

Tools for Mainstreaming Sustainable Development in Small States



Edited by Constance Vigilance and John L Roberts

Tools for Mainstreaming Sustainable Development in Small States

Edited by Constance Vigilance and John L Roberts



Commonwealth Secretariat

Commonwealth Secretariat
Marlborough House
Pall Mall
London SW1Y 5HX
United Kingdom

© Commonwealth Secretariat 2011

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or otherwise without the permission of the publisher.

Published by the Commonwealth Secretariat

Edited and designed by The Pen and Ink Book Company Ltd
Cover design by The Pen and Ink Book Company Ltd
Index by Indexing Specialists (UK) Ltd
Printed by Hobbs the Printers, Totton, Hampshire
Cover photo credit: Ton Keone/Lineair/Still Pictures

Views and opinions expressed in this publication are the responsibility of the authors and should in no way be attributed to the institutions to which they are affiliated or to the Commonwealth Secretariat.

Wherever possible, the Commonwealth Secretariat uses paper sourced from sustainable forests or from sources that minimise a destructive impact on the environment.

Copies of this publication may be obtained from

Publications Section
Commonwealth Secretariat
Marlborough House
Pall Mall
London SW1Y 5HX
United Kingdom
Tel: +44 (0)20 7747 6534
Fax: +44 (0)20 7839 9081
Email: publications@commonwealth.int
Web: www.thecommonwealth.org/publications

A catalogue record for this publication is available from the British Library.

ISBN: 978-1-84929-052-4 (paperback)
978-1-84859-104-2 (downloadable e-book)

Contents

Foreword	v
Acknowledgements	vii
Acronyms and abbreviations	viii
1 Introduction	1
Constance Vigilance and John L Roberts	
Part 1 Devising the strategy	
2 Creating a national sustainable development strategy in Papua New Guinea	16
Albert Nita	
3 Claiming a voice in sustainable development: Participation and bottom-up approaches	27
Tighe Geoghegan	
4 A practical integrated framework for mainstreaming	42
Padma Lal	
5 Regional approaches in sustainable development	64
Margaret Harris and Wonderful Hope Khonje	
Part 2 Laws, finance and economics	
6 National laws as an instrument for the implementation of treaty obligations	84
Mark D Griffith and Derrick Oderson	
7 Financing sustainable development in small island developing states	107
Michael Witter	
8 Applying resource economics to integrate sustainable development principles in SIDS	130
Mark Bynoe	
9 Mainstreaming of sustainable development in national and sectoral budgets	157
Mark Bynoe	

Part 3	Social and environmental perspectives	
10	Youth perspectives on sustainable development for SIDS Fathimath Ghina, Lindsey Higgs and Michael Tran	174
11	Towards social development in SIDS Cletus I Springer	187
12	A review of environmental impact assessment and sustainable development in small island states Rolph Antoine Payet	205
Part 4	Monitoring progress	
13	Indicators of sustainable development and SIDS Lino Briguglio	225
14	The MDGs and SIDS: Issues of performance and use John L Roberts	237
15	The sustainable small state Albert Binger	255
	About the contributors	274
	Index	279

Foreword

Small island developing states (SIDS) are among the most vulnerable countries in the world. This inherent vulnerability stems from high dependence on a narrow range of exports and on strategic imports, environmental susceptibility, limited institutional capacity and limited opportunities for diversification. The question of how SIDS can address this inherent vulnerability has occupied policy-makers at national, regional and international levels for many years.

In 1994, the international community agreed on the Barbados Programme of Action for the sustainable development of small island developing states (BPOA), which provides guidelines for SIDS to pursue sustainable development as an important avenue of addressing inherent vulnerability. The UN Millennium Development Goals provide a common global set of national targets and indicators for assessing progress with sustainable development. The 2005 Mauritius Strategy for the further implementation of the Barbados Programme of Action highlights outstanding, new and emerging concerns with respect to the sustainable development of SIDS and sets out principles for overcoming them. The 2010 review of the Mauritius Strategy recognised the need for more sustained and effective measures to implement sustainable development in all the economic, social and environmental sectors which are important to SIDS.

This book describes and sets out rigorously and systematically the concepts, tools and strategies through which SIDS can bring the implementation of the 2005 Mauritius Strategy into the mainstream of governance for achieving sustainable development. The book comes at a time when the world is once again focused on sustainable development, as the 20-year anniversary of the seminal Rio Earth Summit approaches in 2012. The volume is especially important because of its explicit focus on the challenges and perspectives of SIDS. The tools outlined in this book are presented through the experience of SIDS in the Caribbean, the Pacific and the Indian Ocean.

This publication offers a range of tools in the development and implementation of policy options for SIDS. It provides examples of tools used in devising strategies; tools for the design of the laws, finance and economics for implementing the strategies; tools used for extending strategy through social and environmental perspectives; plus tools for monitoring progress in sustainable development.

This book is the latest in a series of publications produced by the Commonwealth on small states and sustainable development. The Commonwealth Secretariat has a long history of

assisting small states through analysis, research, advocacy, consensus building and project implementation. Seminal analytical work and research include: the 1985 publication *Vulnerability: Small States in the Global Society* – the first major international study to highlight the inherent vulnerability of small states to external forces; the 1997 publication *A Future for Small States: Overcoming Vulnerability*; and the 2000 Commonwealth Secretariat/World Bank Joint Task Force report on small states *Small States: Meeting Challenges in the Global Economy*, which mobilised the concerted support of international organisations to assist small states. The Commonwealth Secretariat is pleased to have worked with a number of leading thinkers on small states and sustainable development in the production of this book. The policy options outlined in this book are, therefore, of particular relevance and assistance to small states committed to the goal of sustainable development.

Cyrus Rustomjee

Director

Economic Affairs Division

Commonwealth Secretariat

Acknowledgements

We would like to give special thanks to Mark Griffith of the United Nations Environment Programme who provided invaluable advice in the formulation of this publication whilst he did his sabbatical at the Commonwealth Secretariat. Thanks are also due to colleagues at the Commonwealth Secretariat: Janet Strachan, Guy Benthall, Nicola Perou and Andrew Armitage for their advice and support in the development of this publication. We would also like to thank Cletus Springer for his considered and detailed comments on the text; and to Padma Lal while she worked at the Pacific Islands Forum Secretariat and Garfield Barnwell and the Caribbean Community Secretariat, for their facilitation. Finally, we are grateful to members of an advisory group that met in the wings of the UN Commission on Sustainable Development in 2006 for an informal brainstorming session on Commonwealth support to implementation of the Mauritius Strategy, with reference to national sustainable development planning in SIDS. They included: David Barrett; Dirk Troost; Albert Nita; Espen Ronneberg; Rohan Richards; Cheryl Ramsubeik; Donna McRae-Smith; Lionel Nurse; Coral Pasisi; Hugh Sealy; Diane Quarless; Mary Pat Silveria and Linda Brice.

Acronyms and abbreviations

AIMS	Atlantic, Indian Ocean, Mediterranean and South China Sea	MTEF	Medium-term expenditure framework
AOSIS	Alliance of Small Island States	NGO	Non-governmental organisation
BPOA	Barbados Programme of Action	NSDS	National Sustainable Development Strategy
CARICOM	Caribbean Community Secretariat	ODA	Official development assistance
CITES	Convention on International Trade in Endangered Species	OECD	Organisation for Economic Co-operation and Development
CROP	Council of Regional Organisations in the Pacific	OECS	Organisation of Eastern Caribbean States
DRM	Disaster risk management	PIFS	Pacific Islands Forum Secretariat
DRR	Disaster risk reduction	PNG	Papua New Guinea
EBM	Ecosystem-based management	SIDS	Small island developing states
ECLAC	Economic Commission for Latin America and the Caribbean	SPREP	South Pacific Regional Environment Programme
EEZ	Economic exclusive zones	TEV	Total economic value
EIA	Environmental impact assessment	UN	United Nations
EPZ	Export processing zones	UNCED	United Nations Conference on Environment and Development
FDI	Foreign direct investment	UNDESA	United Nations Department for Economic and Social Affairs
GDP	gross domestic product	UNDP	United Nations Development Programme
GNI	gross national income	UNEP	United Nations Environment Programme
GNP	gross national product	UNESCO	United Nations Educational, Scientific and Cultural Organization
HDI	Human development index	WHO	World Health Organization
ICT	Information and communication technology	WSSD	World Summit on Sustainable Development
IOC	Indian Ocean Commission	WTO	World Trade Organization
LDCs	least developed countries		
MDGs	Millennium Development Goals		
MEA	Multilateral Environmental Agreement		
MSI	Mauritius Strategy of Implementation		
MTDS	Medium-term development strategy		

Constance Vigilance and John L Roberts

Introduction

Mainstreaming sustainable development is a process of both integrating the concept of sustainable development into general policy-making and management and embracing a set of core values and principles which should underpin policy vision and the development goals that guide priorities and the formulation of activities. These core values and principles crucially include the pursuit of a balance between economic well-being, environmental quality and social harmony so that development goals can be achieved and there is participation of all sectors and people in decision-making and planning.

This book focuses on the tools, or practical means, that are being used to bring policies and programmes for sustainable development out of the shadows into the mainstream of decision-making at all levels of governance, both public and private, and in all sectors. It provides useful insights into the practical realities of moving forward with the complex task of implementing sustainable development in SIDS. It offers a package of practical ideas and working examples of current actions in small states and SIDS that, it is hoped, can assist as a guide to policy-makers and managers to make more rapid progress in the pursuit of the Mauritius Strategy of Implementation (MSI).

Mainstreaming sustainable development in small states means that the thematic areas of sustainable development take centre stage in policy-making and action and are integrated within the core processes of politics, planning, institutional and human capital development, finance, strategic and operational management. This concept of mainstreaming contrasts with the traditional mode of taking separate themes for action and sidelining them to particular ministries or sectors. For example, traditionally, ministries of environment deal with ecology and ministries of finance handle the economy but when sustainable development is mainstreamed, these issues are addressed holistically through an integrated development planning system.

This book is the latest in a series from the Commonwealth addressing issues of sustainable development for small states and islands. The original concept and overall theme of this book arose from brainstorming sessions of a consultative group comprising the Commonwealth Secretariat, the Pacific Islands Forum Secretariat (PIFS), the Caribbean Community Secretariat (CARICOM) and Indian Ocean Commission, as well as representatives from the United Nations Department for Economic and Social Affairs (UNDESA) and from small island developing states (SIDS) themselves.

This volume will be especially useful for small states which are often inhibited in making

progress with mainstreaming sustainable development as they tend to have limited funding, have an inappropriate scale and scope of institutions, lack critical expertise, suffer from high fixed costs of government both in the public and the private sectors, and present highly specific challenges which are complex and not easy to resolve through technical assistance means. It is evident that small island developing states¹ share not only the characteristic vulnerabilities of small states in general but have, in addition, their own specific vulnerabilities arising from the risks of extreme weather events and sea level rise.

Each chapter in the book takes, as its starting point, the Brundtland Commission definition of sustainable development – ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ – and seeks to develop its scope, context and content. What is evident from the contributors is that sustainable development, when mainstreamed, can assume greater prominence and attract more human and financial resources for implementation. The concepts and tools highlighted herein can also serve as a guide for the process of policy formulation and its implementation to ensure that economic, social and environmental factors are kept in balance. This balance is in the best interests of all countries but especially pertinent to small states whose economies and ecologies are inherently vulnerable.

This book identifies and describes tools in use in countries in the three SIDS regions. It examines their effectiveness in strengthening national and regional processes and in support of specific thematic areas for sustainable development. The tools reviewed include macro devices used by policy-makers in these countries to strengthen national processes and the broad development of partnerships as well as tools at the fieldwork level for improved implementation within communities.

The identification of common concepts and effective methods and tools for MSI has an obvious potential benefit if it eases the burden of devising practical processes for individual states which are constrained by scarce planning and development resources. Common strategic concepts, for example, can include the use of environmental accounting methods for setting out the justification for current investment for preserving the environment for future generations, reducing import costs by replacing fossil fuels with local renewable energy sources taking into account externalities, and improving the livelihoods of local people by not only engaging them in the process of planning and development, but also establishing local short-term and long-term returns for them for practices that make sustainable use of the local endowment of natural resources. The tools for doing this vary and have to be adapted to local opportunities and needs but common guidelines for practice are emerging.

The major strategies for mainstreaming sustainable development which are outlined in this book are:

- 1 **Engendering participation** – This can occur through a number of processes including promoting awareness, education and training to ensure that the principles of sustainable development are understood and acted on by all participants, establishing inter-linkages between various government agencies and promoting stakeholder consultation and participation in decision-making.

- 2 **Integrating policy planning and budgeting** – Through this strategy the national budget, sectoral plans and environmental concerns are interlinked. The national plans which include sustainable development concerns will then be linked to national budgets. The budget tools used by governments may include environmental accounting of the value of natural assets and the cost of externalities of traditional development processes which involve pollution and biodiversity degradation.
- 3 **Using regional approaches** – Due to lack of human and financial resources and the synergies that can occur when countries work together, implementing sustainable development using regional mechanisms can involve supranational arrangements such as those adopted through CARICOM, PIC and to a more limited extent in the AIMS region by the IOC.
- 4 **Enacting national laws** – For multilateral environmental agreements to become effective in small states, efforts have to be made to enforce these agreements through the enactment of national laws.
- 5 **Targeting development finance** – Assistance from the international community is vital for the survival of small island developing states. Development assistance in the form of grants, technical assistance and concessional financing can be used to promote sectors which are essential in the pursuit of sustainable development.
- 6 **Conducting environmental impact assessments** – Environmental impact assessments remain the only legal means through which policy-makers can ensure that economic activities do not harm the environment.
- 7 **Monitoring progress** – Through monitoring, policy-makers will be able to evaluate the progress made and take the necessary steps to ensure that goals are achieved. The indicators to monitor this progress have to be agreed on and steps taken to ensure that a monitoring and evaluation system is established, as well as a system to report on the progress to decision makers so that the necessary steps are taken to correct deficiencies.

About the chapters

The book is divided into four parts. The first deals with the tools for moving from the MSI to devising practical national strategies; the second part focuses on the need for new laws, fresh financing arrangements and the broad economic issues of costs, benefits and their distribution; the third part deals with tools for tackling social and environmental aspects of making progress with MSI; and the fourth part is concerned with methods for monitoring progress. The final chapter is an essay on the quest for the ideal case for making progress with MSI.

Part 1 Devising the strategy

Chapter 2, written by Albert Nita, examines the approach to achieving sustainable development through government systems. The chapter sets out the process undertaken in Papua New Guinea (PNG) for establishing a strategy of sustainable development and provides a critical review of its strengths and weaknesses and lessons that can be used by other small states. After the 1992 Rio conference, steps were taken in PNG to reform the

approach to national planning to take account of the impact of development on natural resources. The formal framework built on the goals for national development established on independence in 1975. The PNG government, aided by the university and a range of other national and provincial participants from the public and private sectors and civil society, began to unfold a continuing process for sustainable development planning and implementation. Constraints were experienced in terms of capacity, governance and political will. The author suggests that to resolve conflicts and to establish more effective policy, planning and implementation of sustainable development, a number of tools should be used including active participation in policy-making and implementation at all levels of governance; promoting awareness, plus education and training to ensure that the principles of sustainable development are understood and acted on by all participants, especially those in central government; clarifying and defining roles, functions and responsibilities and inter-linkages to ensure full and effective participation by relevant groups and individuals and establishing a comprehensive method for critical assessment of national policies and their capacity for sustainable development.

Chapter 3, written by Tighe Geoghegan, explores sustainable development at the community level. The chapter calls for more emphasis on participation in sustainable development processes to counter-balance the voice of the weak against the influence of the most powerful in society. Active participation in the formulation and the implementation of policy is cited as a powerful driver of the changes necessary to ensure equitable outcomes and overturn unsustainable practices. But it does not always work and can be manipulated to the benefit of special interest groups. The author gives examples of good practice of effective frameworks for active participation, such as in Bolivia through the use of the 1995 Popular Participation Law, the 1998 UN Aarhus Convention providing for access to information; and the St. George's Declaration for Environmental Sustainability in Caribbean states. Real participation takes time the author asserts. Citing experience from the development of national sustainable development strategies (NSDSs) formulation in various countries, the author suggests that five years may be necessary to achieve active community-level participation throughout a country. Even then, it is difficult to engage with the hard-to-reach people such as women with children. The chapter offers examples of tried and tested tools for promoting active participation. These include participative learning and appraisal, stakeholder analysis, participative planning and conflict management, deliberative and inclusive processes, radio call-in programmes, community consultation, and opinion surveys. Finally, the chapter considers the ways in which these tools need to be adapted to the special needs of SIDS. Detailed material is given to illustrate the practice of participation in three locations: community opposition to a proposed new port development in Trinidad; poor women farmers in Swaziland in consultation on gender equality; and developing national Development Councils for SD strategies in six Caribbean states.

Padma Lal argues in **Chapter 4** that to achieve desired sustainable development outcomes given the limited domestic resources, there should be an integration of National Sustainable Development Strategies (NSDS), ecosystem-based management (EBM) frameworks and the medium-term expenditure frameworks (MTEF) – the NSDS-EBM-MTEF approach. Adopting the NSDS at the practical level includes mainstreaming key values, sustainable development and good governance principles at all level of decision-making and linking

this to national and sectoral plans. Further, the use of an EBM framework will guide analysis of ecological, social, human and economic interactions, and their effects on management issues. Using examples from the Pacific region, the author shows that where EBM and NSDS are linked, there is an increase in the transparent allocation of domestic resources and increased aid effectiveness in the country. The author sees the NSDS-EBM-MTEF as including the critical tools of situation analysis, appointing a lead agency, conducting an issues and root cause analysis and solution analysis, as well as prioritising a sector plan. The chapter emphasises that mainstreaming is a process of including or integrating an idea into strategic intervention at national, sectoral, community and individual levels, involving the national plan, the sectoral plans and the budgetary process.

Margaret Harris and Wonderful Hope Khonje examine the regional approaches to sustainable development in **Chapter 5**. They start with a historical review of how regional co-operation developed in the small states regions – Africa, Caribbean and Pacific. In the Caribbean region, the 1973 Treaty of Chaguaramas which established the Caribbean Community is examined. The Africa Region, after 1959, saw the establishment of a number of trading and regional integration blocs, based on location – East, West, South and the Maghreb regions. The motivations for regional co-operation in Africa and the Caribbean included increasing trade, addressing poverty and improving the living standards of its peoples. Both these regions have sub-regional organisations – the Organisation of Eastern Caribbean States in the Caribbean region and the Indian Ocean Commission in the African Region. The membership of these two organisations is mainly small states. The Council of Regional Organisations in the Pacific (CROP) includes a number of regional organisations including the Pacific Islands Forum Secretariat (PIFS) and the Pacific Regional Environment Programme (SPREP). The chapter notes that strengthened inter- and intra- regional co-operation and partnership is needed as are tools to support the implementation of sustainable development in SIDS. Knowledge and experience can be transferred through regional co-operation. This requires problem identification, research and preparation, team building, working groups and networks and the development of regional co-operation strategies. The chapter posits that the best form for optimum effective regional co-operation involves co-operation between sectors, regions and South-South co-operation.

Part 2 Laws, finance and economics

Chapter 6, written by Mark Griffith and Derrick Oderson, looks at the use of national laws for implementing multilateral environmental agreements (MEAs). Small states are party to many MEAs. For these MEAs to have legal effect in the national jurisdiction, they must be incorporated into national law. The chapter focuses on the Caribbean region, examining a few of the MEAs to which they are party and the relationship between the treaty obligation and national law. Theoretical perspectives which provide an understanding of the relationship between international law and national law as well as the approaches used for incorporating treaty obligations into national law are examined in the chapter. These perspectives include the dualist-monist perspective and methods through which countries can transform treaty obligations into domestic laws. Drawing on Caribbean case law, the chapter illustrates why it is necessary for Caribbean small states to transform treaty obligations into national legislation, as an integral part of their environment and sustainable planning

frameworks. The paper shows that the failure of Jamaica to incorporate the Convention on International Trade in Endangered Species (CITES) into national law meant that CITES was unenforceable although the country had acceded to CITES since 1977. Since 1999, Jamaica has incorporated a number of MEAs into its national laws. The authors conclude that while transformation of treaty obligations into national law is fundamental, it is not, by itself, a panacea for effective implementation at the national level.

Michael Witter considers in **Chapter 7** the different sources of financing for sustainable development in small states. The chapter examines public- and private-sector financing from international and domestic sources, and how these can best be oriented to the goals of sustainable development. Witter estimates that private foreign direct investment (FDI) is a greater potential source of funds than overseas development aid (ODA) but that domestic finance, even in small states, is potentially still greater if it can be refocused through mainstreaming sustainable development in public and private decision-making. The use of national sources of funding in this way requires a culture change in government and private sector policy with a new reorientation of programmes in energy, water, waste, education, health, housing, and contracting to embrace environmental values. The tools of financial policies should reflect concerns for addressing social neglect and environmental abuse. The tools of fiscal policies need reform to remove subsidies which have adverse affects on the environment, such as on fuel, fertilisers and pesticides, water and energy. Incentives should be given for reducing packaging, increasing recycling and the safe disposal of hazardous materials. Other tools are available through government and private contracting which should adhere to regulations and standards for environmentally friendly infrastructure, locations and materials use. Examples are given from the experience and practice in the EU. The chapter calls for countries, international and regional organisations to respond more effectively to the call for financial partnerships proposed in the Mauritius Declaration to which the response has been weak. The author recommends, in particular, that small states should use administrative tools to maximise the financing available for sustainable development, these include reconfiguring the use of public resources in the pursuit of the goals of sustainable development by removing environmentally unfriendly subsidies, increasing the use of economic instruments (subsidies, incentives, taxes, regulations and penalties) to promote environmentally friendly investment and establishing public-private sector partnerships for investment in sustainable development. Here, it is a matter not of developing new tools but of putting existing tools to better use.

Chapter 8, by Mark Bynoe, explores applying resource economics as a set of tools to integrate sustainable development principles for policy analysis and decision-making for small island developing states. He starts with a broad economic framework and then examines the specific tools available for analysis and their use. The concept of total economic value (TEV) is illustrated using an example of valuing tropical rainforest, a critical global resource and one that is subject to increasing pressure in those small states that have any remaining natural forest areas. Classes of economic benefits are distinguished into two groups: use and non-use values. The use values are further identified in terms of development benefits, such as timber, the value of forests for carbon capture, and their products for use for medicinal purposes. Non-use values are illustrated in terms of conservation for the sustaining biodiversity and as bequest benefits for future generations. The chapter critically

reviews how far these values can be expressed in monetary terms. The author illustrates the tools adopted by economists in contingency valuation, revealed preferences, hedonic pricing, the application of the neo-classical economic concept of opportunity cost, and the application of the dose response analysis of value. The chapter then considers the constraints that limit and may bias the application of monetary valuation in resource economics and the traps for the unwary in its use. He draws attention to the flaws in the use of market prices where they exist and the care needed in the interpretation of shadow prices in the absence of a market mechanism, which may lead to the adoption of inappropriate or misleading values. A detailed example is presented to illustrate the use of some of these tools showing how resource economics can be applied in the evaluation of subsidies in agriculture and the assessment of the environmental impact of resulting increased production.

Mark Bynoe argues in **Chapter 9** that an important aspect of mainstreaming sustainable development is to incorporate sustainable development parameters into national and sectoral budgets. By doing this, policy-makers would convey to resource users that some ecosystem goods and services are not free. This he shows would encourage greater value to be attached to such resources. Inappropriate budgeting and under-pricing by governments can aggravate environmental degradation, allowing the carrying capacity of biological systems to be exceeded or non-renewable resources to be diminished. The options available to governments to address these problems include educating consumers and creating market-based incentives. The chapter then explains the three main categories of budgetary instruments through which the government can mainstream sustainable development principles in national and sectoral budgets – public expenditure instruments, revenue-generating instruments and budget-neutral instruments. The author concludes that pursuing these instruments jointly and in a complimentary manner would tend to benefit small states more.

Part 3 Social and environmental perspectives

Chapter 10, written by F Ghina, L Higgs and M Tran, explores a youth perspective on SD for SIDS through the eyes of the UN Youth Visioning project initiated in 2003. One test of sustainability is how far the future interests of today's youth are compromised by current production, consumption and mainstream development policy. Another is how far the current concerns of youth, the leaders of tomorrow, are addressed by today's policy-makers. This chapter is an account of how one UN-backed project provided a voice for youth participants from SIDS world-wide to formulate their concerns, present them formally to the 2005 UN SIDS Mauritius Conference and follow them up through an ongoing communications network. The project evolved to engage youth from the three SIDS regions (Caribbean, Pacific and AIMS) with more than 30 island-based activities. The project itself grew out of proposals made in 1994 as part of the Barbados Programme of Action for SIDS. In 2003, it started an internet Forum covering three broad themes identified by the participants: life and love; my island home; and money in my pocket. International meetings of participants took place in 2004 in the Bahamas and St. Lucia and in 2005 at the UN SIDS Mauritius Conference. The current Youth Visioning activities from the three SIDS regions range from health, environment, land tenure and culture to political awareness, the MDGs, and national pride, but also include fishing, gardening, dance, and youth in support of elderly people. The chapter

emphasises that such activities need sustained support as key youth participants move on into adulthood, and new skills need to be developed in young people not familiar with the processes of international linkage and project management.

Cletus Springer examines the social dimension of mainstreaming sustainable development in **Chapter 11**. The chapter explores some of the main conceptual and practical challenges that are usually encountered in designing, analysing, implementing, monitoring and reviewing social policy. The chapter advocates the adoption throughout the policy cycle of an integrated approach that addresses the individual, the community and the inter-sectoral effects of economic, social, and environmental aspects of development. The author asserts that economic growth is not an end in itself but a means of enabling individuals to lead healthy, happy and rewarding lives, whilst drawing on natural resources in a sustainable way not compromising the needs of future generations. Social development is an integrative process engendering well-being and cohesion. The author explains that the principal goals of social policy are redistribution, protection, production, reproduction and cohesion, operating within a balanced integrated approach through consultation and participation. The chapter explains that market failure justifies intervention especially in the fields of employment, water resources, housing, poverty alleviation, health, education, environmental management and support for disadvantaged groups. The chapter promotes the view that national government, the private sector and civil society have a role to play in policy development and its implementation. Regional and international bodies can best play their parts with the tools of supporting best practice, providing targeted aid, capacity building, technology transfer, monitoring and evaluation. To monitor progress with social development, the chapter recognises that the MDGs as tools for policy review, planning and evaluation need to be supplemented with other indices including those in the Human Development Index, plus indicators to cover social cohesion, income distribution, income polarisation, employment and mobility.

Chapter 12, written by Rolph Payet, reviews the role of the tool of environmental impact assessment (EIA) in sustainable development. The author posits that while the EIA process seeks to minimise the impacts of development on livelihoods and the environment, it also seeks to ensure the maintenance of key ecosystem functions and services, to achieve net benefits for society. The chapter supports the view that EIA is a tool that can be operated both as a science and an art and that the number of steps taken varies from country to country. For the tool of EIA to be effective, it has to meet a number of criteria including international standards and provide decision-makers with information on the consequences of their actions. The chapter examines in detail the international and regional context of EIA, noting that early consideration can be found in Principles 17 and 19 of the Rio Declaration. Prior to the development of the EIA, environment considerations were limited to planning issues, such as wastewater management, drainage, development density, noise control, landscaping and building codes. EIA implementation in SIDS needs to be strengthening in terms of legal, institutional, capacity and monitoring and implementation requirements. A lack of follow-up and monitoring of implementation of EIA management plans defeats the purpose of an EIA, which is meant to predict and mitigate the impacts of a particular activity. The author concludes that EIA remains the only legally binding government tool to require projects and policies to be undertaken in a sustainable way.

Part 4 Monitoring process

Lino Briguglio reviews in **Chapter 13** the use of indicators for mainstreaming sustainable development in SIDS. The chapter recognises that indicators are tools that serve a number of functions, including: supporting decision-making, setting targets and standards, monitoring and evaluation, dissemination of information in standard format, focusing discussion on policy issues, promoting wider discussion of issues and a holistic approach. The author considers that indicators as tools for sustainable development should be selected and constructed in accordance with specific criteria, including: relevance, a guiding vision on sustainable development, transparency, simplicity, affordability, a holistic approach embracing environmental, economic, social dimensions and the quality of life. The chapter reviews common difficulties in constructing indicators for SD for SIDS. These include data problems, the number of indicators involved, time factors and the interests of future generations, policy relevance to SIDS, participation and access, and local capacity to establish a value and to maintain its accurate and timely measurement. In reviewing the choices of indicators for SIDS, it is evident that some global indicators are not relevant and that on some issues of priority to SIDS, there are no relevant indicators in the global sets. Gaps in global systems leave the many priority SIDS issues untouched. The chapter offers some solution to these gaps in indicator systems. As part of a case study on indicators for SD for Malta, the chapter presents a table of SD indicators for SIDS covering environmental, economic, and social dimensions, cross-cutting issues, implementation and monitoring. The author argues that many of the special features of SIDS are inherent and therefore permanent or quasi-permanent. For this reason, the relative Sustainable Development Indicators should not attempt to measure the incidence of the features themselves but should be related to policy measures aimed at mitigating or withstanding the negative effects of these features.

Chapter 14, by John Roberts, examines the use of the Millennium Development Goals as a planning tool. In particular, he reviews the performance of SIDS in the AIMS and other regions against the MDG targets and the interpretation of the results as an aid to developing policy and decision-making for sustainable development. The chapter examines performance using UN data sources across the 8 goals, 18 targets and 48 indicators of the UN MDG system tracking progress since the base-line year 1990. The review broadly covers results for the 55 million people living in some 46 SIDS in the UN data system although for many indicators data is missing. A range of methodological problems are critically reviewed including the arbitrary use of 1990 as a baseline for many targets, and its implications for the assessment of trends. The chapter identifies the next steps in moving from this assessment to investment for improved performance at regional and national levels and examines the strengths and weaknesses of the MDG framework as a tool for planning. The chapter concludes with a set of recommendations for building on the MDG system a more useful set of tools for policy development and decision-making in SIDS including extending the MDG framework to cover absent priority areas including climate change and sea-level rise, and demographic change.

The **last chapter** in the book is an essay on the quest for an ideal solution to the issue of mainstreaming. Al Binger offers in **Chapter 15** five salient tools including synergy and sec-

tor integration, active citizen participation and the utilisation of up-to-date information that are part of an essential toolkit for mainstreaming sustainable development in an ideal small state. The chapter also presents case studies of Barbados and Mauritius to identify the lessons that can be drawn from the experience of these countries in implementing sustainable development and addressing the challenges posed in areas such as energy, marine environment and disaster risk reduction. He suggests that the best practice tools emerging from these countries are their diversification programmes, energy security, citizen participation and resources management.

The Commonwealth and small states

The Commonwealth Secretariat, with more than a third of its members classified as small states, has been strongly committed to policy support and advocacy for these countries. The issue of the vulnerability of small states was first given formal expression at the 1977 Commonwealth Finance Ministers Meeting in Barbados. Having noted the special characteristics of small states – in particular, their reliance on trade, high dependence on capital inflows and, in some cases, their lack of natural resources – the ministers urged the international community to adopt a more flexible approach to the requirements of these countries, as well as special measures to assist them. In response, the Secretariat designed a programme to assist small states in overcoming ‘the disadvantages of small size, isolation and scarce resources which severely limit the capacity of such countries to achieve their development objectives or to pursue their national interests in a wider international context’.

Commonwealth leaders meeting in New Delhi in 1983 expressed their belief that the problems of small states ‘deserved consideration on a wider basis, including that of national security’. A Commonwealth Consultative Group was thus commissioned to carry out such an examination. Its report, *Vulnerability: Small States in the Global Society*, published in 1985, was the first to highlight the inherent vulnerability of small states to external interference. In reasserting the vulnerability of and threats to small states, and outlining economic and foreign policy measures to mitigate these, the report was important in raising the political profile of small states in international forums.

Following this publication, the Ministerial Group on Small States was formed to continue the discussion of issues of importance to small states. At their second meeting in 1995, ministers recognised that the international context faced by small states had changed dramatically since the end of the Cold War. This led to the creation of a Commonwealth advisory group of eminent persons, whose report, *A Future for Small States: Overcoming Vulnerability*, was published in 1997.

In 2000, the seminal report of the Commonwealth Secretariat/World Bank Joint Task Force on Small States, *Small States: Meeting Challenges in the Global Economy*, concluded that small states required effective domestic policy, regional co-operation, assistance from multilateral and bilateral development institutions, and improvement in the external environment to support their development. It highlighted four areas of special relevance to successful development in small states: tackling volatility, vulnerability and natural disasters; transi-

tioning to the changing global trade regime; strengthening capacity; and benefiting from the opportunities and coping with the challenges of globalisation. It also recommended an Annual Small States Forum, where international donors report on their activities in small states. Small states have garnered additional support and attention from international donors as a result, but more remains to be done: a 2005/06 review of the Task Force report established that small states are still vulnerable and continue to face a number of development challenges associated with their size.

At their 2005 meeting in Cyprus, Commonwealth Finance Ministers mandated the Secretariat to collaborate with development partners to convene a biennial conference of small states representatives to promote discussion and sharing of experience. In response to this mandate, the Secretariat held the first Global Biennial Conference on small states in July 2010.

The consensus document from this conference outlines the concerns of small states in the areas of vulnerability and resilience, sustainable development, private sector development, access to international finance, external indebtedness and international trade and regional co-operation. The consensus document called for action by small states themselves and the international community in addressing these concerns. Some of the actions called for included networks for sharing best practices among small states, the need for the international community to recognise small states as a special category in international decision-making and the need to reorient small states' export strategies.

The Mauritius Strategy

The characteristics that shape the sustainable development concerns of small island developing states (SIDS) were recognised in 1992 by the international community when it agreed Chapter 17 of Agenda 21 – one of the key outcomes from the Rio Earth Summit. Agenda 21 notes that SIDS face special challenges in planning for sustainable development, and agreed a Global Conference on the Sustainable Development of Small Island Developing States. This conference took place in Barbados in 1994 and adopted the Barbados Programme of Action (BPOA), which is the principal international framework for addressing the special challenges and constraints faced by small island developing states in their implementation of sustainable development. The BPOA addresses 14 major themes, ranging from climate change through coastal and marine resources to tourism and human resources development.

A ten-year comprehensive review of the implementation of the Barbados Programme of Action took place in Mauritius in January 2005. The summit involved about 2,000 participants, including 18 presidents, vice-presidents and prime ministers, the UN Secretary-General, and around 60 ministers, and representatives of UN agencies and intergovernmental organisations. This international meeting led to the adoption in January 2005 of the Mauritius Strategy for the Further Implementation of the Barbados Programme of Action for the Sustainable Development of SIDS, which includes 20 thematic areas such as climate change and sea-level rise, natural and environmental disasters, and energy resources. The Mauritius Strategy notes that for successful implementation, SIDS require

effective human, institutional and technical capacity development; effective monitoring and co-ordination, including through SIDS regional organisations; and support of the international community, particularly through financial and technical backing. The meeting also adopted the Mauritius Declaration, a political statement which reaffirms the continuing validity of the Barbados Programme of Action, adopts the Mauritius Strategy and makes a commitment to its timely implementation.

It is now five years since the MSI was agreed. In 2009, the five-year review of the implementation of the MSI (MSI+5) started through the UN system, primarily by the UN Department for Economic and Social Affairs and the UN Regional Commissions. The process included the preparation of national assessment reports by SIDS to form the substantive basis of a global synthesis report as well as the convening of three regional review meetings. These Regional meetings, which were held in Vanuatu for the Pacific region (February 2010), in the Maldives for the Atlantic Indian Ocean Mediterranean and South China Seas (AIMS) region (March 2010), and Grenada for the Caribbean region (March 2010) resulted in regional outcome statements and in-depth regional synthesis reports at various levels of detail. This was followed by the Inter-regional Meeting and PrepCom in May 2010 in New York and drafting of the global synthesis report. The High-Level Session to discuss the global synthesis report was held during the September 2010 UN General Assembly meeting in New York.

The five-year review of the MSI found that SIDS have made substantial progress in the implementation of sustainable development. SIDS continue to be highly vulnerable to external shocks and many of the hard-earned gains have come under threat by the adverse impacts of climate change, natural disasters, and the recent global food, fuel, and financial crises.

Four highlights from the progress report covering the processes and the tools used in the implementation of the MSI are as follows:

- *Management of coastal and marine resources.* Many SIDS have established monitoring mechanisms, for example, Maldives collect data on the evolution of the coastal zone, and the Pacific Islands Global Ocean Observing system and the Caribbean Marine Protected Area Management Network and Forum consolidated and standardised information.
- *Energy resources:* Most SIDS are highly dependent on imported oil and other fossil fuels for transport and for energy generation. Oil imports account for an average of 12 per cent of imports of SIDS. In 2009, four Pacific SIDS signed the Bulk Procurement of Petroleum Initiative, in order to improve their market position and reduce the cost of obtaining fuel. Energy plans, policies or action plans, where they exist, tend to address the special vulnerability of SIDS. In the Caribbean, a regional energy policy was drafted in 2007, and the Pacific Islands Energy policy is expected to be reviewed in 2010.
- *Sustainable capacity development and education for sustainable development:* With capacity development and education SIDS face the combined challenges of brain drain and small population size. Progress towards the achievement of the MDG target of universal primary education has been mixed in SIDS. General literacy is

high in Caribbean SIDS, but remains a challenge in the Pacific and in parts of the AIMS region. Steady progress has been made in tertiary education at regional level with well known universities such as the University of the West Indies and the University of the South Pacific.

- *Knowledge management and information for decision-making:* Internet penetration is improving in SIDS, and this is crucial to knowledge management in these countries, since it will assist in mitigating limited capacity, isolation and remoteness. Compared to developed countries, good quality data for decision-making is scarce in SIDS. The ability to monitor environmental change has improved significantly, with the availability of global data systems for spatial and real time data including satellite and air photo imagery and remotely-sensed data. SOPAC GeoNetwork, the Caribbean Marine Protected Area Management Network, and the Pacific Regional Information System are good examples of the use of this data. E-Governance initiatives are being pursued in SIDS, including Antigua and Barbuda, Maldives and Mauritius.

From these highlights, it is evident that certain trends are emerging which affect the progress SIDS have made in the implementation of sustainable development. BPoA and MSI provided the strategic guidelines, leaving the tools to be developed at local and regional level, and it is hoped that this book contributes to the development of tools appropriate for SIDS.

National sustainable development strategies

The Brundtland Commission notes that economic growth, social equity and protection of the environment are the three principal components of sustainable development. The complex relationships between these three principal elements are at the heart of operationalising sustainable development. For example, economic growth must take place without compromising the natural environment and creating negative social consequences. Mitigating negative impacts and establishing trade-offs are therefore essential to the implementation of national sustainable development strategies. As a result, sustainable development strategies involve far-reaching policy and institutional reforms, as well as the involvement of all sectors. Such strategies involve dealing with immediate concerns, while at the same time addressing long-term issues. UNDESA defines sustainable development strategies as ‘a co-ordinated, participatory and iterative process of thoughts and actions to achieve economic, environmental and social objectives in a balanced and integrated manner at the national and local levels. The process encompasses situation analysis, formulation of policies and action plans, implementation, monitoring and regular review. It is a cyclical and interactive process of planning, participation and action in which the emphasis is on managing progress towards sustainability goals rather than producing a ‘plan’ as the end product.

From the experiences of developing and developed countries, UNDESA concludes that the underlying principles of effective national sustainable development strategies include:

- country ownership and commitment;
- integrated economic, social and environmental objectives across sectors, territories and generations;
- broad participation and effective partnerships;

- capacity development and an enabling environment; and
- outcomes and means of implementation focus.

Ensuring sustainable development requires four critical processes to harness the skills, values and energies of countries. These processes – political, participatory, technical and resource mobilisation – have in common the need to involve the key stakeholders and the need to focus on major issues. As with any strategy, the avenue to success is to have an implementation strategy as well as monitoring and evaluation. This would include clarifying respective roles and responsibilities, public communications, assessments, institutional reflections and learning. An added element of the implementation strategy for national sustainable development is the role of the international community in the successful implementation of sustainable development in small island developing states. The role of the institutions and bilateral donors that form this community includes technical and advisory support, and especially resource mobilisation. This is because a lack of financial resources is often identified as one of the greatest impediments to the successful implementation of sustainable development.

This book contributes to the literature on small island developing states in general and on the pathway towards sustainable development in particular. It sets out how countries are pursuing their pathway with a mixed blend of theoretical principles and the use of practical tools. The principles and tools adopted in these countries are based on what should be seen as working hypotheses of what might be best practice.

It is hoped that the book provides a frank and a realistic account of the problems and progress in small states as they implement sustainable development, working as an aid to stimulate mainstreaming of sustainable development in small states.

References

- UN (1994). *The Barbados Programme of Action for the Sustainable Development of Small Island Developing States*. Available at: <http://www.sidsnet.org>
- UN (2005). *The Mauritius Strategy for the further implementation of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States*. Available at: <http://www.sidsnet.org>
- UN (2010). *Review of the Implementation of the Mauritius Strategy*. Available at: http://www.un.org/esa/dsd/csd/csd_csd18.shtml

Notes

- 1 Small island developing states (SIDS) are low-lying and island nations that share similar physical and structural challenges to their development. The UN recognised 38 SIDS in this context, spread across three broad regions. Most SIDS are remote, small in land area and population (less than 1.5 million), with a very narrow resource base and fragile land and marine ecosystems that are highly vulnerable to natural disasters. Their economies are open and heavily dependent on trade for national income.
http://www.un.org/esa/dsd/dsd_aofw_sids/sids_members.shtml The Commonwealth defines small states as 'sovereign states with a population size of 1.5 million people or less' (Source: *A Future of Small States: Overcoming Vulnerability*, Commonwealth Advisory Group, 1997). Using

this standard, 46 countries are classified as small states according to the World Bank and the Commonwealth Secretariat and the Commonwealth has 32 of these small states among its 54 members. In addition, the Commonwealth also includes some larger member countries who share many of the characteristics of small states and these countries are Botswana, Jamaica, The Gambia, Lesotho, Namibia and Papua New Guinea.

Albert Nita

Creating a national sustainable development strategy in Papua New Guinea

Introduction

Sustainable development is the concept of the pursuit of long-term economic and social growth without reducing the quality of the environment; it is especially relevant to the survival of small states, although difficult to implement even if it can be adequately defined for operational purposes. The successful outcome of the pursuit of sustainable development in small states requires an analysis of the capacities for action, the constraints, and the inherent risks. One approach to achieving sustainable development is within government systems, where planning agencies are able to enhance their overall planning, implementation and monitoring roles, by creating and implementing a national sustainable development strategy (NSDS) through consultation and participation. This paper examines the consultation and participation experience of Papua New Guinea (PNG) in creating a National Sustainable Development Strategy (NSDS), and analyses the constraints, risks and lessons learnt.

Consultation and participation for creating a NSDS

Discerning the theoretical underpinnings of consultation and participation (CAP) in the sustainable development discourse is imperative for creating a national strategy for sustainable development (Brodhag and Taliere, 2005; Melnick et al., 2005; United Nations, 2002). The focus on facilitating CAP amongst the 'voiceless' has now shifted to include decision-makers and implementers themselves. Consultation applies to decision-makers informing stakeholders while participation is the involvement of stakeholders in decision-making. CAP should be a two-way interactive system of communication where all stakeholders including decision-makers frequently interact resulting in capacity building and empowerment with a corresponding decline in vulnerability and risks (Cornwall, 2003; Harding, 1998; Morrissey, 1995).

The benefits of CAP are widely discussed and accepted. Principle 10 of the 1992 Rio Declaration unambiguously calls for public CAP in the sustainable development process. The World Summit on Sustainable Development (WSSD) called for partnerships and participation of all stakeholders (UN, 2002). The Mauritius Strategy (2005) and the Pacific Plan (2006) both value the underlying importance of stakeholder CAP in small states. Further, CAP is essential for achieving the three principal Multilateral Environment Agreements (MEA) – the UN Framework Convention on Climate Change, UN Convention on Biological Diversity, and the UN Convention on Combating Desertification.

Despite prioritising CAP as an important input for sustainable development, the notion that institutional decision-makers are often regarded as the 'brains' behind sustainable development has received limited coverage in the CAP literature. In the case of PNG, policy-makers at the Department of National Planning and Monitoring (DNPM) operate exclusively with limited consultation with other key stakeholders.

In PNG, sustainable development has been constrained by the lack of integration in policy priorities and budgetary allocations. The need for planners to understand the importance, strategy requirements and methodologies for creating and integrating sustainability into national priorities cannot be underestimated.

A sustainable development framework, followed by programme implementation involving public CAP, reflects 'development from within'. In the sustainability debate, the contention that, 'If you sew wings on caterpillars, you have not developed a butterfly' (Schoell, 1994) is indeed convincing. If you give cash handouts or bring answers and solutions to people who have not developed capacity to generate and sustain wealth and build their own solutions, you will not have sustainable economic development. Instead, you lay the foundations of dependency relationships between small state governments and their citizens.

For centuries, people in PNG have been seen as industrious, innovative, productive and self-reliant. Their ability to observe, adapt and utilise and renew resources from within their home environments reflects sustainability. Indeed, it reflects the contention that 'true development grows out of people's own input – thinking, struggles, experiences, and hard work.' For PNG, public CAP is a decision-making tool to facilitate, educate, nurture, encourage and create a framework for sustainable development. Through participation, stakeholders are more likely to plant the seeds for sustainable development because 'true development is something that grows from within' (Schoell, 1994). Complementary to public CAP is the assessment of capacity and vulnerability of the country. These tools are essential to improving internal capacity and risk minimisation for developing and implementing sustainable development programmes. In the long term, both seek to enhance the overall sustainable development process in small developing states.

CAP experience in PNG

The period 1992–94 witnessed a high level of participation by stakeholders to support the government in formulating a framework for sustainable development. The University of PNG (UPNG), by providing technical expertise and a discussion forum, played an active role in facilitating public CAP to discuss sustainable development as a potential strategy for development in PNG. The formal discussions involving all stakeholders covered seven main themes: (a) revitalising growth with sustainability (b) sustainable living and health (c) human settlements (d) efficient resource use (e) managing chemicals and waste (f) people participation and responsibility, and (g) essential means. All participants had something to discuss at this forum which made their participation meaningful.

However, the level of participation experienced in this process at the the 20th Waigani Seminar represents only an isolated case where public consultation was relatively high. This

experience has since been repeated in a limited way regarding strategy formulation on national issues. In PNG there are few legal and institutional arrangements for multi-stakeholder group CAP. Public CAP is largely discretionary. Multinational corporations and the government (as a shareholder) facilitate, fund and sponsor public CAP in natural resource projects. It is difficult for this form of 'sponsored' participation to yield lasting solutions. Further, under the Mining Act 1992 public consultation and participation is mandatory only during the negotiation stages in mining projects, after which landowners sign away their resource rights and remain passive observers for the rest of the project life.

Similarly, the Environment Act 2000 provides for public hearings on all issues surrounding resource projects prior to signing agreements and issuing licences. In both cases, there is low level consultation and participation. This nature of participation in PNG serves as a rubber stamp for project approval, unlike in Western democracies where public CAP is a powerful tool for community advocacy. CAP of landowners in project development is an isolated and one-off activity. Developers often use Acts of Parliament designed to facilitate project development to thwart landowner demands for more consultation regarding generated environmental and socio-economic impacts and benefit distribution. The multi-sectoral and multi-dimensional nature of sustainable development inevitably requires multi-stakeholder group CAP. This has been problematic in PNG.

Towards the creation of a NSDS

The 20th Waigani Seminar¹ at the UPNG followed the Post Rio Seminar in 1993 titled 'Environment and Development: From Rio to Rai'² that led to the:

- Recommendations for a NSDS in 1993;
- Drafting of PNG's NSDS in 1994;
- Endorsement of the NSDS in 1994;
- Creation of the National Task Force on Sustainable Development in 1994; and
- The establishment of a National Commission for Sustainable Development in 1994.

The 20th Waigani Seminar fulfilled one of the core principles of sustainable development in providing stakeholder CAP. All sectors of society were invited to participate in the 20th Waigani Seminar including representatives from districts, provinces, the private sector, non-government organisations (NGOs), churches, industry, academics, policy-makers and politicians. This provided a great sense of ownership and the stage to convince the government to redefine development in a sustainable format. Subsequently, the Commission for Sustainable Development and the National Task Force on Sustainable Development were created and housed within the Prime Minister's Department by 1994.

However, the development of the institutional capacity to advise government, another key principle of sustainable development, was relatively limited after the endorsement of the NSDS in 1994. Between 1995 and 2002 constant changes to the political and institutional leadership impacted upon the government's capacity to operationalise the NSDS. There were three different governments in this period and the country witnessed a great deal of institutional change as the respective governments sought to place their own people in key positions.

Despite these constraints, the government of the day adapted the first Medium Term Development Strategy (MTDS) 1997–2002 describing it as the ‘Bridge into the 21st Century’. The MTDS reflected key elements of previous plans including infrastructure development and, in particular, transport infrastructure as a precondition to accelerate economic growth.

The MTDS recognised private sector-led economic growth as the engine for broad-based social and economic development. Although environmental sustainability and sustainable development featured in a limited way in the MTDS, no programme was designed to promote sustainable development apart from the stalled NSDS of 1994. Despite these shortcomings, there were some isolated but positive developments in favour of sustainable development including: the MTDS 1997–2002; the PNG Human Development Report 1999; and the National Poverty Reduction Strategy 2001.

In 2002, the incoming government announced the Programme for Recovery and Development (PRD). The government wanted to maintain continuity from previous programmes such as those initiated under the MTDS 1997–2002 and that were reflected in the PRD including: export-driven economic growth; rural intervention and poverty reduction; and good governance. However, by 2002 there was no specific attempt by the government to revitalise the NSDS process despite the Millennium Declarations and the resultant Millennium Development Goals (MDGs) at the United Nations in New York two years earlier.

The current MTDS 2005–10 was adopted by the government in November 2004. It reflects elements of the previous MTDS and also repeats notable discrepancies. It seeks economic growth through private sector development to support its export-driven economic growth, and the ‘green revolution’ objective targeting agricultural production, rehabilitation of transport infrastructure, health care, education and poverty reduction.

The MTDS 2005–10 was formulated despite limited consultation between its advocates in the Department of National Planning and Monitoring (DNPM) and the 19 provinces which are home to 80 per cent of the total population. The four regional workshops held prior to drafting the current MTDS involved province-based public servants. This was further hampered by limited grassroots CAP. This significantly reduced any opportunities or avenues for meaningful participation of local people to become part of the design and implementation process.

The limited consultation continuously impinges upon the capacity to form effective partnership between key architects of the MTDS and the intended beneficiaries. This scenario equally applies to an NSDS. The Central Agencies Coordination Committee (CACC)³ oversaw the drafting and implementation of the current MTDS but without first realising that the advice to the CACC from the DNPM was contrary to facilitating partnerships between all stakeholders.

Further, ‘environmental sustainability’ which is a major component of sustainable development did not feature in the MTDS 2005–10. By early 2007, the MTDS was already facing implementation problems despite the allocation of K650 million under the second Supplementary Budget handed down in August 2006. The Third Supplementary Budget passed in March 2007 allocated K600m to the prime minister’s home province with only K50m going to the remaining 18 provinces. This exemplifies the inherent risks in government pri-

orities and underlies the capacity constraints discussed in linking development with expenditure priorities.

Creating a national sustainable development strategy

The spirit of sustainability is acknowledged in PNG's Constitution through the Five National Goals and in particular the Fourth Goal. The Fourth Goal states:

'We declare our Fourth Goal to be for Papua New Guinea's natural resources and environment to be conserved and used for the collective benefit of us all and are replenished for the benefit of future generations.'

Enshrined in the definition of the Fourth Goal is the vision of sustainability. The other Five Goals are reflected in Agenda 21, The Johannesburg Plan of Implementation (JPOI), Mauritius Strategy and the Pacific Plan. Indeed, through the Fourth Goal sustainable development was declared as a national objective under the PNG Constitution – 12 years before the publication of the Brundtland Report (1987) which defined sustainable development for the global audience. This implies that sustainable development in PNG is not entirely a new concept. What is perhaps new is the language with which sustainable development is being communicated to the people of PNG and the way in which the government seeks to re-define development in sustainability terms.

While the 20th Waigani Seminar set the pace for introducing and drafting the PNG NSDS in 1994, the NSDS lacked the political and institutional support necessary to drive it. The experience in PNG shows that the operational aspect of any national sustainable development framework requires political will and institutional capacity to implement the NSDS. Foremost, the presence of a core group of committed personnel is required in key planning agencies such as the DNPM. Similarly it is necessary to have a group of politicians in government to champion the cause for an NSDS. Further, the absence of a sustainable development branch in the DNPM makes the NSDS agenda 'homeless'. Unless these gaps in the institutional system are filled, PNG's quest for creating and implementing a NSDS will continue to be problematic.

Although the MTDS 2005–10 attempts to incorporate the Five Goals into its operational strategy, one of the significant differences between the MTDS and the Five National Goals, Agenda 21, JPOI, the Mauritius Strategy, and Pacific Plan 2006 is the failure of the PNG government (through the DNPM) to consider 'environmental sustainability' as one of the pillars of sustainable development. Adopting the sustainable development framework can add value to the efforts of the national government to promote the MTDS or an equivalent. It is therefore imperative for the government either to review the current MTDS in an effort to strengthen its capacity for promoting sustainable development or to develop a national framework for sustainable development.

Constraints and risks in creating and implementing a NSDS

In small developing states, the outcome of an NSDS is contingent upon the social, political, economic, and cultural environment in which it is created and implemented. Several critical issues in PNG continue to make the planning and implementation process vulner-

able to internal bureaucratic wrangling and political influence. Five major constraints and risks challenging PNG's efforts to create and implement a successful NSDS or its equivalent are briefly described.

The first lies with PNG's 'strategic planning' process and lack of conviction about the notion of sustainability and strategy development. Despite the decentralised nature of the planning process, strategic planning is dominated by the DNPM. The DNPM has incorporated the principles of sustainability in a limited way with the concept itself featuring relatively less prominently amongst strategic planners at DNPM. This is clearly demonstrated by the content of the MTDS 2005–10 in which 'environmental sustainability' failed to feature as a core strategic objective of the MTDS. Consequently, PNG has witnessed limited success in achieving both domestic and internationally agreed objectives of Agenda 21, the Millennium Development Goals, and the JPOI.

Good governance is the second critical factor in creating and implementing an NSDS. Transparency in decision-making, accountability in financial management, professionalism in the workplace, taking responsibility for decisions, respect for the rule of law, and respect for professional advice are key elements of good governance. However, fulfilling the requirements for good governance in PNG remains a major issue despite the widespread use of the term (Nita, 2006; Piest and Velasquez, 2003). The creation of an NSDS, including its successful implementation, will continue to face difficulties without first addressing the critical governance issue.

Political stability remains an important precondition for creating, implementing and monitoring sustainable development initiatives. This is the third major risk PNG faces. Stability in government is necessary to achieve medium and long-term sustainable development goals but is often upset when frequent cabinet reshuffles introduce new ministers with new priorities. For example, the DNPM has had seven different ministers between 2002 and 2007.

The fourth major constraint or risk experienced in PNG is the lack of capacity of national institutions for creating, implementing, monitoring and reporting sustainable development initiatives. There are limitations in capacity within line agencies (horizontal) and sub-national governments (vertical) to support sustainable development. Effective inter-agency linkages remain central to capacity building but the prevalent lack of inter-agency linkages to co-ordinate policy development and implementation remains a testimony to the overall institutional weakness in PNG.

Corruption is the fifth constraint and risk factor inhibiting progress with sustainable development. To eradicate corruption, there are various initiatives of the government designed to strengthen the role of the Ombudsman Commission, the Auditor General's Office, and the Public Accounts Committee (PAC) which indicate the resolve of governments to improve PNG's capacity to effectively deal with corruption.

Enabling environment

A sound political and institutional decision-making environment is imperative to enhance capacity to create and implement sustainable development policies in PNG. Parliament and

hence the National Executive Council (NEC) remain the highest decision-making bodies in the country. The DNPM remains the nerve centre for the government's planning and budgetary processes but not without internal capacity constraints. All sectoral and provincial plans enter the national planning, monitoring and selection process at the DNPM. Furthermore, all foreign aid (both grants and loans) enters the country via the DNPM before being disbursed through the annual budgetary process, the Public Investment Programme (PIP) cycle or directly into prioritised recurrent costs. However, the DNPM relies on other agencies in the bureaucratic system to input sectoral plans and budgets into the decision-making process. The information provided by sectoral agencies is valuable in devising policies to pursue sustainable development goals and to designing an NSDS.

The MTDS 2005–10 was developed through the process described above. The DNPM drafted the MTDS for the medium term in consultation with key government agencies as well as with the wider community and donor partners. However, most government agencies were not exposed to the significance and value of incorporating the sustainable development principles into their respective sectoral priorities. Consequently, the state agencies and provincial governments have been unable effectively to promote the sustainable development message within state agencies and at sub-national and local levels.

In most cases, the working relationship between the DNPM and the provincial governments is less conducive for creating and implementing an NSDS. Despite the passage of the Organic Law on Provincial and Local-level Government (OLPLLG) in 1995 to facilitate 'bottom-up' planning, it is, in practice, difficult to implement projects at the provincial level.

The MTDS (and NSDS) have obviously suffered given the existing tension between the DNPM and respective provinces. It is important to consult and guide both leaders and policy-makers at the provincial and national levels about their roles and responsibilities in designing and implementing an NSDS. Successful design and implementation requires integration, co-operation and co-ordination between key line agencies (horizontally) and between different levels of government (vertically). It may imply delegating some key functions to other agencies but the co-ordination rests with the DNPM, including universities, to monitor and evaluate the progress of implementation.

Further, the capacity for an efficient working relationship between the key agencies (horizontal) has not always been sound. The NEC and DNPM have established ad hoc structures for co-ordinating national strategy processes. The CACC is remote from the realities of needs for sustainable development at the provincial and local levels. The CACC, Consultative Implementation and Monitoring Council (CIMC), or their equivalent, should be properly defined in terms of its role and responsibilities for sustainable development.

In addition, there is often a conflict of interest between line agencies. Their roles and responsibilities are compartmentalised in ways that constrain the process of complementing and supporting MTDS and/or NSDS between and within sectors. Both the MTDS and NSDS deal with many cross-cutting priority issues which often require inter-agency commitment. In PNG, this has caused problems. For example, the DEC is responsible for environmental impact monitoring in resource projects which require co-ordination and collaboration between the DEC and agencies implementing resource development projects, e.g. mining.

The Mining Department views its role as a developer while it views the role of the DEC as an environmental manager. The perceived, yet contrasting views of these key agencies make inter-agency linkages difficult.

Inter-agency linkages

JPOI recognises the significance of promoting and establishing better integration between cross-cutting issues under a sustainable development framework. This is another principle of sustainable development. Cross-cutting issues seeking sustainable solutions in PNG include poverty, gender equality, environment protection, HIV-AIDS and health, unemployment, and education. Establishing and promoting inter-agency linkages between key government agencies dealing with the cross-cutting issues helps to reduce the risks of policy failure.

Both a synergistic and co-ordinated approach is essential in PNG to facilitate inter-agency co-operation for a 'more cost-effective, negotiated decision-making, planning and implementation' of policies. The MTDS 2005–10 recognises the significance of developing better co-ordination between the three tiers of government but it is limited in its practical application. The MTDS does not prescribe specific mechanisms effectively to integrate policies and to co-ordinate the country's institutional mechanisms including laws, work culture, civil society and NGOs in implementing sustainable development initiatives. Improved co-ordination of sustainable development activities at these levels and between line agencies can reduce inadvertent gaps and conflicts between policies and strategies and between different elements of governance.

In this context, the Central Agencies Coordination Committee (CACC) and the Consultative Implementation and Monitoring Council (CIMC) in PNG's case have a key role in co-ordinating and integrating cross-cutting policies both at the level of central government agencies and between these agencies and provincial governments. The functions of the CACC and CIMC are complementary; but both tend to be more focused on issues in the capital city, Port Moresby, rather than in the provinces, for there is little statutory provision to define their roles and responsibilities. This makes them operate as ad hoc agencies in their tasks in overseeing the implementation of the MTDS and related matters. The roles and responsibilities of the CACC and the CIMC need to be redefined and strengthened to achieve inter-agency co-ordination for creating and successfully implementing of sustainable development strategies. Effective inter-agency co-ordination and linkages can reduce the risks of policy failure through the inadequacies of the formal roles of public agencies. But this function of co-ordination needs to be statutorily defined.

Outcomes and means of implementation

The positive outcomes from sustainable development interventions depend on effective implementation. Implementation in turn depends on effective institutional, financial and human resource capacities.

Sustainable development indicators provide useful tools to measure, evaluate and report on the implementation of key sectoral programmes. However, the MTDS 2002–10 does not have its own set of indicators reflecting PNG's social, economic, environmental and

cultural specificities. PNG-specific indicators, together with the MDG indicators, should include institutional and subsistence indicators reflecting PNG's 80 per cent rural-based population. The underdeveloped nature of PNG-specific indicators meant that the MTDS 2005–10 adopted the MDG indicators at national level without modification. Furthermore, there is relatively little monitoring by the DNPM using indicators on a cross-sectoral basis and with provincial governments. The indicators contained in the MTDS need to be expanded in order to help cover the specific economic, social, institutional, cultural, political and environmental issues. If this were done, it would, indeed, assist decision-makers in Waigani and elsewhere to decide on the next level of sustainable development intervention.

It is not unfair to argue that the government's monitoring and evaluation system is underdeveloped to monitor and evaluate performance indicators. Moreover, the reporting mechanism of the CACC, CIMC and DNPM, to provide information to decision-makers on emerging trends, needs to be significantly improved. Both these weaknesses emerge as significant impediments and highlight capacity constraints to supporting decision-making for sustainable development.

Lessons from the PNG experience

The important lessons emerging from the discussion on assessing the capacity and risks for creating and implementing an NSDS are four-fold. First is the limited capacity of governments for achieving sustainable development through the MTDS. The commitment of governments to sustainable development is evident from international obligations and in national priorities set out in the MTDS. But capacity for implementation is constrained within the PNG process of governance and institutions, which lack effective integration of sustainable development within the mainstream of long-term policy formulation and implementation at national and at local levels. The benefit of future generations defines the horizon for an NSDS which goes way beyond the scope of a five-year MTDS.

Second is the need to strengthen the current MTDS through a rigorous review process. The review process should involve consultation involving all stakeholders, especially peripheral government agencies and rural communities. The process should establish a long-term framework for allowing local input into the planning process. The review process should highlight planning deficiencies at all levels including the DNPM, capacity constraints in various agencies and recommend appropriate capacity building initiatives. Integration of 'environmental sustainability' into the list of government priorities is not an option but is essential for economic growth, social progress and environmental protection.

Third is the absence of a sustainable development branch in the DNPM for the design and evaluation of an NSDS. The DNPM is the natural home of the NSDS but its homelessness is a major constraint to creating an NSDS and its effective co-ordination and implementation.

Fourth, the creation of an NSDS is essential for progress with development in PNG. The long-term NSDS process that began earnestly and ended in 1994 needs to be revitalised with a series of medium-term plans (MTDS) directed towards achieving an NSDS. Mid-term

review processes are necessary to identify capacity constraints and minimise identified risks which may affect the effective co-ordination and implementation of an NSDS. Policy-makers at the DNPM should take responsibility for sustainable development by accelerating the pace for designing, implementing and co-ordinating an NSDS.

Finally, a comprehensive methodology for assessing strategic planning in the government system is highly desirable to drive the review process. A review methodology is required to analyse the planning personnel and planning process in the DNPM, sectoral agencies and in provincial governments. An appropriate methodology specifically designed to appraise the strategic planning process at the DNPM and elsewhere should enhance the planning capacity at all levels which may, in the long term, reduce political and bureaucratic risks.

Conclusion

Creating a sustainable development strategy for PNG remains a 'No Regrets Option' for the long term and is a must. The creation of an NSDS does not stop the government developing and reviewing and implementing the MTDS. Planning officials at the DNPM should realise the complementary roles that the NSDS and the MTDS can play in promoting sustainable development. The MTDS remain the appropriate driver of an NSDS but the latter is yet to be designed, continually updated and implemented.

So far this discussion reveals serious capacity constraints within PNG's institutional and governance systems. The inherent capacity issues give rise to risks in creating, co-ordinating and implementing sustainable development programmes. An NSDS will experience similar risks currently faced by the MTDS should the capacity issues raised be ignored. It is the role of the government to enhance capacity within its planning, monitoring and implementation system as a precondition for creating and implementing a national framework for sustainable development.

References

- Brodhag, C and S Taliere (2005). 'Sustainable development strategies: Tools for policy coherence'. *Natural Resource Forum* 30 (2): pp. 136–145.
- Cornwall, A (2003). 'Whose voices? Whose choices? Reflections in gender and participatory development'. *World Development* 31 (8): pp. 1325–1342.
- George and Kirkpatrick (2006). 'Assessing national sustainable development strategies: Strengthening the links to operational policy'. *Natural Resource Forum* 30 (2): pp. 146–156.
- Harding, R (ed.) (1998) *Environmental Decision-making: The Roles of Scientists, Engineers and the Public*, The Federated Press. Sydney.
- Melnick, D, J McNeely, Y Navarro, G Schmidt-Traub, and R Sears (2005). 'Environment and Human Well-being: A Practical Strategy'. *Summary Version*. UN Millennium Project. Task Force on Environmental Sustainability. New York.
- Morrissey, O (1995). 'Political commitment, institutional capacity and tax reform in Tanzania'. *World Development* 23 (4): pp. 637–649.

- Nita, A (2006). 'Papua New Guinea National Assessment Report: Towards a Framework or Sustainable Development'. UNDESA, CSD. New York.
- Piest, U and J Velasquez (2003). *Environmental Governance in Papua New Guinea: Inter-linkages: Synergies and coordination among Multilateral Environmental Agreements*. UN, University. Japan.
- Polidano, M (2000). 'Measuring Public Sector Capacity'. *World Development* 28 (5) pp. 805–822.
- Saulei, S, A Faiteli, B Manoka, D Mowbray, E Kwa (2002). *Papua New Guinea National Assessment Review: Response to Rio and Agenda 21*. Prepared for the WSSD. University of PNG.
- Schoell, Hans-Martin (1994). *Development and Environment in Papua New Guinea: An Overview*. Goroka, Papua New Guinea: The Melanesian Institute.
- Silveria, Mary Pat (2006). 'Introduction: National sustainable development strategies: Moving from theory to practice'. *Natural Resource Forum* 30 (2): pp. 86–99.
- Tameo, S (2004). 'PNG's National Assessment Report on the Further Implementation of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States'. Port Moresby.
- UNDP (2004). 'Papua New Guinea Millennium Development Goals Progress Report 2004'. Port Moresby.
- United Nations (2002). 'Report of the World Summit on Sustainable Development'. Johannesburg, South Africa, 26 August–4 September, 2002.
- Woods, N (2000). 'The Challenge of good governance for the IMF and the World Bank Themselves'. *World Development* 28. (5): pp. 823–841.

Notes

- 1 The Waigani Seminar is a biannual seminar series held at the UPNG and sponsored by the government, development partners including donors, the private sector and NGOs.
- 2 From Rio in Brazil to Rai, a village along the Rai Coast in Madang Province in PNG.
- 3 The CACC is made up of all Departmental Heads with the Chief Secretary as Head of the CACC.

Tighe Geoghegan¹

Claiming a voice in sustainable development: Participation and bottom-up approaches

This chapter discusses the role of citizen participation in sustainable development. It examines the contribution of various forms and levels of participation in achieving sustainable development. It explores some of the impediments to mainstreaming citizen participation in sustainable development, and reviews approaches that have been effectively used to overcome these obstacles.

Why does sustainable development require participation?

Major international statements on sustainable development over the past twenty years have commonly called for the participation of all sectors of society in national development processes (Box 3.1 below). While the rhetoric about participation has been accompanied by some encouraging changes in both policy and practice, the rationale, value, and requirements for more participatory and democratic processes of development are still only partially accepted, maybe poorly understood, and the mainstreaming of participation remains a distant goal. Failure to understand and address the many structural, cultural, economic, political, institutional and attitudinal obstacles to the participation of different sectors of society in development may be a major reason why progress towards a more sustainable future has been so limited and halting. In order to begin to make participation in sustainable development a reality, it is first necessary to be clear on why, how, by whom and on whose terms participation occurs.

Box 3.1. International and regional statements on participation relevant to small states **Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States, 2005:**

... there is a need for strengthened cooperation and partnership in support of sustainable development of small island developing States at the national, regional and international levels. Such partnership should be broad-based and ensure the involvement and participation of relevant stakeholders. (Clause 3)

The Strategy also calls for the participation of youth (clause 14), women (15), civil society (74) and the private sector (88).

Johannesburg Declaration on Sustainable Development, 2002:

We recognise that sustainable development requires a long-term perspective

and broad-based participation in policy formulation, decision-making and implementation at all levels. (Clause 26)

All countries should ... promote public participation, including through measures that provide access to information regarding legislation, regulations, activities, policies and programmes. They should also foster full public participation in sustainable development policy formulation and implementation. (Clause 164)

Barbados Programme of Action for the Sustainable Development of Small Island Developing States:

Critical to the effective implementation of the objectives, policies and mechanisms agreed to by Governments in all programme areas of Agenda 21 will be the commitment and genuine involvement of all social groups. New participatory approaches to policy-making and implementation of sustainable development programmes will be necessary at all levels. In that regard, there is a special role for groups that include women, youth, senior citizens, indigenous people and local communities, as well as the private sector, labour and non-governmental organizations. As stated in Agenda 21, one of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making. (Clause 71)

Mahé Programme of Action for African SIDS, 1998:

African SIDS have primary responsibility for their sustainable development and in so doing should involve the active participation of all major groups, including women, children and youth, indigenous people and their communities, non-governmental organizations, local authorities, workers, trade unions, business and industry, the scientific and technology community and farmers. (Section XVI)

St. George's Declaration of Principles for Environmental Sustainability in the OECS, 2006 revision:

The Member States of the OECS share a vision of development that is based on the principles of sustainability, stakeholder participation, equity and justice; that protects and enhances livelihoods; that reduces vulnerability to risk, stresses and shocks; that brings people out of poverty; and that results in improvement in the quality of life for all.

By 2010 Member States commit themselves to [a]cknowledging, in policy and action, and making appropriate provision for, the *meaningful and informed participation of civil society, local governments and administrations and the private sector* as managers and decision-makers.

Sustainable development requires fundamental changes in the way the earth's assets are allocated, managed and used. Although poverty is sometimes blamed for degradation and over-exploitation, these are often the result of decisions made by powerful economic and political actors. The structures, policies and systems perpetuating the status quo are deep-

seated, complex, and thus resistant to technical fixes. Bringing those who are affected by these structures, but who are often silent, into the negotiations required to bring about change, is a first step in from the commitment to sustainability becoming a reality. (Borrini-Feyerabend et al., 2004: 342).

The comprehensive nature of sustainable development – the sum of many actions at every level of human activity – also demands the participation of all sectors of society (Dalal-Clayton and Bass, 2002: 177). Participatory approaches bring in a variety of perspectives, information, ideas and values, and provide arenas for identifying potential synergies and conflicts and negotiating partnerships and trade-offs. Such processes can help overcome a tendency to emphasise sustainable development's managerial and technical aspects, which can result in 'intellectual constructs of bureaucratic and professional analysts' rather than fundamental change driven by the priorities and needs of society (Dalal-Clayton and Bass, 2002: 117). Involving all those who have an interest in or who are likely to be affected by decisions and management actions (often referred to as *stakeholders*) can also strengthen institutions and capacities for sustainable development (Dalal-Clayton and Bass, 2002: 178–179; Geoghegan et al., 2004: 4). Participation is therefore not only an integral component of sustainable development, but also can be the primary driver of the changes that it engenders.

What does broad-based participation mean?

While seeking the full participation of all members of society may be impractical, the prevailing practice of limiting participation to the major civil society, private sector and government actors can reinforce structures perpetuating inequitable policies and unsustainable practices.

Individuals have a diversity of stakes in sustainable development, which reflect the impact of sustainable practices on their economic activities, daily routines, resource consumption patterns, health of themselves and their families, options for personal advancement, recreational activities, and other aspects of their lives. Because of these different stakes, people cannot be neatly separated into a particular 'stakeholder group', although that is what many approaches to participation, especially those driven by themes or specific events, try to do. People are essentially asked to choose whether to be represented as, for example, a 'woman' or a 'conservationist' or a 'commercial resource user'. Not only does this approach oversimplify the complexity of people's multiple identities, it may also reflect the lobbying efforts of interest groups, reinforcing inequities and excluding the voices of the most marginalised.

The problem can be compounded by the absence or weakness of institutionalised forms of governance that allow for citizens regularly to participate in decision-making on matters that affect their interests. While representative democracy, where it exists, offers citizens voice and accountability, power plays at least an equal role in political decision-making, and the needs and interests of the poor and weak tend to be least well-served (World Bank, 2001: 112–114). Local government appears to many people to offer a more promising avenue for institutionalised citizen participation. Local Agenda 21 is a global programme,

begun in 1991, to work towards sustainable development through local structures of government. At their best, these initiatives have promoted broadly inclusive processes of consultation on sustainable development issues and priorities, and translated these into concrete local actions (Dalal-Clayton and Bass, 2002: 64). To date, however, most success has been in industrialised rather than in developing countries, where local government tends to be less autonomous and power structures that exclude the poor are likely to replicate themselves through the successive layers of government (e.g., Crook, 2003). In small developing states, particularly, local government can be absent or weak.

On the other hand, it can be misleading to talk about stakeholders being excluded from participating in development. Even the poorest and most marginalised people manoeuvre constantly to pursue their interests, even if the only means available are manipulation or resistance (White, 1996). The aim of participation is to create avenues for more open and constructive ways of influencing development processes and outcomes.

The challenge, therefore, is not so much to identify ‘what groups’ should participate as to find practical ways of incorporating, on a continuing basis, the diverse and multiple views, needs, interests, values, ideas and talents represented by each individual and by the various institutions, groups, networks and communities of which she or he is part.

What constitutes meaningful participation?

Much has been written on the different ways in which the term participation is used and understood (e.g. Rahnema, 1992; Dalal-Clayton and Bass, 2002: 178–185). In Table 3.1 the forms of ‘participation’ found in a survey of over 200 development projects are ordered along a continuum from passive listening to active involvement. These distinctions illustrate that sometimes what is termed participation offers participants no role except to listen, to provide information or to react to decisions already made. The amount of stakeholder involvement in sustainable development plans is necessarily variable as scale increases from

Table 3.1. Levels of participation in policy processes

1	<i>Participants listening only</i> – receiving information from a government public relations campaign or open database.
2	<i>Participants listening and giving information</i> – through public inquiries, media activities.
3	<i>Participants being consulted</i> – through working groups and meetings held to discuss policy.
4	<i>Participation in analysis and agenda-setting</i> – through multi-stakeholder groups, round tables and commissions.
5	<i>Participation in reaching consensus on the main strategy elements</i> – through national round tables, parliamentary and select committees and conflict mediation.
6	<i>Participants directly involved in final decision-making on the policy, strategy or its components</i> through direct participation or representation in planning and decision-making bodies.

Source: Adapted from Bass et al. 1995

local to national, and direct involvement of all affected parties is rarely possible even for local decisions. Nevertheless, for participation to be meaningful to all, it should at least offer fair and adequate representation of a wide range of stakeholder interests and concerns, channels for two-way communication, and the opportunity to contribute to decisions.

Who should lead participatory processes?

It is generally assumed that the state will take the lead in creating the structures for participation and co-ordinating the involvement of different sectors of society in processes of sustainable development. However, the reality is more complex, and while the state generally does play a central role in creating the structures for citizen participation, leadership is also occurring, and must occur, on a range of levels.

The role of the state

Regardless of the type of government it embodies, the state has a crucial role in creating the enabling environment for participation and is the legitimate leader of national public policy processes on sustainable development. However, the state cannot mandate participation or unilaterally set its terms. States have attributes that can actually impede participation: these include vested interests opposed to participation and entrenched attitudes and institutions that are adverse to change. State-led participatory processes have also been derailed by the dominance of public agencies with their own agendas and lack of follow-up to agreements and decisions (Vordzorgbe, 2002). As governments progressively employ the rhetoric and establish the institutions for participation, they need to be mindful of the more fundamental changes and commitments that participation implies.

Civil society and participatory processes

Civil society, including NGOs, community organisations, private sector associations, churches and labour organisations, is also an important facilitator of participation, and particularly the participation of the poor and the socially and politically marginalised. Organisations that represent stakeholder interests, whether those of women, farmers, big business, micro-entrepreneurs or citizens generally, can create a link between individuals and governments and a channel through which the interests of their constituents can be broadcast. Equally importantly, they can also help people organise in response to government policies and actions that are not in their interests. However, civil society organisations can also misrepresent or homogenise people's interests. Their most useful roles, therefore, are in organising participatory processes and communicating their results, rather than being proxies for groups of stakeholders.

Challenging unsustainable policies and initiatives through grassroots participation

Many sustainable development initiatives occur at the community or 'grassroots' level. Significantly, some of the most innovative and effective grassroots efforts have evolved out of a sense of marginalisation, through opposition to state plans or resistance, often in the face

of considerable government hostility (Massol González et al., 2006; Renard, 2005). An important lesson from these experiences is that citizens and communities can and do take responsibility on issues of sustainable development even when governments and their policies fail to be supportive or are even antagonistic, and when civil society institutions fail to adequately represent their interests. In fact, given the powerful forces perpetuating the unsustainable practices that contribute to continuing poverty and insecurity, progress towards a more sustainable world may be driven more by the sum of individual grassroots initiatives such as the one described in Box 3.2 than by the international agreements and national strategies that capture the headlines.

Box 3.2. A grassroots approach to sustainable development

In June 2000, a group of citizens in the village of Toco in north-eastern Trinidad and Tobago were surprised to discover that a large area of the village had been earmarked, through negotiations between the government and a group of developers, for a major infrastructural project including a ferry port, oil bunkering facilities, marina, and cruise ship terminal. Much private land, including the heart of the village, was to be acquired through eminent domain. While it was widely agreed that the area needed development opportunities, most residents preferred those that would protect and enhance the many natural and cultural assets of the area. The plan that was being negotiated did not fit that mould.

Following a meeting with the developers that confirmed their concerns, the group called a press conference and invited the public to attend. At that meeting, over 100 members of the community came out in opposition to the port plan, and appointed a committee to organise a local response, including the preparation of an alternative development plan that would allow for the sustainable development of Toco and the surrounding region and respect the interests and desires of the local population.

The way in which the government port plan was prepared and the inadequacy of the plan itself to meet local development needs, meant that the counter-plan had to be developed with the full involvement of stakeholders, in order to demonstrate its greater legitimacy. A participatory process also offered an opportunity to create a shared vision of development for all the communities in the area.

The method that was used to identify options, negotiate alternatives, and develop the plan included the following steps:

- a first round of formal consultations in each affected village
- informal consultations wherever and whenever possible
- incremental synthesis of the information coming from the consultations
- development of a draft plan
- a second round of community consultations to present and refine the draft plan
- a presentation of the revised plan at a public meeting for all the communities covered by the plan, to seek local endorsement and present it to the political directorate, and

- a final meeting in the capital city to present the plan to the country and get wider input.

The group spearheading the initiative put substantial early effort in mobilising residents and gathering and sharing information. By the time the actual planning process began, the local population was well aware of the issues and ready to be involved. The committee also employed media events such as a radio call-in programme to mobilise and inform the larger Trinidadian community.

This spontaneous grassroots initiative forced the government to cancel the original port development plans and to consider instead the community's alternative plan.

*Adapted from Geoghegan et al. (2004: 32–34)

Institutional capacity for participation

Just as institutions, whether of the state, civil society, private sector or community, require skills, knowledge and resources to perform their technical functions, they require capacities and orientations to effectively lead or take a role in participatory processes. These include a world view and institutional culture that are accepting of participation, structures and strategies that enable it, and skills and material resources to operationalise it. Building such capacities requires a conscious and sustained effort over time (Krishnarayan et al., 2002), starting with the recognition that institutional change is needed and that the skills and resources for engaging in participatory processes differ from those required for other aspects of governance and management. Capacity-building is a never-ending process since capacity is context-specific; changing conditions or relationships will require new forms of capacity and approaches to working effectively with others.

Basic principles of participation

Before considering methods for mainstreaming participation into processes of sustainable development, it is useful to consider some basic principles that have emerged out of experience over the past two decades:

The right to participate includes the right to negotiate objectives and outcomes.

Participation is constrained if participants have no legal or social standing in the decision-making process. Such standing can come through legal rights to the land or resources at issue or formal participation in a decision-making body that has such rights, or through laws providing citizens with the right to participate in matters affecting their economic or social well-being. Forms of consultation such as public hearings may be ineffective when they carry no obligation to take the ideas and opinions expressed into account (Dalal-Clayton and Bass, 2002: 179).

Participation in development decisions is increasingly characterised as a basic human right (Pettit and Wheeler, 2005). Some countries have signed laws or regional agreements guaranteeing broad rights to participate. For example, Bolivia's 1995 Popular Participation Law introduced decentralisation to the municipal level to increase public involvement in polit-

ical decisions. While these decentralised decision-making processes have largely been captured by local elites aligned to the main national parties, the law nonetheless represents an important step in establishing the need for a legal grounding for participation (Dalal-Clayton and Bass, 2002: 203).

Other initiatives to establish legal rights to participation have worked through international agreements such as the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (known as the Aarhus Convention), established by the United Nations Economic Committee on Europe in 1998. It has since been signed by 40 countries and by the European Union. The Convention 'grants the public rights and imposes on Parties and public authorities obligations regarding access to information and public participation and access to justice' (UNECE 2007).

Small states have also provided formal guarantees of the right to participate. A revision of the St. George's Declaration of Principles for Environmental Sustainability, accepted by Member States of the Organisation of Eastern Caribbean States in 2007, commits each state to making 'appropriate provision for the meaningful and informed participation of civil society, local governments and administrations and the private sector as managers and decision-makers' in matters related to environmental sustainability (Organisation of Eastern Caribbean States, 2006: 11).

Stakeholders in participatory processes need adequate information, negotiating skill, and the willingness and time to be involved.

The inadequacy and poor quality of many participatory processes often stems from a tendency of lead actors, particularly governments and donors, to approach sustainable development as a 'project' rather than a process, and tie it to rigid timeframes and outputs that turn participation into just another deliverable. Inadequate attention to building the capacity of stakeholders to participate effectively, insufficient time for stakeholders to prepare and poor dissemination of information needed for decision-making are commonly cited obstacles to effective participation. Establishing trust and building frameworks for participation require a significant time investment, for example up to five years to plan and implement the mechanisms and processes for participation in national strategies aimed at mainstreaming sustainable development (Dalal-Clayton and Bass, 2002: 195).

Even when adequate time and effort are invested in mobilising stakeholders and providing them with information to assess issues and form opinions, high levels of participation are not guaranteed. People must make choices about how to spend their time and resources. For many stakeholders, such as poor women with family responsibilities, these choices are quite constrained. Participatory processes can put demands on people that they cannot meet. It is therefore important that organisers seek to understand the underlying reasons for low participation and find creative ways to overcome them.

Stakeholders and their interests change over time.

While allowing adequate time for processes to develop is crucial, situations, and the ways in which they affect people, change constantly. One danger of institutionalising participatory processes too rigidly is that they can become 'stuck' on issues and groups of actors and fail to identify new issues, stakeholders and relationships that may be emerging.

Participation requires confronting power and marginalisation and accepting the possibility of conflict.

Sustainable development implies giving a voice to poor stakeholders, who have little influence over normal political processes, and to those whose positions are unpopular and therefore tend to be outvoted in those processes, while ensuring a level of equity among competing interest groups. This means offering spaces in which different stakeholders feel comfortable to make substantive contributions. Initiators of participatory processes generally exert considerable control over decisions such as who participates, to what degree and on what terms, and by so doing can constrain undesirable participants and levels of participation. The selection of methods can also favour some stakeholders and exclude others. For example, methods that involve large amounts of written material exclude the non-literate, while those based on frequent meetings can exclude people with conflicting time commitments. The result is often a decline in participation over time. As power relations establish themselves in participatory forums, less powerful and more nonconformist stakeholders may drop out, although it may outwardly appear that participation is continuing (White, 1996: 149).

It is not unusual in participatory processes for entire groups of stakeholders to be overlooked because of cultural or social biases that relegate them to insignificance; this is the case for women in many parts of the world, as well as for people from minority ethnic or religious groups.

When the institutions of participation do welcome all stakeholders and offer space for the less powerful, conflict is inevitable, as stakeholders assert their rights and challenge the status quo. In fact, 'the absence of conflict [in participatory processes] is something that should raise our suspicions' (White, 1996: 155).

The reasons different stakeholders choose to be involved in participatory processes can vary substantially (White, 1996). Governments and international agencies may use participation to legitimise their agendas, while those they seek to involve would necessarily have other motivations. In grassroots initiatives, some may use participation to show strength through numbers, while others are motivated by personal interests. Thus beneath the surface, individual motives and power relations are always in play, even as the institutions of participation may be working to equalise power and achieve consensus.

Participation in policy processes requires linkages and feedback loops from local to national.

In many countries, including a number of small states, participation has become embedded in local development institutions and planning practices. More recently, the focus has shifted to participation in national policy processes (Pimbert, 2004: 3). This scaling up has proven difficult, even for small states. Unless approaches tailored to this larger scale are employed, the number of people directly and deeply involved will decrease as the scale increases. This may be acceptable if the interests of stakeholders are adequately represented and have weight in the decisions and policies that emerge. National Sustainable Development Councils, established in many countries in the decade following Rio, may offer a vehicle for this; however, their effectiveness as stakeholder forums has so far been limited.

Box 3.3. National Sustainable Development Councils

Creation of National Sustainable Development Councils (NSDCs) is one approach to operationalising the commitments to stakeholder participation made in global sustainable development forums. Although there is no single template, the main objectives of most of these councils have been to bring major stakeholder groups together to assist in development decision-making and policy formulation. The structure would appear to be well-suited to small states where it is possible to identify most major stakeholder groups and accommodate representatives within a single council. Although considerable international support has been devoted to the establishment of NSDCs since Rio, their effectiveness as vehicles for stakeholder input into sustainable development planning and decision-making has not yet been substantial.

NSDCs were established in six Caribbean states (Barbados, British Virgin Islands, Dominica, Grenada, Jamaica, and St. Lucia) through UNDP's Capacity 21 programme in the mid-1990s. Only Grenada's has continued to function, and although its membership encompasses representatives of most sectors of society and it has contributed to government policy and decisions, particularly regarding its international commitments to sustainable development, it has not fundamentally changed national decision-making structures in favour of greater citizen participation (Rosenberg and Thomas, 2005). In contrast to the Caribbean, most small African states have successfully established NSDCs, but they mainly serve to co-ordinate the efforts of different ministries and statutory bodies, and representation of non-governmental actors is very limited. There are for example no representatives of farmers on the NSDCs of any African country (Economic Commission for Africa, 2005: 31–32).

In summary, experience over the past ten years seems to indicate that NSDCs may play a useful role in co-ordinating inputs to national sustainable development strategies from key partners or in contributing to an improved understanding of sustainable development issues, but they have not yet proven effective as mechanisms for stakeholder consultation and participation in decision-making.

References cited:

Economic Commission for Africa, 2005. *National Sustainable Development Councils in Africa: A Review of Institutions and Their Functioning*. Addis Ababa: ECA Printshop.

Rosenberg, J and LS Thomas, 2005. Participating or just talking? Sustainable Development Councils and the implementation of Agenda 21. *Global Environment* 5(2): 61–87.

Decentralised or multi-dimensional structures of governance also enable the interests of the majority to be negotiated 'upward' from local to national, and then fed back down for implementation or renegotiation. While such processes can simply channel local inequities upwards, they at least provide the possibility of broad participation and limit the potential of capture by powerful national or international actors.

The form participation takes should fit the larger social and political context.

In developing countries, the values, processes and structures underpinning sustainable development initiatives may be heavily influenced by donors and international agencies, sometimes conflicting with the local agenda or context and thus impeding eventual mainstreaming. This is particularly true of participatory processes in countries where the avenues through which citizens normally participate are different from those in donor countries. For example, external agencies may view an absence of national NGOs as a sign of weak civil society, and overlook vibrant local institutions. The ways in which citizens participate in government also vary and may not always conform to western or other models and norms (for example the 'bottom-up' consultation models employed by countries such as Cuba and Vietnam), but be locally legitimate nonetheless (Dalal-Clayton and Bass, 2002:181).

In some contexts, multi-stakeholder participation in decision-making is not socially acceptable or culturally appropriate. Such situations may require very different approaches, not necessarily apparent to outsiders, for integrating the needs and interests of all of society without undermining or threatening entrenched social hierarchies and norms; such approaches have, for example, been employed to involve women in societies where they have no 'official' role in political decision-making. Finally, there are situations, for example under totalitarian rule, in which the political or cultural context is hostile to even indirect forms of stakeholder participation in decision-making. In these cases, external support can be important to grassroots or civil society resistance.

A glance at methods and approaches

A vast literature exists on methods for effective participation, bringing with it a multiplicity of sometimes bewildering acronyms. The main sets of methods that have gained prominence over the past twenty years can be broadly categorised as follows:

- *Participatory learning and appraisal*: This group, which includes the widely used set of tools known as Participatory Rural Appraisal, or PRA, aims at incorporating stakeholders in building the information base required to address problems that have been pre-identified, and, increasingly, to contribute to the analysis of issues.
- *Stakeholder analysis*: These methods support the identification of stakeholders and analysis of their interests, as necessary steps in the participatory process. They are helpful in assessing who should be involved and how, and what their stakes are.
- *Participatory planning and conflict management*: These approaches bring stakeholders together to plan and negotiate on issues that affect their lives or livelihoods.

These approaches have largely been tested and refined at local levels. As the scale of participatory processes has increased to regional, national and even international levels, new methods are emerging. There has been particular interest in a set of approaches referred to as *deliberate and inclusive processes*, or DIPs. These methods seek to assure the full and considered involvement of a diversity of social actors in determining policy needs and directions. They include tools such as visioning exercises, multi-criteria analysis, and citizen panels, which give representatives of major interest groups a substantive role in policy

processes. Their scope can be expanded through techniques such as radio call-in programmes, community consultations, and opinion surveys.²

Whatever methods are used should be effective in eliciting information and stimulating dialogue on sustainable development issues and needs. The information and perceptions that participatory processes can uncover can be organised into the following typology:³

- *Priorities*: What aspects of sustainability are most important to what groups? What have the greatest impacts on people's well-being and livelihoods and on the economy?
- *Problems*: Where do the priorities and interests of different groups create conflicts that must be negotiated to achieve sustainable outcomes?
- *Power*: What are the relations among different groups that impede equitable access or sustainable use of natural resources? Whose interests have precedence in existing decision-making processes and whose are overlooked?
- *Potentials*: What capacities can different groups bring to the process of sustainable development? How can those capacities be strengthened and put to most effective use? What are the roles and responsibilities of various actors, and how might they be redistributed to ensure more equity and create real opportunities for participation?
- *Partnerships*: Who is already doing what and how can the efforts of all be most effectively marshalled and organised?

Small states and participation

While making participation an integral part of national development depends on political will and the distribution of power within society, small states may be appropriate sites for learning about mainstreaming participation and scaling it up to national levels. Size may give small states an advantage in implementing participatory processes, particularly at national level, given shorter physical distances separating stakeholders, more frequent interaction between local and national levels of governance, and dense social networks in which 'everybody seems to know everybody'.

There are also a number of factors that may affect the rationale and form of participation in small states. For example, the capacity within agencies responsible for sustainable development is likely to be limited and staff must necessarily be generalists. It therefore becomes necessary to draw on knowledge and expertise from outside government to address complex problems of sustainable development.

Small states are particularly vulnerable to shocks including global market volatility, environmental change and disasters. Change, and the need to adapt to change, may thus be a more frequent issue for small states than larger ones, requiring regular processes of collective decision-making and negotiation among stakeholders. While participation cannot decrease the vulnerability of small states to external shocks, it can help build their resilience.

Small states negotiate participation at multinational levels differently than larger states. While often disadvantaged and even marginalised in global processes, most small states are

parts of regional or global groupings that can enable them to represent the interests of their stakeholders at international forums on sustainable development. However, doing so requires the development of effective co-operation mechanisms, civil society networks, and structures for communicating and disseminating information.

Conclusion

Securing meaningful stakeholder participation is essential for achieving the vision of sustainable development now shared by nearly all countries, large and small. Attention to process is crucial, and much effort has gone into developing and disseminating appropriate methods and approaches. Actors at different levels have also shown their commitment. Governments have enacted policies and ratified international agreements supporting people's right to participate. Civil society organisations have played leadership roles in mobilising stakeholders and facilitating their participation. Impressive grassroots initiatives have demonstrated that people are prepared to act on issues of sustainable development even when they are discouraged from doing so. However, while there have been local level successes, broad-based participation of all sectors of society in national or regional processes has proven difficult to achieve. The essential challenge remaining is to confront and overcome entrenched attitudes, institutions and power relations that impede the effective mainstreaming of participation in processes of sustainable development.

References⁴

- Bass, S (2000). 'Participation in the Caribbean: a review of Grenada's forest policy process'. *Policy That Works for Forests and People* no. 10. London: International Institute for Environment and Development.
<http://www.iied.org/pubs/pdf/full/7559IIED.pdf>.
- *Bass, S, B Dalal-Clayton and J Pretty (1995). 'Participation in strategies for sustainable development'. *Environment Planning Issues* No. 7, May 1995. London: International Institute for Environment and Development.
<http://www.poptel.org.uk/iied/docs/spa/epi7.pdf>
- *Borrini-Feyerabend, G, M Pimbert, MT Farvar, A Kothari and Y Renard (2004). *Sharing Power: Learning by Doing in Co-Management of Natural Resources throughout the World*. International Institute for Environment and Development and IUCN Commission on Environmental, Economic and Social Policy, Collaborative Management Working Group. Tehran: Cenesta. http://www.iapad.org/sharing_power.htm
- Crook, RC (2003). 'Decentralisation and poverty reduction in Africa: the politics of local-central relations'. *Public Administration and Development* 23: 77–88.
- *Dalal-Clayton, B and S Bass, compilers (2002). *Sustainable Development Strategies: A Resource Book*. Paris: Organisation for Economic Co-operation and Development and New York: United Nations Development Programme.
- *Geoghegan, T, Y Renard and N Brown (2004). 'Guidelines for participatory planning: a manual for Caribbean natural resource managers and planners'. *CANARI Guidelines Series 4*. Laventille, Trinidad: Caribbean Natural Resources Institute.
- *Krishnarayan, V, T Geoghegan and Y Renard (2002). 'Assessing capacity for

- participatory natural resource management'. *CANARI Guidelines Series 3*. Laventille, Trinidad: Caribbean Natural Resources Institute.
- Massol González, A, E González, A Massol Deyá, T Deyá Díaz and T Geoghegan (2006). Bosque del Pueblo, Puerto Rico: 'How a fight to stop a mine ended up changing forest policy from the bottom up'. *Policy That Works for Forests and People* no. 12. London: International Institute for Environment and Development.
<http://www.iied.org/pubs/pdf/full/13503IIED.pdf>
- Organisation of Eastern Caribbean States (2006). *St. George's Declaration of Principles for Environmental Sustainability in the OECS* (2006 Revision). Castries, St. Lucia: OECS.
- Pettit, J and J Wheeler (2005). 'Developing rights? Relating discourse to context and practice'. *IDS Bulletin* 36 (1): 1–8. Brighton: Institute of Development Studies.
- Pimbert, M (2004). *Institutionalising Participation and People-centered Processes in Natural Resource Management: Research and Publications Highlights*. London: International Institute for Environment and Development and Brighton: Institute of Development Studies. <http://www.iied.org/pubs/pdf/full/9444IIED.pdf>
- *Pimbert, M and T Wakeford, eds. (2001). 'Deliberative democracy and citizen empowerment'. *PLA Notes* 40. London: International Institute for Environment and Development. http://www.iied.org/NR/agbioliv/pla_notes/pla_backissues/40.html
- *Pretty, JN, I Gujit, J Thompson and I Scoones (1995). *A Trainer's Guide for Participatory Learning and Action*. London: International Institute for Environment and Development.
- Rahnema, M (1992). 'Participation'. pp. 116–131 in W Sachs, ed. *The Development Dictionary*. London: Zed Books.
- *Ramírez, R (1999). 'Stakeholder analysis and conflict management'. pp. 101–126 in D Buckles, ed. *Cultivating Peace: Conflict and Collaboration in Natural Resource Management*. Ottawa: International Development Research Centre.
- *Renard, Y (2004). 'Guidelines for stakeholder identification and analysis: a manual for Caribbean natural resource managers and planners'. *CANARI Guidelines Series 5*. Laventille, Trinidad: Caribbean Natural Resources Institute.
<http://www.canari.org/Guidelines5.pdf>
- Renard, Y (2005). 'The sea is our garden: Coastal resource management and local governance in the Caribbean'. pp. 152–179 in S Bass, H Reid, D Satterthwaite and P Steele, eds. *Reducing Poverty and Sustaining the Environment: the Politics of Local Engagement*. London and Sterling, VA: Earthscan Publications Limited.
- UNECE (2007). Introducing the Aarhus Convention. <http://www.unece.org/env/pp/>
- Vordzorgbe, SD (2002). Linking national and local sustainable development: issues and capacity development implications based on the Ghanaian experience. Presentation at the World Summit on Sustainable Development Prepcom IV Bali, Indonesia, 27 May 2002.
- White, SC (1996). 'Depoliticising development: the uses and abuses of participation'. *Development in Practice* 6 (1): 6–15.
- World Bank (2001). *The World Development Report 2000/2001: Attacking Poverty*. New York: Oxford University Press.

Notes

- 1 The author acknowledges with thanks the comments and suggestions of the following reviewers of this draft: Steve Bass, Nicole Brown, Vijay Krishnarayan, Yves Renard, and three anonymous reviewers.
- 2 For a comprehensive overview of participatory learning and appraisal, see Pretty et al. (1995). Good references on stakeholder analysis include Ramírez (1999) and Renard (2004). On participatory planning and conflict management, see Geoghegan et al. (2004) and Ramírez (1999). For more on DIPs, see Pimbert and Wakeford (2001) and Borrini-Feyerabend et al. (2004: 393–407). For an example of an inclusive participatory policy process in the small state of Grenada, see Bass (2000).
- 3 The typology, developed by the author, synthesises the uses of participation found in a range of works including Bass et al. (1995) and Geoghegan et al. (2004).
- 4 Starred references can provide further information and guidance on the theory and practice of participation in processes of sustainable development.

A practical integrated framework for mainstreaming

Introduction

The failure to link policy, planning and budgeting is often the single most important cause of poor development outcomes in developing countries. The Pacific Island Leaders have endorsed two separate frameworks to help address the challenge of national development. The first is through co-ordinated domestic and development partner resources; the second is through national sustainable development strategy (NSDS) and ecosystem-based management (EBM) frameworks. Strengthening of NSDS has been promoted as part of improving national planning and budgetary processes, while EBM has been promoted as part of efforts for resource and environmental conservation. The Leaders have also endorsed the Forum Eight Principles of Good Governance. One of the core principles of this is the use of medium-term expenditure framework (MTEF) for allocation of domestic resources to priority policy areas. Countries have made efforts to implement these, usually independently, a result of which is the continued concern about the countries' abilities systematically to develop and implement development strategies and effectively to use limited domestic resources and development partner support to produce development outcomes.

This chapter argues that to achieve the desired outcomes for sustainable development using limited domestic resources, and those of development partners, Forum Island Countries (FICs) should adopt a systems approach to national development, underpinned by an integration of NSDS, EBM and MTEF. The chapter presents a practical methodology based on such an integrated framework for developing and resourcing prioritised national development strategies. It focuses on the FICs' challenge of mainstreaming, in their development process, key values concerning human rights, democracy, sustainable development and good governance, which have been endorsed in their international and regional commitments. The use of an integration of NSDS, EBM and MTEF in the planning and budgeting processes can also help countries to get in the driver's seat and engage with development partners using their outcome-focused, prioritised and costed NSDS-linked sectoral plans.

This chapter looks at how countries in the Pacific region have addressed the mainstreaming of sustainable development through the use of regional approaches and national sustainable development strategies. The chapter starts by examining the ecosystem-based management framework and how this can be used to guide analysis of interaction between ecological, social, human and economic factors. This is followed by an exploration of the processes involved in formulating national sustainable development strategies. The next two sections look at the framework and methodology for integrating NSDS, EBM, and MTEF.

The experiences of Pacific small states at the regional and country levels in utilising these approaches are then analysed.

Ecosystem-based management framework

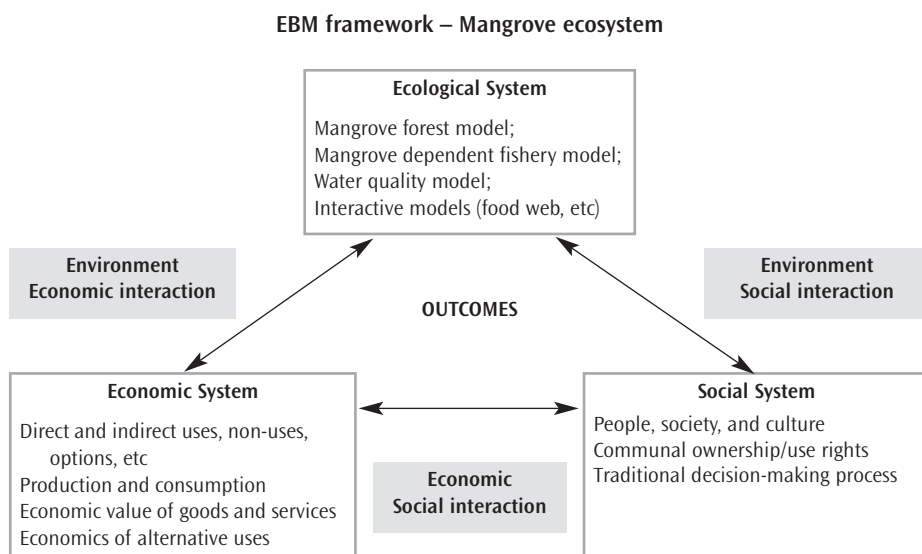
To design appropriate strategies specific to a sector or theme, ideally one would identify technical dimensions of the underlying ecological, economic and social subsystems as well as connectivity between them. Underlying causes of management issues and root causes of a symptom would be teased out, taking into account human behaviour. Figure 4.1 on the mangrove ecosystem illustrates the sectoral and cross-sectoral effects of human activities necessary for a sound technical and scientific understanding of the dynamics of subsystems and interactions between them.

The use of an EBM framework will guide analysis of ecological, social, human and economic interactions, and their effects on management issues, including:

- a Analysis of subsystems and connectivity,
- b Analysis of positive and negative effects of sectoral activities across other sectors, and
- c Analysis of key economic, social, institutional, capacity and other constraints, in achieving specific sectoral objectives and related national development goals.

Information to be collected and analysed under EBM covers economic and social characteristics of a community and the social, economic and environmental interactions. Depending on the theme under consideration, one may need to draw on expertise and analytical understanding based on different disciplines.

Figure 4.1. EBM framework – Dynamics within and between ecological, social and market subsystems



Source: Authors

The ecosystem-based management framework can help understand root causes as well as define appropriate response strategies summarised in strategic action plans. Root causes of a problem may differ from immediate causes of concern. Thus, for example, suppose there is a concern about excessive mangrove harvesting. The problem may not be solved by intervention to reduce the over-harvesting, if the root cause is the unclear customary property rights over the inter-tidal areas and thus customary resource owners are not able to assert their property rights and prevent the mangroves from being harvested from their fishing rights areas.

Taking an EBM approach when addressing thematic concerns and problems, appropriate strategies and related initiatives can then be identified in relation to root causes rather than the symptoms. The programme of initiatives can then be identified for each strategy with prioritised programmes designed to achieve the desired outcomes. These will be brought together in the Action Plan, ensuring these are grounded in the best scientific and traditional knowledge about the dynamics and connectivities within and between the ecological, economic and social systems. This will assist the design process including getting the incentives right. The design of these action plans will be guided by national development goals: the outcome of the NSDS-linked action plans will be determined by the effectiveness of domestic and donor resources.

Where a plan exists, links between the existing national development goals and strategies and sectoral objectives and strategies should be made explicit; this was recently completed for the Education Sector in Tuvalu (Table 4.1).

Outcome-focused management strategies, including policy formulation, and initiatives in a sectoral action plan would then have explicit links to the national development goals

Table 4.1. Education: ‘Strategy’ re-categorised to better reflect expected outcomes/outputs

Objective 5: Strengthen partnerships and develop a culture of working together

Subheading	Activity	Sub-activity
Strengthening partnerships	Public, private and community partnerships	Strengthen strong partnerships and networks with the private sector, NGOs and local communities to undertake stakeholder-based planning and policy development, curriculum development and to support Education for All teaching and learning.
		Strengthen the partnerships with Falekaupule and Kaupule to help achieve quality and cost-effective Education for All goals.
	Regional and international partnerships	Strengthen regional and international partnerships, consistent with the Pacific Plan, to support Tuvalu’s efforts to achieve their quality Education For All goals (technical and financial support) in a co-ordinated and harmonised manner.

articulated in the NSDS. These would then be prioritised, costed and then used in the national budget allocation process. The NSDS-EBM linked, prioritised and costed sector plans would also form the platform for negotiating development partner support to complement their own national development efforts, thus targeting external aid towards their priority issues.

Recent experiences in the region demonstrate that NSDS-EBM-based planning and budgetary processes can help to not only increase the transparent allocation of domestic resources but also to increase aid effectiveness, as has recently been experienced in, for example, Tuvalu and Vanuatu (Box 4.1).

Box 4.1. NSDS-EBM-based planning processes in Tuvalu and Vanuatu

1 Tuvalu – Health and education sector prioritisation and donor co-ordination, Pacific Islands Forum Secretariat (PIFS)

Tuvalu recently took steps to increase the effectiveness of their engagement with donor partners with the support of PIFS. This initiative helped the Department of Education and Health to explicitly link their sector plans and strategies to their Kakeega II (NSDS). The joint PIFS-Tuvalu Health and Education Sector Teams subsequently produced a prioritised list of activities and strategies for urgent attention in the short to medium term (2008–2010).

As a result of this initiative the Tuvalu Government for the first time in three years was able to get a commitment from Australia and New Zealand during 2007 July donor roundtable to support their key education priorities. Australia also provided indicative support for key priorities under the health sector, even though the health sector was not listed as a priority area for Australia's bilateral support to Tuvalu. By developing a prioritised list of activities for the health sector together with the respective justification for the priorities, it was possible for the Tuvalu Government to argue, and the donors to see, the relevance of financial support under their fiscal management category of bilateral support.

At the donor roundtable, Australia and NZ in particular came forward with their support for the priorities identified by the government and asked for concept notes on each of the initiatives, and with an indicative cost (outlining assumptions, etc.). During a follow-up meeting with AusAID and NZAid, the programme of priorities identified for 2008 have all been given in principle support, with at least three initiatives identified as 'early wins'.

2 Vanuatu – DRM Partnership (SOPAC, PIFS, UNDP)

Vanuatu recently produced the Prioritised Action Agenda (PAA – Vanuatu's NSDS), a linked prioritised sector plan for disaster risk management, with the assistance of SOPAC, PIFS, and UNDP. They also developed a supplementary PAA to reflect the DRM goal, and helped produce an indicative medium-term budget for the DRM plan.

This process has helped them to strengthen their inter-departmental decision-making processes regarding cross-cutting disaster risk management and adopt the NSDS decision-making process outlined above. The government has already started using the Cabinet approved PAA-NAP to make some strategic decisions about institutional arrangements for DRM and to allocate their domestic resources for priority initiatives. For example, in June

2007 the government decided to establish a disaster risk reduction and disaster management Project Management Unit (PMU) within the Prime Minister's Office. They also agreed in principle to allocate 24.7 Million VT to meet the cost of the DRM entity pending the review of options paper on the establishment of the Disaster Risk Management entity (DRM entity). These were the highest priority initiatives identified in the NAP.

They are also using the PAA-NAP together with the medium-term costings to engage with donors in a co-ordinated manner. The Government of Vanuatu is now able to engage with donors to also seek financial and technical support for the priority initiatives highlighted for implementation in 2007–2008 in an appropriately sequenced manner.

Source: PIFS paper to PPAC (Pacific Plan Action Committee)

The EBM approach focuses on designing resource and environmental management policies, strategies and institutions based on a sound understanding of the dynamics of ecological, social and economic subsystems, as well as temporal and spatial dimensions of the complex interactions between environment and human activities, environmental sustainability, and adaptability and accountability of management. The guiding principles of the ecosystem-based management approach, promoted by technical agencies and sectoral line ministries, are essentially similar to those under the NSDS processes: partnerships and citizen participation; long-term view; and a comprehensive perspective of supporting economic prosperity, lasting livelihoods, and ecological health and sustainability. EBM also emphasises the science-based approach that accepts humans as an integral part of the ecosystem. Key elements of the ecosystem-based management are essentially similar to those under the NSDS processes (Box 4.2).

Box 4.2. Key elements of Ecosystem-based Management Framework

- **Ecological systems understanding:** Recognising that change and evolution are inherent in ecosystem sustainability, ecosystem management avoids attempts to freeze ecosystems in a particular state of configuration.
- **Humans as ecosystem components:** Ecosystem management values the active role of humans in achieving sustainable management goals.
- **Context and scale:** Ecosystem processes operate over a wide range of spatial and temporal scales, and their behaviour at any given location is greatly affected by surrounding systems. Management has to adjust to these requirements as there is no single appropriate scale or timeframe for management relevant to all ecosystems.
- **Connectedness:** Ecosystem management recognises that biological diversity and structural complexity strengthen ecosystems against disturbance and supply the genetic resources necessary to adapt to long-term change.
- **Adaptability and accountability:** Ecosystem management acknowledges that current knowledge and paradigms of ecosystem functions are provisional, incomplete, and subject to change. Management approaches must be viewed as hypotheses to be tested by research and monitoring programmes.

Source: Ecological Society of America 2005 'Principles of Ecosystem based Management' and 'Overview of Ecosystem Based Management'

National sustainable development strategies

A national sustainable development strategy (NSDS) is defined as, ‘... a participatory and cyclical process of planning and action to achieve economic, ecological and social objectives in a balanced and integrated manner’ (Dalal-Clayton et al., 1994). Further, it is regarded as ‘a co-ordinated set of participatory and continuously improving processes of analysis, debate, capacity-strengthening, planning and investment, which integrates economic, social and environmental objectives of society, seeking trade-offs where this is not possible’. (OECD, 2001.)

Adopting NSDS would mean (adapted from Dalal-Clayton and Bass, 2002:29), countries have, amongst other things, to :

- move away from centralised and controlled decision-making towards a process which is **participatory** and involves all relevant stakeholders in a concerted effort and in a transparent negotiation process;
- move from a focus on outputs (projects, legislation, plan) towards a **focus on systems and outcomes** (impacts) on people, and on the quality of participation and the management process;
- move from sectoral planning towards an **integrated ‘holistic’ planning**;
- move towards a medium-term fiscal framework linked to medium-term sector costing and sector budget submissions; and
- move towards development partner support, complementing national efforts and national resources, towards a high priority programme of initiatives.

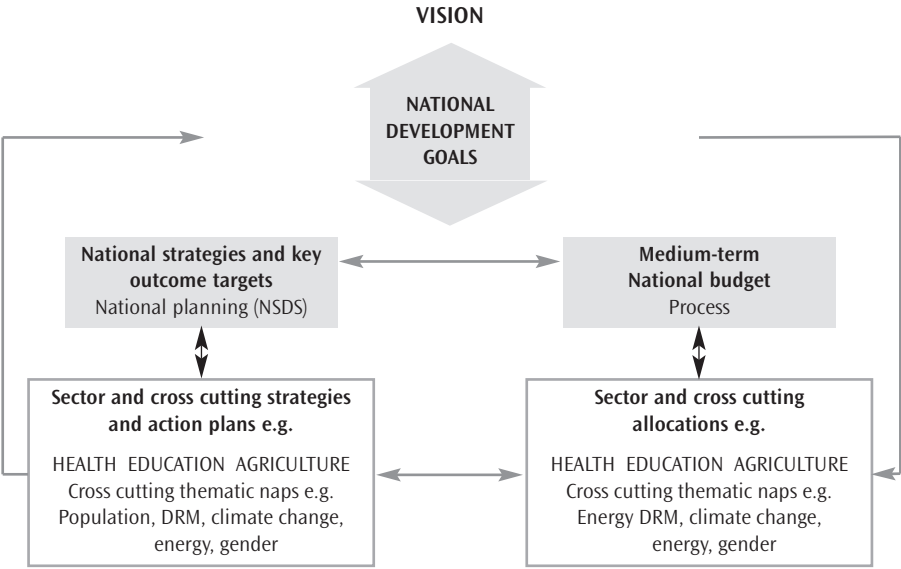
There are essentially three key components of the NSDS framework: first, a stakeholder-based national visioning and the development of a national development plan; second, a national development plan with linked and prioritised sectoral plans; and third the use of national and linked sectoral plans to allocate domestic and development partner resources, within the medium-term fiscal management framework. (Figure 4.2)

The OECD’s Joint Venture on ‘Managing for Development Results’ working definition of development outcomes refer to observable behavioural, institutional and societal changes that take place over the medium term (3 to 10 years), usually as a result of co-ordinated set of investment in the development of individual and organisational capacity of key development stakeholders.

Amongst the critical processes identified to produce an NSDS are:

- political process – strong commitment is obtained from all levels of government, from national bi-partisan political leaders to local level authorities and leaders;
- technical process – NSDS formulation is based on assessment of the economic, social and environmental situation, identifying problems, setting clear priorities and developing investment programmes, and monitoring and evaluation; and
- resource mobilisation – domestic and development partner resources are available for feasible strategies linked to the national development goals (UNDESA, 2002:23).

Figure 4.2. Key components of the NSDS process: visioning; national and sectoral planning and budgeting and resource allocation



NSDS-EBM-MTEF framework-based development

To achieve the desired development outcomes and make effective use of domestic and development partner resources, Pacific Leaders have called for strengthening of NSDS- based planning and resource allocation processes. At the practical level, NSDS strengthening would include adopting a systems approach, mainstreaming key values, custom and sustainable development and good governance principles at all levels of decision-making, national, provincial and local, and the use of linked national and sectoral plans, policies and priorities for the allocation of domestic and development partner resources.

Defining mainstreaming

Mainstreaming in its simplest form can be seen as a process of including or integrating an idea into strategic interventions at national, sectoral, community and individual levels.

At a more practical level, in the context of national development mainstreaming is about integrating core values and principles into national vision and national development goals as well as using them to guide sectoral, thematic, and local level strategies and activities aimed at addressing national development goals.

At the highest level – national development – mainstreaming can be seen as translating peoples’ beliefs and values about things such as democracy, basic human rights, and culture into a national vision; and then translating that vision into a development framework and development plan. The regional vision includes concepts that can be regarded as societal values and some aspects of the Leaders’ Vision are what could be regarded as goals – of peace, harmony, security, freedom, economic prosperity; while others can be seen as guiding

principles – principles of sustainable development, good governance, gender equity, medium-term fiscal management and performance-based budget allocation. Mainstreaming is also about operationalising international commitments, which all emphasise the principles of good governance for sustainable development, including:

- a balanced focus on the elements of sustainable development – economic wellbeing, environmental conservation, social harmony;
- improving the wellbeing of people through a programmatic whole of country approach;
- the use of market-based financial instruments together with a command and control approach including legislation to address environmental problems; and
- adopting a participatory method to improve integrated decision-making processes and environmental governance at all levels.

Mainstreaming values, goals and principles can be achieved using the integrated NSDS-EBM framework. The NSDS-EBM development framework can be divided into three, albeit closely linked, components:

- **Mainstreaming at the national plan level** – Stakeholder-based national development planning process, mainstreaming core fundamental values and principles that societies want to live by to meet their needs and aspirations.
- **Mainstreaming at the sector and cross sector level** – NSDS-linked EBM-based sectoral planning and prioritisation processes, based on the mainstreaming principles of sustainable development, good governance, and incentive-based management.
- **Mainstreaming at the budget level** – Including sustainable development concerns in the budgetary process through medium-term prioritised sectoral budget and links to development partner supported programmes.

Mainstreaming at the national plan level

A nationally owned vision of the type of society people want to live in defines the basic foundation of national development, as well as individual action. A stakeholder-based NSDS process should ideally involve the country producing such a vision. A country's national plan should articulate the national vision and core principles that the stakeholders have agreed to live by. The stakeholders should also collectively mainstream the broad values and principles to define development goals and priorities and broad policies, recognising their natural resource endowments, capacity and social, economic, environmental and political context. This is also where countries reflect considerations of international and regional commitments in their national development plans (Figure 4.3).

Thus, for example, the Cook Islands 2003 national forum arrived at their national vision, which was then translated into 'Living the Cook Islands Vision – a 2020 Challenge' – a 15-year visionary framework that provides guidance for the realisation of the long term hopes and dreams of the people. It incorporated national values and principles that the stakeholders hold dear and articulates the expected strategic outcome of their *Te Kaveinga Nui* journey. These are then translated into eight strategic goals, and their associated specific strategies to achieve those goals (Table 4.2).

Figure 4.3. Mainstreaming and national development framework

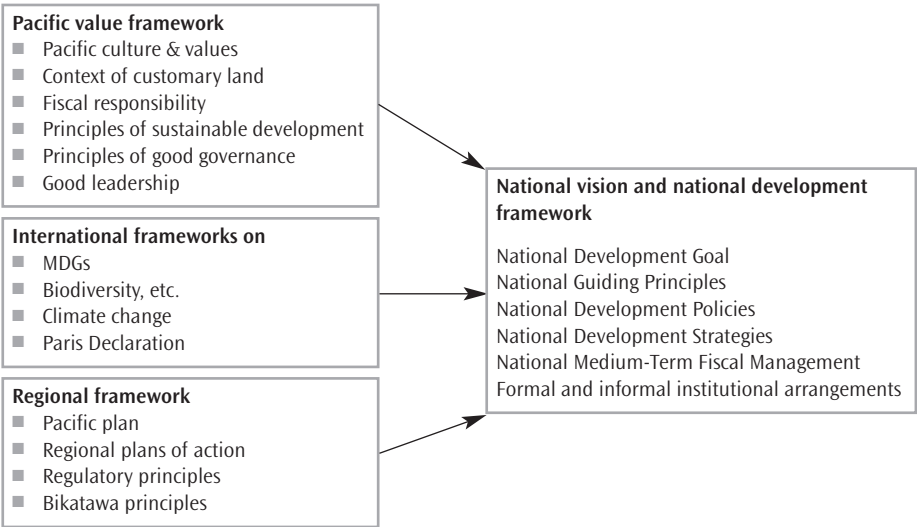


Table 4.2. Long-term development framework and linked national sustainable development plan mainstreaming national values, and desired outcomes – the Cook Islands example

Living the Cook Islands Vision – a 2020 Challenge

To enjoy the highest quality of life consistent with the aspirations of our people, and in harmony with our culture and environment.

Outcomes:

- Well educated, healthy and productive people and resilient communities;
- A secure society built on law and order, and good governance;
- Sustainable economic growth in harmony with our social values, culture and environment;
- Responsible and mature foreign relations with New Zealand and other regional and international communities in the interest of the people of the Cook Islands;
- Enhanced cultural and environmental values.

National Sustainable Development Plan (NSDP) 2007–10

Objective: to build a sustainable future that meets our economic and social needs without compromising prudent economic management, environment integrity, social stability, and our Cook Islands Maori culture, and the needs of future generations.

Strategic Goals:

- Equal opportunities for education, health, and other social services towards maintaining an inclusive and vibrant, resilient and productive society in harmony with our culture;
- A society built on law and order and good governance at all levels;
- Innovative and well-managed private-sector-led economy;
- Sustainable use and management of our environment and natural resources;
- A strong basic infrastructure base to support national development;
- A safe, secure and resilient community;
- A foreign affairs policy that meets the needs and aspiration of the Cook Islands people;
- Strengthened national co-ordination and institutional support systems for development planning, evaluation and monitoring.

Mainstreaming at the sector level

At the sectoral and individual decision-maker level, mainstreaming is about operationalising the national vision, national development goals and guiding principles, as well as putting into practice commitments made in international and regional instruments to achieve desired outcomes. In the sector plans, the links between national development goals and national policies and sectoral plans, strategies and initiatives will be made clear; the cross-sectoral linkages and interactions fully captured; institutional co-ordination of initiatives and actions across sectors will be made clear and the linkage between national priorities, sector priorities and desired outcomes will be made explicit. Essentially, all stakeholders will adopt results-based management centred around the notion of causality and the connectivity between activities and results (outputs, outcomes and impacts) (The World Bank and OECD-DAC, 2006).

To develop outcome-focused plans, stakeholders need a change in their thinking, and a change in approach used to develop strategic policies and plans at the national and sub-national levels. Such changes are required at all levels of planning and decision-making – national, local, provincial, communal, sectoral, programme and project. The decisions themselves would need to be more data and information reliant to ensure that all parties are informed of the current situations, the current pressures, the implications of changes, and the criteria that will guide the outcomes of decisions toward the long-term objectives. Where a sector plan needs to be developed from scratch, this can be done using a NSDS-EBM framework, linking NDG with sector goals and desired outcomes with specific strategies.

National budget process

Countries are gradually moving towards medium-term expenditure frameworks (MTEF) with the help of international financial institutes such as the World Bank, ADB and IMF. The Forum Economic Ministers in 1997 endorsed the Eight Principles of fiscal accountability, including the multi-year expenditure framework. Principles of sound budgeting captured in the budgeting framework and the Forum's Good Governance Principles of national fiscal management include legitimacy, reflecting government's policies and priorities; discipline; predictability; transparency; accountability; and competitive procurement (Forum Economic Ministers, 1997).

Key features of the MTEF include: medium-term fiscal policy; and a medium-term planning framework for strategies and policies such as sectoral policies that take into account the available domestic and development partner resources (Abbott, 2007). The MTEF process involves having developed a systematic forecasting of revenue and debts and available domestic and external resources, and using this to allocate resources to the sector level based on policies and development targets, including MDGs.

FIC governments have gone part-way towards implementing these principles. Where a medium-term budget framework has been adopted, government efforts, with the support of development partners such as ADB and PFTAC, have generally focused on strengthening finance ministries' ability to produce three-year forecasts and projections of government's revenue and annual expenditure, based on previous spending. Greater emphasis has been

placed on macro-level fiscal management and a rolling, three-to-five year fiscal management framework. These have led to some changes in fiscal management and improvements in transparency and accountability in countries such as Samoa, Vanuatu and Tuvalu.

However, in the actual implementation and management, the performance-based budget system falls short of the expected elements of performance budgeting. In almost all countries, the weakest aspect is the link between national and sectoral policies and programmes. Sectoral programme costings are input based rather than outcome based, and sectoral budget submissions are also individual activity based rather than using programme budgets as advocated under the MTEF. This reflects the fact that sector plans are often designed from the perspective of activities and inputs rather than outcomes and key strategies are often not prioritised nor costed. If they are costed, as has been the case with Tuvalu's Education Sector Plan, the costings are input based rather than outcome focused, which then also means that the annual budget submissions remain input based, and only loosely related to sector goals and national development goals.

Furthermore, in the absence of prioritised and programmatic sectoral plans, development partner support has generally been piecemeal and project based, rather than the programmatic longer term funding advocated under the Pacific Aid Effectiveness Principles. The OECD and the World Bank have advocated the use of the 'managing for development results' (MfDR) concept for development assistance. The MfDR concept argues that to make development assistance more effective, there is a need for enhancing country ownership; aligning assistance with country priorities; harmonising development policies and procedures and focusing on development outcomes (World Bank and OECD-DAC, 2006). Despite the presence of aid co-ordinating committees, countries also face difficulties in co-ordinating development partner support to complement national efforts. From the country perspective, aid effectiveness cannot be improved without countries having NSDS-linked sector priorities and a medium-term sector budget linked to their NSDS-linked medium-term national budget and without using these as the platform for engaging with development partners.

NSDS-EBM-MTEF-based development methodology

Expanding on the NSDS-based processes suggested by UNDESA (2002) i.e. political, participatory, technical and resource mobilisation, the following NSDS-EBM-MTEF-based holistic and integrated national and linked sectoral planning and budgeting process is proposed. National development goals and broad sectoral goals and strategies would often be developed simultaneously, followed by a detailed sectoral plan and medium-term sectoral budget. This will be linked to a national medium-term fiscal framework and national budget allocation process.

Context/situation analysis – Understanding the current situation

A critical aspect of mainstreaming is the reliance on coherent and robust evidence-based assessment of current institutional, organisational and policy context, governance and decision-making processes and existing strengths and gaps in the management of cross-sectoral issues and problems. The EBM framework can help inform the national, sectoral and cross- sectoral planning process.

Situation analysis will often be based on the review of published and unpublished information, and discussion with key actors and experts. In undertaking situation analysis, systems thinking, together with ecosystem-based analysis, can assist in confirming key stakeholders, horizontal and vertical ecological, economic and other linkages and interactions, as well as sectors that will be impacted on by specific sectoral activities. Situation analysis is used to identify:

- National development planning and budgetary context, framework and processes;
- Relevant stakeholders, including national and sectoral government agencies, civil societies and private sector involved in:
 - a National planning and budgetary processes,
 - b Sectoral planning and prioritisation & development/management decision-making processes, and
 - c National resource allocation.
- Legislative and other institutional frameworks that guide national, sectoral decisions and activities of stakeholders;
- Identification of key issues and main concerns; and
- Sectoral/thematic development and/or management framework, planning and prioritisation processes, and decision-making processes.

Lead agency and task force identification

It is important to identify at the outset a lead agency that will carry the process through to fruition. The EBM framework can help identify relevant stakeholders at all levels, both government and non-government, as well as private sector. Stakeholder analysis will help identify primary stakeholders who are likely to be directly affected, either positively or negatively, and secondary stakeholders who are individuals or groups of individuals that fund, implement and monitor the implementation of strategies. Primary stakeholders are usually the people whose livelihood will be impacted on, such as members of a community. Secondary stakeholders may include government agencies, donor agencies, NGOs, politicians and local leaders. Out of this group of secondary stakeholders, a clear understanding of the key governmental agents of change can emerge. Such an organisation or persons can then be identified as the lead agency to operationalise the particular mainstreaming concept in the country. Also, the nature of the multi-sectoral task force will also become obvious.

The multi-stakeholder task force would thus ideally include stakeholder representatives who have the relevant knowledge and skills to identify key information sources, contribute towards developing the mainstreaming strategy, and are committed to national development processes.

National development planning process

Stakeholders collectively will identify the national vision and key development goals and reaffirm principles that will guide national development efforts. National, regional and international commitments and guiding principles, including principles of sustainable development, good governance and fiscal management will inform this process. A national forum with specific thematic discussions, followed by a national discussion could be used to canvas different views, as was done in Tuvalu and Cook Islands. This process is often resource intensive and time consuming. In Tuvalu, with a population of about 10,000, the

national forum cost over half a million US dollars. Nonetheless, a stakeholder-based process supported by coherent and robust information will encourage broad ownership of the country's vision and development goals. If the process is not carefully planned, the actual preparation of the NSDS document can be rather challenging. In the Cook Islands, for example, the NSDS document took almost two and a half years to finalise after holding the national forum and collating volumes of material. In the preparation of the NSDS, key targets for each goal would be identified as well as indicators for monitoring and evaluating progress made over time. These would then be packaged together as a medium-term NSDS for a country.

Ideally, these national goals will be translated into sectoral and thematic plans of action, or 'sectoral' plans, prioritised and costed to produce the medium-term sectoral plan and medium-term sectoral budget.

EBM-based sector planning – Issues and root cause analysis

Confirmation of issues and concerns and root causes analysis using EBM framework can be used to understand ecological, social, human and economic interactions, effects, root causes and management issues.

Economic, social and environmental impact assessments can also help understand the root causes of observed sectoral and cross sectoral effects. A process called root cause analysis can help unravel the symptoms, different causes, and root causes of an observed symptom. Interdisciplinary knowledge about ecosystem dynamics, cause and effect linkages, and core human behaviour drawn from economics and psychology and other disciplines, such as sociology and public policy, can help to reach an understanding of **root causes**, and identify key drivers of change. By identifying existing economic, social, institutional, capacity and other constraints in achieving specific sectoral objectives and related national development goals, it will also be possible to identify areas of policy intervention to address these gaps. Several tools are available to assist in this process (see for example, Department for International Development, 2002).

Root cause analysis will help undertake a number of tasks, including to:

- Confirm key priority issues and concerns related to the thematic area;
- Analyse subsystems and connectivity relevant to the specific theme;
- Analyse (vertical and horizontal) linkages and the impact of activities across and between sectors and the root causes of the effects; and
- Analyse the impact of sectoral activities on national development goals.

EBM-based sector planning – Solution analysis (*policy, institutional & instruments*)

This involves the identification of outcome-focused response strategies, including policies, organisational design, institutions (rules and regulations), as well as other development strategies and activities, and appropriate agents of change.

Once the specific constraints and root causes of each symptom are understood, then management strategy can be identified to address the causes for each symptom or issue. Solutions may be single or multiple depending on the complexity of the issue and the root causes and/or contributing factors. A response may comprise a mixture of policy shift,

institutional co-ordination and the use of regulatory and financial instruments, as well as moral suasion and public awareness.

For each outcome, it is at this stage that key strategies will be identified which, when successfully implemented, can produce the desired outcome. For each desired outcome, a programme of initiatives, appropriately sequenced, may be identified for each management strategy, which when successfully implemented can together produce the desired outcome. This step will thus help identify outcome-focused programmes of development and management initiatives that may be directed at a specific sector and/or may involve cross-sectoral initiatives, the organisational co-ordination of policies, and strategies.

This process would be repeated for each of the key symptoms of concern, identifying causes, and ultimately root causes of an observed symptom. For each root cause, an appropriate response – policy or action initiative – that can help address the root causes is identified. These symptoms and concerns are used to define desired key outcomes, and programmes of strategies, actions and initiatives are clearly identified.

Consolidation of the sectoral action plan linked to NSDS – log frame

Each of the problems, response strategies and programme of initiatives against each strategy and goal would then be consolidated to develop a sectoral action plan, linked to the NSDS and national development goal. It will outline sectoral objectives, specific response strategy (ies) against each objective and a programme of initiatives against each strategy. These are consolidated into a sectoral action plan, together with specific outcome indicators.

Prioritisation of the sector plan

The next step will be to prioritise expected outcomes identified in the sectoral action plan. Two sets of criteria could be used in this process – expected benefits associated with specific outcomes, and the feasibility of achieving the outcome given institutional and human capacity in the country. Expected net benefits could also be considered in terms of expected cost savings that a society can expect if the particular outcome is achieved. Scoring can be used to facilitate this prioritisation process, with the outcomes with higher benefits ranked higher than those whose benefits are lower. Similarly, feasibility assessment by the task force members could be used to rank the likelihood of the anticipated benefits being achieved, with once again a higher score given to that benefit with a higher feasibility factor. These scores could then be plotted to select outcomes according to the dual criteria. This ranking can later be tempered by further analysis of usually foundational initiatives that can increase either the expected benefit or feasibility of other outcomes. A set of priority outcomes can be identified as high (of immediate relevance), medium (of relevance in the short term), and low (desirable in the longer term). Depending on the time frame adopted, the strategic plan could target only the high-medium priority outcomes.

For these high and medium priorities, respective strategies within each of the priority outcomes can then be sequenced according to the key steps involved in producing the outcome. In most cases, a strategy has to be conducted first to set the motion for others to follow, that is, one cannot take place without the initial strategy being implemented. This consideration forms an essential part of the sequential process and care has to be taken to consider this aspect of sequencing strategies over a three year period.

Consolidation of NSDS and linked prioritised sector plan

If a stakeholder-based NSDS process is used simultaneously to develop national development plans as well as sector plans, then the end product will be a NSDS-based national development plan and a prioritised and costed outcome-focused sector plan, plus the medium-term sector costing. As a minimum, if a country already has a national development plan, NSDS, or equivalent, one of the products of the mainstreaming exercise will be an NSDS-linked prioritised sector plans, detailing sector goals and a prioritised outcome-focused programme of initiatives, with clear M&E indicators and timelines.

Medium-term sector budget linked to MTEF

For the selected high priority outcomes and respective strategies, the next step is to identify resource needs and their respective quantities and unit costs. These estimates could be based on past experiences and/or projected costs of similar activities. When consolidated, this will provide an indicative cost associated with each strategy and each outcome. The medium-term indicative costs of the prioritised sector plan would then be pulled together to form the medium-term sector cost.

The prioritised medium-term sectoral plan and associated medium-term costing could then be used to make annual budget submission as well as engage with development partners for their support to complement national efforts, thus providing a framework for outcome-focused systematic national development effort and aid effectiveness, targeting priority national development needs, national development goals and strategies. The medium-term sector costing will form the basis of the annual submission to the Ministry of Finance.

Several tools are available to support strengthening of different components of the NSDS-based planning and budgetary processes. These include DFIDs *Tools for Development* (Department for International Development 2002); World Bank OECD's *Managing for Development Results* (World Bank and OECD-DAC, 2006), UNDESA's **Guidance in Preparing National Sustainable Development Strategy** (OECD, 2001; United Nations Division for Sustainable Development, 2002); UN Millennium Project's **A Practical Plan to Achieve the Millennium Development Goals** (United Nations Millennium Project, 2005). The UNDP and UN Millennium Project have also developed several MDG-based costing tools, including those for energy and wastes (United Nations Millennium Project, 2005).

Experiences from Forum Island Countries (FICs)

All FICs have produced some form of national development plan, sustainable development strategy (SDP), national sustainable development plan (NSDP) or equivalent. Since the WSSD, the national plans have been formulated in most countries with the active involvement of stakeholders and getting common support, taking into account key human rights, cultural and religious values. The Pacific Island countries are proud of their natural heritage and their unique 'Pacific Way' lifestyle, where communal living and reciprocal social relationships are integral aspects of their lifestyle.

Although economic development is seen as the primary focus of national development, concerns about human development issues, such as education and health, have also come to the fore, particularly since the promotion of the Millennium Development Goals (MDGs).

The Pacific is also a region that is going through rapid changes in the face of globalisation, and the changing needs and aspirations of the people, including increasing consumerism. They recognise that a dynamic approach to strategic national development is critical if people of the Pacific are to meet their changing needs and aspirations in a rapidly changing globalised environment.

As part of the global community, the Pacific nations have made commitments to put greater emphasis on democracy and basic human rights, including equitable economic development. In response to the changing environment, the Pacific Leaders have recognised the need for national development efforts that recognise not only its traditional systems but also the introduced forces of market economics and the importance of maintaining ecological land governance processes and mechanisms. They have made various commitments at the international fora and signed different international instruments, such as the Convention on Biological Diversity and MDGs, as well as having embraced the guiding principles such as those related to sustainable development, good governance, and fiscal management. The region also recognises that in the light of their own limited financial and other resources, and the reliance on development partner support, Pacific nations need to better co-ordinate development partner assistance and their own national efforts towards high priority development needs. Moving towards national sustainable development is arguably the most difficult challenge decision-makers face at all levels and in all countries (UNDESA, 2002: 22).

Development plans generally continue to be seen as the blueprint to guide national development efforts. Many of the national economic development efforts have also been guided by key global goals, but these would have been addressed on a piecemeal basis. Thus, for example, a Poverty Reduction Strategy Plan was developed in response to the World Bank calling for such plans, and which became one of the guiding documents for national development. It often sat in parallel with the national development plan. More recently, the Millennium Development Goals have also become an integral part of national development efforts, as required under the commitments made during the global MDG and MDG Plus conferences. Thus, governments have responded by providing MDG reports, but these are often treated independently, rather than as part of the reporting on the achievement of their own national development goals.

Furthermore, implementation of strategies addressing national development goals have been largely from individual sectoral perspectives, with minimal recognition of the broader connectivity and influences from, and to, other parts of the environment, economy and/or social wellbeing. The explicit links with national development goals, priorities and policies are often rather tenuous. Thus, for example, attention on climate change is largely driven from an environmental perspective and that, too, from the perspective of the GHG emissions and their global effects. Very few countries have addressed climate change from the perspective of it being a development issue, or as an issue which required significant responses from within and across diverse sectors, such as infrastructure development, agriculture, water, forestry and fisheries (PIFS, 2006). Similarly, renewable energy issues are addressed by the energy sector without necessarily looking at energy security as a devel-

opment issue, of which renewable energy is an integral component which also links in with the climate change mitigation goal (PIFS, 2006).

Table 4.3. Self assessment scoring against key elements of the NSDS process

Common elements of NSDS adopted in the Pacific	Elements not adequately reflected in NSDS in the Pacific
Consensus and long-term vision Country-led and nationally owned People centred	Mainstreaming of the SD principles and processes. NSDS-linked sector plans based on comprehensive and reliable problem analysis and solutions designed to address the root causes of the problems. Prioritisation and cost outcome-focused programmes of initiatives. Targeted with clear budgetary priorities. Incorporate monitoring, learning and improvement. Explicit links to national, provincial, sectoral and local level programmes reflecting agreed government goals and policies.

Source: Adapted from (Government of Nauru, 2006; Nita, 2006; UNDESA, 2006)

In summary, although NSDS-based approaches have been adopted, many countries have not necessarily fully embraced the key dimensions of the NSDS process as a whole, as illustrated by FICs self assessment (see for example, Government of Nauru, 2006; Nita, 2006) (Table 4.3). While the specifics vary between countries, mainstreaming of the SD principles and processes and ensuring these are reflected in institutional structures and decision-making processes has been a recurrent theme in the region (UNDESA, 2006).

Challenges facing the FICS include how to mainstream principles such as those related to sustainable development, good governance and MTEF to produce outcome-focused national and sector plans integrating economic, social and environmental objectives across sectors and generations, and an MTEF-based resource allocation which collectively produces the desired outcomes. This is where the ecosystem-based management framework has a role to play.

Experiences at the country level

At the sectoral level, FICs have been largely guided by their international and regional commitments, with primary concerns about environmental and social goals, in addition to the economic goal. In response to such commitments, some countries have developed their sectoral plans, such as fisheries, agriculture, environment, biodiversity conservation, focusing on key sectoral issues and reflecting key connectivities within that sector. In most countries, sector level planning has had difficulties in operationalising the core commitments made about the balanced three elements of sustainable development and good governance. The links between national development goals and national policies and sectoral plans, strategies and initiatives are often not clear and the sector priorities may not necessarily fully reflect the national priorities and policy commitments. Neither are the cross

sectoral linkages and interactions fully reflected in national development. Institutional co-ordination of initiatives and actions across sectors is also often weak at best and non-existent in some cases.

Table 4.4. Possible link between Te Kakeega II ‘Policy Objectives’ and Education Strategic Plan ‘Objectives’

Stated Education Strategic Plan ‘Objectives’	<i>Te Kakeega II Stated Education Sector ‘Policy Objectives’</i>
Curriculum and assessment	● Improve overall education standards. ● Install sound, consistent and more appropriate curricula that better target the needs of students and the economy. ● Make maths and science subjects, and technical and vocational training a central part of the school curricula. ● Expand services and facilities for special needs students, including pre-schoolers and the disabled.
Increase student participation	● Provide more classroom materials to improve the teaching and learning environment. ● Make maths and science subjects, and technical and vocational training a central part of the school curricula. ● Create comprehensive Human Resource Development Policy and Institutional Framework.
Improving the quality and efficiency of management	● Improve overall education standards. ● Adequately maintain schools with better and more appropriate facilities.
Human resource development	● Hire more highly trained and motivated primary, secondary, and post-secondary teachers. ● Expand and improve technical and vocational training opportunities. ● Create comprehensive Human Resource Development Policy and Institutional Framework.
Strengthen partnership and develop a culture of working together	● Reflect the acknowledgement by the Tuvalu Government in the <i>Kakeega II</i> of its limited domestic resources and the reliance on regional and international partners’ support, as well as reliance on national public, private and community support.

Source: Adapted from <http://www.paddle.usp.ac.fj/collect/paddle/index/assoc/tuv003.dir/doc.pdf> and <http://www.sprep.org/att/IRC/eCOPIES/Countries/Tuvalu/42.pdf>

There often aren’t clear links between national development goals and national policies and sectoral plans, strategies and initiatives, and the sector priorities may not necessarily

fully reflect the national priorities and policy commitments (see Table 4.4 for Tuvalu's *Kakeega* and Education Sector Plan). There are some signs of countries trying to draw the link, for example Samoa is explicitly adopting the sector wide approach, aligning sector plans and goals with their national development goals.

Forum Island Countries have agreed to strengthening the link between sector plans and national development plans through the commitments made when they endorsed regional strategies and/or regional plans of action including those on disaster risk management, climate change, biodiversity conservation, energy and oceans management. Included in many of these regional sectoral and thematic frameworks of action, policies and plans is the 'mainstreaming' of respective thematic issues into national planning and budgetary processes, and strategies and actions that relate to improved decision-making processes at sectoral and national levels (Table 4.5). For example, Theme 1 of the Pacific Framework for Disaster Risk Reduction and Disaster Management (DRR & DM) deals with strategies related to 'Governance – Organisational, Institutional, Policy and Decision-making Frameworks'. Similarly, the PIFACC Principle 2 deals with 'Governance and decision-making' identifying expected outcomes to include: mainstreaming; public-private sector-community partnerships; other partnerships; and good governance.

Table 4.5. Examples of key NSDS-related strategies and actions common to several Regional Policies, Frameworks for Action, and Action Plans

Examples include:

- mainstreaming of thematic consideration into national planning and budgetary process (e.g. DRM; PIEPP; PIFACC, PIROP);
- mainstreaming of economic, environmental and social considerations in sectoral level decision-making, including the use of market-based instruments to finance environment conservation (DRM; PIEPP, PIFACC; PIROP);
- promoting information-based decision-making processes, including traditional knowledge and robust statistical information (DRM, PIEPP; PIROP, PIFACC);
- developing appropriate national targets and indicators for the thematic area that reflects the three pillars of sustainable development (and in line with MDGs);
- improving governance and the decision-making process to facilitate sustainable development, including administrative and institutional structures to implement and operationalise regional strategies, policies and plans. (Integrated decision-making and consultative mechanisms) (PIROP; PIFACC; DRM);
- reviewing legislation that affects SD at the national level, improving co-ordination between legislative frameworks, and developing guidelines for those who must carry out legislative objectives (PIFACC, PIROP, DRM);
- building institutional and human capacity at all levels to facilitate sustainable development (DRM; PIFACC; Energy, Oceans); and
- co-ordinating and harmonising donor support (DRM, PIFACC, Energy, Oceans).

NB: PIROP – Pacific Islands Regional Oceans Policy; PIFACC – Pacific Islands Framework of Action on Climate Change; PIEP – Pacific Islands Energy Policy, DRR & DM – Disaster Risk Reduction and Disaster Management.

Recent assessments of the implementation of these regional plans of action, as well as sector level activities in countries, suggest that national level implementation has been minimal due to several challenges. These challenges have included: the lack of political commitment to 'walk the talk'; difficulty in linking horizontally between sectors, as well as between the sectors and national development goals. The lack of capacity fully to take into consideration interactions within and between ecological, social and or economic subsystems has also been an issue. This is particularly the case in cross-cutting thematic areas such as climate change and natural disasters, although even in the more traditional sectors, such as education and health, the link between sector goals and national development goals are implicit rather than explicit. In most cases, sectoral plans and strategies reflect considerations of immediate causes and not necessarily the underlying root causes. Rarely, if at all, has systematic prioritisation of strategies and initiatives been attempted. Other key issues raised by the Forum Island Countries include:

- Economic development pursued independent of its impact on the environment;
- Emphasis on economic development, with environmental issues often given a lower priority and thus smaller budgetary allocations;
- Disconnect between national planning and budgetary processes and sectoral or thematic priorities;
- Emphasis on top-down planning and management disconnected with the traditional decision-making processes;
- Emphasis on 'bottom-up' community level project development process but without explicit links to the national decision-making and budgetary processes;
- Piecemeal and sector-based management with little cross-sectoral co-ordination;
- Governance organisations do not reflect ecological connectivity;
- Limited capacity in integrated planning that reflects ecological and economic connectivity, economic planning and cross-sectoral planning;
- Lack of up-to-date legislation, policy, and strategies that reflect ecological connectivity. Lack of robust interdisciplinary information, including traditional knowledge; and
- Limited analytical skills in integrated and interdisciplinary assessment, and decision-making.

Conclusion

The expected outcome of the mainstreaming process is the realisation of the desired national economic, social and environmental goals in the medium term and the achievement of the national vision in the long run, and for the citizens to meet their needs and aspirations. This can be achieved through linking stakeholder-based systematic development and implementation of NSDS-EBM, national and sectoral plans, the medium-term national and sectoral budgets, the annual budget and the partner allocation, based on the medium-term budget framework.

Both the NSDS and EBM framework articulate specific goals and objectives and priority strategies to achieve stated outcomes in a systematic manner. NSDS and sectoral mainstreaming take the current organisational and institutional arrangements as a starting

point to identify alternative decision-making processes that reflect agreed principles such as sustainable development and good governance principles. Both have associated medium-term financial management – NSDS has an associated medium-term fiscal framework, whereas a mainstreamed sectoral plan has a medium-term sector and thematic budget for prioritised strategies.

The difference is that NSDS is geared towards developing strategies that encompass macro-economic and nation-wide issues, whereas sectoral mainstreaming is aimed at providing a programme of initiatives aimed at achieving the sectoral goals, and implementing principles of sustainable development and good governance. Sectoral mainstreaming links sectoral goals and strategies to national development goals articulated in national development plans, NSDS, or the like.

Sectoral programmes of initiatives are implemented using domestic resources, often allocated on an annual basis but within the medium-term fiscal management framework. Domestic resource allocation would ideally be complemented by development partner resources targeting, once again, priority issues, strategies and activities identified in the mainstreamed sectoral plan. Ultimately, the outcomes targeted by linking NSDS and EBM-based sectoral plans are the same. The process of linking them should enhance the outcomes of economic wellbeing, human development and security and environmental sustainability as articulated in the following Pacific Vision.

Strengthening national planning and budgeting processes by adopting an integrated NSDS and EBM framework can help mainstream not only values and cultures to achieve the needs and aspiration of the people, but also implementation of international and regional commitments on key principles. These principles include sustainable development, good governance, and prudent fiscal management, which should ensure transparency and accountability in the decision-making process based on a sound partnership between government and donors, thus improving the effectiveness of national programmes and the use of international aid.

References

- Abbott, D (2007). 'NSDP and the Budget: developing a medium term expenditure framework', *Cook Islands NSDP Workshop for the Heads of Ministry and Senior Planners*, Rarotonga.
- Dalal-Clayton, B and B Bass (2002). *Sustainable development strategies: a resource book*. Organisation for Economic Co-operation and Development, Paris and United Nations Development Programme, New York, Earthscan, London.
- Dalal-Clayton, Barry, Stephen Bass, Barry Sadler, Koy Thomson, Richard Sandbrook, Nick Robins and Ross Hughes (1994). *National Sustainable Development Strategies: Experience and Dilemmas*. International Institute For Environment And Development (IIED) Environmental Planning Group, Environmental Planning Issues No. 6 October 1994.
- Department for International Development (2002). *Tools for Development: a handbook of those engaged in development activity*. UK Department for International Development

- Forum Economic Ministers (1997). Eight Principles of Good Governance. In Secretariat, P.I.F. (ed.). Pacific Islands Forum Secretariat, Suva.
- Government of Nauru (2006). 'National Sustainable Development Strategy – National Assessment Report', *UNDESA Workshop on National Sustainable Development Strategies*, New York.
- Nita, A (2006). 'National Assessment Report for Papua New Guinea' (NSDS), *UNDESA Workshop on National Sustainable Development Strategies*, New York.
- OECD (2001). *Strategies for Sustainable Development – Practical guidance for development cooperation*. OECD, France.
- OECD/DAC (2002). 'Glossary of Key Terms in Evaluation and Results-Based Management'. Paris: OECD.
- Pacific Islands Forum Secretariat (PIFS) (2006). 'Pacific education for sustainable development framework'. Education Ministers Meeting, Nadi, Fiji 26–27 September 2006, Session Six.
- UNDESA (2002). *Guidance in preparing a national sustainable development strategy: managing sustainable development in the new millennium*, Division for sustainable development, DESA/DSD/PC2/BP13, background paper No. 13, 8 February 2002. New York: UN.
- UNDESA (2006). 'UNDESA Report on the Workshop on National Sustainable Development Strategies in the Pacific Islands', *UNDESA Workshop on National Sustainable Development Strategies in the Pacific Island Developing States*, New York.
- United Nations Division for Sustainable Development (2002). 'Guidance in preparing a national sustainable development strategy: managing sustainable development in the new millennium', *Background Paper*.
- United Nations Millennium Project (2005a). *Investing in Development: A Practical Plan to Achieve Millennium Development Goals*. Earthscan, New York.
- United Nations Millennium Project (2005b). *Preparing National Strategies to Achieve Millennium Development Goals: A Handbook*, New York.
- World Bank and OECD-DAC, (2006). *Emerging Good Practice in Managing for Development Results: Source Book*.

Margaret Harris and Wonderful Hope Khonje

Regional approaches in sustainable development

Introduction

This chapter examines the role of regional co-operation in making progress with the Mauritius Strategy of Implementation (MSI). It examines historical features of regional co-operation in small island developing states (SIDS) and the role of the United Nations (UN) in capacity development. It illustrates the strengths and weaknesses of co-operation in SIDS as part of wider South-South co-operation. Regional co-operation operates within the SIDS geographically contiguous states such as in the Caribbean Community (CARICOM). This reveals the current reality and future opportunities for promoting a more effective sustainable development strategy within SIDS and through the wider policies and programmes in the fields of environment, economics, trade and social development by complementary partnerships and networks across the SIDS and the other countries and territories in their regions.

The general definition of sustainable development employed here is that of the Brundtland Report, *Our Common Future*¹: that is 'Development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. This chapter also uses the operational definition of the Pacific Islands Forum (PIF) Sustainable Development Programme:

'Sustainable development as a new way of approaching economic and social development and environment conservation. It can be seen as a new way of life, a culture, a philosophy that guides everyone's day to day decisions, and underpins each policy, strategy and decision at every level of decision-making – local, community, sub-regional, and national, as well as international. To achieve sustainable development, one needs a whole country approach – government, private sector and communities.'

One focus of the chapter is the pursuit of national interests, examining those elements of national trade, economy, environment and development in regional strategies and how far regional co-operation is worthwhile for the individual states themselves.

Historical regional co-operation and sustainable development policy in small island developing states

Caribbean region

In the Caribbean, the driver for integration was as much economic as it was social. In the

West Indies, an economic framework in the form of the West Indies Federation was established in 1958. This was followed by the creation of the Caribbean Free Trade Area (CARIFTA), a customs' union, in 1972. CARIFTA did not provide, however, for the free movement of labour and capital, nor the co-ordination of agricultural, industrial and foreign policies. Countries also gave priority to foreign policy co-ordination and external economic negotiation². The Caribbean Community (CARICOM), which is now recognised as one of the most integrated regional groupings of SIDS states, was established by the Treaty of Chaguaramas in 1973 with the following objectives:

- a** improved standards of living and work;
- b** full employment of labour and other factors of production;
- c** accelerated, co-ordinated and sustained economic development and convergence;
- d** expansion of trade and economic relations with third States;
- e** enhanced levels of international competitiveness;
- f** organisation for increased production and productivity;
- g** the achievement of a greater measure of economic leverage and effectiveness of Member States in dealing with third States, groups of States and entities of any description;
- h** enhanced co-ordination of Member States' foreign and economic policies; and
- i** enhanced functional co-operation, including:
 - more efficient operation of common services and activities for the benefit of its peoples;
 - accelerated promotion of greater understanding among its peoples and the advancement of their social, cultural and technological development;
 - intensified activities in areas such as health, education, transportation, and telecommunications.

Impetus for sub-regional co-operation has grown in the wake of these challenges and institutions such as CARICAD³ were formed with UNDP funding for the purpose of (a) establishing a national advisory and co-ordinating mechanism or sustainable development council; (b) launching a consultative process at the national and regional levels; (c) conducting case studies of innovative experiences from which to derive policy and operational insights and lessons; and (d) establishing a regional network for information sharing.

Within the Caribbean region, there is another regional organisation – the Organisation of Eastern Caribbean States (OECS) of seven member states and two associated states. Formed in 1981, the member countries signed a treaty agreeing to co-operate with each other and promote unity and solidarity among the members. Their main mission was to contribute to the sustainable development of the OECS member states by assisting them to maximise the benefits from their collective space by facilitating their intelligent integration with the global economy; by contributing to policy and programme formulation and execution in respect of regional and international issues; and by facilitation of bilateral and multilateral co-operation.

Africa region

In Africa, the Union of African States (UAS) was formed in 1959. The UAS predated the

Organisation of African Unity (OAU), which was established in 1963 and is now the African Union (AU). The AU is responsible for the implementation of the New Economic Partnership for Africa's Development (NEPAD). The primary objectives of NEPAD include eradicating poverty and halting the marginalisation of Africa from the globalisation process. The continent is further served by other regional organisations which divide Africa into North, South, East and West. The Union of Arab Maghreb serves North Africa, and as the name suggests, the South East and West African countries are served by the Common Market for Eastern and Southern Africa (COMESA) the East African Community (EAC) and the Economic Community of West African States (ECOWAS) and the Southern African Development Community (SADC). Another big player on the African continent is the Economic Commission for Africa (ECA) established by the Economic and Social Council (ECOSOC) of the United Nations (UN) in 1958 as one of the UN's five regional commissions. ECA's work programme now focuses on achieving results in two related and mutually supportive areas:

- promoting Regional Integration in support of the African Union vision and priorities, and
- meeting Africa's special needs and emerging global challenges.

Within these two aims, the Commission focuses on the following thematic areas:

- regional integration, trade and infrastructure;
- meeting the MDGs with a special emphasis on poverty reduction and growth, sustainable development and gender;
- promoting good governance and popular participation;
- ICT, science and technology for development; and
- statistical development.

At the **regional level**, the thrust of ECA activities is predominantly focused in two areas. First, ECA aims to play a significant role in monitoring and reporting on the progress being made by the continent on meeting global and continental commitments, thus supporting progress in regional accountability. Second, ECA aims to continue its role in advocacy and consensus building, including developing common positions to give the region a stronger voice in global forums.

At **sub-regional level**, emphasis is now placed on advisory services and technical assistance aimed at building the capacity of the RECs to implement their agendas and, particularly, to promote regional integration.

The Indian Ocean Commission (IOC) has also been concerned with promoting sustainable development of the Western Indian Ocean Islands. The IOC also represents the island states in international forums and defends their interests on specific environmental and economic issues, as well as facilitating regional co-operation and integration. Established in 1984, the IOC encourages and strengthens co-operation within the Indian Ocean region on a number of levels, including: diplomatic co-operation; economic and commercial co-operation; co-operation in the field of agriculture, maritime fishing and the conservation of resources and ecosystems; and co-operation in cultural, scientific, technical, educational and judicial fields.

Pacific region

In the Pacific, as noted by Rolfe⁴, co-operation first came without integration and was functional in nature. As in the Caribbean, the metropolitan colonial powers promoted the formation of a co-operative system known as the South Pacific Commission (SPC). Rolfe points out, 'The SPC reinvented itself' as the representative of regional states and dependent territories to develop 'programmes of technical assistance, professional, scientific and research support and planning and management capability building, focusing on land, marine and social resources'. The Pacific Islands Forum (PIF) was founded in 1971 as the South Pacific Forum. In 2000, the name was changed to the Pacific Islands Forum better to reflect the geographic location of its members in the north and south Pacific. The main goals of PIF are to stimulate economic growth and enhance political governance and security for the region through the provision of policy advice; and to strengthen regional co-operation and integration through co-ordinating, monitoring and evaluating implementation of leaders' decisions. The organisation comprises three sub-groups based on cultural characteristics: the Melanesian Spearhead Group, the Smaller Island Group, and the Micronesian states. The latter grouping has free association status with the United States and closer relations with that country than with other influential states such as Australia and New Zealand.

In the Pacific, a number of agencies are involved in providing assistance in capacity-building in SIDS. For instance, the South Pacific Regional Environment Programme (SPREP) has co-ordinated the preparation of national environmental management strategies throughout the region, with assistance from the Asian Development Bank (ADB), UNDP and Australia.

The regional role and international agreements

The regional role has characteristics that reflect not only geographic proximity but political organisation and association in SIDS. Historical networks have served as an important context on which regional systems in SIDS have emerged. The patterns of regional development, with the exception of countries such as the Maldives, have been similar even when formal regional systems have been institutionalised.

Table 5.1. Regional trade agreements in SIDS⁵

RTAs	Description	Member countries
CARICOM	Caribbean Community & Common Market	Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Guyana, Haiti, Jamaica, Montserrat, Trinidad and Tobago, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, Suriname
COMESA	Common Market for Eastern and Southern Africa	Angola, Burundi, Comoros, Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Namibia, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zimbabwe
GCC	Gulf Cooperation Council	Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates

MSG	Melanesian Spearhead Group	Fiji, Papua New Guinea, Solomon Islands, Vanuatu
OCT	Overseas Countries & Territories	Greenland, New Caledonia, French Polynesia, French Southern and Antarctic Territories, Wallis and Fortuna Islands, Pierre and Miquelon, Aruba, Netherlands Antilles, Anguilla , Falkland Islands, South Georgia, South Sandwich, Montserrat, Pitcairn, St. Helena, Ascension Islands, Tristan da Cunha, Turks and Caicos, British Antarctic, Indian Ocean Territory, British Virgin Islands
PICTA	Pacific Island Countries Trade Agreement	Cook Islands, Fiji, Kiribati, Nauru, Niue Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu
PIF	Pacific Islands Forum	Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, The Marshall Islands, Nauru, New Zealand, Niue Palau, Papua New Guinea, Samoa, The Solomon Islands, Tonga, Tuvalu, Vanuatu, New Caledonia, French Polynesia
PACER	Pacific Agreement on Closer Economic Relations	Australia, Papua, New Guinea
PATCRA	Agreement on Trade & Commercial Relations between the Government of Australia & the Government of Papua New Guinea	Australia, New Zealand, Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Papua New Guinea, Solomon Islands, Tuvalu, Vanuatu, Western Samoa
SADC	Southern Africa Development Community	Angola, Botswana, Lesotho, Malawi, Mauritius , Mozambique, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe
SAARC	South Asian Association for Regional Cooperation	Afghanistan, Bangladesh, Bhutan, India, Maldives , Nepal, Pakistan, Sri Lanka
SPARTECA	South Pacific Regional Trade and Economic Cooperation Agreement	Bangladesh, Bhutan, India, Maldives , Nepal, Pakistan, Sri Lanka
SAPTA	South Asian Preferential Trade Arrangement	
Trans-Pacific	Trans-Pacific Strategic Economic Partnership	Brunei, Darussalam, Chile, New Zealand, SEP, Singapore
	West African Economic & Monetary Union	Benin, Burkina Faso, Cote d'Ivoire, Guinea Bissau , Mali, Nigeria, Togo

The SIDS regions function with differing forms of 'collective diplomacy', whilst preserving national sovereignty. The evolution of regional integration has meant that while states have remained legally intact, the interplay of international, regional and national relations has forced convergence of some functions.

One such organisation is the Council of Regional Organisations in the Pacific (CROP). This is an ad hoc committee composed of the heads of the Pacific Island intergovernmental organisations, and permanently chaired by the Pacific Forum Secretariat. Its purpose, according to its charter, is to discuss and co-ordinate the work-programmes and policies of the different regional agencies to avoid either duplication or gaps in the provision of services to member countries.

The definitive statement with a proposition for a higher level of regional co-operation between the South is as follows:

'South-South co-operation, including co-operation among SIDS, is critical at the bilateral, sub-regional and regional levels in strategic areas, such as information and communication technology, trade, investment, capacity-building, disaster management, environment, food, agriculture, oceans, water, energy, health and education.'

The proliferation of regional co-operation for SIDS started in the 1960s. They generally followed the 'South-South Regional Trade Agreements (RTAs)⁶ under-the-industrialisation by-invitation' model of the Presbisch school of economics. The second phase occurred in the 1980s and saw the creation of agreements between Northern and Southern states generally in geographically contiguous spaces, e.g., the Caribbean and the US. The present-day renewal of interest in regional integration systems in the South is a reaction to the growing presence of regional agreements developed particularly to advance the domestic interests of Northern countries. This is a departure from early Southern models that followed the core-periphery logic of the Presbisch school and sought to create internal organisation that responded to historically conditioned economic and often political relations. Far from mere 'reaction', it was a movement aimed at shaping policy choice and direction based on an internal logic, understanding and ethos aimed at self-development. Since the 1980s and the emergence of new regionalism in SIDS, the increasing demands placed upon domestic institutions and a crisis of capacity, regional co-operation has taken a new direction in all the SIDS regions. The new collective diplomacy is now shaped more and more by the demands of the new multilateral trade system and Multilateral Environmental Agreements (MEAs).

In the aftermath of the Uruguay Round and the GATT 1994, SIDS worked more within the reality of altered economic frameworks, with an end to trade preferences and international institutional development. There was a coincidence in timing of the heightened demands for sustainable development policy initiatives and trade policy initiatives in Agenda 21 and the Barbados Plan of Action and the Uruguay Round. Since then, policies on sustainable development became based on a need for social, economic and environmental co-operation, with regional co-operation as an important operating mechanism.

Understanding the extent to which these strategies are incorporated into national policy

frameworks and national sustainable development strategies could explain the degree of absorption of the new thinking on trade and environment linkages. The significance of the trade and environment dimension for SIDS in the multilateral system and in regional organisations recalls the SIDS principles enunciated in the BPoA of the need for integrated treatment of the two sectors in national, regional, sub-regional and international processes. The Mauritius Strategy in 2005 reaffirmed the need for regional treatment of environment and trade, adopting in this way the new language in the Doha Development Round, the WTO and regional trade areas such as Southern Common Market (MERCOSUR) and the North American Free Trade Agreement (NAFTA). MERCOSUR and NAFTA have incorporated environmental instruments but there remains a challenge in monitoring progress.

Other examples of regional trading bodies in SIDS states that have incorporated environmental policy include the Pacific Islands Forum Secretariat (PIFS), Economic Community of West African States (ECOWAS) and Association of Southeast Asian Nations (ASEAN). In 2002, ASEAN adopted a strong environment focus through the signing of the ASEAN Agreement on Trans-boundary Haze Pollution. It later created the Cebu Declaration on East Asian Energy Security and the ASEAN Wildlife Enforcement Network in 2005. In addition, it is a signatory to the Asia-Pacific Partnership on Clean Development and Climate.

The SIDS are committed to regional co-operative instruments. In Africa, SIDS operate within multiple regional blocs that oversee trade. In the Community of Sahel-Saharan States (CEN-SAD) for example, are Guinea Bissau and Comoros. Comoros, Mauritius and Seychelles are also members of the COMESA and Seychelles (until recently) and Mauritius are members of the South Africa Community (SADC). In Asia, SAARC countries also set up the South Asia Free Trade Agreement. Like other regional trade groupings, the primary objective is the reduction of trade barriers generally in the form of border tariffs and other duties.

The MSI is essentially an environmental strategy upon which is superimposed the rhetoric of globalisation, liberalisation, multilateralism, regionalism and development. It supports regional co-operation, but falls short of offering a framework for implementation. Formalisation of the regional pattern therefore undertakes multiple shapes and forms built on preconditions for distinctive forms of co-operation and emerging experience on how co-operative ventures are best obtained and maintained to serve national interests.

Padma Narsey Lal⁷, observed the following points in implementation of the Mauritius Strategy:

- confusion or lack of understanding about the benefits of regionalism,
- disconnect between those espousing regionalism and those who have to deal with national development efforts on a day to day basis (linkages national and regional), and
- absence of appropriate methodologies for mainstreaming regionalism.

On the development of national, regional and international linkages and any perceived emphasis on South-South regional co-operation for sustainable development, Lal found that:

- often international and regional initiatives are seen as being imposed from outside, 'top down', with
- little understanding about what really needs to be done when operationalising these commitments.

With regard to the relationship between trade, regional co-operation and sustainable development, she noted a number of paradoxes:

- Regional co-operation and trade and sustainable development are not necessarily explicitly defined. Through international negotiations on WTO-related matters regional co-operation may be practised. SD is often talked about but not necessarily really practised at this level.

South-South co-operation⁸ has grown since the 1970s particularly through the support from the United Nations agencies with broad-based partnerships led by its agencies – United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), United Nations Economic Commission for Latin America and the Caribbean (ECLAC), United Nations Development Programme (UNDP), and the United Nations Environment Programme (UNEP) and others. The approaches to regional co-operation are not now so narrowly defined. A strictly regional co-operation through trade may also bring about limited welfare impacts in low income countries. Many of the current regional initiatives are more broad-based with RTAs seen as a platform for increasing both non trade and non environmental co-operation ventures, extending to technological and scientific co-operation and development and improvements to public goods.

In 1997, the Small Island Developing States Network (SIDSnet) was established as a direct follow-up to the 1994 Barbados Programme of Action (BPoA), with the primary goal of supporting the sustainable development of SIDS through enhanced information and communication technology (ICT). SIDSnet also assists in the implementation of internationally agreed development goals in SIDS, in particular the Mauritius Strategy of Implementation (MSI), the Barbados Programme of Action (BPoA), and the Millennium Development Goals (MDGs). SIDSnet responds to several critical challenges faced by small islands including (1) remoteness, isolation and geographic dispersion, (2) poor connectivity and data management, particularly through ICT, (3) limited human and technological capacity, and (4) the need for greater international recognition and assistance in reducing SIDS' economic and environmental vulnerability.

The Alliance of Small Island States (AOSIS), which was founded in 1991, is a coalition of small island and low-lying coastal countries that share similar development challenges and concerns about the environment, especially their vulnerability to the adverse effects of global climate change. It functions primarily as an ad hoc lobby and negotiating voice for small island developing states (SIDS) within the United Nations system. With a membership of 43 states and observers drawn from all oceans and regions of the world (Africa, Caribbean, Indian Ocean, Mediterranean, Pacific and South China Sea), AOSIS deliberates on important issues that mostly pertain to the implementation of MSI and other international initiatives like the MDGs.

Regional co-operation principles in implementing the MSI

Since 1990 there have been many regional economic agreements with criss-crossing arrangements, some with little apparent coherence linking specific country needs. The MSI sets out principles for addressing environmental concerns and development goals linked to sustainability. This includes the integration of SIDS into the global economy from a diversity of entry points. The MSI is a multidimensional and multipurpose project. Many regional initiatives have made important contributions to the economic welfare of small states, and doubtless to political stability as well. However, there is a need to consider where this proliferation is leading in terms of enhancing capacity for trade and international economic relations.

The regional co-operative model in the MSI considers SIDS's vulnerability characteristics. The policy includes some consideration of limited state capacity but does not concern itself with any prospects of failure based on impediments to co-operation such as relative gains and payoffs among the SIDS due to their state preferences. This presents a major problem for SIDS – the need to place into context and to analyse the specific characteristics and thereby preferences of regions and islands. Small states may address constraints of size, capacity, markets, economic and environmental vulnerabilities, through regional co-operation arrangements.

There is an assumption that negotiation will lead to effective implementation. The principle holds that research, analysis, advocacy, policy development, political action and decision-making will lead to effective implementation.

The first premise is that the transfer of knowledge and experience through co-operation should be based on negotiation⁹. This requires:

- **Problem identification.** It is assumed that regional co-operation for development must be mainstreamed in SIDS. But the challenges in co-operating between SIDS need more detailed qualification and quantification as vulnerabilities are affected by other factors such as regional and international differences, security issues, power struggles, migration, and others. The definition of what constitutes the regions and sectors for which co-operation is required is integral to effective implementation. For example, unequal economic and political partners pose problems for negotiations, implementation and understanding of co-operation aims and objectives.
- **Research and preparation.** Deeper analysis of sectoral issues is required on the measures and tools available for achieving the desired outcomes. This includes analysis of regions, stakeholders and how they can alter and influence decision-making, identification of relevant domestic and international legal provisions, and a determination of the influence and role of citizens, the media and public opinion in regional co-operation arrangements. It also involves the review of research and training opportunities, ongoing assessments of priorities and needs, the exchange of experience and the dissemination of information. This will be an ongoing requirement in order for countries and regions to make rapid adjustments to general policy proposals.

- **Team Building, Working Groups and Networks.** Phase I: It is necessary to co-ordinate, prepare and collect information on various sectors to inform co-operation and co-ordination strategies. Countries should organise initiatives in collaboration with supranational agents, private sector, civil society organisations and others, including citizens. Phase II: Networks and groups should continue collaboration in the regional co-operation exercises, collating and disseminating information, and playing more active roles in specialist interpretations of provisions and dimensions of regional organisations.
- **Brainstorming Options for regional co-operation.** This can take place at several levels: with inter-governmental and intra-governmental involvement, in commercial, non governmental organisations including business, trade, environmental, labour, development, IGOs and others. After these phases have been completed, technocrats can then begin to design relevant regional co-operation schemes for sustainable development that are well researched based on local experience and best practice.
- **Development of regional co-operation strategies.** These need to be negotiated at multiple levels: national, bilateral, within SIDS, outside SIDS, internationally, regionally, with southern partners, with donor and multilateral agencies, etc. This may include several forms of regional functional co-operation.

The approach to regional co-operation is contingent on arriving at a balance between the three elements of trade, environment and development (with all its diverse components) within and outside the geographical regions of SIDS. The best form for optimum effective regional co-operation may be expressed as follows:

Level I: Co-operative relationships by sector between SIDS regions

- Working groups are established by sub-sectors within each sector. Research is undertaken.

Level II: Co-operation between regions

- Sharing and learning from experiences of other island states and regions based on common problems and challenges by sector through an intensification of communication and advocacy.

Level III: Co-operation between island regions and other southern states

- Deepening and broadening of South-South co-operation to address how to source funding for Southern corporate partners as a measure; deepening of cross border partnerships (e.g. education, training, exchanges, technical co-operation, etc.).

Level IV: Co-operation with global institutions (multi-lateral / IGOs / INGOs and others)

- Developing opportunities for funding inter-regional co-operation projects, institutional and administrative strengthening, training, etc.

Regional co-operation for sustainable development has to be entered into as an arrangement which guarantees regional citizens and governments opportunities to benefit from the deals and to participate consistently over time.

There are a number of ways for making regional co-operation more effective in achieving progress with MSI and delivering real benefits to the member states. Kahle and Lake¹⁰ have made the following useful observations about the possibilities of deepening co-operation through creation of networks:

‘Networks are enduring or repeated interactions among multiple actors that are typically characterised by reciprocity. Distinguishing networks from alternative forms of governance requires a narrowing of recent descriptions, which define networks as a pattern of regular and purposive relations among like government units working across the border that divide countries from one another and that demarcate the domestic from the international sphere ... they may lack a legitimate organisational authority to arbitrate and resolve disputes that may arise during the exchange. Relations between states in a network are enduring – not ad hoc.’

For the regional dimensions of the MSI to be implemented, a network of sectors linked through supranational organisations may work best¹¹. Sectors may be highly organised formal collective units that meet to organise across sectors to address implementation needs and requirements. The greatest opportunity for success lies in a combination of brainstorming and field work based on collection and review of appropriate baseline data. Structured, formal organisation is required for SIDS in networks to overcome the historical problems of weak institutions and the lack of effective enforcement mechanisms.

SIDS regional co-operation can then best proceed within regions and then outward to deepen South-South links within SIDS and with other countries. A stronger political element is required to help take forward the developmental thrust of SIDS as it brings together the disparate elements of international development commitments (MDG, Monterrey Conference on Development, AFT, etc.).

Current regional frameworks for implementing the MSI

In view of the many challenges faced by small states, mostly as a result of their economic vulnerability, more sub-regional mechanisms may emerge to allow effective action, while taking into account the existing constraints in terms of financial, human and institutional resources.

Regional integration and co-operation systems in SIDS are still evolving and may be converging. Regional co-operation is a means of reorganising limited resources, pooling governance systems, increasing complementarity between organisations, states and institutions (internally and externally) and ultimately reinstating elements of sovereignty. The best modelling from past organisation may be reinserted and is a means of enabling SIDS to strengthen national and regional existing relationships, or shed some, towards the goal of strengthening their bargaining power. At the same time, they also become stronger internally.

Caribbean region

In the Caribbean, the absence of a co-ordinating mechanism at the Caribbean sub regional level was highlighted as impeding the BPoA implementation process as early as 1995. A first attempt at creating such a mechanism was made in 1999, at the initiative of the ECLAC sub regional Headquarters for the Caribbean, but did not materialise. However, precisely because both the BPoA and the Mauritius Strategy contain provisions requiring that sub regional institutions and agencies play a significant role in the co-ordinated implementation of both, this issue had to be addressed.

Discussions were held in 2005, and it was then agreed that, based on the overlapping nature of the mandates of regional and sub regional institutions, duplication of efforts and expenditures should be avoided. The co-ordinating mechanism should then be aimed at finding a way to pool and combine the limited resources of SIDS so that the existing constraints could be overcome. At the Twenty-first Session of the Caribbean Development and Co-operation Committee (CDCC) in January 2006, member governments agreed to set up a Regional Co-ordinating Mechanism (RCM) for the implementation of the Mauritius Strategy for the further implementation of the BPoA. The stated objectives and functions of the RCM require that more and better support should be provided to Caribbean SIDS to ensure the implementation of the MSI.

The RCM is to promote awareness at all levels of issues and activities related to sustainable development, and assist in the mobilisation of new and additional resources for the achievement of sustainable development in Caribbean SIDS. It must also optimise the benefits of these resources, through effective co-ordination of initiatives and activities, and assist in the development, monitoring and co-ordination of a sub regional work programme, facilitate the exchange of best practices and transfer of knowledge, liaise with SIDS in other regions for the promotion of joint positions at international forums, strengthen institutional arrangements, and ensure the effective participation of civil society organisations.

The RCM is currently engaged in the establishment of a sub regional database on sustainable development activities, and of co-operative agreements and partnerships among agencies. The governance structure of the RCM requires Ministerial approval to ensure that it obtains the highest level of recognition among stakeholders. The establishment of the RCM was accompanied by the creation of the Technical Advisory Committee (TAC). Key objectives for the establishment of the RCM included information sharing, co-ordination, strengthening of institutional arrangements and effective participation of civil society organisations. The RCM is also designed to assist in the mobilisation of additional resources. One of its main functions is also to provide assistance and support to countries at the national level, and to consider national priorities with regard to the implementation of the MSI.

A crucial component of the RCM structure is the Technical Advisory Committee (TAC) which comprises 15 representatives from a number of governments, regional organisations, civil society representatives and development partners. TAC has since highlighted the many challenges it faces as a co-ordinating mechanism. It stated that the awareness and understanding of MSI on the part of government officials and the level of engagement of the donor community was clearly insufficient. The heterogeneity among member coun-

tries also results in uneven capacities of countries to generate necessary and appropriate data. In addition, there is still a continued perception that the Mauritius Strategy is a framework for action within the environment sector only.

In 2006, ECLAC carried out two studies with the aim of deepening the appreciation of Caribbean SIDS for the MSI and providing improved understanding of obstacles to its implementation. One of the main aspects highlighted in the first study is the extent to which SIDS in the sub region require support from the international community to be able to better implement MSI. The scarcity of their financial as well as technical resources impacted on countries' abilities to address their needs. According to the findings of the study, SIDS were concerned with energy resources and coastal and marine resources. In addition, the view was expressed that natural and environmental disasters, climate change and sea level rise were among the top priorities for Caribbean SIDS.

The second study also contributed to an enhanced understanding of MSI as it focused on '*Challenges in the implementation of the MSI in the Caribbean*' (LC/CAR/L.101). Such challenges were identified on the basis of responses to a questionnaire sent to 23 CDCC member countries and 11 sub regional agencies that had placed sustainable development on their agendas. Difficulty in accessing financial and technical resources was cited as one of the main deterrents to implementation of the MSI by countries and agencies that responded to the questionnaire. Furthermore, insufficient public awareness with regard to the provisions and content of the Mauritius Strategy was also considered a significant obstacle. The report provides a well-informed overview, by sector and theme, of the various existing and anticipated difficulties and suggests that, in the case of climate change and sea level rise, the lack of strong political will, combined with restricted access to resources and technical expertise, was delaying implementation. The absence of a synergistic approach to national plans and policies also acted against effective implementation of MSI.

Pacific region

In the Pacific, the regional approach, or regionalism¹², has the potential to deliver necessary services to countries more cheaply than if countries were to provide the services themselves. The Pacific Islands Forum, through the Pacific Islands Forum Secretariat, has launched the Pacific Plan for Strengthening Regional Co-operation and Integration, which sets out a number of very worthwhile initiatives promoting, in the spirit of the Mauritius Strategy, the sustainable development of Pacific small island developing states.

In the Pacific Plan, the Forum and the Council of Regional Organisations in the Pacific (CROP) have undertaken, inter alia, to help advance countries' sustainable development by the following.

- Developing and implementing their national sustainable development strategies.
- Developing and implementing national and regional conservation and management measures for the sustainable utilisation of fisheries resources.
- Developing and implementing policies and plans for waste management.
- Implementing the Pacific Energy Policy and associated Strategic Action Plan to provide available, reliable, affordable and environmentally sound energy for the sustainable development of all Pacific island communities.

- Investigating the potential for expanding regional technical and vocational education training programmes to take advantage of opportunities in health care, seafaring, hospitality/tourism and peacekeeping that can enhance and standardise such programmes, ensuring the portability of technical qualifications.
- Harmonising approaches in the health sector under the Samoa Commitment to Achieving Healthy Islands, including implementation of the HIV/AIDS and sexually transmitted infection prevention strategy, a stronger focus on non-communicable diseases, and agreement on the recruitment of health workers.
- Enhancing advocacy for, and co-ordination of, youth programmes and monitoring of the status of youth.
- Enhancing regional sports networks to support the development role of sports.
- Securing international finance for sustainable development, biodiversity, and environmental protection and climate change in the Pacific, including through the Global Environment Facility.

Other Pacific Plan themes, also contributing to the sustainable development of Pacific Small Island Developing States and hence reflecting the content of the Mauritius Strategy, address the important issues of economic growth, good governance and security. Under the theme of economic growth, the objective is to raise output through increasing sustainable trade, including trade in services, and investment. Efforts are already being made to improve the efficiency and effectiveness of infrastructure development and the delivery of common goods and services. The economic growth strategy would also include raising private sector participation in, and contribution to, the development of Pacific SIDS.

The Pacific Plan addresses these concerns under the theme of good governance, which aims to improve transparency, accountability, equity and efficiency in the management and use of resources in the Pacific. The Pacific SIDS agreed that because countries were dissatisfied with having to understand and report on many different international conventions and declarations relating to sustainable development, a single document, the Pacific Small Island Developing State Matrix, to be called the 'Pacific SIDS Matrix', would be compiled by the CROP group for those countries. The document would combine and draw on all the sustainable development conventions and international instruments, including Agenda 21, the Johannesburg Plan of Implementation, the Millennium Development Goals, the Mauritius Strategy and the sub region's own sustainable development plans, including the Pacific Plan. It is intended to make it easier to understand, implement and report on the international conventions.

Another important initiative, amplifying Chapter X of the Mauritius Strategy on transport and communication, is the adoption of a sub region-wide Pacific Regional Digital Strategy. The three pronged approach prescribes different policies at the national, regional and global levels. At the national level, the policy suggests liberalisation of the communication sector to allow private operators to compete for, run and manage the country's telecommunications within a regulatory framework that facilitates development appropriate to the people and cultures of the Pacific. Countries are encouraged to provide the domestic telecommunications and information infrastructure, while the sub region could provide the technical expertise which is lacking in most Pacific SIDS.

The great advances achieved in ICT hold potential for alleviating the common problem of the isolation and remoteness of Pacific small island developing states. The Mauritius Strategy recognises the potential of ICT for development and recommends policies for SIDS to follow. Pacific SIDS can develop some of the opportunities presented by ICT, for example, telemedicine, distance learning, improved early warning systems and e-commerce, and some have already done so. ESCAP has started a number of ICT initiatives in the region, including setting up the Intergovernmental Consultative Committee on the Regional Space Applications Programme for Sustainable Development, which last met in September 2005.

The private sector in the Pacific small island developing states is receiving support from the establishment of the Pacific Islands Private Sector Organisation, which the Pacific Plan has undertaken to support. The Organisation is expected to carry out the requisite reforms for upgrading and placing the private sector at the forefront of development as a development partner with government. Many of the services, including utilities, which are currently the responsibility of the government, are expected to be devolved to the private sector, where it is hoped competition will result in reduced prices for the benefit of consumers.

The contribution of ESCAP to implementation of the Mauritius Strategy has been mainly through its technical assistance programmes, providing advisory services, building national institutional capacity and training in the different sectors and areas of operations of Pacific SIDS. Since the launching of the Strategy, ESCAP has helped seven countries, Fiji, Kiribati, Palau, Papua New Guinea, Samoa, Tuvalu and Vanuatu, to address their emerging social issues through workshops on identifying emerging social issues in least developed countries; through the second session of the Committee on Emerging Social Issues (attended by representatives of Kiribati, Palau, Samoa, Tuvalu and Vanuatu); and through two other workshops, providing training on how to mainstream gender and girls' education into countries' development programmes and national development processes.

There are several constraints faced by the Pacific region in implementing the Mauritius Strategy. Firstly, there is a lack of national implementation capacity stemming from the lack of national understanding, ownership and political will to implement the Strategy. Public services in many of the countries are small and unskilled and as states require a critical mass of institutions, for example, parliament, the judiciary and the executive branch (including foreign missions, education and health services and police) to exist as 'states', their small human resources are often spread too thinly across government institutions, resulting in ineffectiveness and poor performance.

Another constraint is the tendency of governments to exclude the wider civil society, thereby foregoing the benefits of society-wide participation and support for implementation of the Mauritius Strategy. Many governments of Pacific SIDS need to consult more widely and build partnerships with stakeholders, not only on the Mauritius Strategy but also on their overall national sustainable development strategies.

The co-ordination and harmonisation of aid is another challenge faced by the Pacific SIDS in the implementation of the Mauritius Strategy and there is a need for innovative ways of co-ordinating aid among donors. The prospects for Pacific SIDS being able to finance implementation of the Mauritius Strategy from their own resources are not encouraging because

the majority of them have very limited sources of financing for economic development. Overall, although many SIDS have made significant strides in the implementation of MSI +5, there are still a few difficulties to overcome. For many SIDS, access to financial resources is a special challenge because of the small size of their economies and the high relative cost of better market information and project preparation. Furthermore, capacity development and education suffer from migration of talented people and the problems of specialisation within a small population. The requirements for implementing the MSI +5 place on SIDS a heavy workload for such countries with limited human resources and expertise. This translates into a lack of capacity for implementation. Many SIDS also lack effective management of education and training services to meet the knowledge management requirements for MSI. The implementation of sustainable development strategies and the ability to monitor and evaluate progress rely on effective knowledge and information powered by modern ICT. Accelerated development in these fields may hold the key to overcoming the vulnerabilities of SIDS arising from their fragmentation, isolation, and remoteness.

Conclusions

Concerted efforts are being made by the small island developing states to implement meaningful policies and adaptation strategies to address their vulnerabilities and build resilience both at national and regional levels. It is clear that countries require support from the international and regional communities in implementing several areas of the MSI and, as such, it is recommended that the regional mechanism be further strengthened as soon as possible, so as to provide direction and oversight to implementation of the MSI.

While small states acknowledge that sustainable development is primarily a national responsibility, there is a need for strengthened co-operation and partnership in support of sustainable development of SIDS at the national, sub regional, regional and international levels. Such partnership should be broad-based and ensure the involvement and participation of relevant stakeholders.

Mainstreaming the MSI through regional co-operation should start with a negotiation of positions and actions, driven primarily by stakeholders and actors within the SIDS who themselves seek to ensure that domestic policy-making coincides with regional co-operation goals in a viable supranational entity, preferably a regional co-operation arrangement. Within the complex mix there is expected to be positioning based on how to apply the best strategies and action planning in spite of constraints, cultural differences and institutional roadblocks.

The existence of willingness and an Action Plan or Framework is not guaranteed to bring about results. Effective co-operation depends upon thorough research that includes both specialist and citizen participation. Co-ordination is unachievable without a segmentation of the whole into its distinct parts, and an understanding what they are, how they inter-relate and how they can best be addressed. It is not sufficient to enumerate or state the problem but map and remap solutions based on ongoing redefinition and reshaping of parameters in response to changing social, economic, environmental and political factors. The most effective approach may be to take small progressive steps within sectors.

Many SIDS are already dependent on larger regional co-operation schemes and SIDS must advance regional co-operation as progressively and as efficiently as they can, a factor given implicit recognition in the common framework of the MSI. There are, however, no shortcuts to implementation. Regional co-operation can be the foundation for expanding into international development but it must be seen to be worthwhile in delivering benefits at national level.

There is co-ordination of activities relevant to the implementation of MSI undertaken by UNDESA through its SIDS unit. This is largely pursued through meetings of the Inter Agency Consultative Group (IACG) on SIDS, which is an informal co-ordinating mechanism for the focal points of all relevant UN agencies, Regional Commissions and regional intergovernmental organisations to have a chance to exchange expertise, experiences, policies and information on planned activities, as well as co-ordinate joint efforts. Much of the future work will have to be done by SIDS themselves if international aid declines as SIDS make progress in economic development.

Mainstreaming regional co-operation is achievable providing it is not seen as an alternative but complementary to internal national development and external international co-operation. The expressed interest and continuing political rhetoric in support of integration has not for the most part been matched by political will and systematic action to advance and deepen the integration process by many SIDS.

Although a few of the groupings are beginning to make modest progress, the overall achievement to date has been slow to materialise, both in terms of cross-border trade and investment among member countries and with respect to the strength and capability of the institutions themselves. Moreover, the proliferation of multiple and multifaceted integration schemes operating within the same geographic area has, in some cases, resulted in overlapping membership and duplication of mandates. There is a need to harmonise the regional plans and co-ordinate various activities to promote efficient and co-ordinated use of resources and best practice. There is also a need to review the coherence, governance and consistency of the international monetary, financial and trading systems, and to promote greater participation of small island developing States in international financial decision-making processes and institutions and in the process of setting international rules, codes, norms and standards.

The recent regional reviews of MSI + 5 indicated that the future focus should be on implementation of initiatives that address SIDS's vulnerabilities and strengthen their coping capacities, with support from the international community through partnerships. The meetings highlighted the need for strengthened co-operation and partnerships and suggested building on existing mechanisms with enhanced and co-ordinated roles for regional organisations and UN organisations. This calls for strengthening public-public and public-private partnerships, which could take the form of South-South co-operation, including SIDS-SIDS, and the building of alliances with donor communities in a co-ordinated manner for the effective delivery of assistance.

In terms of building on existing mechanisms, the MSI + 5 review also considered ways to improve the CSD Partnerships mechanism that has been in place since WSSD in 2002, by

reviewing and re-launching a revised set of CSD Partnership Initiatives that provide focus and impetus for action to address the vulnerabilities of SIDS, building on lessons learned since 2002. In addition to regional co-operation, SIDS should make fuller use of National Sustainable Development Strategies (NSDS) as a mechanism for implementing the requirements of international and regional commitments such as the Mauritius Strategy, the Pacific Plan, the United Nations Development Assistance Framework (UNDAF) and the Millennium Development Goals.

Further reading

- Bartley, Tim and Albert Bergesen (1997). 'World Systems Study of the Environment' in *Journal of World Systems Research* 3, No. 3.
- Bass, Ademola (2002). *Regional Organisations and the development of collective security: Beyond Chapter VIII of the UN Charter*. Oxford and Portland, Oregon: Hart Publishing.
- Burfisher, Mary E, Sherman Robinson, Karen Thierfelder (2003). 'Regionalism Old and new: Theory and Practice'. Paper Prepared for presentation to the International Agricultural Research Trade Consortium Conference. June, 2003.
- Caribbean Sub-regional preparations for the International Meeting to Review the Implementation of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States. 20th Session of the Caribbean Development and Cooperation Committee. 2004. Available at: <http://www.eclac.cl/publicaciones/xml/5/14775/L0002.pdf>
- Chase Dunn, Christopher and Barry Gills (2003). 'Understanding waves of globalization and resistance in the capitalist world system: Social movements and critical globalization studies'. Study prepared for presentation at the conference on Critical Globalization Studies, University of California, Santa Barbara, May 2–4.
- Chunyao Yi (2007). 'Emergence of Regionalism: About state preference formation in Europe and Asia', *Polis Working Paper* 23. School of Politics and International Studies, Draft paper prepared for presentation to the conference on European Union and the world: Asia enlargement and constitutional change. University of Leeds.
- Estes, Richard J (1993). *Toward Sustainable Development: From Theory to Praxis*. School of Social Work. University of Pennsylvania.
- Haughton, Graham and Dave Counsell (2004). *Regions, Spatial Strategies and Sustainable Development*. Routledge, Taylor and Francis. London.
- Hurrell, Andrew (1995). 'Regionalism in Theoretical Perspective' in Fawcett, L and A Hurrell (eds). *Regionalism in World Politics: Regional Organization and International Order*. Oxford University Press: Oxford.
- Lamy, Pascal (2007). Speech by Director General Pascal Lamy at the Informal Trade Ministers dialogue on Climate Change in Bali at http://www.wto.org/english/news_e/sppl_e/sppl83_e.htm
- Mace, Gordon and Louis Belanger (1999). *The Americas in Transition: The Contours of Regionalism* – Google Books Result. Offering an assessment of the state of regionalism in the Americas, this text asks the question: do the FTA, Mercosur, the

Enterprise for Americas Initiative, NAFTA, and the Summit of the Americas constitute building blocs?

Munoz, Lucio (2003). 'Eco-Economic Development Under social constraints: how to redirect it towards sustainability?' *Theo Mai, Segundo Semester, Numero 008*, Universidad Nacional de Quilmes, Argentina.

Milner, Helen (1992). 'International Theories of Cooperation among Nations: Strengths and Weaknesses.' *World Politics*. Abstract: Co-operation among nations has become the focus of a wide range of studies in the past decade. The recent literature on international co-operation has made two general contributions. First, it has developed a concept of co-operation, which can help distinguish what behaviour counts as co-operation and which has been adopted widely in the field. Second, the literature has tried to illuminate the conditions under which co-operation is likely to emerge.

Regional Cooperation: 'Conceptual Framework and Asia Pacific Experience'. Accessed at http://ttd.webserver.unescap.org/pdd/publications/regcoop/ch_2.pdf

The Pacific Plan for Strengthening regional Cooperation and integration. Accessed at <http://www.Pacificplan.org/tiki-page.php>.

Tay, Simon, Hank Lun and Matthew Walls (2004). *The Rush to Regionalism: Sustainable Development and Regional/Bilateral Approaches to Trade and Investment Liberalization*. Singapore Institute for International Affairs.

UNCTAD (2007). Ad hoc Expert Group Meeting on 'The Development Interface between the Multilateral Trading System and Regional Trade Agreements'.

Vossenaar, Rene (2004). 'Trade and environment: an important relationship in SIDS' in *Is a Special Treatment of Small Island Developing States Possible?* UNCTAD. Available at: www.unctad.org/en/docs/idc2004/en.pdf

Wisner, Benjamin, Camilla Toulmin and Rutendo Chitiga (eds) (2005). *Towards a new map of Africa*. Earthscan Ltd.: London.

Notes

- 1 The Report of the Brundtland Commission, headed by Gro Harlem Brundtland, *Our Common Future*, was published by Oxford University Press in 1987. The Brundtland Commission, formally the World Commission on Environment and Development (WCED), known by the name of its Chair, Gro Harlem Brundtland, was convened by the United Nations in 1983. The commission was created to address growing concerns 'about the accelerating deterioration of the human environment and natural resources and the consequences of that deterioration for economic and social development'. In establishing the commission, the UN General Assembly recognised that environmental problems were global in nature and determined that it was in the common interest of all nations to establish policies for sustainable development. Available at www.wikipedia.org
- 2 World Bank – *Experiences and Opportunities for Capacity Sharing through regional cooperation and integration: The case of the Caribbean Community*. <http://siteresources.worldbank.org/PROJECTS/Resources/409401118776867573/casecaribbean.pdf>. Last accessed 13 August 2010.
- 3 Ibid.
- 4 Rolf, Jim (2007). 'Many Small states, Two Regions, Different Constructions'. In *Social Economic Studies*: 56. Nos 1 & 2.
- 5 There are other groupings such as the UMOEA states (Benin, Burkina Faso, Cote d'Ivoire,

Guinea-Bissau, Mali, Niger, Senegal and Togo). Of these blocs, there are five regional organisations of which small island developing states form part: CENSAD (Comoros: 2007 and Guinea Bissau: 2004 and Togo); COMESA (Comoros: 1994 and Mauritius); ECOWAS (Cape Verde: 1976); SADC (Mauritius: 1990 and Seychelles:1997) and ECCAS (São Tôme and Príncipe: 1999). Seychelles has since withdrawn from SADC. All of these groupings and associations generally fall within the ACP bloc and are mainly economic and trading organisations.

- 6 See Alessia Lo Turco (2005). 'Are South-South RTAS Growth Enhancing: The Case of Latin American Agreements, 1960–2000' in *Applied Econometrics and International Development*: 5. No. 2.
- 7 Padma Narsey Lal, Sustainable Development Advisor of the Pacific Islands Secretariat: comments made in response to a questionnaire for selected implementers of MSI in the SIDS regions.
- 8 *Co-operation South Journal*. October 1995. *Idealistic Notions for Realistic World: the Case for South South Co-operation*. Accessed at: tcdc.undp.org/CoopSouth/default.asp.
- 9 This negotiations framework builds on the work undertaken in *Analyzing the Issues*, article by Prof. Geza Feketekuty (2004) of the Institute for Trade and Commercial Diplomacy at Monterrey, California. It can be accessed at: www.commercialdiplomacy.org
- 10 Kahler, Miles and David A Lake in: *Economic integration and global governance: Why so little supra nationalism?* (University of California, San Diego Paper Prepared for the Workshop on Explaining Global Regulation, University College, University of Oxford 20–21 October 2006.)
- 11 Ibid.
- 12 Regionalism is described in the Pacific Plan as countries working together for their joint and individual benefit.

National laws as an instrument for the implementation of treaty obligations¹

Introduction

The growth of modern environmental diplomacy over the past three decades or so has led to a growth in the number of Multilateral Environmental Agreements (MEAs), partly in response to concerns about global environmental issues and partly out of a recognition by the international community that such problems cannot be solved by an individual country, irrespective of how strong it may be, but only by collective action among nations. It is through these treaties, conventions and agreements that environmental norms and standards are established and applied. Many of these MEAs have been signed, acceded to and ratified by the Caribbean SIDS, in particular since 1992. The coverage of these MEAs is extensive and addresses a wide spectrum of environmental and natural resources issues which are critical to the environmental and sustainable development of Caribbean SIDS. A selection of some of the most important MEAs which are relevant to the environmental and sustainable use of natural resources in the Caribbean are clustered and presented in Table 6.1. The clusters identified cover, *inter alia*, wildlife and biodiversity conservation; the protection of traditional knowledge; marine and coastal resources, their management and protection and marine safety; the protection of atmospheric systems (i.e. ozone depletion and climate change); sustainable land management; waste and chemical management; and the protection of human health and environmental and cultural and natural heritage.

The growth of liberalisation has brought into sharper focus inter-linkages between trade and environment, in particular the use of environmental measures (i.e. health and safety standards, sanitary and phytosanitary measures, etc.) as non-technical barriers to trade. This broadens the scope of the multilateral agreements which warrant consideration; though not all are regarded, by some, as environmental agreements per se, they are nevertheless important, given inter-linkages between trade and the environment. Agreements which are relevant, in this regard, include the World Trade Organization (WTO) disciplines on the Agreement on Sanitary and Phytosanitary Measures; the Agreement on Technical Barriers to Trade (TBT) and the relevant aspects of the Agreement on the Trade-Related Aspects of Intellectual Property Rights (TRIPs) and the General Agreement on Trade in Services (GATS). In keeping with this trend, Paragraph 31 of the Doha Ministerial Declaration mandates, albeit restrictively, the relationship between existing WTO rules and specific trade obligations set out in MEAs, and the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services. Also, pursuant to paragraph 32, to give particular attention to the effect of environmental measures on market access,

Table 6.1. Indicative list of selected Multilateral Environmental Agreements (MEAs) to which Caribbean SIDS Member States are party

MEA	AB	Bah	Bar	BEL	Cuba	Dom	DR	Gren	GUY	Haiti	Jam	SKN	SL	SVG	SUR	TT
Wildlife/conservation																
Convention of International Trade in Endangered Species, 1972 (CITES)	A 1997	A 1979	A 1992	A 1986	A 1990	A 1995	A 1986	A 1999	A 1977		A 1997	A 1994	A 1982	A 1988	A 1980	A 1984
Convention on the Conservation of Migratory Species (CMS)	A 2007				A 2008											
Convention on Wetlands of International Importance especially as Waterfowl Habitats (RAMSAR)	R 2005	R 1997	R 2005	A 1998	R 2001		R 2002				A 1997		R 2002		A 1985	A 1993
International Convention for the Regulation of Whaling 1948 and 1959	Ad 1982					Ad 1992		Ad 1993				Ad 1992	Ad 1981	Ad 1981		
Protocol Concerning Specially Protected Areas and Wildlife to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean, 1983 (RE)	S 1990		A 2002	A 2008	A 1998		A 1998				S 1990		A 2000	A 1991		A 1999
Biodiversity/bio-safety, traditional knowledge																
International Plant Protection Convention, Rome, 1951	Ad 2006	Ad 1997	Ad 1976	Ad 1987	R 1976	Ad 2006	Ad 1952	Ad 1985	Ad 1970	Ad 1970	Ad 1969	Ad 1990	Ad 2002	Ad 2001	S ² 1954	Ad 1970

MEA	AB	Bah	Bar	BEL	Cuba	Dom	DR	Gren	GUY	Haiti	Jam	SKN	SL	SVG	SUR	TT
Convention on Biological Diversity, 1992	R 1993	R 1993	R 1993	R 1993	R 1994	R 1994	R 1996	R 1994	R 1994	R 1996	A 1995	R 1993	A 2003	A 1996	R 1996	R 1996
Cartagena Protocol on Bio-Safety	R 2003	R 2004	A 2002	R 2004	R 2002	A 2004	A 2006	R 2004	A 2008	S 2000	S 2001	A 2001	A 2005	A 2003	A 2008	A 2000
International Labour Organisation No. 169 Concerning Indigenous and Tribal Peoples in Independent Countries (ILO)						R 2002										
Marine protection and safety																
Convention on the Protection and Development of the Marine Environment in the Wider Caribbean, 1983 (Cartagena Convention) (RE)	A 1986		A 1985	A 1999	A 1998	A 1990	A 1998	A 1987			R 1987	A 1999	A 1994	A 1990		A 1986
Protocol Concerning Co-operation in Combating Oil Spills in the Wider Caribbean, 1983 (RE)	A 1986		A 1985	A 1999	A 1988	A 1990	A 1998	A 1987			A 1987	A 1999	A 1984			A 1990
Protocol Concerning Pollution for Land Based Sources and Activities in the Wider Caribbean 1983 (LBS Protocol). (RE)						A 2002										
Protocol of 1973 to the International Convention for the Prevention of Pollution from Ships as Amended (MARPOL 1973/78)	A 1988	A ³ 1983	A ⁴ 1994	A 1995	A ⁵ 1992	A ⁶ 2000	A 1999		A 1997		A 1991	A 1997	A 2000	A 1983	A 1988	A 2000

MEA	AB	Bah	Bar	BEL	Cuba	Dom	DR	Gren	GUY	Haiti	Jam	SKN	SL	SVG	SUR	TT
International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC, 1969)	A 1997	A 1976	A 1994	A 1991			R 1975		A 1997			A 1994		A 1989		
Protocol of 1992 to Amend the International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC PROT, 1992)	A 2000	A 1997	A 1998	A 1998	A 2001	A 2000	A 1998	A 1997			A 1997	A 2004	A 2004	A 2001		A 2000
Convention relating to Civil Liability in the Field of Marine Carriage of Nuclear Material, 1971 (NUCLEAR, 1971)						A 2001										
International Convention for the Establishment of an International Fund for the Compensation of Oil Pollution, 1971 (FUND, 1971)	A 1997	A 1976	A 1994						A 1997			A 1994				
Protocol of 1992 and 2003 to Amend the International Convention for the Establishment of an International Fund for the Compensation of Oil Pollution, 1971	A 2000	A 1977	A 1998 2005	A 1998	A 2001	A 1999					A 1997	A 2005	A 2004	A 2001		A 2000
International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969; (INTERVENTION, 1969)		A 1976	A 1994		A 1976		R 1975		A 1977		A 1991	A 2005	A 2004	A 1999	A 1975	A 2000

MEA	AB	Bah	Bar	BEL	Cuba	Dom	DR	Gren	GUY	Haiti	Jam	SKN	SL	SVG	SUR	TT
Protocol relating to Intervention on the High Seas in Cases of Pollution by Substances other than oil, 1973 as Amended (INTER-VENTION PROT, 1973)		A 1981	A 1994								A 1991		A 2004	A 1999		
Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, as Amended (LC 1972)	DI 1989		DI 1994		EF/SU 1991			DI 1973		DI 1975	DI 1991		DI 1985	DI 2001		
1996 Protocol to the International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, (LC PROT, 1996)			A 2006									A 2004			A 2007	A 2000
International Convention on Liability and Compensation from Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS Convention, 1996)												A 2004				
International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC Convention), 1990	A 1999	A 2001				A 2001			A 2002		A 2000	A 2004	A 2004			A 2000
International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 (BUNKERS 2001)											A 2004					

MEA	AB	Bah	Bar	BEL	Cuba	Dom	DR	Gren	GUY	Haiti	Jam	SKN	SL	SVG	SUR	TT
International Convention for the Control and Management of Ship Ballast Water and Sediment, 2004 (BMB 2004)			A 2007									A 2005				
Marine resources																
United Nations Convention on the Law of the Sea, 1982	R 1989	R 1983	R 1993	R 1983	R 1984	R 1991	R 1991	R 1991	R 1993	R 1996	R 1983	R 1993	R 1985	R 1993	R 1998	R 1986
Agreement Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Species, 1995		R 1997	R 2000	R 2004									R 1996			R 2006
Chemicals/waste management																
Basel Convention on the Control of Transboundary Movement of Hazardous Waste and their Disposal	A 1993	A 1992	A 1995	A 1997	A 1994	A 1998	A 2000	A 2000	A 2001	S 1989	A 2000	A 1994	A 1993	A 1996		A 1995
Rotterdam Convention on the Prior Consent Procedures for Certain Hazardous Chemicals and Pesticides in International Trade			S 1998		R 2008	A 2005	A 2005	A 2005	A 2007				S 1999		A 2000	
Sustainable land management																
United Nations Convention to Combat Desertification	R 1997	A 2000	A 1997	A 1998	R 1997	A 1997	A 1997	A 1997	A 1997	R 1996	A 1997	A 1997	A 1997	R 1998	A 2000	A 2000

MEA	AB	Bah	Bar	BEL	Cuba	Dom	DR	Gren	GUY	Haiti	Jam	SKN	SL	SVG	SUR	TT
Atmospheric/climate systems																
Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985	A 1992	A 1993	A 1992	A 1997	A 1992	A 1993	A 1993	A 1993	A 1993	A 2000	A 1993	A 1992	A 1993	A 1996	A 1993	A 1989
Montreal Protocol on Substances that Deplete the Ozone, 1989*	A 1992	A 1993	A 1992	A 1998	A 1992	A 1993	A 1993	A 1993	A 1993	A 2000	A 1993	A 1992	A 1993	A 1996	A 1997	A 1989
United Nations Framework Convention on Climate Change, 1992	R 1993	R 1994	R 1994	R 1994	R 1994	R 1993	R 1998	R 1994	R 1994	R 1996	R 1995	R 1993	R 1993	R 1996	R 1997	R 1994
Kyoto Protocol	R 1998	R 1999	R 2000	R 2003	R 2002	R 2005	R 2002	R 2002	R 2003	R 2005	R 1999	R 2003	R 2003	R 2004	R 2006	R 1999
Protection of human health and the environment																
Stockholm Convention on Persistent Organic Pollutants (POPs), 2001	R 2003	R 2005	A 2004	S 2002	R 2007	A 2003	R 2007	A 2007	A 2007	S 2001	R 2007	A 2004	A 2002	A 2005	S 2002	A 2002
Culture and natural heritage																
Convention for the Protection of World Culture and Natural Heritage, 1972	Ac 1983		Ac 2002	R 1990	R 1981	R 1995	R 1985	Ac 1998	R 1997	R 1980	Ac 1983	Ac 1986	R 1991	R 2003	Ac 1997	R 2005

* Excludes the various Amendments (London Amendment (10.8.1992); Copenhagen Amendment (14.6.1994); Montreal Amendment (10.11.1999) and Beijing Amendment (25.2.2002)).

Legend: AB = Antigua and Barbuda; Bah = The Bahamas; BEL = Belize; Bar = Barbados; Dom = Dominica; DR = Dominican Republic; Gren = Grenada; GUY = Guyana, Jam = Jamaica; SKN = St. Kitts and Nevis, SL = St. Lucia; SVG = St. Vincent and the Grenadines, SUR = Suriname and TT = Trinidad and Tobago. A = Accession⁷; Ac = Acceptance⁸; Ad = Adherence; R = Ratification⁹ and S = Signature, DI = Date of deposit of instrument; EF/Su = Date of Entry into Force or Succession; RE = Regional MEA.

See page 106 for source references.

especially in relation to developing countries, in particular the least-developed among them, and those situations in which the elimination or reduction of trade restrictions and distortions would benefit trade, the environment and development; the relevant provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights; and labelling requirements for environmental purposes. The trade and environment interface is also present in trade and economic agreements concluded between Caribbean SIDS and third States or group of States. An example of this is the Economic Partnership Agreement (EPA) concluded between the CARIFORUM States, of the one part, and the European Community and its Member States, of the other part, where the Parties¹⁰:

... reaffirm their commitment to promoting the development of international trade in such a way as to ensure sustainable and sound management of the environment, in accordance with their undertakings in this area including the international conventions to which they are party and with due regard to their respective level of development.

The interface between trade policy and the environment is likely to gain increasing importance in the foreseeable future. Unlike national law, Treaties¹¹ are concluded between two or more States. The process by which treaty obligations are carried out varies, and includes by legislation, executive and/or judicial means. This paper addresses the former – the use of national laws as an instrument for the implementation of treaty obligations. A related question, particularly in the context of Caribbean SIDS, is the extent to which national law is used as a tool for mainstreaming the environmental and sustainable development principles underpinning treaty obligations into national planning processes. The importance of national law to the implementation of treaty obligations, particularly with respect to MEAs, is recognised by the Programme of Action for the Sustainable Development of SIDS¹², which calls for national action to ‘enact the domestic legislation required for the implementation of the wide range of international environmental conventions and agreements directly relevant to small island developing States’. This brings into focus the relationship between treaties, more specifically MEAs, and national law in Caribbean SIDS.

The dualist-monist perspectives in international law

Two theories which provide a context for understanding the relationship between international law and national law are the dualistic and monist perspectives, respectively. The theory of dualism considers international law and domestic law as two separate legal orders. International legal instruments therefore do not have direct effect in national law and their applicability is limited if they are not transformed into national legislation. The monism view, on the other hand, contends that there is unity in a given field of inquiry. International law and domestic law, viewed from the monism perspective, are considered as part of the same body of knowledge – ‘Law’; the implication is that international law is adopted into national law because it is international law. Closely related to these two theoretical perspectives are the doctrines of ‘incorporation’; an exemplification of the monist perspective, and that of ‘transformation’, which holds that rules of international law do not automatically become a part of domestic law unless expressly adopted by the State. The

determination of which doctrine is applicable to a particular Member State is usually determined by the national law of that country, usually by the constitution.

The status of international law in domestic courts is addressed by Lord Hoffman in *John Junior Higgs and David Mitchell v The Minister of National Security and Others*¹³. Though specific to the Bahamas, this case is equally applicable to countries with common law traditions. It highlights the dualist approach to international law and national law. Lord Hoffman opined that (emphasis added):

14. '... the fact that the constitution of the OAS (including the Statute which established and conferred powers upon the Commission) is an international treaty. In the law of England and The Bahamas, **the right to enter into treaties is one of the surviving prerogative powers of the Crown. Her Majesty does not require the advice or consent of the legislature or any part thereof to authorise the signature or ratification of a Treaty.** The Crown may impose obligations in international law upon the state without any participation on the part of the democratically elected organs of government.

15. But the corollary of this unrestricted treaty-making power is that **treaties form no part of domestic law unless enacted by the legislature.** This has two consequences. The first is that **the domestic courts have no jurisdiction to construe or apply a treaty:** see *JH Rayner (Mincing Lane) Ltd. v Department of Trade and Industry* [1990] 2 A.C. 418. So, in the present case, the effect of the treaty in international law may be that The Bahamas has a duty to wait indefinitely for the decision of the Commission or that it has a duty to wait a reasonable time or (given the advisory and non-binding nature of the possible recommendations of the Commission) it has no duty to wait at all. **The courts of The Bahamas have no jurisdiction to pronounce upon this question.**

16. The second consequence is that unincorporated **treaties cannot change the law of the land. They have no effect upon the rights and duties of citizens in common or statute law:** see the classic judgment of Sir Robert Phillimore in *The Parlement Belge* (1879) 4 P.D. 129. They may have **an indirect effect upon the construction of statutes as a result of the presumption that Parliament does not intend to pass legislation which would put the Crown in breach of its international obligations.** Or the existence of a treaty may give rise to a legitimate expectation on the part of citizens that the government, in its acts affecting them, will observe the terms of the treaty: see *Minister for Immigration and Ethnic Affairs v. Teoh* (1995) 183 C.L.R. 273.

17. **The rule that treaties cannot alter the law of the land is but one facet of the more general principle that the Crown cannot change the law by the exercise of its powers under the prerogative.** This was the great principle which was settled by the Civil War and the Glorious Revolution in the seventeenth century. And on no point were the claims of the prerogative more resented in those times than in relation to the establishment of courts having jurisdiction in domestic law. There have been no prerogative courts in England since the abolition of Star Chamber

and High Commission. But the objection to a prerogative court must be equally strong whether it is created by the Crown alone or as an international court by the Crown in conjunction with other sovereign states. In neither case is there power to give it any jurisdiction in domestic law.'

A number of salient observations can be drawn from the above extract that are relevant to the discussion of national law as an instrument of the implementation of treaty obligations. First, it is the prerogative of the Executive Branch of Government to authorise the signing, accession and/or ratification of Treaties without the participation of the Legislative Branch of Government. In those Caribbean SIDS with common law jurisdictions, the decision to sign and to ratify a treaty is taken by the Cabinet on the advice of the relevant line Ministry, in this case Environment, in close collaboration with the Ministry of Foreign Affairs which is usually assigned the responsibility for signing treaties on behalf of the State. In many instances the end result is such that once the treaty is ratified the Executive Branch, more often than not does not take the next step to transform treaty obligations into national law. In addition, more often than not, the Legislative Branch of Government as well as the general public has little or no information on the content of the instrument which was ratified by the Executive Branch. Despite the enactment of the *Ratification of Treaties Act (Chapter 364) of the Laws of Antigua and Barbuda*, by the Parliament of Antigua which provides that 'No provision of a treaty shall become, or be enforceable as, part of the law of Antigua and Barbuda except by or under an Act of Parliament' and that 'The instrument of ratification shall be issued under the signature of the Minister responsible for External Affairs', this has not remedied the deficiency of the exclusion of the Legislative Branch in the treaty ratification process by the Parliament of Antigua and Barbuda.

Another observation is that treaties form no part of domestic law unless enacted by the legislature. This is settled case law commencing, as indicated by Lord Hoffman, with the landmark case of *The Parlement Belge*¹⁴ and reaffirmed in *J.H. Rayner (Mincing Lane) Ltd. v. Department of Trade and Industry*¹⁵. The implication of this is that the domestic courts have no jurisdiction to construe or apply a treaty; nor do treaties change the national law. Hence they have no effect upon the rights and duties of citizens in common or statute law, until they are transformed into national law. It is therefore incumbent on the State to enact the necessary legislation to enable them to honour their treaty obligations. Furthermore, pursuant to Article 27 of the Vienna Convention of the Law of Treaties, a party may not invoke the provisions of its internal law as justification for its failure to perform a treaty. The situation is, however, different in Caribbean SIDS with civil law traditions. In the case of Haiti, pursuant to Haiti's Constitutional Law of 1987, MEAs automatically form part of the legal order upon ratification. The obligations contained therein are enforceable by judges through a legislative action called a Decret (Decree) to be promulgated in the official journal (see Articles 125, 276–1 and 276–2 of the Constitution Law of 1987).

Methods of transforming treaty obligations into domestic laws

Two legal systems predominate in Caribbean SIDS; those Member States with a common law tradition inherited from the British legal system and those with a civil law heritage, namely Cuba, Haiti, the Dominican Republic and Suriname. Legislation in Caribbean SIDS

take two principal forms; primary legislation as a result of an Act of Parliament and secondary legislation, consisting of statutory instruments made by primary legislation and passed in Parliament under summary procedures. Since MEAs do not have direct effect, their ratification by the Executive Branch of Government does not make them automatically part of national law. Rather they must be transformed into national law in order for them to have legal effect. This point is highlighted by Harrison, JA in *Natural Resources Conservation Authority v Seafood and Ting International Limited and DYC Fishing Limited*¹⁶:

‘a treaty entered into by the executive of a sovereign state does not automatically become a part of the domestic law unless it has been incorporated by legislation. Only then do any rights and obligations arise hereunder with reference to its nationals.’¹⁷

Panton, J.A., in the same judgment, emphasised that

‘It is imperative that the Convention [CITES] should be made part of the domestic legislation as early as possible – if the protection of the environment is a serious national objective. The proper regulation of matters relating to the environment is not something that should be left to individual desire or business interests. The failure to enact appropriate legislation is a recipe for chaos and unfairness.’¹⁸

A number of methods are employed in the common law jurisdictions of Caribbean SIDS to transform treaty obligations into national law. These methods include giving force to treaty obligations through the incorporation of the text of the treaty or the operative parts thereof; by reference; and the translation of treaty obligations into traditional legislative language by way of an Act of Parliament or through the statutory instruments made by primary legislation under summary procedures, usually in the form of Regulations. An example where the text of the treaty or the operative parts of the treaty is given force in domestic legislation is *The Shipping (Oil Pollution) Act, 1994 as Amended 1997*, Chapter 296A of the Laws of Barbados. The Convention(s) to which the Act refers are is/are identified in the definition section of the Act as ‘An Act to make provision concerning oil pollution of navigable waters by ships, to provide for civil liability for oil pollution by ships and to give effect to certain international conventions relating to pollution’. In the substantive part of the Act, at Part VIII Section 56. (1), the international conventions and protocols to which the Act refers are listed¹⁹. Provision is made in Part VIII 57 for the resolution of conflicts, should they occur. In such circumstances the provision of the international convention or protocol prevails unless the national regulations applied by the Ministry are different.

Incorporation by reference is usually achieved by way of a statement that the particular treaty or treaties have ‘the force of law’ in national law. An example of this approach is the *National Conservation and Environmental Protection Act 1987 as Amended 1996* of St. Kitts and Nevis, where a number of MEAs²⁰ are referred to by ‘short title’ in the Fifth Schedule of the Act. However, a major weakness of this approach is that the institutional and substantive administrative requirements necessary for the effective implementation of treaty obligations are not spelt out in the legislation. This shortcoming can lead to uncertainty in the administration of the Act. Additional legislative action is usually required to address these uncertainties as in St. Kitts and Nevis, where the Minister responsible for Environ-

ment in the exercise of his powers conferred by 54B (1) of the *National Conservation of Environment and Protection Act, No. 5 of 1987* makes the *Substances That Deplete the Ozone Layer (Control) Regulations, 2004*, to facilitate compliance with the treaty obligations of the Montreal Protocol.

Another method used to translate the treaty obligations into traditional legislative language is an Act of Parliament. This method provides more legal certainty in the implementation of treaty obligations. An example of this approach in the Caribbean SIDS is *An Act to Give Effect to the Montreal Protocol on Substances that Deplete the Ozone Layer and for Matters Concerned Thereto, 2004*, (Cited as the *Montreal Protocol (Controlled Substance) Act, 2004*) enacted by the Parliament of The Bahamas. This Act covers the substantive requirements required by The Bahamas to honour its treaty obligations for, *inter alia*, prohibition of the use of controlled substances in order to protect the ozone layer except those controlled substances used for human or animal health care application, the manufacture or sale of anything containing a controlled substance; the purchase of controlled substances without a certification card issued by the National Ozone Unit as well as the release of such substances into the ambient air. The Act also imposes an obligation on persons who service appliances and vehicles that contain or may contain controlled substances as well as persons desirous of disposing of appliances that contain a controlled substance, on the expiration of that item's useful life. The Act also prohibits the release of controlled substances to the atmosphere as well as empowers the responsible Minister to make specific regulations for carrying out the provisions of the Act.

Another approach which could be used in translating treaty obligations into traditional legislative language is selecting a basket of MEAs with similar or overlapping objectives (i.e. biodiversity) and synergistically clustering the commitments into a single coherent piece of legislation. This approach could be attractive for countries, such as those of the Caribbean, which are faced with a plethora of MEAs to implement and limited human, financial and administrative capacity to effectively do so. This approach – the Model Framework Harmonised Clustering Legislation – is the subject of a pilot project undertaken by the countries of the Organisation of Eastern Caribbean States (OECS) in which the commitments of a cluster of MEAs on biodiversity are translated into one piece of 'model law'. The model law could subsequently be used by individual countries of the OECS as the basis for translating the treaty obligations of the selected MEAs into national law. The overall objective is to develop a holistic and integrated model law that implements five global Conventions – Convention on Biological Diversity (Rio de Janeiro, 1992); Convention on the International Trade in Endangered Species of Wild Flora and Fauna (Washington, 3 March 1973); Convention on the Conservation of Migratory Species of Wild Animals (Bonn, 23 June 1979); Convention for the Protection of the World Cultural and Natural Heritage (Paris, 23 November 1972); and Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar, 2 February 1971) and the regional MEA on Specially Protected Areas and Wildlife (SPA) Protocol to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean (Cartagena des Indias, 24 March 1983) – related to the management and protection of biological diversity²¹.

Treaty obligations can also be transformed into national law by way of regulations, under the power conferred by primary legislation. With the exception of a small number of Caribbean SIDS with common law jurisdictions; notably, The Bahamas, Jamaica and Saint Lucia, the substantive obligations under the Montreal Protocol have been transformed into national law by way of regulations. Hence the St. Kitts and Nevis *Substances That Deplete the Ozone Layer (Control) Regulations, 2004*, under the *National Conservation and Environmental Protection Act 1987 as Amended 1996*, and the Montreal Protocol (Substances that Deplete the Ozone Layer) Legislations and Regulations (2006) in Dominica are example of where this approach is being used. The principal regulation, the *Belize Pollution (Amendment) Regulations, 2002 Part XII Prohibition Of The Manufacture Of Ozone Layer Damaging Substances*²² made by the Minister responsible for the Environment in exercise of the powers conferred by Section 21 and 44 of the Environmental Protection Act (Cap. 328 of the Revised Laws of Belize 2000), is another example of the use of regulations to transform treaty obligations into national law.

Notwithstanding the various methods which are employed in Caribbean SIDS for transforming treaty obligations into national law, a major constraining factor to achieving this is the availability of adequate legal drafters sufficiently knowledgeable of these instruments, their benefits and costs and implications for national development to expeditiously transform them into national law. This is one of the critical gaps that have implications for effective MEA implementation in Caribbean SIDS. This is one area in which investments could be made by the international community to enable Caribbean SIDS to increase their capacity in the implementation of MEAs.

Learning the hard way: Examples from Caribbean SIDS environmental case law

The transformation of treaty obligations into national law is of critical importance as it gives them legal effect in national jurisdictions. A failure to do so means that those provisions are unenforceable between individuals and entities within a state and any action taken to enforce them would be to act without any legal basis. This lesson has been learnt the hard way by Jamaica in its attempt to enforce CITES. Though Jamaica acceded to CITES in 1977, this MEA was never transformed into its national laws. Its enforceability is a central issue in *Natural Resources Conservation Authority v Seafood and Ting International Limited and DYC Fishing Limited*²³.

Seafood and Ting applied to NRCA, the Competent National Management Authority for CITES²⁴, for a permit to export 227,000 pounds of queen conch (*strombus gigas*), an Annex II listed species²⁵. The annual national quota for harvesting and exporting queen conch is set by the Ministry of Agriculture, subject to the approval of the Competent National Authority for CITES, on the advice of a Scientific Authority which it appoints, and which determines whether or not the amount being harvested would be detrimental to the preservation of the species. NRCA in turn advises the CITES Secretariat regarding approval or non-approval. The Convention requires NRCA, as the competent authority designated by Jamaica, to issue a CITES permit before exports of conch can be received by another state party to the Convention.

The NRCA refused to grant the permit on the grounds that the 'Fisheries Division of the Ministry of Agriculture has not approved the granting of the same', and referred the company to the Ministry of Agriculture which declined to grant the permit advising that '... only the Minister of Agriculture can grant permission to obtain allocations for permit to export'. The companies applied by letter to the Minister of Agriculture, but did not receive a reply from the Minister. In the meantime, DYC Fishing was facing mounting unpaid bills. Against these circumstances both Seafood and Ting and DYC Fishing issued writs and an *ex parte* mandatory injunction was granted by Orr, J. on May 31, 1999. The NRCA filed a summons to discharge the said injunction which was dismissed on June 14, 1999 (see an excerpt of the ruling on page 94).

Similarly in *Talisman (Trinidad) Petroleum Ltd. v The Environmental Management Authority*²⁶ the issue of the enforceability of an MEA – this time the Convention on Wetlands (The Ramsar Convention, Iran, 1971) – was the centre of attention. In this case, the application by Talisman for a Certificate of Clearance (CEC) under the Certificate of Environmental Clearance Rules 2001 (CEC Rules) to undertake a seismic survey in a licensed area, of which an Overlap Area (32 sq. km) falls within the Nariva Swamp and 5 sq. km of the Overlap Area lies within the Wetland proper, was denied. The two primary grounds for refusal to grant the CEC were firstly that the Nariva Swamp had been designated for inclusion in the Ramsar List of Wetlands of International importance under the Ramsar Convention, Iran, 1971. Secondly, that the area is designated an Environmentally Sensitive Area based on the fulfilment of the requirements laid out in Schedules I, II and III of the Environmentally Sensitive Areas Rules, 2001; that the Nariva Swamp Ramsar Site and the Bush Bush Wildlife Sanctuary are Prohibited Areas under the Forests Act, Chap. 66:01; and the Bush Bush Wildlife Sanctuary is declared as a Wildlife Sanctuary under the Conservation of Wildlife Act, Chap. 67:01. The decision was appealed by the respondent on the grounds that although the Ramsar Convention was ratified by the Government of Trinidad and Tobago, it was not embodied into the laws of Trinidad and Tobago, since there was no Act of Parliament incorporating it into local laws; and that while the Convention will be binding upon the Government of Trinidad and Tobago as a signatory thereto, its terms cannot be enforced unless they are brought into effect by local enactment.

These two Caribbean SIDS cases underscore the importance of the role played by national law as an instrument in the implementation of treaty obligations and its contribution to the incorporation of environmental and sustainable principles in domestic legislation. In the Jamaican case, the failure to transform treaty obligations with respect to the issuance of permits in respect of the export of conch from Jamaica proved to be a hindrance to the effective management of its biodiversity. Further, the Minister of Agriculture has no power under any statute or any authority otherwise to assume the right to issue permits to regulate quotas or to dictate or advise or influence who should be granted quotas or in what amounts. This deficiency in Jamaica's national laws was subsequently rectified by the promulgation of *The Endangered Species (Conservation and Regulation of Trade) Act*, 2000 which incorporates Jamaica's obligations under CITES into national law. This Act governs both international and domestic trade in endangered species.

Both of these cases illustrate a general principle of law in common law jurisdictions that

treaties form no part of domestic law unless enacted by the legislature and that the domestic courts have no jurisdiction to construe or apply a treaty. These cases are applicable not only to Jamaica and Trinidad and Tobago, but also to the Member States of the Caribbean Community in general, where the transformation of treaty obligations into national law is the exception rather than the norm. These cases underscore a general trend in Caribbean SIDS with common law jurisdictions of not paying due diligence to completing the necessary legislative action to give legal effect to many of the MEAs to which they are party.

A success story: Jamaica and the implementation of the Montreal Protocol

Notwithstanding the general trend of the failure of many Caribbean SIDS to take the necessary legislative action to transform treaty obligations into national law, there are examples where this has successfully been done. An example of this success is the implementation of the Montreal Protocol (MP) for the phase-out of Ozone Depleting Substances (ODS) which Jamaica ratified in March 1993. The Montreal Protocol requires Developing countries State Parties to gradually phase out the production and consumption of chlorofluorocarbons (CFC) and other ODS. Jamaica commenced its country programme in 1993, in which the Government set the framework for ozone phase-out by adopting clear and ambitious regulations (eventually grouped under an Ozone Act) and established a National Ozone Commission that was also instrumental in providing guidance and ensuring the development and implementation of all national activities²⁷. An integral part of the Government's strategy included the ambitious goal of eliminating Annex A Group 1 CFCs consumption completely by 31 December 2005, four years ahead of the phase-out schedule applicable to developing countries under the Montreal Protocol²⁸.

One of the key instruments used to achieve this target was the codification of the treaty obligations into national law. Since 1991 Jamaica has used several orders and legislation to phase out the production and use of Ozone Depleting Substances as required under the Montreal Protocol. These include the Trade Amendment Order in 2002, which provided for the prohibition of the sale of chlorofluorocarbons (CFC); the Trade (Prohibition of the Importation of Halon) Order in 2002, which bans the importation of virgin halons; and the Pesticides Regulations of 1996²⁹. These legislative measures culminated in the enactment of the Ozone Act 2003. These actions contributed to Jamaica meeting its target of early phase-out four years ahead of schedule as required by the Convention and thereby becoming the first country in Latin America and the Caribbean to eliminate CFC consumption sustainably. For its outstanding achievement Jamaica's National Ozone Unit was one of four recipients of the 2003 Outstanding Ozone Unit Award for meeting obligations under the Montreal Protocol in phasing out the use of Ozone Depleting Substances (ODS)³⁰.

This achievement, however, cannot be attributed solely to the transformation of treaty obligations into national law but instead to a combination of factors: including the sustained and unambiguous commitment of the Government to the implementation of the Protocol provided the context for the country's implementation strategy; the establishment of a strong National Ozone Unit with the necessary authority and capacity and capability for providing guidance and ensuring development and implementation of all relevant activi-

ties proved to be an important factor in Jamaica's success; the establishment of strong inter-sectoral linkages between various entities of the public service, including the policy arm in terms of the Ministry with responsibility for the Environment; and finally, the regulatory arm in the form of the Ministry of Trade and the Enforcement arm in the form of Customs, the police, fire and Coast Guard, were critical in ensuring compliance.

Another critical factor contributing to Jamaica's compliance and the adoption of ozone friendly technologies is the co-operation established between public sector and non-state actors, in particular, the main private sector industry stakeholders as well as the academic community, particularly the University of Technology. The main private sector stakeholders – the air conditioning and refrigeration sub-sector – were able to organise themselves into the Air Conditioning and Refrigeration Association, thereby influencing, in a more systematic manner, the implementation of national and regional activities. This is supported by a demonstrated commitment by the academic community in Jamaica, in particular the University of Technology, to the institutionalisation of capacity building and development, including research and technology adaptation. The role played by the University system in this regard, as a means of ensuring sustainability, is of significance. A robust and continued public education and awareness campaign also contributed to informing the relevant stakeholders in both the public and non-state sectors as well as the general populace about Jamaica's obligations under the particular international instrument. This led to the informed participation of the key stakeholders; an essential element for effective MEA implementation.

Equally important were the efforts taken as part of the Montreal Protocol (MP) implementation strategy, which comprised both national and regional action, with the view to institutionalising capacity development and awareness building about the substantive requirements for honouring the country's obligations under the Montreal Protocol. The success of this is exemplified by the inclusion of specific guidelines on MP implementation in the training of custom officers as well as inclusion in the curricula of the University of Technology, and formal training on MP implementation for air conditioning and refrigerant specialists. The systematic approach to compliance of the treaty obligations of the MP in Jamaica can also be attributed, in part, to the incentive structure provided by the Protocol by way of the availability of financial resources through the Multilateral Fund for technical co-operation including transfer of technology in support of compliance and the effective implementation of the UNEP Compliance Assistance Programme (CAP). The support provided by Jamaica's participation in the Caribbean National ozone officers' Network³¹ also proved to be valuable. The incentive structure provided by the international legal instrument itself and the supporting structures provided by the international community to facilitate the effective implementation of the MEA is also important. Lessons can be drawn from the implementation of the MP to guide Caribbean SIDS in the implementation of other MEAs.

An indirect effect upon the construction of statutes: Catalysts for the development of national environmental law

An indirect effect of the signing and ratification of MEAs by Caribbean SIDS is the potential they have to catalyse the construction of national environmental legislation. This, as

Lord Hoffman opined in *John Junior Higgs v Minister of National Security and Other*³², arises as a result of the presumption that Parliament does not intend to pass legislation which would put the Crown in breach of its international obligations. The indirect effect of the decision by Caribbean SIDS to be bound by treaties and the implication of this on the construction of national laws takes a number of forms. Judicial action on the applicability of any rights and obligations arising under such treaties with reference to its nationals could serve as a driver for the construction of domestic environmental legislation. This is the case in *Natural Resources Conservation Authority v Seafood and Ting International Limited and DYC Fishing Limited*³³ which led to the promulgation of *The Endangered Species (Conservation and Regulation of Trade) Act, 2000* which incorporates Jamaica's obligations under CITES into national law.

Another indirect impact of MEAs on the construction of national law is the requirements that are necessary to ensure compliance. This is best illustrated in Caribbean SIDS with respect to the implementation of the MP. Though many of the Caribbean SIDS signed and ratified the Montreal Protocol in the early to mid-1990s, the transformation of treaty obligations into national law to support the gradual phase-out of the production and consumption of chlorofluorocarbons (CFC) and other ODS is more recent as, for example, the *Belize Pollution (Amendment) Regulations, 2002, Part XII Prohibition Of The Manufacture Of Ozone Layer Damaging Substances*³⁴ and the *Refrigeration Technicians (Licensing) Bill, 2007*, an Act to provide for the registration and licensing of refrigeration and air conditioning technicians; to regulate the practice of refrigeration and air conditioning services; and to provide for matters connected therewith or incidental thereto.

In instances where treaty obligations are not being honoured, as in the case of the Montreal Protocol, a country will be deemed as being in non compliance. Such is the case with a number of Caribbean SIDS, such as Barbados and Haiti, which as of November 2008 were declared as non-compliant with Article 4B of the Montreal Protocol which requires the establishment of licensing systems. In the case of Barbados, until the regulations establishing the licensing system had been gazetted and had become fully operational, the country could not be treated as a Party with a fully operational licensing system as envisaged under Article 4B of the Montreal Protocol³⁵. The Implementation Committee, in keeping with its mandate, then had to:

(b) '... request each of Barbados, Eritrea, Haiti and Tonga to complete the process of establishing and operating a licensing system and to notify the Secretariat immediately after its licensing system becomes operational in accordance with its obligations under Article 4B of the Protocol'³⁶;

Subsequently, both Barbados and Haiti undertook the necessary legislative amendments under their respective Customs legislation to establish a licensing system for Ozone Depleting Substances (ODS). In the case of Barbados, this was achieved by way of the *Customs (List of Prohibited and Restrictive Import and Export) Order, 2009*.

In some instances, a country anticipating ratifying a Convention might decide in advance to make provision in its national law for compliance with its potential obligations under that particular instrument. This is the case with Jamaica, which in anticipation of becom-

ing a Party to the Basel Convention, drafted regulations under s. 38(1)(d) of the Natural Resources Conservation Authority Act for implementation of this MEA³⁷. The signing of trade and economic agreements between Caribbean SIDS and third States or groups of States, as in the case of the Economic Partnership Agreement concluded between the CARIFORUM Member States, on the one part, and the European Union and its Member States, on the other part (CARIFORUM/EU EPA), also has an indirect influence on MEA implementation. Pursuant to Article 72 (c) of the CARIFORUM/EU EPA, the Parties agree to co-operate and take, within their own respective territories, such measures as may be necessary, *inter alia*, through domestic legislation, to ensure that:

'Investors do not manage or operate their investments in a manner that circumvents international environmental or labour obligations arising from agreements to which the EC Party and the Signatory CARIFORUM States are parties.' [Emphasis added.]

Another potential indirect effect on the construction of national legislation is likely to be as a result of the application of Caribbean Community Law to Caribbean SIDS which is part of the CSME Zone³⁸. This is likely, given that pursuant to Article 217 of the *Revised Treaty of Chaguaramas Establishing the Caribbean Community Including the CARICOM Single Market and Economy* the Caribbean Court of Justice (CCJ) in its original jurisdiction is required to apply such rules of international law as may be applicable. This presumably includes international environmental law. However, at the time of writing there is little precedent in Caribbean Community Law to definitely state the role international environmental law will have in influencing the jurisprudence of the CCJ on environmental and sustainable development issues in the CSME zone.

The transformation of treaty obligations into national law: Fundamental but not necessarily a panacea for effective implementation at the national level

The transformation of treaty obligations into national law is a fundamental and important aspect of mainstreaming environmental and sustainable development principles into the legal structures of Caribbean SIDS. In giving the treaty objectives legal effect, it also confers any rights and obligations arising hereunder with reference to its nationals. However the transformation of treaty obligations into national law in and of itself is not a panacea for effective implementation at the national level, nor an assurance that the principles contained therein are known by a wide cross-section of the populace. As discerned from the Jamaica success story in the implementation of the MP, transformation of treaty obligations into national law is only one step, albeit a very fundamental and important one. Other factors are also important for effective implementation. A few of these are highlighted, including:

- A commitment on the part of the policy-makers to the mainstreaming of environmental and sustainable development principles in national and sectoral planning.
- A strong institutional mechanism at the national level to provide the necessary

leadership and guidance with respect to MEA implementation, as many stakeholders are usually unaware of the obligations contained in the various MEAs and the costs and benefits of MEAs.

- The effective engagement of stakeholders, in particular the interest groups which are key to effective implementation. As deduced from the Jamaica experience, the effective implementation of the MP requires the active participation of a wide cross-section of stakeholders from both the public and non-state sector including the private sector and academia.
- The availability of adequate financial resources to enable actions to be taken in support of the implementation of treaty obligations. In many instances resources might be made available to enable Caribbean SIDS to undertake the various national action plans required under MEAs; however, limited resources are available to implement specific actions arising out of those action plans.
- The institutionalisation of capacity development for the key stakeholders that are required for the effective implementation of the particular MEA. This involves more than the convening of training workshops, but more fundamentally, mainstreaming implementation into existing processes and structures.

From a governance standpoint, the responsibility for MEA implementation in Caribbean SIDS with common law traditions is spread among various entities. For example, the marine protection and safety cluster highlighted in Table 6.1, with the exception of the Cartagena Convention and the Global Programme of Action, usually falls within the mandate of the Ministries dealing with international transport, with a focus on shipping, rather than on marine resources management, aspects. The usefulness of the international instrument as a resource management tool is usually not given the attention it deserves. In addition, the MEAs in the marine resources cluster (see Table 6.1) are usually shared between the Ministry of Foreign Affairs, with the responsibility for the UNCLOS; the Ministry of Agriculture in the case of those instruments relating to living resources; and the Ministries of Environment which unusually have the responsibility for the other related marine resources. With respect to most of the other MEAs highlighted in Table 6.1, it is usually the Ministries of Environment under which these instruments fall, with exceptions. For example, some Ministries of Agriculture have responsibility for the UNCCD. What emerges from an environmental and natural resources management standpoint is a fractured approach to the implementation of MEAs as instruments for mainstreaming environment and sustainable development principles in national and sectoral planning processes.

To illustrate this point, take for example the cluster of MEAs in Table 6.1 in the marine resources and marine protection and safety clusters. Together these MEAs address a number of critical issues of relevance to the protection and sustainable use of living and non-living resources of the marine environment in Caribbean SIDS including: pollution of the marine environment from both ship-generated and land-based sources and the sustainable use of marine biodiversity including fisheries management as well as non-living resources. These MEAs along with other binding (i.e. the relevant elements of the Convention on Biological Diversity, the Convention on the Regulation of Whaling, etc.) and non-binding multilateral agreements (i.e. the Global Programme for Action for the Protection of the Marine Environment from Land Based Sources, FAO Code of Conduct for

Responsible Fisheries, the BPOA, the United Nations General Assembly Resolutions on the Integrated Management of the Caribbean Sea, etc.) provide a framework for the integrated management of the Caribbean Sea; the next frontier for Caribbean SIDS development. However, in the view of the authors, these instruments are not implemented in a holistic and systematic manner so as to facilitate the integrated and sustainable management of the coastal, marine and ocean resources of Caribbean SIDS.

Singh³⁹ identifies a number of shortcomings in the governance framework of the MEAs addressing the protection and sustainable use of coastal marine resources of the Caribbean Sea including: the sectoral orientation of these MEAs with their own forms of governance, without much regard for synergies between them; the repetitiveness of some of the provisions of the instruments; sometimes different implementing entities at the national level, reflecting the sectoral orientation of the instruments and poor implementation. Despite being parties to these MEAs, the effective management of the coastal, marine and ocean resources of Caribbean SIDS needs strengthening. Caribbean SIDS could benefit from the rationalisation of their national governance structure with respect to the various MEAs addressing marine protection and safety and the sustainable management of living and non-living resources. This, however, should be couched in the broader context of the region's strategic development goals for its coastal, marine and ocean resources, which of necessity must include consideration of the delimitation of their Economic Exclusive Zones (EEZ); the expansion of the merchant marine industry as well as the marine leisure industry, particularly those elements which lend themselves to regional and/or sub-regional development (i.e. yachting industry); fisheries management; pollution control and exploitation of living and non-living resources and the provision of sufficient waste receiving and treatment infrastructure at ports⁴⁰.

Conclusion

Participation by Caribbean SIDS in MEAs has costs and benefits. There is no doubt that Caribbean SIDS's participation in a number of MEAs has been beneficial. Their participation also comes with challenges, which are exacerbated by their limited human, technical and financial resources. One such challenge is the transformation of treaty obligations into national law, which is necessary to give legal effect to treaty obligations and in conferring the rights and obligations, with reference to its nationals. The experience in Caribbean SIDS of transforming treaty obligations into national law has been at best uneven. This paper has highlighted a number of factors, including: lack of adequate capacity in environmental drafting; inadequate institutional arrangements for the implementation of MEAs; lack of awareness by both the legislative branch of Government and the public in general about the obligations contained in the various MEAs and the implications for national and regional development; the perception that the implementation of MEAs is a Government responsibility, alone; and the inability of officialdom to perceive the MEAs in a broader sustainable development context which have collectively impeded the effectiveness of MEA implementation in Caribbean SIDS. With increasing focus being placed on the establishment of 'green economies' as the direction of the future, it is likely the Caribbean SIDS will pay more attention to the greening of their economic policies. This will create new oppor-

tunities for examining the costs and benefits of MEAs in Caribbean SIDS. In addition, there is a need in Caribbean SIDS to recognise the application of MEAs as part of a wide process for the support of and the development of an 'environmental industry'⁴¹.

Acknowledgements

The authors would like to thank a number of people, in particular Dr Asha Singh and Ms Artie Dubrie, for critically reviewing and making constructive comments and suggestions on various drafts of this chapter.

Notes

- 1 The views in this paper are those of the authors and do not represent those of any regional or international organisation. Some of the ideas in this paper are drawn from a larger study on 'Environment and the Multilateral Trading System' undertaken by the principal author as part of his UN Sabbatical Award, 2005/2006. The recipient of the Award was hosted by the Economic Affairs Department of the Commonwealth Secretariat in London. The principal author, during his sabbatical, contributed to the conceptualisation of this article in collaboration with Ms. Constance Vigilance of the Small States, Environment and Economic Management Section of the Economic Affairs Division of the Commonwealth Secretariat.
- 2 On 22 April 1977, the Director-General received from Suriname a formal declaration of succession stating that Suriname considers itself bound by the Convention, which had been previously declared applicable to Suriname by the Kingdom of the Netherlands, and that it accepts the rights and obligations arising therefrom.
- 3 (with the exception of Annexes III, IV and V of the Convention), (in respect of Annex V) 12 October 1990, (in respect of Annex III) 11 August 1992.
- 4 (with the exception of Annex IV of the Convention) in respect of Annex IV) 26 November 2001.
- 5 (with the exception of Annexes III, IV and V of the Convention) (in respect of Annex V) 12 February 2002.
- 6 (with the exception of Annexes III and IV of the Convention) (in respect of Annex III) 31 August 2001.
- 7 'Accession' is the act whereby a state accepts the offer or the opportunity to become a party to a treaty already negotiated and signed by other states. It has the same legal effect as ratification. Accession usually occurs after the treaty has entered into force. See Arts.2 (1) (b) and 15, Vienna Convention on the Law of Treaties between States and International Organizations or between International Organizations 1986.
- 8 The instruments of 'acceptance' or 'approval' of a treaty have the same legal effect as ratification and consequently express the consent of a state to be bound by a treaty. Arts.2 (1) (b) and 14 (2), Vienna Convention on the Law of Treaties 1969.
- 9 Ratification defines the international act whereby a state indicates its consent to be bound to a treaty if the parties intended to show their consent by such an act. See Arts.2 (1) (b), 14 (1) and 16, Vienna Convention on the Law of Treaties 1969.
- 10 See Chapter 4, Article 183.4 of the CARIFORUM/EU EPA, Official Journal of the European Union 30.10.2008.
- 11 Article 2.1(a) of the Vienna Convention on the Law of Treaties, 1969, defines a 'treaty' as an international agreement concluded between States in written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designation.
- 12 See X. National Institutions and Administrative Capacity, paragraph 49. (ix).
- 13 Privy Council Appeal No. 45 of 1999, *John Junior Higgs and David Mitchell v The Minister of*

- National Security and Others*, From The Court of Appeal of The Bahamas, Judgment of The Lords of The Judicial Committee of The Privy Council, delivered the 14 December 1999.
- 14 (1879) 4 P.D. 129.
 - 15 (1990) 2 A.C. 418.
 - 16 Judgment in the Jamaica Court of Appeal, Supreme Court Suit C.L. 1999/D-058 and Suit No. C.L. 1999/S-134, Motions 16 and 17 of 1999, July 1, 1999.
 - 17 Per Harrison, J.A. in *Lewis v. Attorney General et al.* (unreported) S.C.C.A. 104/98 dated 18th December, 1988, at page 8, relying on *MacLaine Watson and Co. Ltd. v Trade and Industry* (1989) 3 All E.R. 523 at p. 544.
 - 18 Ibid.
 - 19 These include (a) Protocol of 1978 relating to the International Convention for the Prevention of Pollution from ships (1973 as amended); (b) International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969; (c) Protocol of 1973 relating to Intervention on the High Seas in Cases of Pollution by Substances other than oil; (d) International Convention on Civil Liability for Oil Pollution Damage, 1969; (e) Protocol of 1976 to the International Convention on Civil Liability for Oil Pollution Damage; (f) International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971; (g) Protocol of 1976 to amend the International Convention on the Establishment of an International Fund for Oil Pollution Damage; (h) International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972; (i) Protocol of 1992 to the International Convention on Civil Liability for Oil Pollution Damage; and (j) Protocol of 1992 to the International Convention on the Establishment of an International Compensation Fund for Oil Pollution Damage.
 - 20 CITES, UNFCCC, CBD, the Vienna Convention for the Ozone Layer and the Montreal Protocol, 1987; Basel Convention, Civil Liability Convention, 1969 and the International Oil Pollution Compensation Fund Convention, 1971.
 - 21 Daniel Judy, UNEP/OECS Model Harmonised Biodiversity Project, Final Report, January 2006, in UNEP/OECS Model Harmonised Biodiversity Legislation Project, Final Output, June 2006, UNEP and OECS.
 - 22 Gazetted 20th June, 2002.
 - 23 Judgment in the Jamaica Court of Appeal, Supreme Court Suit C.L. 1999/D-058 and Suit No. C.L. 1999/S-134, Motions 16 and 17 of 1999, July 1, 1999.
 - 24 The NRCA as the designated Management Authority for Jamaica in accordance with Article 9(1) (a) of the Convention.
 - 25 The queen conch was placed in Annex II in 1992 as an indication that it had to be strictly regulated in order to avoid its extinction. The Convention provides that an export permit is necessary for specimens of species listed in the Appendices.
 - 26 *Talisman (Trinidad) Petroleum Ltd. v the Environmental Management Authority*, Before The Environmental Commission In The Matter Of The Environmental Management Act, 2000 And The Certificate Of Environmental Clearance Rules, 2001, Republic Of Trinidad And Tobago, No. EA3 of 2002.
 - 27 UNEP, 'Celebrating 20 years of progress in 2007'. Recognition of some of the Exemplary Projects that have been undertaken pursuant to Article 10 of the Montreal Protocol, Ozone Secretariat.
 - 28 Ibid.
 - 29 Brown, Jeremain O, Ozone Act to be Passed by Year-End, Tuesday, Ministry of Lands and Environment, Jamaica Information Service, March 15, 2005, www.jis.gov.jm
 - 30 Jamaica Information Service, Jamaica Applauded For Efforts To Phase Out Ozone Depleting Substances, Ministry of Lands and Environment, Friday, January 16, 2004.
 - 31 Since 1997 this Network has met twice yearly with the aim of having a sustained capacity building forum for National Ozone Officers in the implementation of the Montreal Protocol.
 - 32 Privy Council Appeal No. 45 of 1999, *John Junior Higgs and David Mitchell v. The Minister of National Security and Others*, From The Court Of Appeal Of The Bahamas, Judgment Of The

- Lords Of The Judicial Committee Of The Privy Council, Delivered the 14 December 1999.
- 33 Judgment in the Jamaica Court of Appeal, Supreme Court Suit C.L. 1999/D-058 and Suit No. C.L. 1999/S-134, Motions 16 and 17 of 1999, July 1, 1999.
 - 34 Gazetted 20th June, 2002.
 - 35 UNEP, Report of the Implementation Committee under the Non-compliance Procedure for the Montreal Protocol on the work of its Forty-first Meeting, UNEP/OzL.Pro/ImpCom/41/8, Doha, 12–14 November 2008; Distr.: General: 24 October 2008.
 - 36 Ibid, See Recommendation 41/18.
 - 37 Davis-Mattis Laleta. 'Jamaica's Commitment to the Conservation and Management of Natural Resources Ten Years in Retrospect'. Unpublished Paper, National Environmental and Planning Agency; Kingston, Jamaica, March 2002.
 - 38 The CSME Zone is used to encompass those countries of the Caribbean Community that are part of the CSME. These include Antigua and Barbuda, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago and Suriname.
 - 39 Singh, Asha (2008). 'Governance in the Caribbean Sea: Implications for Sustainable Development'. Research Paper, United Nations/Nippon Foundation Fellowship, 122 pp.
 - 40 Griffith, MD and D Oderson. *The Strengthening of the Inner Circle for Environment and Development: The Case of the Caribbean Community*. Prepared for CaribInvest (West Indies) Limited, February 2009.
 - 41 For a more detailed discussion on this issue with respect to the CSME Zone, see Griffith, MD, *A Concept Note on Trade in Environmental Services: Towards the Formulation of a Strategic Framework and Action Plan for the Caribbean Community Single Market and Economy (CSME)*. Prepared for CaribInvest (West Indies) Limited and the Caribbean Community Secretariat (CARICOM), January 2009.

Table 6.1

Source: Compiled by the authors from a number of sources. Sources by clusters:

Wildlife/conservation cluster: CITES Secretariat at www.cites.org; CMS Secretariat at <http://www.cms.int/>; RAMSAR Convention Secretariat at www.ramsar.org; International Whaling Commission at www.iwcoffice.org/commission/member.htm and UNEP at <http://www.cep.unep.org/cartagena-convention/#status>;

Biodiversity/Bio-safety and traditional knowledge: International Plant Protection Convention, Legal Office at <http://www.fao.org/Legal/TREATIES/004s-e.htm>; Convention on Biological Diversity Secretariat at www.cbd.org; ILO Convention on Indigenous and Tribal Peoples, 1989 (No. 169), A Manual at www.ilo.org (Date of Ratification as of January 2002);

Marine protection and safety: UNEP at <http://www.cep.unep.org/cartagena-convention/#status> and IMO, Status of Multilateral Conventions And Instruments In Respect Of Which The International Maritime Organization Or Its Secretary-General Performs Depositary Or Other Functions as at 31 December 2007, 006 IMO, www.imo.org;

Marine resources: United Nations, Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, at www.un.org/Depts/los/reference_files/chronological_lists_of_ratifications.htm#;

Chemical/waste management: Basel Convention Secretariat at <http://www.basel.int/convention/about.html> and the Rotterdam Convention at <http://www.pic.int/home.php?type=t&id=63>;

Sustainable land management: UNCCD Secretariat at <http://www.unccd.int>;

Atmospheric/climate systems: UNEP Ozone Secretariat at http://ozone.unep.org/Ratification_status/ and UNFCC Secretariat at www.unfccc.org;

Protection of human health and the environment: Stockholm Convention Secretariat at <http://chm.pops.int/Countries/StatusofRatification/tabid/252/language/en-US/Default.aspx>;

Culture and natural heritage: UNESCO World Heritage at www.unesco.org

Financing sustainable development in small island developing states

Introduction

In this chapter, sustainable development is interpreted in the broad sense of the improvement of the socio-economic circumstances of the poor without compromising the quality of the environmental resources of succeeding generations. Further, the poor must participate integrally in the formulation and implementation of policies directed toward eradicating their poverty while fostering environmental sustainability.

Financial support for developing countries to deal with environmental issues was first mooted in the UN Conference on Human Development in 1972, but much more clearly articulated and adopted on the global policy agenda in 1987 by the Bruntland Report (World Commission on Environment and Development Report). In 1992, UNCED advanced the principle of 'differentiated responsibilities among nations in pursuing sustainable development¹' in Article 7 of the Rio Declaration on Environment and Development. Chapter 33 of Agenda 21 called on governments to 'identify ways and means of providing new and additional resources, particularly to developing countries, for environmentally sound development programmes and projects ...²'.

Two broad approaches to financing sustainable development have been articulated, expanded and refined since the commitment to pursuing sustainable development by world leaders at the UNCED conference in Rio in 1992. Chapter 33 of Agenda 21 estimated targets to meet sustainable development – in the broad sense:

- US\$600 billion would be needed annually;
- US\$125 billion = 0.7 per cent of the GDP of the developed countries would come from the international community on concessional terms;
- US\$475 billion would come from domestic private and public sources.

The commitments of the international community to financing sustainable development were reiterated in Monterrey, at WSSD in 2002 and in Mauritius in 2005.

This chapter reviews the approaches to financing sustainable development with a view to assisting concrete decision-making and practice by government 'officials responsible for national planning in small states, particularly within Ministries of Planning and Finance, and national sustainable development bodies³'.

Financing sustainable development – International resources

It has long been recognised that developing countries can benefit from international resources – financial, technological, knowledge, and others – that augment their own resources in their respective struggles for sustainable development. Some have argued persuasively that without proper management, international financial resources can ‘underdevelop’⁴ countries and reinforce historical tendencies for ‘persistent poverty’⁵ through exploitative relationships that disrupt and destroy social networks and damage the natural environment. Proper management here refers to dynamic decision-making within the framework of a national development plan that is diligently implemented and carefully monitored.

The range of international resources that flow to developing countries includes Official Development Assistance (ODA), private investment, debt forgiveness and swaps, and special funds and mechanisms for allocating those funds. In addition, there are standing proposals for the levying of international taxes on economic transactions that undermine sustainable development and the redistribution of the proceeds to developing countries to fund sustainable development projects.

Official Development Assistance (ODA)

The literature on financing sustainable development and the annual reports on ODA by the World Bank uniformly recognise the decline in ODA since UNCED, and the failure of the developed countries to honour their commitment to provide 0.7 per cent of their GDP to fund sustainable development.

Table 7.1 shows the ODA of each of the OECD countries as a percentage of their Gross National Income⁶ (GNI) for selected years. Notice that it fell from 0.33 per cent in 1991–92 to 0.26 per cent in 1995–96, and as low as 0.23 per cent in 2002. Thereafter, it rose again, peaking at 0.33 per cent in 2005.

Of course, there was considerable variation around the average. In 2002, the USA provided only 0.13 per cent of its GNI as ODA. On the other hand, for the years 2002–06, Denmark, Luxembourg, Norway, and Sweden all averaged over 0.80 per cent, and in 2006 Sweden provided 1.02 per cent of its GNI as ODA.

On a per capita basis, Norway was by far the most generous with US\$1.02 per capita of government aid and US\$0.24 per capita of private aid. Denmark with US\$0.64 and Sweden with \$0.61 per capita of government aid were the next most generous. The USA was among the lowest for government aid at \$0.13 per capita, but it was the second highest in private aid at \$0.05 per capita.

ODA doubled between 2001 and 2005⁷, but was still only 0.33 per cent of the GNI of the developed countries, less than had been achieved in 1991, the year before UNCED. Table 7.1 shows the trend of the average for the Development Assistance Committee (DAC) countries, and for the two extreme cases, Sweden and the USA.

Table 7.1. OECD countries – ODA as a percentage of GNI

Net disbursements at current prices and exchange rates

Per cent of GNI	1990–	1995–	2002	2003	2004	2005	2006	2007	2008
	1991 average*	1996 average							
Australia	0.36	0.31	0.26	0.25	0.25	0.25	0.30	0.32	0.32
Austria	0.14	0.25	0.26	0.20	0.23	0.52	0.47	0.5	0.43
Belgium	0.43	0.36	0.43	0.60	0.41	0.53	0.50	0.43	0.48
Canada	0.45	0.35	0.28	0.24	0.27	0.34	0.29	0.29	0.032
Denmark	0.95	1.00	0.96	0.84	0.85	0.81	0.80	0.81	0.82
Finland	0.72	0.32	0.35	0.35	0.37	0.46	0.40	0.39	0.44
France	0.61	0.51	0.37	0.40	0.41	0.47	0.47	0.38	0.39
Germany	0.40	0.31	0.27	0.28	0.28	0.36	0.36	0.37	0.38
Greece	..	0.15	0.21	0.21	0.16	0.17	0.17	0.16	0.21
Ireland	0.17	0.30	0.40	0.39	0.39	0.42	0.54	0.55	0.59
Italy	0.30	0.18	0.20	0.17	0.15	0.29	0.20	0.19	0.22
Japan	0.32	0.24	0.23	0.20	0.19	0.28	0.25	0.17	0.19
Luxembourg	0.27	0.40	0.77	0.81	0.83	0.86	0.89	0.92	0.97
Netherlands	0.90	0.81	0.81	0.80	0.73	0.82	0.81	0.81	0.8
New Zealand	0.24	0.22	0.22	0.23	0.23	0.27	0.27	0.27	0.3
Norway	1.15	0.85	0.89	0.92	0.87	0.94	0.89	0.95	0.88
Portugal	0.27	0.23	0.27	0.22	0.63	0.21	0.21	0.22	0.27
Spain	0.22	0.23	0.26	0.23	0.24	0.27	0.32	0.37	0.45
Sweden	0.90	0.80	0.84	0.79	0.78	0.94	1.02	0.93	0.98
Switzerland	0.34	0.34	0.32	0.39	0.41	0.44	0.39	0.38	0.42
United Kingdom	0.30	0.28	0.31	0.34	0.36	0.47	0.51	0.35	0.43
United States	0.20	0.11	0.13	0.15	0.17	0.23	0.18	0.16	0.19
TOTAL DAC	0.33	0.26	0.23	0.25	0.26	0.33	0.31	0.28	0.31

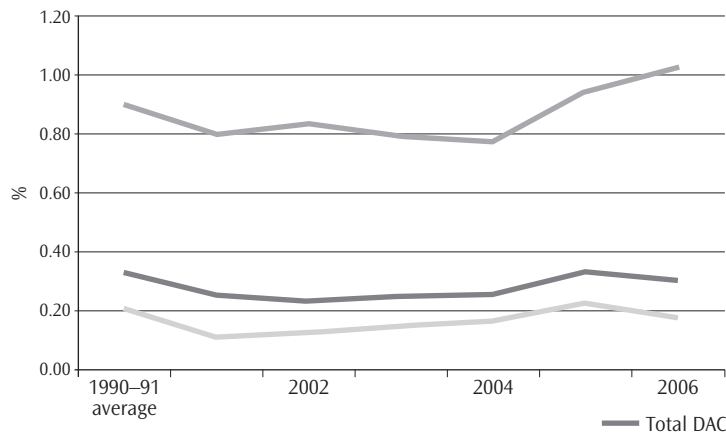
* Including debt forgiveness of non-ODA claims in 1990 and 1991, except for total DAC

Source: http://www.oecd.org/document/9/0,3343,en_2649_34485_1893129_1_1_1_1,00.html

Further, in 2006, ODA accounted for only 34 per cent of the total net flows, whereas private flows on market terms represented 64 per cent. For the years, 2001–04, ODA had been greater than 50 per cent of total net flows, and in 2002 it was as high as 80 per cent of total net resource flows from DAC countries. Figure 7.2 shows the trend in the ODA share of total net flows of resources.

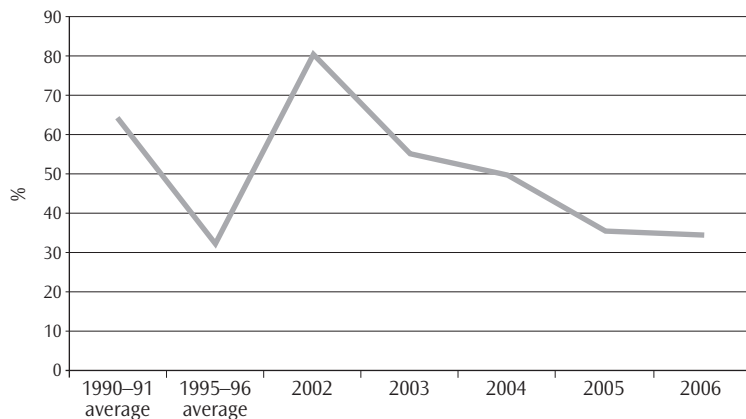
In the CEPAL-UNDP study of 2001, it was noted that ODA was unevenly distributed across regions and countries. In the case of Latin America and the Caribbean, it was highly concentrated among a small group of countries – Nicaragua, Honduras and Guyana in 1999, and Nicaragua, Honduras, Bolivia and Peru in 2000. The last column of Table 7.2 shows the trend for each country as increasing (+), decreasing (-), or constant. Of the 34

Figure 7.1. OECD-DAC countries – total ODA as percentage of GNI



Source: http://www.oecd.org/document/9/0,3343,en_2649_34485_1893129_1_1_1_1,00.html

Figure 7.2. OECD-DAC countries – total ODA as percentage of total flows



Source: http://www.oecd.org/document/9/0,3343,en_2649_34485_1893129_1_1_1_1,00.html

SIDS for which estimates were available, 26 reported that ODA as a percentage of GNI declined between 1990 and 2004. Only five reported increases and three were constant. Two of those showing increases of ODA as a percentage of GNI were Barbados and The Bahamas, and the three that were constant were the Dominican Republic, Singapore and Trinidad and Tobago. All five of these countries received negligible amounts of ODA during the period because of their high per capita incomes. For the period 2001–05, SIDS received an average of 2 per cent of total ODA, which accounted for about 0.5 per cent of their GNI.

Table 7.3 shows the per capita receipts of net ODA for selected SIDS for the period 2002–08. The last column shows whether the trend has been increasing (+) or decreasing (–) for each country.

Table 7.2. ODA received in small island developing states as a proportion of their gross national incomes

Country	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	
Antigua and Barbuda	1.33	0.49	0.78	0.77	1.65	1.71	1.58	1.27	2.00	0.86	0.21	0.94	0.35	0.67	0.72	(-)
Barbados	0.15	-0.06	0.22	0.20	0.68	-0.09	0.01	-0.05	0.14	0.77	1.06	-0.06				(-)
Belize	7.46	3.05	3.34	2.23	2.30	6.67	1.89	2.78	2.61	1.30	0.80	1.22	0.79	1.95	2.11	(-)
Cape Verde	30.92	23.85	23.51	22.24	24.27	23.58	18.02	14.19	15.14	18.85	15.77	16.80	12.60	12.62	14.24	(-)
Comoros	17.98	17.86	16.077	12.84	16.29	9.61	9.25	12.48	12.94	7.57	7.27	5.92	7.59	9.53	7.01	(-)
Dominica	12.17	11.87	19.81	6.41	7.90	4.06	6.55	8.17	13.05	4.74	12.28	7.81	6.49	5.98	6.42	(-)
Dominican Republic	1.50	0.77	0.57	0.38	0.58	0.91	0.24	0.45	0.57	0.35	0.42	0.25	0.16	0.31	0.35	(-)
Fiji	3.84	2.30	2.23	2.16	2.30	1.86	1.70	1.58	1.85	2.21	2.40	2.20	1.83	1.55	1.27	(-)
Grenada	6.61	4.12	4.24	3.08	1.96	2.92	4.17	2.89	2.59	2.51	3.79	9.99	4.99	3.99	5.45	(-)
Guinea-Bissau	54.15	49.84	71.59	48.98	49.82	24.94	39.54	32.76	30.55	67.30	27.92	22.78	26.27	32.94	31.56	(-)
Guyana	61.17	15.17	21.80	39.31	14.34	13.66	17.52	17.60	10.76	13.90	21.48	18.64	21.14	12.32	14.51	(-)
Jamaica	6.51	1.93	0.90	0.97	0.22	-0.26	0.10	0.62	0.27	0.07	0.87	0.38	0.33	0.23	0.57	(-)
Kiribati	41.87	16.78	13.79	14.01	15.12	18.65	16.46	11.47	18.02	13.89	10.99	17.43	16.63	13.55	13.21	(-)
Maldives	10.76	15.24	7.49	5.39	4.88	5.50	3.22	4.22	4.54	3.55	3.92	10.44	4.27	3.75	4.55	(-)
Marshall Islands					45.75	54.01	42.78	53.91	40.86	37.12	31.84	33.53	31.13	28.29	27.26	(-)
Mauritius	3.36	0.57	0.44	1.00	0.97	0.97	0.44	0.46	0.49	-0.25	0.52	0.54	0.29	0.89	1.16	(-)
Micronesia, Fed. States of		31.81	46.46	41.81	35.219	45.97	41.49	57.51	45.49	45.93	35.14	41.07	41.45	42.64	34.50	(+)
Palau		145.12	56.27	32.78	75.79	24.38	31.21	26.40	25.28	20.32	14.01	15.82	23.51	13.42	23.48	(-)
Papua New Guinea	13.32	8.47	8.12	7.51	10.26	6.77	8.33	7.16	7.42	7.04	7.54	5.89	5.65	5.61	3.97	(-)
St Kitts and Nevis	5.26	1.77	3.04	2.83	2.52	1.69	1.32	3.29	8.97	0.05	0.02	0.62	1.13	0.72	9.05	(-)
St Lucia	3.33	9.25	7.27	4.48	0.99	3.94	1.65	2.58	4.97	2.21	-2.91	1.30	2.10	2.17	2.09	(-)
St Vincent and the Grenadines	8.21	18.70	9.71	2.09	6.73	5.25	1.95	2.47	1.32	1.82	2.71	1.04	1.00	12.45	4.71	(-)
Samoa	28.94	22.31	14.25	11.23	15.94	10.00	11.725	18.05	14.37	10.36	8.18	10.59	10.69	7.06	7.78	(-)
Seychelles	10.00	2.63	3.87	3.04	4.08	2.16	3.10	2.19	1.22	1.53	1.56	1.75	1.48	1.04	1.58	(-)
Solomon Islands	22.02	14.87	12.59	7.45	9.18	8.32	15.67	14.65	8.06	18.12	32.03	47.76	44.37	48.83	40.79	(+)
Timor-Leste							71.56	69.22	74.76	56.30	35.80	26.59	21.51	16.10	9.52	(-)
Tonga	25.54	22.94	16.81	14.66	15.40	12.33	12.13	14.98	14.75	15.70	9.44	15.03	8.80	11.63	8.91	(-)
Trinidad and Tobago	0.38	0.51	0.31	0.62	0.24	0.41	-0.02	-0.02	-0.10	-0.03	-0.01	-0.01	0.08	0.10	0.05	0
Vanuatu	30.46	21.02	14.06	11.91	16.67	15.13	19.78	13.77	12.60	12.40	12.45	11.49	12.43	11.89		(-)

Source: World Development Indicators, 2010

Table 7.3. Per capita net ODA receipts, US\$, for selected SIDS

	2002	2003	2004	2005	2006	2007	2008	Average 2002–8	Trend 2002–8
Cape Verde	224	349	341	386	329	336	439	344	(+)
Dominica	427	156	417	298	277	261	301	305	(–)
Grenada	108	115	171	586	298	218	313	258	(+)
St Kitts & Nevis	712	–3	–4	63	129	61	935	270	(+)
São Tôme & Príncipe	153	209	186	168	113	228	292	193	(+)
Seychelles	98	115	129	187	174	106	139	136	(+)
Antigua & Barbuda	199	76	23	111	47	83	94	91	(–)
St Lucia	210	93	–136	62	109	113	112	80	(–)
Guinea-Bissau	45	108	56	56	57	79	84	69	(+)
St Vincent & the Grenadines	40	47	87	37	39	605	247	157	(+)
Belize	85	44	29	43	26	72	81	54	(–)
Comoros	53	39	39	37	44	70	57	48	(+)
Haiti	20	27	32	60	68	73	93	53	(+)
Barbados	12	71	103	–8	–2	71	20	38	(+)
Mauritius	20	–12	26	28	15	55	87	31	(+)
Jamaica	9	2	31	14	13	10	29	15	(+)
Dominican Republic	17	8	9	8	6	13	16	11	(–)
Cuba	5	7	9	8	7	8	11	8	(+)
Trinidad & Tobago	–8	–3	–2	–2	12	16	9	3	(+)

(+) increasing (–) decreasing

Sources: Population data: <http://www.census.gov/cgi-bin/ipc/idbsprd>Net ODA: <http://www.oecd.org>

The picture is mixed, though the trend of decline is probably the dominant one, when one considers that the net (positive) ODA to the last two on the list, Cuba and Trinidad and Tobago, both of which showed increasing trends, was marginal, and that most of the countries on the list showed a declining trend for the five years under review. Certainly, there is no indication from the record of the selected SIDS of an increase in net ODA in line with the commitments to finance sustainable development.

The sectoral composition of ODA receipts had also shifted over the course of the 1990s away from the commercial sectors toward social sectors. The CEPAL-UNDP study acknowledged the lack of hard data, but guessed that probably only 3–5 per cent had been allocated to sustainable development.

The decline of ODA as a percentage of both the incomes of the donor countries and the SIDS occurred while the need for additional funding for sustainable development projects in developing countries was increasing. In particular, there was a clear case for special allocations of ODA targeted to global public goods such as the protection of the ozone layer. The evidence is that the general decline in ODA from developed countries was particularly severe in the case of the SIDS.

Private flows – Foreign Direct Investment (FDI) and portfolio investments

Unlike ODA flows, private flows, and particularly FDI flows, have been increasing rapidly. Except for 2002 when portfolio investment (purchases of financial securities) was -37 per cent of net flows from DAC countries, private flows averaged 51 per cent for the years 2001, 2003–06. In 2006, the share rose to 64 per cent of total net flows from DAC countries. Direct investment averaged 47 per cent of total net flows for the same period, with the vast majority of the balance accounted for by bilateral and multilateral portfolio investments.

Private flows have been concentrated among few countries, and within these, in few sectors. In a review⁸ of financing for sustainable development in Latin America and the Caribbean, it was pointed out that of the top twenty FDI recipient countries, only six were developing countries. Another study noted that ‘... the vast majority of FDI, around 75 per cent, has gone to just ten middle-income countries. Moreover, FDI is observed to be heavily concentrated in a limited number of sectors: automotive, chemicals, electronics, energy, petroleum and petrochemicals, and pharmaceuticals⁹’. On the whole, developing countries received very little of these flows.

One of the features of globalisation has been the growth of portfolio investments in the capital markets of both developed countries and developing countries. It is generally believed that the volatility of these investments contributed to the Asian and Latin American financial crises.

For SIDS, whereas FDI accounted for about 19.5 per cent of gross fixed capital formation for the decade of the 1990s, for the years 2002–06 the annual average increased to 33.8 per cent. Table 7.4 presents FDI as a percentage of gross fixed capital formation for 40 SIDS. In 15 of the countries, the FDI as a percentage of gross fixed capital formation declined, and in most instances the decline was marginal. In the Caribbean, only tiny Montserrat that was partially destroyed by its volcano and St. Vincent and the Grenadines with a collapsed banana industry experienced any significant declines. On the other hand, several of the Pacific SIDS reported declines, and particularly those with social and political instability such as Fiji, Papua New Guinea, and the Solomon Islands.

Table 7.4 also shows the FDI per capita for the 40 SIDS for 2002–06, with the last column indicating whether there was an increasing, constant, or a decreasing trend for those years by a plus (+) sign, a zero (0), and a minus (-) sign respectively. In 28 of the countries, the FDI per capita was increasing for those years, and in only 9 of the countries was the FDI per capita decreasing. Here again, the Caribbean SIDS fared better than the other SIDS, particularly those in the Pacific.

The potential role of private investment in funding sustainable development is suggested by the fact that, ‘In 1999, the assets of the world’s top ten banks were equivalent to the combined gross domestic product (GDP) for all 108 developing countries¹⁰’. The pros and cons of private foreign investments as a driver for economic development have sustained a debate over many decades. Many of the same arguments apply with respect to foreign investment funding sustainable development. On the positive side, it is argued that foreign investors are ‘increasingly coming to recognise the importance of socially and environmentally sustainable activities in their efforts to secure a licence to operate, to protect or

Table 7.4. FDI flows to selected SIDS – as a percentage of gross fixed capital formation, and in per capita US\$

	FDI as a % of Gross Fixed Capital Formation							FDI per capita, US							
	Avg 1990– 2000	Change between avg 1990– 2000 and						2006	2002–6						
		2002	2003	2004	2005	2006	Avg 2002–6		2002	2003	2004	2005	2006	Avg 2002– 2006	
Anguilla	75.9	120.5	98.5	179.1	189.5	202.6	158.0	82.1	3800.00	3400.00	9200.00	10300.00	11300.00	7600.00	(+)
Antigua and Barbuda	19.5	21.8	30.2	24.0	31.0	45.7	30.5	11.1	1142.86	2557.14	1300.00	1842.86	2957.14	1960.00	(+)
Bahamas, The	7.1	12.8	15.3	26.6	32.2	38.2	25.0	18.0	696.67	823.33	1476.67	1880.00	2353.33	1446.00	(+)
Barbados	4.4	4.2	12.8	-2.2	10.1	5.6	6.1	1.7	60.71	207.14	-42.86	603.57	128.57	191.43	(+)
Belize	14.5	11.5	-5.8	59.7	50.5	27.5	28.7	14.2	92.31	-3.70	474.07	382.14	251.72	239.31	(+)
Cape Verde	8.3	4.3	6.4	6.9	5.9	26.7	10.0	1.7	24.39	34.15	47.62	45.24	290.48	88.37	(-)
Cuba	1.3	0.1	-0.3	0.1	0	0	0.0	-1.4	0.27	-0.80	0.35	-0.09	-0.09	-0.07	(+)
Comoros	9.2	1.7	2.6	2.1	2.8	2.2	2.3	-6.9	0.00	1.59	0.00	1.49	1.45	0.91	(+)
Cook Islands	0.2	-0.3	0	-2.8	2.5	-0.1	-0.1	-0.3	0.00	0.00	-50.00	0.00	0.00	-10.00	(+)
Dominica	31.0	39.2	48.7	35.1	47.4	45.1	43.1	12.1	300.00	428.57	357.14	385.71	485.71	391.43	(+)
Dominican Republic	14.4	18.9	16.3	20.7	17.9	19.6	18.7	4.3	105.65	69.58	84.69	98.90	128.17	97.40	(+)
Fiji	16.6	5.8	5.3	18.6	-0.7	17.7	9.3	-7.2	24.42	29.89	106.82	-4.49	114.44	54.21	(+)
Grenada	25.6	42.9	48.8	42.7	49.9	65.4	49.9	24.4	633.33	1011.11	611.11	311.11	1322.22	777.78	(+)
Guinea-Bissau	8.3	7.8	13.5	4.8	27.5	65.7	23.9	15.5	3.01	2.96	1.45	7.09	29.17	8.74	(+)
Guyana	26.2	15.8	16.8	16.2	28.8	36.4	22.8	-3.4	57.89	34.21	39.47	100.00	132.47	72.81	(+)
Haiti	1.2	1.7	3.5	1.3	5.2	30.4	8.4	7.2	0.77	1.77	0.74	1.20	18.82	4.66	(+)
Jamaica	15.3	17.9	29.7	21.7	20.4	24.1	22.8	7.5	180.08	268.03	222.14	219.34	307.97	239.51	(+)
Kiribati	36.7	66.6	66.2	65.6	2.5	36.7	47.5	10.8	150.00	160.00	190.00	170.00	120.00	158.00	(-)
Maldives	7.2	7.6	7.2	5.4	4.6	6.4	6.2	-1.0	37.50	43.75	45.45	41.18	40.00	41.58	(+)
Marshall Islands	34.5	-78.9	7.9	834.9	483.2	29.4	255.3	220.8	-783.33	83.33	8550.00	2616.67	316.67	2156.67	(+)
Mauritius	4.8	3.1	4.9	1	3	6.8	3.8	-1.0	26.67	51.64	11.38	19.35	84.00	38.61	(+)
Montserrat	19.2	3.3	9.0	13.1	6.1	3.6	7.0	-12.2	100.00	200.00	300.00	100.00	100.00	160.00	(+)
Nauru	0.2	8.1	8.6	4.5	4.5	4.9	6.1	5.9	100.00	200.00	100.00	100.00	100.00	120.00	(-)
Palau	41.0	2.4	3.9	12.6	1.7	2.1	4.5	-36.5	50.00	100.00	350.00	150.00	50.00	140.00	(+)
Papua New Guinea	34.3	2.9	14.3	3.3	3.2	2.9	5.3	-29.0	3.46	19.06	4.79	5.77	5.63	7.74	(-)

	FDI as a % of Gross Fixed Capital Formation							FDI per capita, US							
	Avg 1990– 2000	Change between avg 1990– avg 2000 and						2006	2005	2004	2003	2002	2001	Avg 2002– 2006	
		2002	2003	2004	2005	2006	2002–6								
Samoa	16.8	–0.2	1.4	5.5	–7.6	–3.3	–0.8	–17.6	0.00	5.00	–55.00	–19.05	–9.52	–15.71	(–)
São Tomé & Príncipe	9.6	17.3	4.8	–7.3	–2.4	–1.7	2.1	–7.4	17.65	5.56	–11.11	36.84	0.00	9.79	(+)
Seychelles	16.9	28.2	92.3	47.8	105.3	169.4	88.6	71.7	600.00	725.00	462.50	1025.00	1825.00	927.50	(–)
Singapore	36.2	31.9	52.2	77.5	57.6	79.5	59.7	23.6	1714.29	2429.98	3406.90	4543.67	5391.31	3497.23	0
Solomon Islands	18.5	–7.4	–3.8	10.9	32.6	31.3	12.7	–5.7	–8.00	–3.92	1.92	–1.85	34.55	4.54	(+)
St Kitts and Nevis	32.7	47.9	47.2	30.4	51	94.3	54.2	21.5	2025.00	1950.00	1325.00	1250.00	5075.00	2325.00	0
St Lucia	35.2	37.1	73.9	50.4	45.6	62.7	53.9	18.7	356.25	700.00	525.00	658.82	700.00	588.01	(+)
St Vincent and the Grenadines	48.9	31.4	43.7	46.5	24.6	47.1	38.7	–10.3	283.33	458.33	550.00	283.33	708.33	456.67	(+)
Suriname	–11.6	61.0	62.9	76.7	79.8	61.3	68.3	79.9	331.82	–168.89	–80.43	89.13	687.23	171.77	0
Timor-Leste	31.6	1	4.5	3	0.1	2.4	2.2	–29.4	1.05	5.00	1.96	2.88	2.83	2.75	(–)
Tonga	4.6	–1.2	11.2	14.6	52.4	31.0	21.6	17.0	0.00	109.09	9.09	45.45	100.00	52.73	(+)
Trinidad and Tobago	38.3	49	45.6	54.1	35.2	28	42.4	4.1	719.09	741.28	926.85	1018.52	736.45	828.44	(+)
Turks & Caicos Islands	0.7	–0.1	13.3	–9.9	48.7	15.2	13.4	12.7	0.00	700.00	–750.00	0.00	1800.00	350.00	(–)
Tuvalu	–1.7	304.2	0.1	0.3	–0.1	0.1	60.9	62.6	227.27	0.00	0.00	66.67	0.00	58.79	(–)
Vanuatu	47.2	25.2	27.9	27.9	19.8	86.2	37.4	–9.8	65.00	75.00	110.00	71.43	290.48	122.38	(+)
Average	19.5						33.8	14.3	328.48	436.35	745.09	711.20	949.49	634.12	(+)

Source: World Development Indicators, 2010

enhance their reputation, and to go beyond regulatory compliance as a means of competitive advantage¹¹. A stronger version of this argument is 'There is mounting evidence that foreign firms tend to pollute less since, as they are generally based in developed countries, their technology and processes comply with higher environmental standards and it would not be cost-effective to adapt them to less strict regulatory regimes. In many cases, these firms also export to markets that are more sensitive to environmental issues and certification: ISO 14000 certification¹², though voluntary, is increasingly becoming a commercial necessity¹³'.

There is also the emergence of an asset class, socially responsible investment (SRI) that combines its rate of return with the values of the investors and the entities in which they invest. 'Recent years have seen a definite movement to a greater appreciation of businesses that build value by integrating a sustainable development approach into their core business model and offering services or products specifically designed to meet the environmental and social, as well as economic, needs of clients¹⁴'.

Finally, there is a case to be made for increasing the pool of funds for microfinance, with the proper guidance of micro-enterprises toward environmentally sustainable products and services. Incomes generated by these activities can lift individuals and their families out of poverty and generate demand for health, education, clean water, and the other services that will encourage greater productivity and the ability to tap into economic opportunities.

On the negative side, some foreign investment has gone into industries such as mining, some have exploited local labour and taken advantage of weak environmental standards and lax regulation by authorities, and still others have been accused of influencing policy-makers toward concessions that undermine sustainable development. This last trend is reinforced in circumstances where developing countries compete with each other for foreign investment instead of establishing common standards and enforcing them.

Debt relief

Debt relief in the form of forgiveness and debt for nature swaps have been proposed as a way of freeing up resources for sustainable development projects. In 1996, the Fund for Heavily Indebted Poor Countries (HIPC) was launched by the World Bank and the IMF and expanded in 1999. Four SIDS – Guyana, Haiti, Guinea Bissau, São Tôme and Príncipe – are included in the HIPC, and have benefited from debt relief. This study has not been able to access information on how the resources released from debt repayment are being utilised.

Debt for nature swaps have been used by some countries, especially in Latin America, as early as 1987¹⁵. In 1990, the Enterprise of the Americas Initiative (EAI) was launched with a facility for debt for nature swaps for countries qualifying under the Brady Plan. Under this initiative, a percentage of the principal owed by a country is cancelled and the balance and interest is deposited in local currency in a Trust Fund for environmental protection and sustainable development projects. The Environmental Foundation of Jamaica was set up in this way to support sustainable development in Jamaica.

The USA also passed the Tropical Forest Act in 1998 to extend the facility of the EAI to important tropical forests in the developing world. Belize benefited from this programme

The Environmental Foundation of Jamaica (EFJ)

The Environmental Foundation of Jamaica was established by the governments of the USA and Jamaica as a private non-profit organisation in 1993 with funds from two debt swaps within the context of the Enterprise of the Americas. Its goal is to finance environmental and child development projects using local NGOs. The first agreement provided for US\$9.2 million between 1991 and 2001 from interest payments due to USAID. The second will provide US\$12.3 million between 1993 and 2012 from interest payments due to PL480 (food aid).

There is a tight ceiling on the EFJ's own administrative expenses, consisting of 15 per cent of the annual contributions of the government plus 15 per cent of the interest earned on capital.

The EFJ was conceived of as a 'sinking fund' that would cease when it had spent all its capital. This was expected to be in 2012, but could be before depending on its rate of expenditure. However, investments in high yielding government securities have expanded the capital base significantly, and the organisation developed fund-raising strategies to prolong its life in the face of the anticipated persistence of Jamaica's needs for environmental and child development projects beyond 2012.

As the only vehicle of its kind, the EFJ has received a wide array of requests for funding, most of which do not meet the organisation's technical and administrative requirements. In addition, the wide ranging demands have pressured the EFJ to take on responsibilities which are properly outside its focus and competence. It remains as the main source of funding for all Jamaican NGOs, especially for projects within EFJ's focus on the environment and child development. As such, it is the principal source of funding for sustainable development in Jamaica.

with a debt swap that left the country with a small fund (US\$7 million) for conservation. Table 7.5 summarises the agreements that benefited Jamaica and Belize, the only two Caribbean SIDS that reported debt swaps.

Table 7.5. Caribbean SIDS – Debt-for-nature swaps, US\$ millions

Year	Country	Purchaser/Donor	Face value	Cost	Conservation funds
2002	Belize	USA-TFC and TNC	9.00	7.20	7.20
1991	Jamaica	TNC/USAID	0.44	0.30	0.44
1991	Jamaica	EAI	271.00	n.a.	9.20

Source: CEPAL-UNDP, 2002, Table II.1, p. 17

Debt swaps require debtor governments to find domestic resources to fund environmental projects. This often leads to more fiscal pressure, as the governments have to trade off other services for the environmental projects. The CEPAL-UNDP study estimated that in 2002, the total debt relief due to debt for nature swaps was equivalent to only 1 per cent of the debt of developing countries. That is, very little resources had been released by this method for funding sustainable development projects.

Multilateral financial institutions

The World Bank and the network of regional multilateral funding institutions were seen as natural sources and vehicles for funding sustainable development, and particularly environment projects. Table 7.6 shows the trend in per capita multilateral flows to selected SIDS for the years 2002–08, with the last column showing whether the trend has been increasing (+), decreasing (–), or constant (0). Of the 38 SIDS in Table 7.6, 11 countries experienced declining per capita multilateral flows. Table 7.6 also shows the average for the countries for these years, varying from negative flows for Trinidad and Tobago to the high for Montserrat with its historically very small population that was halved by the eruptions of the island's volcano.

New sources

The Multilateral Fund for the Implementation of the Montreal Protocol that was established in 1987 was the precursor of new sources of funding that paved the way for the establishment of the Global Environmental Facility (GEF) in 1991. By 2007, the Fund had received US\$1.9 billion of the US\$3.2 billion that had been pledged, and 'had supported the transfer of technology and capacity building through about 5500 projects and activities in 144 developing countries¹⁶'. Thirty-six SIDS were included in the developing countries.

GEF was the mechanism for funding sustainable development, in the narrow sense of environmental development that was established in 1992 in the wake of UNCED. Between 1992 and 2004, it 'allocated \$4.5 billion in grant financing, supplemented by more than \$14.5 billion in additional financing, for 1,400 projects in more than 140 developing countries and countries with economies in transition¹⁷'. The SIDS received \$365.1 million, 8 per cent of the total grant financing, on 225 projects, or 16 per cent of the total number of projects. The average project funded by GEF in the SIDS was \$1.6 million compared to the average of \$10.4 million for developing countries.

GEF has focused on an integrated approach to 'biodiversity loss, climate change, degradation of international waters, and ozone depletion – and subsequently desertification, deforestation, and persistent organic pollutants'. A strong case was made for an 'interlinkages' approach to sustainable governance, and in particular toward the financing of sustainable development and the implementation of multilateral environmental agreements (MEAs)¹⁸. Essentially, the approach recognised the overlap of agreements, and institutions, and proposed a more co-ordinated approach to funding that supported the complementarity of projects, while minimising support for the areas of conflict between agreements.

The Clean Development Mechanism (CDM) is intended to support the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC). There has been some growth of carbon trading both within and outside of the context of the Kyoto Protocol. In some instances, countries receive credit to be applied to the targets for their own emission levels from the savings obtained by investing in low carbon emission projects in developing countries¹⁹. In other cases, carbon is sequestered by the conservation of forests which also supports the maintenance of biodiversity.

Table 7.6. Multilateral flows to selected SIDS, per capita, US\$

	2002	2003	2004	2005	2006	2007	2008	Average 2002–08	
Anguilla	−107.0	214.0	131.0	−29.0	411.0	187.6	227.1	147.8	(+)
Antigua & Barbuda	57.9	28.4	19.3	3.0	16.1	61.9	78.6	37.9	(−)
Barbados	1.5	61.8	93.8	−29.4	−12.4	40.3	14.1	24.2	(+)
Belize	35.6	29.0	16.7	19.4	15.8	47.2	64.8	32.6	(−)
Cape Verde	121.8	129.9	122.8	132.1	89.6	102.5	111.1	115.7	(−)
Comoros	27.1	21.0	17.9	11.5	14.4	39.7	23.6	22.2	(−)
Cook Islands	13.5	60.0	143.5	39.0	65.0	28.3	104.1	64.8	(+)
Cuba	1.0	1.4	2.4	1.7	1.8	2.8	2.7	2.0	(+)
Dominica	227.6	106.4	261.0	150.0	247.4	218.3	290.6	214.5	(−)
Dominican Republic	0.7	0.9	0.0	2.2	4.2	9.9	6.0	3.4	(+)
Fiji	2.9	9.0	30.8	27.9	17.4	21.2	13.0	17.5	(+)
Grenada	101.1	37.8	58.8	275.2	262.3	185.8	291.9	173.3	(+)
Guinea-Bissau	25.2	35.3	35.1	28.1	29.8	50.8	49.7	36.3	(+)
Guyana	40.3	76.1	83.8	127.2	164.0	114.1	162.0	109.6	(+)
Haiti	3.9	7.4	6.2	19.3	25.7	27.8	36.2	18.1	(+)
Jamaica	10.6	0.8	24.8	8.9	13.7	17.4	31.4	15.4	(+)
Kiribati	21.3	55.4	66.3	64.8	55.5	44.8	68.9	53.9	(+)
Maldives	47.8	28.6	41.0	69.6	57.9	66.5	13.6	46.4	(−)
Marshall Islands	116.2	82.8	26.8	12.0	0.2	9.4	36.0	40.5	(−)
Mauritius	16.3	2.1	16.2	8.5	9.6	21.8	75.2	21.4	(+)
Montserrat	−178.0	18.0	710.0	85.0	744.0	772.1	494.0	377.9	(+)
Nauru		13.0	8.0	10.0	14.0	30.0	112.1	31.2	(+)
Palau	10.5	4.0	3.0	4.0	5.5	18.8	95.1	20.1	(+)
Papua New Guinea	1.1	0.4	3.6	3.8	4.7	5.8	6.5	3.7	(+)
Samoa	31.8	29.8	30.2	66.2	41.6	44.9	70.4	45.0	(+)
São Tôme & Príncipe	39.7	67.6	64.7	71.0	17.3	31.1	127.6	59.9	(+)
Seychelles	52.8	39.8	36.4	86.1	93.5	92.8	79.6	68.7	(+)
Solomon Islands	9.8	7.2	8.7	47.9	46.4	24.3	11.1	22.2	(+)
St Kitts & Nevis	502.0	6.5	23.5	44.0	80.3	18.7	288.3	137.6	(−)
St Lucia	132.4	62.4	14.6	26.2	83.8	54.4	116.9	70.1	(−)
St Vincent & Grenadines	35.4	21.8	31.7	−7.5	25.2	169.3	164.0	62.8	(+)
Suriname	8.8	15.1	17.6	22.5	17.3	52.8	53.4	26.8	(+)
Timor-Leste	32.3	27.3	19.6	23.4	33.4	47.6	43.0	32.4	(+)
Tonga	49.8	98.5	39.4	63.3	25.7	41.0	16.6	47.8	(−)
Trinidad & Tobago	−13.1	−7.5	−8.6	−7.6	8.3	10.3	6.1	−1.7	(+)
Turks & Caicos Islands	73.0	50.0	97.0	105.5	−25.0	580.0	129.3	144.3	(+)
Tuvalu	5.0	3.2	24.0	25.4	22.0	217.8	222.0	74.2	(+)
Vanuatu	25.6	21.2	15.6	28.9	35.0	20.0	10.8	22.4	(−)

Source: http://stats.oecd.org/wbos/Index.aspx?DatasetCode=ODA_RECIPIENT

As of April 2008, only six SIDS – Cuba, Cyprus, Dominican Republic, Fiji, Jamaica, Papua New Guinea – were on the list of countries with registered CDM projects. Except for Cyprus which had two projects, each of the other SIDS has one project, accounting for a total of seven of the 1029 projects registered²⁰. As far back as 2006, the executive board of the CDM had noted ‘... submissions [to the Board] agreed that there were barriers to the (increased) participation of Small Island Developing States (SIDS), Least Developed Countries (LDCs), and Sub-Saharan African countries Two of the main obstacles for these

countries relate to financial issues: a need for increased financial resources to assist in building requisite capacity and for innovative means of project financing/risk management²¹.

The Resilience Building Facility was agreed by the Mauritius meeting in 2005 to help SIDS to 'implement technological, administrative and even market-oriented innovations to strengthen resilience and reduce vulnerability²²'. The Facility is yet to be funded and implemented.

Opening markets in the developed countries

David Pearce has argued for the removal of subsidies in the developed world that seek to protect labour and other resources against competition from developing countries, and subsidies on water and energy in developing countries which frequently have harmful environmental impacts. He estimated that the removal of these subsidies could free up \$200 million per annum for financing sustainable development projects²³. This would also serve to promote economic growth through enhanced exports from developing countries.

Potential sources of funds

A Tobin tax on transactions that speculate on foreign currencies has been proposed as a source of new funds. The original proposal was justified as a means of reducing speculation to mitigate the instability of exchange rates. The proceeds were to be deposited in international financial institutions for funding development in poor countries. The modern twist to the proposal is to use these funds for sustainable development. The problem of achieving international agreement on implementing a Tobin tax remains intractable. In 2002, Pearce estimated that at a rate of 0.25 per cent, such a tax could bring well over \$200 million annually²⁴.

There have been many other proposals for taxes on activities that emit greenhouse gases in the developed countries that are subject to the same drawback of requiring a supra-national agency to implement them.

Public-private partnerships

An increasingly widely held view is that ODA and FDI should have complementary roles. For example, ODA could increase the capacity of developing countries to benefit from FDI, and thereby reduce the risks faced by private investors.

Carefully targeted and timely delivered ODA, and properly administered projects that ODA funds, can also assist in enabling the productive sectors to lead the re-positioning of SIDS in the global economy.

Despite the commitments given by the international community at least from UNCED and most recently in Monterrey and Mauritius, the international flows have not been as large and sustained as required to support the targets set by Agenda 21 and the MDGs almost a decade later. There continues to be great potential in the rapid growth of private investment flows, but the challenges of tapping these for sustainable development in developing countries in general, and SIDS in particular, remain formidable. Tapping into new sources of funding, such as resources mobilised by a Tobin tax and similar kinds of measures, are

even more elusive since they require new institutions with global authority and power that are not likely to be agreed at the expense of national sovereignty.

Nevertheless, SIDS and other developing countries must continue to campaign for increased ODA flows that are less tied, and to see whether these flows can assist in leveraging FDI toward more sustainable development projects and activities. There is much that can be done to improve the attractiveness of the investment climate in SIDS. However, the fundamental characteristics of small size and the proneness to natural hazards that underpin the vulnerabilities of SIDS will remain as constraints and obstacles to the resource flows that are so desperately needed by these countries²⁵.

Financing sustainable development – Domestic resources

Of the \$600 billion Agenda 21 estimated to fund sustainable development annually, \$475 billion, or 79 per cent, was projected to come from domestic sources. Naturally, this requires re-allocation of traditional public expenditure patterns, and some governments have been able to generate incremental resources for one-off projects in this way. However, perhaps the sustainable approach is to mainstream sustainable development in public expenditure and to promote public-private sector partnerships to fund the relevant programmes and activities.

Mainstreaming sustainable development

SIDS and other developing countries will have to align their budgetary processes and practices with the requirements of financing sustainable development to support the mainstreaming of sustainable development in public policy. Governments will have to re-engineer the services they provide to deliver them in a way that is consistent with sustainable development approaches. It is generally accepted that sustainable development is premised on a participatory approach to policy formation and implementation, that prudent resource use is fundamental to protecting the resource base for future generations, and that confronting poverty is the top priority of the public policy agenda.

It cannot be that traditional service delivery modes that are inconsistent with and/or undermine sustainable development are pursued side-by-side with sustainable development initiatives. Energy and water policy must be re-oriented to minimise waste and environmental abuse while addressing the needs of the poor. Education and health policy should promote attitudes and practices that support the fight against poverty while protecting the environment. Similarly, housing policy should be re-drafted to establish standards for building that optimise renewable energy use, and regulations for locations that adapt to climate change and are best suited to cope with the natural hazards. Security policy should strive for eliminating the incentives for anti-social and criminal behaviour rather than suppressing behaviour that recurs once the fundamental drivers remain in place. In this way, the entire budget will be converted to financing sustainable development.

Even with this perspective, there will be the need for additional resources to fund special projects to mainstream sustainable development as well as to tackle the legacy of social neglect and environmental abuse.

In the previous section, the potential for freeing up resources through debt relief was dis-

cussed. Here, attention is being drawn to the potential savings from the removal of subsidies which encourage consumption and frequently adversely impact on the environment. The most commonly cited example is the subsidy on petroleum that facilitates consumption and results in emissions that pollute the atmosphere.

In addition, the common justification for subsidies is to assist the poor. Often, there is abuse and the non-poor benefit disproportionately from subsidies designed for the poor. For example, subsidised kerosene for cooking often ends up fuelling trucks.

Along with subsidies on the consumption of energy, governments of developing countries provide subsidies on water consumption, including the consumption of water by farmers for irrigation purposes. Indeed, farmers benefit as well from subsidies on inputs such as fertilisers and other chemicals, such as pesticides.

Subsidies on water make waste more affordable, and in that sense do not encourage efficient use of water. In the case of farm inputs, the excessive use of chemicals impacts negatively on the soil, on the aquifers, and on the rivers and the life sustained by their waters.

A study done for the World Bank has argued that the 'removal of energy subsidies would support the three main aims of sustainable development: social welfare, environmental protection, and economic growth. Funds supporting subsidies could be directed to social benefits and income redistribution. Environmental benefits accrue from proper pricing, which could reduce both local and global pollution (including CO₂ emissions). Economic growth would be boosted through improved efficiency and reduced budget costs²⁶.' A similar conclusion was drawn from a review of subsidies on water usage.

In the case of SIDS, there is no evidence to suggest that the removal of subsidies will release significant amounts of funds. Table 7.7 summarises what little data we have on the importance of subsidies and the potential gains from removing them in seven SIDS. On the other hand, the arguments that subsidies often encourage the abuse of resources and environmentally unfriendly practices, and that the non-poor frequently benefit disproportionately from subsidies intended for the poor are equally valid for SIDS.

Environmental taxes

The EU probably has the widest array of environmental taxes and charges²⁷ with the longest experience of implementing them. Environmental levies were first implemented in the EU in the 1980s, and the evaluation of the implementation and of the impact of these taxes and charges is quite recent. Environmental levies may seek to alter behaviour and/or generate revenue. In the first instance, if the levy is successful, then the revenue generated will decline over time. For both of these reasons, SIDS can utilise these to generate domestic resources to fund sustainable development projects.

The economic rationale for these levies is to take account of the cost of production and consumption externalities which refer to costs that are incurred but not paid for. Pollution is the most common example, and has been met with the polluter-pays principle.

In a study reviewing the use of these instruments in the EU up to 2000, the authors trace the interest of policy-makers in these instruments beginning in the 1980s, and sanctioned

Table 7.7. Potential gains from removing subsidies and capturing rents in SIDS

Country	Net effect on public budget from gasoline and diesel price reform														Total resource rents							
	Electricity			Efficiency gains from subsidy phase out		Gasoline subsidy, US\$m		Diesel subsidy, US\$m		Gasoline and diesel subsidy, % of GDP		Mineral fuels rents, US\$m				Timber rents, US\$m						
	US\$ mns	% of LMC	% of GDP	US\$ m	% of GDP	GB1	GB2	GB1	GB2	GB1	GB2	GB1	GB2	US\$m		% of GDP	US\$m	% of GDP				
Cuba	35	3.3	n.a.	0	n.a.									n.a.	n.a.	7	n.a.	n.a.				
Dominican Republic	0	0	0	0	0	0	0	0	0	98	0.00	0.56	374	128	2.1	0.7	39	0	39	0.23		
Guinea-Bissau																	3	1.6				
Guyana																	8	1.1				
Haiti	0	0	0	0	0	0	0	0	0	0	0.00	0.00	14	0	0.3	0	0	4	4	0.1		
Jamaica	0	0	0	0	0	0	0	0	0	0	0.00	0.00	75	55	1.1	0.8	0	58	5	63	0.91	
Netherlands Antilles						0	0	0	0	0	n.a.	n.a	3	0	n.a.	n.a						
Papua New Guinea																	179	154	69	1.8	402	11.21
Solomon Islands																		16	6			
Trinidad & Tobago	135	50.9	2	29	0.4	0	0	2	26	0.03	0.38	94	75	1.4	1.1	433	0	1	434	6.32		

Source: *Generating Public Resources to Finance Sustainable Development*, Table 3.1, p. 35, and Tables C.1–C.3, p. 121–132

Estimates of rents from timber based on 1999 data

GB1 – traditional measure of energy subsidy; GB2 – transport measure of energy subsidy = GB1 + subsidies to transport infrastructure;

GA – global average; RA – regional average; LMC – long-run marginal cost.

and promoted by several regional and international agreements, including the Rio Declaration on the Environment and Development²⁸. The study lists the taxes and charges implemented in each of the member states of the EU under the broad headings of agricultural pesticides and fertilisers; other goods that have impact on the environment, such as batteries, tyres, disposable plastic and other packaging, lubricant oil, and others; waste; water; and air transport. The most common levies are for user charges for waste disposal and water, followed by the levy for noise pollution.

Apart from the levies, there are deposit schemes for containers, and take-back schemes for hazardous materials like batteries. The purpose of these is to discourage improper disposal by giving the users the incentives of reclaiming their deposits for returning the items covered.

EU policy-makers are concerned with a variety of other issues, all of which ultimately relate to the kinds of market signals by way of incentives and disincentives sent to producers and consumers. There is debate as to whether the proceeds of any particular levy should be earmarked for specific, and usually related, services, or simply put into a pool that allows for re-allocation according to need. There is interest in shifting the burden of taxation from goods and services, and hence labour, to environmental goods and services. There is concern, however, that the taxes do not result in a loss of employment or competitiveness. All of these are pertinent to the implementation of environmental taxes in SIDS. Here too, the shift from taxing 'goods' to taxing 'bads' supports the pursuit of sustainable development.

The revenue from levies earned by OECD countries is estimated to be 2.0–2.5 per cent of GDP, depending on whether the estimate is the weighted or arithmetic averages across member countries. Based on five case studies in Latin America and the Caribbean, it was estimated that environmental expenditure had probably not exceeded 1 per cent of GDP and had rarely exceeded 3 per cent of public expenditure²⁹.

It is clear that the use of environmental levies is still new, but that there is a great potential to be tapped. SIDS in particular, with their fragile environments and their dependence on tourism, have a yet untapped source of funds from environmental levies.

Privatisation of the ownership or the management of public assets

Another approach is to divest the ownership or management of public resources to private operators. In the first case, the government earns a one-off sum in the form of the sale price. Unless this value is then invested to earn a stream of future revenues, its impact on public expenditure will be limited to the spot expenditures that it finances.

In the second case, the government can earn a stream of revenues from the operators. Resources freed up from managing parks, beaches, and other public facilities can then be re-allocated along with the revenues earned from the divestment. An essential factor for success will be appropriate guidelines for operating the facilities in a sustainable manner, and the adequate regulatory oversight.

Capturing rents from natural resources

Forests

Some SIDS – Guyana, Suriname³⁰, Belize, Papua New Guinea – have large forest reserves,

and hence potentially large rents from timber from their forests. Table 7.7 lists four SIDS among the top ten countries in terms of potential rents from forests as estimated from 1999 data by a World Bank team. In all cases, potential rents were estimated to be greater than 1 per cent of GDP, and as much as 6 per cent in the case of the Solomon Islands in the Pacific.

Case studies of five developing countries³¹ showed that, except for Cameroon, the governments were collecting between 23 per cent and 66 per cent of the potential rent from their forests through a variety of royalties and taxes. The challenge for the tax authorities is to identify the appropriate royalties and the correct levels of those royalties to capture the full potential rents efficiently³².

Protected areas

Tourism is becoming the leading industry, and especially hard currency earner, for SIDS. There is evidence that tourists are willing to pay more than they are currently charged for maintaining protected areas such as ecological habitats and national parks. Estimating the form and level of charges for each attraction will require on-going research of visitor expenditure patterns and preferences. Charges will be determined by the access to quality services that enhance the visitors' experience with the natural attraction. As such, some, and perhaps all, of the revenue earned by each attraction should be reinvested in the development of the attraction both for purposes of conservation as well as enhancing its earning capacity.

Private resources

As with international resources, domestic private resources constitute a greater potential pool than public resources in SIDS whose governments are generally poorly resourced. Domestic private resources refer not only to the resources of firms and households normally resident in the country, but also to remittances from migrants. In many SIDS remittances constitute the single most important source of private inflows annually. Domestic resource owners respond to market incentives too, and are more likely to respond to evidence-based regulations implemented by impartial transparent processes than capricious decision-making.

Accordingly, when the governments of SIDS review traditional incentive regimes of subsidies and taxes, they will of necessity change relative costs and prices to entrepreneurs and hence send different signals for the allocation of resources. Mainstreaming sustainable development entails re-engineering regulatory processes to guide investors and entrepreneurs away from environmentally unfriendly practices, toward more efficient resource utilisation and labour regimes and processes that comply with the best international practices. Again, the government should strive for partnerships with private domestic and international investors to effect synergies that enhance their profitability while operating within the national strategy for sustainable development. Households too can contribute to sustainable development by their consumption and waste disposal practices.

In Jamaica, for example, a third of gross fixed capital formation annually is in construction of housing, commercial buildings and infrastructure. Building regulations governing siting and encouraging the optimisation of energy for cooling and heating can re-orient the built environment toward more harmonious relationships with the natural environ-

ment. Public-private partnerships have had mixed success in managing water resources, but the challenges vary across SIDS, and within each SIDS. There may be no universal one-size-fits-all partnership, but there are surely opportunities for success on a case by case concrete basis.

It is estimated that 80 per cent of the waste on islands end up in the sea. With a strong orientation to beach tourism, improper waste disposal and climate change haunt the tourist industries of SIDS. Waste management is an obvious area for co-operation among investors and the state to tackle an externality that is too big for any one enterprise or for the state alone.

Most difficult will be the modalities of co-operation to address the conditions of the communities of the poor that threaten the natural environment with squatter settlements, improper sewage and waste disposal, and poor sanitation. These in turn pose serious risks to public health and frequently security. All of these constitute the causes by which the impact of natural hazards become disasters that require resources for relief. Sustainable livelihoods are essential to sustainable development.

The Green Fund of Trinidad and Tobago

In 2000, the government of Trinidad and Tobago established a fund to finance the activities of NGOs in the environmental sector by levying a tax of 0.05 per cent on gross revenue of firms operating in the country. In 2007, the Fund had exceeded US\$110 million, but the requisite regulations to guide the disbursement of the Fund's resources had still not been legislated. Further, there were several articles in the Trinidadian press criticising the inactivity of the Fund, and warning against transferring the resources into the consolidated fund of the central government.

As a mechanism for sourcing new finds for sustainable development, this seems to have worked for Trinidad and Tobago. However, the lack of implementation perhaps speaks to the prioritisation of sustainable development projects and activities as well as the momentum of traditional government services that has yet to be checked.

A strategy for SIDS

The Mauritius Declaration recognised the economic, social and environmental vulnerability of SIDS, and committed the international community to building the resilience of SIDS. It reiterated the 'commitment ... [of the international community to] ... support the sustainable development of small island states through the provision of financial resources. This commitment entails a more coherent, co-ordinated and collaborative approach to the sustainable development of small island developing states through, *inter alia*:

...

- b) Active support for regional and interregional co-operation among small island developing states ...
- c) Broad-based partnerships that ensure involvement and participation of all relevant stake-holders, including the private sector;³³.

The response of the international community continues to be less than is required in all respects. ODA flows remain weak, private flows are highly concentrated to non-SIDS coun-

tries, and the failure of the negotiations under the DOHA round underscore the persistent difficulties SIDS face in exporting to the developed countries. The Mauritius Declaration anticipated this and ended with an exhortation to the regional institutions of the SIDS to monitor the implementation of the commitments. Accordingly, the SIDS must strengthen their co-ordination to intensify the pressure on the international community to honour commitments made in all the major international meetings between UNCED and Mauritius. An immediate rallying point should be the resourcing and activation of the Resilience Building Facility.

Co-operation among SIDS was a key element in the strategy to build partnerships for sustainable development. The Consortium of Universities in SIDS has been initiated, and must be consolidated to develop some of the necessary personnel to guide the relevant policy formation and implementation. Many other points of collaboration have been mooted, not least disaster mitigation and risk reduction.

Careful study of the development success stories among the SIDS is warranted to see what lessons can be transferred to other SIDS. In this regard, Singapore, Malta, Cyprus and to a lesser extent Mauritius, are perhaps the cases that should be studied first. To some extent, this study initiated that process with regard to financing sustainable development by searching for examples of success. However, much more needs to be done at the national, regional and international levels to have a more comprehensive and detailed record of modalities for financing sustainable development in SIDS.

Ultimately, SIDS have to reconfigure the allocation of public resources to promote sustainable development policies in each concrete national context. In some cases, such as the removal of subsidies with negative environmental impacts, resources can be freed to fund incremental projects and to expand relevant activities. In most cases, the provision of public services will have to be re-engineered and re-oriented because of the inertia of expenditure patterns. To reiterate, an abiding principle should be to 'shift from taxing goods to taxing bads', both to generate revenue as well as to curb behaviour that undermines the environmental and social aspects of sustainable development.

Most important, public-private partnerships must be forged in areas where they do not now exist, and strengthened where they do, to re-direct private investment flows and consumption expenditures to support the goals and objectives of the national sustainable development strategy. This last issue is very challenging, but perhaps represents the greatest potential source of funds for SIDS to build their resilience to external shocks from natural hazards and negative impacts from the evolving global economy.

References

- Beckford, George (2000). *Persistent Poverty*. Kingston: University of the West Indies Press.
- Binger, Al (2000). 'Country Capacity Development Needs and Priorities: Report for Small Island Developing States'. GEF-UNDP.
- CEPAL and UNDP (2002). *Financing for Sustainable Development in Latin America and the Caribbean: From Monterrey to Johannesburg*. LC/R.2098.

- Dougall, Desmond, and Wayne Huggins (2002). *Expenditures, Investment and Financing for Sustainable Development in Trinidad and Tobago*. ECLAC/UNDP Project RLA/01/001, Santiago, Chile.
- ECLAC (2005). Foreign Investment in Latin America and the Caribbean. Port of Spain: ECLAC <http://www.eclac.org/publicaciones/xml/2/24302/lcg2309i.pdf>
- ECOTEC et al. (2001). *Study on the Economic and Environmental Implications of the Use of Environmental Taxes and Charges in the European Union and its Member States*.
- El-Ashry, Mohammed T (2003). 'Financing Global Environment and Sustainable Development in Latin America'. Address by El-Ashry, CEO and Chairman of GEF in Lima, Peru.
- GEF (2005). *GEF and Small Island Developing States*. Washington DC: Global Environment Facility Secretariat.
http://207.190.239.143/Outreach/outreach-publications/GEF_SIDS_ENG.pdf
- Grafton, Quentin R, Frank Jotzo, and Merrilyn Wasson (2004). 'Financing Sustainable Development: Country Undertakings and Rights for Environmental Sustainability (CURES)', Australian National University, *Economics and Environment Working Paper*, EEN0403.
- IMF, UNEP and World Bank (2002). *Financing for Sustainable Development*.
- Najam, Adil (2002). 'Financing Sustainable Development: Crises of Legitimacy'. *Progress in Development Studies* 2, 2 pp. 153–160.
- OECD (2007). *DAC Development Cooperation Report*.
- Pagiola, Stefano, Roberto Martin-Hurdado, Priya Shyamsundar, Muthukumara Mani, Patricia Silva (2002). *Generating Public Sector Resources to Finance Sustainable Development: Revenue and Incentive Effects*. World Bank. WTP 538.
- Panayotou, Theodore (1997). 'Taking stock of Trends in Sustainable Development Financing Since Rio'. *Environment Discussion Paper* 31.
- Pearce, David (2002). *Making Globalization a Positive Force for Sustainable Development*. Commonwealth Consultative Group on the Environment.
- Rodney, Walter (1976). *How Europe Underdeveloped Africa*, Bogle L'Ouverture Publications.
- Smith, David (2002). 'Financing for the Earth: Environmental Trust Funds in Jamaica'. Global senior Fellows Meeting. Windhoek, Namibia.
<http://www.synergos.org/knowledge/02/jamaicaenvfunds.pdf>
- Stewart, H (1998). 'Financing Sustainable Development', Asia – Capacity 21 Workshop. Discussion paper. March. Vientiane, Laos.
- UN (2005). *Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States: Report of the Secretary General*. A/60/401.
- UNFCCC (2006). Clean Development Mechanism Executive Board Meeting 26, 26–29 September 2006. Annex 4 – Approved baseline and monitoring methodology.
http://cdm.unfccc.int/EB/026/eb26_repan04.pdf
- Velasquez, Jerry, Jong Malabed, Jacob Park and Shona Dodds (2002). *Interlinkages: Synergies and Coordination among Multilateral Environmental Agreements*. United Nations University, Tokyo.
- Wara, Michael (2006). 'Measuring the Clean Development Mechanism's Performance and Potential'. *Program on Energy and Sustainable Development, Working Paper* 56. Stanford University.

World Bank (2010). World Development Indicators, 2010. Washington, D.C.: World Bank. <http://data.worldbank.org/data-catalog/world-development-indicators>

Notes

- 1 Velasquez et al, 2002, p. 4
- 2 Ibid, citing Agenda 21.
- 3 From Terms of Reference for the study undertaken by the author.
- 4 Rodney, 1976.
- 5 Beckford, 2000.
- 6 The GNI = GDP + Net Factor Income Payments from Abroad – indirect business taxes. Accordingly, the GNI and the GDP are closely related measures of national income.
- 7 OECD, 2007.
- 8 CEPAL-UNDP, 2002.
- 9 Velasquez et al, 2002, p. 11.
- 10 IMF et al., 2002, p. 5.
- 11 IMF et al., 2002, p. 6.
- 12 ISO 14000 refers to a family of standards established by the International Standards Organization to guide environmental management.
- 13 CEPAL-UNDP, 2002, p. 33.
- 14 IMF et al., p. 8.
- 15 CEPAL-UNDP, 2002, p. 15.
- 16 <http://www.multilateralfund.org/achievements.htm>
- 17 GEF, 2005, p. 4.
- 18 See Velasquez et al., 2002.
- 19 Wara, 2006, p. 25: 'Contrary to theory and expectation, the CDM market is not a subsidy cum market mechanism by which CO₂ reductions that would have taken place in the developed world take place in the developing world. Rather CDM subsidies are paying for the substitution of CO₂ reductions in the developed world with reductions in developing world emissions of industrial gases and methane. Indeed, the types of emissions that make up the bulk of the CDM reductions do not even occur in the developed world, not because of an absence of adipic acid or HCFC-22 manufacture, but because Annex I industries, after recognizing the threat posed by these emissions and the low cost of abating them, have opted to voluntarily capture and destroy them.'
- 20 See <http://cdm.unfccc.int/Statistics/Registration/NumOfRegisteredProjByHostPartiesPieChart.html>
- 21 UNFCCC, 2006, p. 2.
- 22 UN, 2005.
- 23 Pearce, 2002, p. 18.
- 24 Pearce, 2002, p. 22.
- 25 A reviewer of this paper has pointed out that Singapore and Malta are somewhat of exceptions to the general claim that is being made here.
- 26 Pagiola et al., 2002, p. 19.
- 27 This study follows the distinction made in ECOTEC, 2001, p. 4. There they distinguish between a tax whose revenue goes to the government's budget without any specific reciprocation, and a charge which is collected for a specific service delivered, and whose proceeds may be earmarked for specific purposes. The term levy refers to both taxes and charges.
- 28 ECOTEC, 2001, p. 20
- 29 CEPAL-UNDP, 2002, p. 77.
- 30 90 per cent of Suriname and 80 per cent of Guyana are in forest. Suriname has more rain forest than all of Central America.
- 31 Cameroon, Gabon, Brazil, Indonesia, Laos.
- 32 See Pagiola et al., 2002, p. 38.
- 33 Draft Mauritius Strategy, January 2005, p. 25.

Mark Bynoe

Applying resource economics to integrate sustainable development principles in SIDS

Introduction

Though small island developing states (SIDS) are defined in Agenda 21 (Chapter 17) as ecologically fragile and vulnerable entities (measured by the number of natural disasters), whose small size, limited resources, geographic dispersion and isolation from markets (measured in terms of transportation costs), place them at a disadvantage economically and prevent economies of scale (mainly linked to domestic population) generally, it is important to note that SIDS are a complex mix of heterogeneous islands and countries (see Encontre, 2004). Furthermore, from a social and economic standpoint SIDS exhibit significant diversity, with some such as Bahrain, Malta and Singapore, being well developed, with low HIV/AIDS rates¹, crime and incidence of natural disasters, but the reverse situation tends to be present in others such as the Comoros and Guinea Bissau with relatively high crime and HIV rates, and States like the Maldives, Seychelles, and Mauritius that are subject to natural disasters. Comparisons, as seen in Table 8.1, with regards to other socio-economic variables demonstrate wide dispersions amongst SIDS and emphasise the contrasting states and trends in social and economic characteristics as evidence of inherent vulnerability and the performance of some in overcoming these challenges (Briguglio, et al., 2005; Prasad, 2007). At the same time, the threat of global warming is a distinct challenge with the need to reconcile and synergise conservation of SIDS's environmental and natural resources with their development policies, programmes, and plans in the face of globalisation and profound economic changes.

Ecology, and by extension resource economics, which are often credited to the writing of Rachel Carson's *Silent Spring*, which aroused a greater level of environmental consciousness globally, was in fact being discussed since the 19th Century by Karl Marx and Frederick Engels who had a profound interest in the interactions between the human economy and the natural environment, particularly as regards capitalist agriculture (Foster, 2007; Martinez Alier, 2004)². They indicated that capitalism degrades the environment in a way that disproportionately affects the poor and the colonised in a concept that has become known as the 'metabolic rift'³. As such, resource economics provides us with the analytical tools to reconcile and prioritise the diverse objectives identified above and allocate the limited resources to their most economically efficient uses; in an administratively cost effective, and socially equitable manner in pursuit of the goal of sustainable development (Ison, et al., 2002; Tietenberg, 2002; Stavins, 2005; and Martinez Alier, 2004).

Table 8.1. Small states and some socio-economic statistics

Country	Land (sq km)	Population	GNI (Current US\$m)	GDP per capita	2000–03 av. growth	Poverty index	Gini co- efficient
Antigua & Barbuda	440	75,779	716.0	9,134.65	2.47	12.0	0.53
Bahamas	10,070	311,560	4,840.0	15,591.00	1.23	9.3	0.46
Bahrain	620	690,865	610.0	11,851.67	3.47	6.0	
Barbados	430	268,788	2,520.0	9,372.93	−0.12	13.9	0.39
Belize	22,800	261,500	899.0	3,446.65	7.70	33.0	0.40
Bhutan	47,000	839,443	584.0	642.30	685	25.3	0.34
Brunei	349	347,270			295		
Cape Verde	4,030	452,230	784.0	1,251.78	5.00	44.0	
Comoros	2,170	578,993	323.0	364.98	1.46	60.0	
Cook Islands	240	18,250		5,349.28	7.57	12.0	
Cyprus	9,240	763,143	9,100.0	12,153.75	3.78	25.5	0.34
Djibouti	21,980	686,270	641.0	834.73	2.17	45.1	
Dominica	750	71,175	239.0	3,597.53	−2.24	30.0	0.35
Equatorial Guinea	28,050	475,930	454.0	3,215.10	8.81		
Estonia	43,211	1,361,125	8,510.0	4,418.70	6.65	8.9	0.37
Federated States of Micronesia	702	212,318	261.0	1,832.83	2.18	27.9	0.41
Fiji	18,270	821,800	1,960.0	2,222.50	2.25	2.25	0.49
Gabon	257,670	1,301,100	5,210.0	3,889.38	1.83	62.0	0.48
Gambia	10,000	1,368,400	370.0	321.07	3.70	40.0	0.40
Grenada	340	103,025	388.0	3,830.63	1.64	32.0	0.45
Guinea-Bissau	245,860	1,427,325	3,600.0	146.25	0.28	20.8	0.47
Guyana	196,850	763,935	698.0	950.16	0.08	43.0	0.43
Iceland	100,250	285,750	10,300.0	30,276.75	2.94		
Kiribati	717	93,647	84.6	569.09	1.73	51.0	
Luxembourg	2,586	442,250	23,600.0	45,398.75	3.56	5.5	0.31
Macao, China	21	437,000		14,956.00	5.65	19.0	0.40
Maldives	300	283,520	680.0	2,377.90	5.73	43.0	
Malta	320	395,250	3,660.0	9,706.65	1.42	15.0	0.30
Marshall Islands	181	52,325	139.0	1,903.30	140	20.0	0.54
Mauritius	1,850	1,204,800	5,220.0	3,973.55	4.58	12.1	0.37
Palau	458	19,792	130.0		185		
Qatar	11,437	604,158					0.38
Samoa	2,850	175,050	265.0	1,474.78	4.55	20.3	0.44
São Tôme & Príncipe	1,000	152,675	50.2	323.64	3.90	53.8	
Solomon Islands	27,540	437,425	247.0	621.60	−4.95		
St Kitts & Nevis	269	45,955	299.0	7,413.25	2.38	32.0	0.37
St Lucia	610	158,435	644.0	4,195.98	−0.44	25.1	0.43
St Vincent & Grenadines	340	109,833	356.0	3,125.48	1.83	37.0	0.56
Suriname	161,470	431,408	1,150.0	2,155.85	3.49	70.0	0.46
Swaziland	17,200	1,076,650	1,890.0	1,343.68	2.36	40.0	0.61
Seychelles	455	82,102	678.0	7,324.43	−0.54	19.0	0.47
Timor-Leste	14,609	819,500	341.0	438.44	5.01	41.0	0.35
Tonga	718	100,900	161.0	1,606.20	2.75	22.7	0.42
Trinidad & Tobago	5,130	1,300,525	10,100.0	6,708.85	6.57	21.0	0.40
Vanuatu	14,760	203,480	279.0	1,124.73	0.58	40.0	0.58

Source: WDI (World Bank 2006), for Gini coefficient various IMF country reports

Resource economics, which includes the study of environmental economics and resource utilisation, views the exploitation of the natural resources with which countries are endowed, inclusive of the SIDS, as being critical for economic growth. During the extraction, processing, and utilisation of some of these materials pollutants are produced that are emitted back into the environment (Kneese, et al., 1975)⁴. For the policy-makers in SIDS it is critical therefore, that ways be examined that would allow for this exploitation to occur to advance human welfare while minimising the negative externalities associated with the exploitation and utilisation activities.

However, before discussing the specificities of utilising resource economics to advance sustainable development principles, in particular valuation techniques and their applicability, it is useful to have a clear understanding of the conceptual issues. This approach will allow us to view the environment as a composite whole and to appreciate the interrelationships and complementarities present amongst its disparate parts.

Within this chapter, therefore, we consider the general tenets in mainstreaming resource economics for sustainable development, with specific reference to SIDS. The chapter reviews a number of approaches that seek to place a value on environmental goods and services, particularly when environmental changes, whether positive or negative, occur. This approach is offered here as an operational tool since traditional models have historically served two main functions:

- 1 applied as benchmarks against which to measure progress in the field, and
- 2 the provision of relatively simple frameworks to focus on crucial relationships.

We therefore commence by examining the relationship between human actions, as manifested through economic systems, and the environmental consequences of those actions. This then provides the basis for the establishment of criteria to identify the nature and severity of environmental problems confronting SIDS and to demonstrate how resource economics provides an avenue to assess and deal with these challenges.

Throughout this chapter, therefore, the focus is on using resource economics in a practical and effective manner for decision-making. At the same time, the most pertinent shortcomings encountered with the methodologies are highlighted and alternatives provided where possible.

Why value the environment?

There are at least five reasons why we seek to place a value on our environmental and natural resources in the SIDS to ensure that they are put to their most efficient usage where possible. Valuation:

- 1 reminds us that the environment is not a free good despite the absence of a conventional market in environmental services⁵;
- 2 signals changing scarcities of these resources as conventional economic theory postulates that in a competitive market, as the supply of a good falls with demand remaining constant, the price will tend upwards;
- 3 translates environmental impacts of projects into values which can be compared and

integrated with financial and economic criteria of cost-benefit analysis (CBA)⁶, thus aiding decision-making;

- 4 provides a more realistic indication of economic performance as the environment is then taken as one of the factors of production as well; and
- 5 serves as a guide for public policy: taxation, subsidies, conservation and pollution abatement expenditures.

The process of environmental and resource valuation assesses the amount of goods and services that an individual is willing to forego in order to consume the good or service in question (Tietenberg, 2002). Within the process of economic valuation of an environmental asset attempts can be made to determine its wider value to society and place a monetary figure on this value. The justification for placing monetary values on non-market goods, such as environmental resources, is that they can then be considered more readily in the valuation of potential policies and projects. This process remains controversial in both economic and environmental spheres, with members of either grouping doubting the ethics, rationale and the accuracy of these valuations (Clark, 2002; Stavins, 2005, Pearce and Barbier, 2001, and Bromley, 1990).

On some occasions, the market mechanism provides monetary valuations by yielding prices from products derived from environmental assets in well-functioning markets (Boardman, et al., 2001). However, many of the markets are not often well functioning and in fact, distortions are a reality of life due to the presence of monopolies, distortionary public policies⁷, and externalities⁸. In such circumstances, some adjustment to the quoted market price is often necessary. This adjusted price is often referred to as the 'shadow price' as it reflects the valuation to society in these States due to a particular activity. But where markets exist the opportunity is provided to observe the aggregate quantity purchased and, therefore, the chance to find the point of interaction between the supply and demand curves. The shapes of these curves allow us to determine changes in social surplus, which is the combination of consumers surplus⁹ and producer surplus¹⁰, minus any costs associated with the policy or action. Thus, where we are able to observe the demand function there are a range of valuation techniques available to us to value environmental and resource impacts. These include:

- i) the travel cost method;
- ii) the hedonic price method;
- iii) the defensive expenditures method; and
- iv) cost benefit analysis.

But we are not always able to observe the prices and quantities for goods and services provided by the environment and natural resources, or the proxies available are often inadequate for inferences to be made (Portney, 1994). In such circumstances, analysts have often shown a propensity to use what is referred to in the literature as contingent valuation (CV) (Alberini and James, 2006)¹¹. Respondents are often asked to indicate a hypothetical value of 'willingness to pay' for an environmental amenity or 'willingness to accept' compensation for an environmental loss. However, their responses to such questions do not have to be matched by payment. Hence there is often some degree of scepticism attached to using these values as they tend to suffer from extreme values (outliers). However, whatever the

faults of contingent valuation methods, they do involve the public in a dialogue with experts. Hence, any means that gives voice to the public in an age of public policy-making by managers, consultants, professional politicians, large firms and interest group leaders is at least an antidote to environmental managerialism.

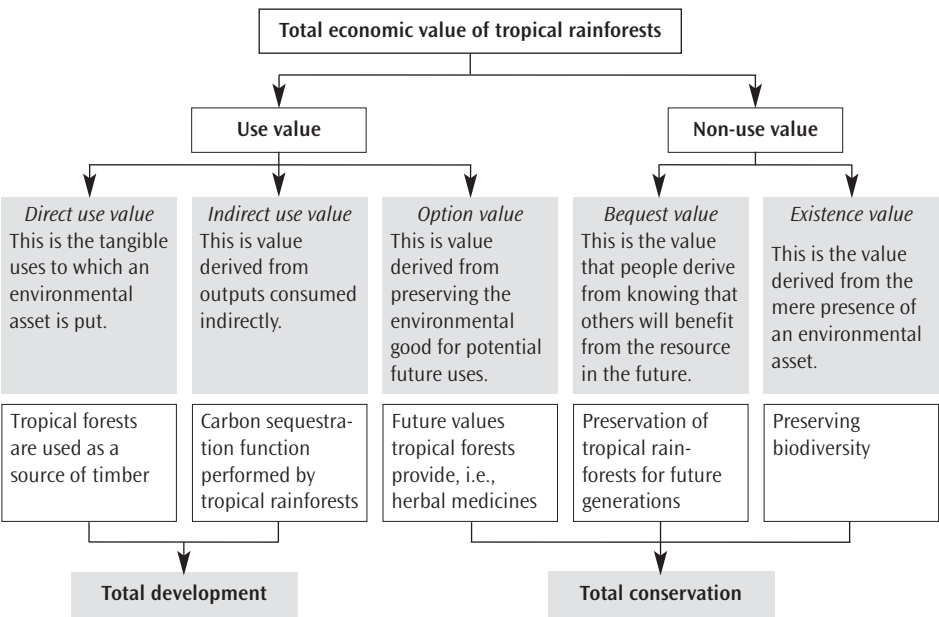
Total economic value

In recent years there has been considerable debate of how to measure total economic value (TEV) of an environmental asset in SIDS and globally. The TEV is suggested as having five component parts that can be further sub-divided into ‘use’ and ‘non-use’ values (see Figure 8.1). The values identified are direct use value, indirect use value, option value, bequest value and existence value. Figure 8.1 shows the relationship between these values.

While an accurate valuation of environmental assets in the SIDS should take into account each of these values, such values are not without their challenges. For example, in the absence of a conventional market place, it is often difficult to derive proper values for the many environmental services performed by environmental assets that include tropical forests, coral reefs, and watersheds, in these States. Furthermore, it is contended that conventional measures underestimate the true value of these assets (Tietenberg, 2002, Ison, et al., 2002). This is often due to the way we compartmentalise the environment, failing to appreciate the interdependencies, interrelations, and complexity of the systems that we work with.

Additionally, an indication of what one is willing to pay in the present for a future benefit that may occur (as required under the option value categorisation) is generally based on

Figure 8.1. Derivation of total economic value



Source: Adapted from South Pacific Regional Workshop on Integrating Economic and Environmental Policies and Practices for Environmentally Sustainable Development, Commonwealth Secretariat, Economic Affairs Division p. 21–22

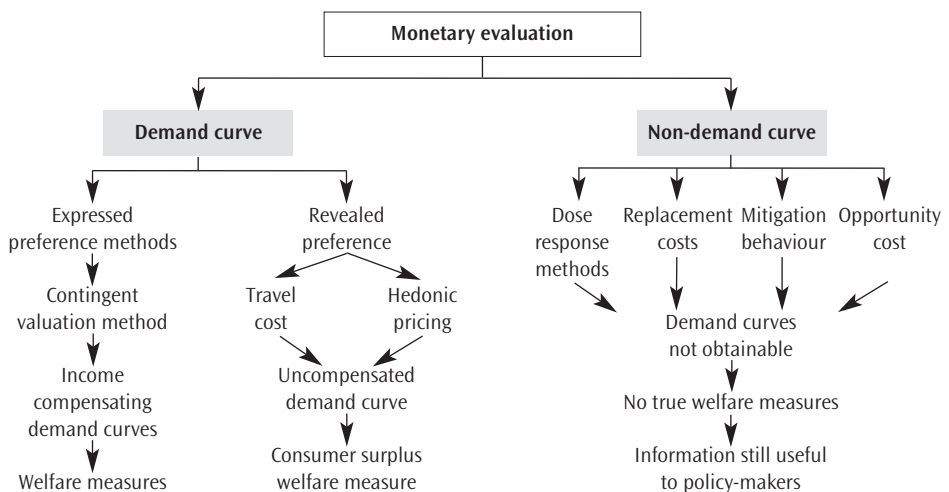
(Ison, 2002, Stavins, 2005). Thus, there is often a substantial amount of subjectivity present in such an approach. Lastly, using the concept of existence value, we may wish to have an environmental asset maintained in its present state so that we can pass it over to future generations un-depleted. But this conceptualisation assumes that future generations would want what it is the present generation wants! This may be an erroneous assumption. Hence, the debate continues.

But in studies conducted outside of SIDS it was found that the 'option' and 'existence' values of environmental assets often far exceeded their 'use' value (Pearce, 1991, O'Doherty, 1994).

Approaches to valuation

Valuing the resources of the SIDS can be achieved through a variety of means depending on the nature of the asset, i.e. the forests, biodiversity, corals, or land in question and the available information relating to its use. If the asset is bought or sold in a market of some kind, the market price for the asset provides one estimate of its value. But even this value may be distorted as a result of market failures due to, *inter alia*, few buyers and sellers, asymmetric information, and hidden externalities. These can lead to increased income inequalities, reduction in the quantity and quality of social services and a faster rate of liquidation of the environmental and natural resources. Furthermore, this method may miss some elements of TEV that are not captured by market activities, such as indirect use value, option value and existence value as discussed above due to the failures outlined. If the asset is not based in a market, it may have links with marketed goods that allow implicit techniques to be used. One of the most common of these methods is the hedonic pricing method that attempts to elicit environmental values using house prices that may implicitly contain estimates of these environmental valuations (Freeman, 2003; Triplett, 2006).

Figure 8.2. Methods of valuing impacts of development policy, plans and programmes on environmental assets



Source: Adapted from Turner, Kerry, Pearce, David and Bateman, Ian (1993) *Environmental Economics: An Elementary Introduction*, Prentice Hall, London

These techniques can capture direct and 'indirect values' but are unlikely to capture 'option' and 'existence' values. If, however, the environmental asset in question is not marketed or linked to a marketed good (or if this data is unavailable or deemed unreliable), valuation becomes decidedly more challenging. Methods such as stated preferences can be used to elicit these values. The most common of these methods is the **contingent valuation method** (CVM). This method draws out an individual's or household's willingness to pay for an environmental contingency. This information can then be used to extrapolate the value of society as a whole and, hence, the economic value of an environmental asset in a country. The advantage of this method is that it can capture many of the elements of total economic value, including existence values. Figure 8.2, adopted from Turner, Pearce and Bateman (1993), indicates graphically some of the valuation techniques available to decision-makers in SIDS and wider afield.

From Figure 8.2, two basic approaches are available to resource economists, such as those methods which value an impact via a demand curve¹² and those which do not and therefore fail to provide 'true' valuation information and welfare measures. These latter measures are still useful in at least being used to sensitise policy-makers to the effects of their decisions (Bateman and Willis, 1999; Ison, et al., 2002).

In many developing countries, inclusive of SIDS, the absence of data for measurement and valuation means that they are often coerced to employ methods referred to as non-demand curve approaches¹³. For example, the **dose-response approach** requires the existence of information that establishes a connection between an environmental condition, such as a loss of production from a fishery affected by water pollution, and the physiological responses of humans, plants and/or animals. But many SIDS, for example, in seeking to extract their mineral resources for faster economic growth, are forced to assess how increasing exposure to stock pollutants¹⁴ that result from the extraction process are likely to affect human health. In conducting such an assessment, a dose-response methodology is often applied as this method seeks to determine the condition of one's health before the negative impact occurred, and what responses (conditions) emerged after the impact occurred. The forgone earnings and cost of illness to value an environmental good become critical tenets in utilising the dose-response method. The dose-response method, therefore, allows for an objective and realistic evaluation of the economic consequences of some actions pursued in the name of development. Furthermore, utilisation of the method is necessary to avoid decisions being taken that are in disfavour, while simultaneously improving resource allocation decisions and social welfare.

Additionally, the **replacement cost technique** (RCT) examines the cost of replacing or restoring a damaged or degraded environmental asset and uses this cost as a measure of the benefit of restoration. Its application, however, always requires careful thought and reasoning. For example, it remains a valid approach in situations where it is possible to argue that the remedial work must take place because of some other constraint. In such circumstances, where there may be a regulatory standard in place, the costs of achieving that standard may be used as a proxy for the benefits of reaching the standard (Tietenberg, 2002; Stavins, 2005).

However, the RCT does not provide strict measures of economic values, which are based

on people's willingness to pay for a product or service. Instead, it assumes that the costs of replacing ecosystems or their services provide useful estimates of the value of these ecosystems or services. This is based on the assumption that, if people incur costs to avoid damages caused by lost ecosystem services, or to replace the services of ecosystems, then those services must be worth at least what people paid to replace the services. Thus, the method is most appropriately applied in cases where replacement expenditures have actually been, or will actually be, made, i.e., valuing erosion protection services of a forest or wetland by measuring the cost of removing eroded sediment from downstream areas.

In the process of pursuing economic growth, many households in SIDS are often affected by, for example, noise from the construction of a new highway or contamination of freshwater supplies from mining activities occurring upstream. In order to insulate themselves against the noise impacts that may negatively affect their sleeping pattern and, hence, their performance at work, householders may invest in insulation mechanisms to minimise this noise nuisance. The cost associated with such investment is used as an indication of that which the polluter should be paying to the household for its **mitigation behaviour**.

But as Pearce and Seccombe-Hett (2000) argued, if benefits were measured by costs then the benefit-cost ratio would always be at least one, begging the question as to what would have to happen for replacement not to be worthwhile. But where it is clear that the asset in question is unique and that benefits greatly exceed costs even on a limited inspection of the information available, then replacement cost becomes a minimum estimate of benefits. As a general rule, however, replacement costs should only be used in exceptional circumstances.

It is worthwhile to indicate at the inception that the opportunity cost¹⁵ approach is not a valuation technique as no direct attempt is made to value the benefits of a particular action.

Photo 8.1. An open pit gold mining site at Kamarang, Guyana using a missile dredge in February 2007 (courtesy of M Bynoe).



Rather, it looks at the benefits of an activity that will result in environmental degradation – say drainage of a wetland to allow intensive agriculture – uses this to establish a benchmark for what the environmental benefits would have to be, at a minimum, to make the development (agriculture) worthwhile for society (Turner, et al., 1993).

Valuation techniques

While resource economists often commence from the premise of an idealised world in which there is perfect competition, in reality, all markets are ‘imperfect’ in some respect, leading to different types of **market failure**¹⁶. As such, the market price does not reflect the extra resource cost to society of producing the last unit of output of a product¹⁷, and we encounter situations in which ‘inappropriate’ prices are established that distort valuations or where no prices at all exist. When a market ‘fails’ governments often take this as an indication that they should enter the market to correct for the imperfection. However, it is argued by Tietenberg (2002) and Stavins (2005) that governments should only enter the market if they can perform better than this mechanism. Otherwise, their intervention may worsen the situation leading to what is termed **policy failure**.

Policy failure occurs when the public policy required to correct market and institutional failures create unintended and usually negative environmental side effects (Barbier, 2000)¹⁸. For example, subsidies, taxes, tariffs, quotas, and many other policy interventions (such as grandiose public investments) are often made with the intention of improving social welfare. The goals of increased employment and agricultural output, adequate food supplies, or the protection of domestic industry may be well intentioned but are often economically inefficient. In some cases, the result is an increase in the supply of many products and services that are derived from natural resources whose input prices have been artificially lowered. This leads to resources over-use, often with negative environmental consequences. For example, low energy prices increase acid rain and the amount of carbon dioxide contributing to global warming.

Photo 8.2. Severely degraded mangrove forest along the Essequibo Coast, Guyana in April 2006 (courtesy of M Bynoe).



Market and policy failures: Valuation remedies

Where market prices exist, it is at least feasible to obtain monetary valuations of future net revenues from an environmental asset. However, where either a market or policy failure occurs, these prices may be deemed 'inappropriate' and in need of adjustments to more accurately reflect the true benefits and costs to society. Such adjustments give rise to **shadow prices**, i.e. prices which do not actually exist in the market place but which are assumed to exist for purposes of valuation (Boardman, et al., 2001; Ison et al., 2002; Londero, 2003). Box 8.1 illustrates the type of price adjustments which must be made when market and policy failures occur. As can be seen from Figures 8.3 and 8.4, the actual market price is too low (\$22 and \$14 respectively) when compared to the 'appropriate' market price (\$26) corresponding to the best interest of society, in terms of efficiency gains, better resource allocation and improving public policy. Should government policy be unable to 'correct' this discrepancy (by tax or regulation) then, for valuation purposes, the product from this activity should be given a higher 'shadow price' and lower output. Within the remainder of this chapter, the focus will be on the valuation techniques available to policy-makers when there are market and policy failures and how these techniques can aid the resource allocation decisions to answer such questions as: Should funding priorities be given to areas with the worst environmental problems, or to areas that have made some environmental improvements? What criteria should be used to target resources for conservation? Should conservation programmes target least expensive resources or resources that are most vulnerable to environmental damage? What are the economic, environmental, and distributional implications of alternative targeting criteria? These issues are not only intellectually challenging, but also policy relevant.

Box 8.1. Market and policy failures, environmental impacts and 'shadow prices'

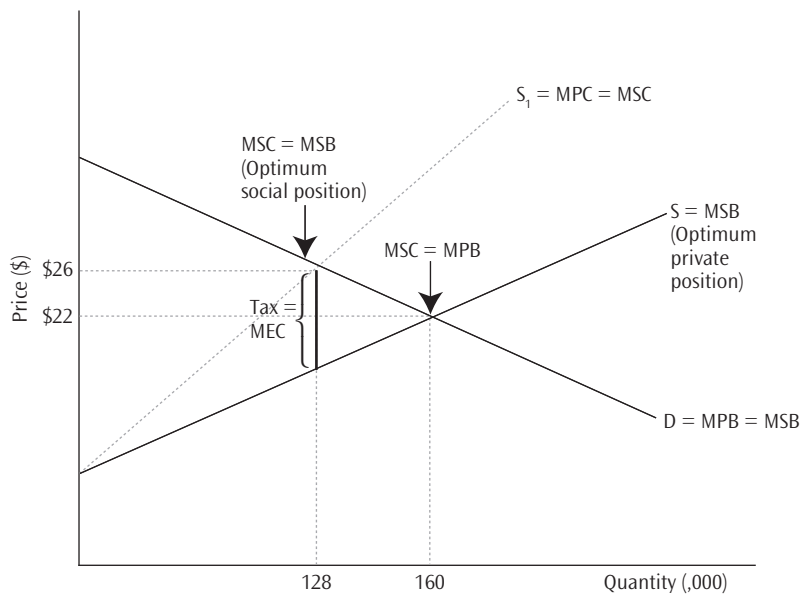
For the purposes of this chapter, we shall assume that two 'failures' occur in SIDS, a market and a policy failure.

In the first instance, we assume that a market failure occurs due to pollution that is produced during the production of agricultural output in SIDS. This externality, which is assumed to occur on the supply-side (cost) results in the cost to society being greater than the cost to the private operators, i.e., marginal social cost (MSC) is greater than the marginal private cost (MPC). The assumption here is that each extra unit of product produced by farmers adds more to the cost of society, i.e., MSC increases, than it does to the cost of the farmers. As such, since farmers are not currently paying for (internalising) the damage caused by the externality then society is worse off. This is so because the environmental damage may manifest itself in terms of deteriorating freshwater quality and declining health of the populace associated with this deteriorating water quality. This scenario is shown in Figure 8.3. The 'true' cost to society of producing the last unit of output does include the cost to the farmers, i.e. MPC of using factor inputs (since these scarce factors are thereby denied to other farmers). However, the true cost to society also includes any environmental damage caused by producing the last unit of output. We call any such damage the marginal external cost (MEC). This is the distance between S (the original supply curve without the MEC) and S1 (the new supply curve inclusive of MEC). The MSC, therefore, is equal to the MPC plus the MEC.

Primarily because the environment is a public good¹⁹ it may be contingent upon the government to intervene in the market place to ensure that the polluter pays for the damage that is being caused and the suffering endured by other innocent parties. In this case, we assume that the government sets an environmental tax, i.e., MEC. With this environmental tax, the real cost of producing the agricultural output moves from \$22 per unit to \$26 per unit, while output declines from 160,000 tons to 128,000 tons. Clearly, there is ‘nothing like a “free lunch”’, but what policy-makers have to decide is if the fall in output is outweighed by the improvement in environmental quality and health of the society.

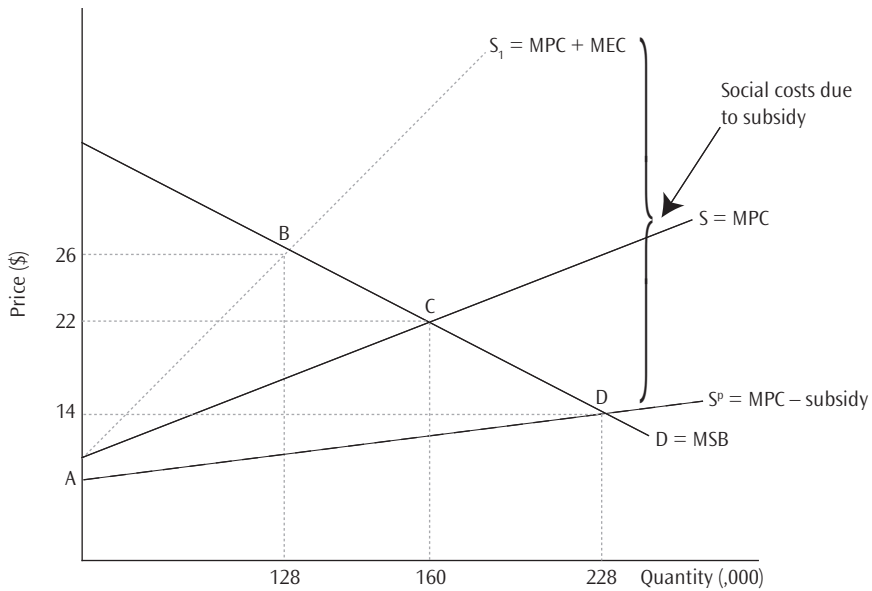
In the second instance, we assume that the government enters the market to offer subsidies to farmers on fertilisers to increase agricultural output and move the SIDS one step closer to the goal of food security (Figure 8.4). In this instance, the new supply curve is at S_p , with output increasing to 228,000 tons and $MPC < MSC$. This increase in output often comes at a cost, with the total cost to society (MEC) in the form of increased water pollution from fertilizer leachates, declining food quality and degradation of soil quality. Thus, without the subsidy, and instead with farmers being encouraged to grow more nutritious foods, the real price would have been \$26 and the quantity produced would have been 128,000 tons. Thus, policy-makers are consistently called upon to make choices based upon their objectives and the scarce resources that they have at their disposal to meet the myriad needs. This is where resource economics can assist with the attainment of making efficient and informed choices.

Figure 8.3. Market failure (negative externality)



Source: Author's construction

Figure 8.4. Policy failure: distortionary subsidy



Source: Author's construction

Revealed cost methods

The valuation techniques within this category and which are applied for a variety of the goods and services provided by SIDS in their pursuit of economic development, seek to observe consumers' responses to various substitutes or complementary goods and services to gain an estimate of value of a particular environmental asset or condition (Benneer, et al., 2005). The focus here is on the **revealed preferences** of the consumers as expected in the market place, even if this expression is indirect in that it involves surrogate goods and services rather the environmental amenity itself (Ison, et al., 2002; Gul and Pesendorfer, 2005; Rubinstein, 2006).

Travel Cost Method (TCM)

Many SIDS economically depend on tourism and the recreation sector. However, how do we know whether this sector is adding more to revenue than to cost if we do not cost the very thing that is most important to visitors, i.e., the environmental quality and assets of the area? The Travel Cost Method (TCM) which is often used to estimate demand for recreational sites, provides the framework to value those sites, particularly, when no entry price is charged (Hackett, 2006; Mendes and Proenca, 2005). Resource economists have often argued that this method provides complementary indicators to the consumption of the recreational good whose value is being estimated. The TCM is simple to apply in that the 'price' paid (in the form of petrol cost, entrance fee, parking fee, etc.) to visit any site can be estimated for each visitor by calculating the travelling costs from his/her location of origin. In applying the TCM, we first randomly select a sample of households using the recreational site. Second, we survey the selected population to derive information on their travel cost and other socio-economic, demographic and geographic variables, such as the

price of substitute sites (p_s), the income of the person (y) and variables that reflect the person's tastes (Z) (see Equation 1). Thirdly, we specify a functional form for the demand function and estimate the same using the survey data.

$$q = \phi(p, p_s, y, Z) \quad \text{Equation 1}$$

Alternatively, by observing people's willingness to pay for the private complementary good or service, often via a questionnaire survey, it is then possible to infer a price for the non-price environmental amenity. Using this information one can estimate the average visitor's (V) total recreational value (Visitors x Price) for the site. Multiplying this by the total number of visitors per annum allows the analyst the opportunity to estimate the total annual recreational value of the site.

The attractiveness of the TCM is that while admission fees are generally the same for everyone, the travel costs tend to vary, and hence usage. Thus, this allows one to make inferences about the demand for a particular site in relation to cost of use. Not surprisingly, the relationship generally shows a downward sloping demand curve between cost of a visit and number of visits made per year²⁰. The TCM, therefore, can be used to measure both the elimination of a site as well as the impact of access restrictions and changes in environmental quality, both valuable in terms of how public resources are allocated.

However, that which makes the TCM attractive may also be its main challenge, i.e., its simplicity. Some of the flaws in the methodology of TCM are explored below:

- **Time costs.** While TCM seeks to determine the cost of travel, the opportunity cost of time travel is often omitted from the estimation. Furthermore, there are some persons that enjoy travelling and therefore have a negative cost for travelling. Thus, it is quite possible that the actual cost is incorrectly specified.
- **Multi-purpose trips.** When visitors visit multiple sites on a single visit, apportioning costs has to be undertaken.

Photo 8.3. Visitors on the Valadero Beach in Cuba in November 2006 (courtesy of M Bynoe).



- **Benefit of the journey.** It is often assumed that benefit is only derived from the site visited. But, the journey itself may have value. However, if the journey is part of the reason for the visit to the site, then the trip has multiple purposes and the problem identified above resurfaces. In this case though, the cost is a net cost, allowing for travel benefits, which are negative costs.
- **Substitute sites.** One visitor may travel 20 kilometres to visit a site which they enjoy visiting, whereas another who has comparatively little enthusiasm for the site may travel the same distance from another direction simply because there is no other available site near their home. Using the simple TCM approach would yield the result that both visitors held the same recreational value for the site, which is clearly incorrect. Some analysts have tried to allow for this by asking visitors to name substitute sites; however, this is both statistically complex and open to error.

Case Study: Applying the Travel Cost Method to value the recreational amenities at the Splashmins Fun Park

In 2003 we applied the travel cost method to estimate the average household value of a trip to the Splashmins Recreational Fun Park on the Linden Soesdyke-Highway, Guyana and the average household value of improving the water quality at the site. A random sample of two hundred and fifty (250) visitors to the site was sampled on April 11, 2003. Our estimates of the travel cost assumed the marginal cost of operating a vehicle at G\$420 per mile in 2003 (G\$195 = US\$1). Furthermore, for the time cost component of our travel cost, this value was set equal to the daily wage rate of that particular respondent's occupation, that ranged from G\$481 per day to G\$4,920 at constant 2001 prices. We logged our variables and estimated the following uncomplicated model, with the t-statistics in parentheses:

$$\text{Ln}q = -4.929 \quad -0.150TC \quad +0.005y \quad +0.011Gn \quad (R^2 = 0.233) \\ (-4.003) \quad (-3.109) \quad (+3.992) \quad (+1.901)$$

Where *TC* is travel cost, *y* denotes income, and *Gn* is gender, which was a dichotomous variable, with 1 indicating males and all others zero. Based on this model we estimated that the average annual value per household visiting the Splashmins Recreational Fun Park was G\$18,532.50 and the average value of improving the water quality from boatable to swimming was estimated at G\$20,100 in 2001 dollar terms.

Hedonic Price Method (HPM)

The hedonic pricing method is the most commonly applied revealed preference technique used in resource economics. The HPM attempts to evaluate environmental services that affect market prices. This method is applicable for the SIDS as it can be used for valuing certain tropical forest functions, i.e., micro-climate regulation and groundwater recharge in terms of their impact on agricultural land values, assuming that the link between forest functions and agricultural productivity is widely known and fully reflected in agricultural land prices. But its applicability is best known in the property market where it is used to indicate a household's willingness to pay for changes in the 'level' of a scenic view (Hidano, 2003). People have a positive willingness to pay to live close to an environmental amenity

to reduce environmental risk or nuisance (Boardman, et al., 2001). This may come from health concerns or aesthetic considerations. It could be used equally to estimate the discounted house price resulting from living within easy access of a source of environmental concern. It can be assumed that areas of land degradation affect property prices through the latter channel. This willingness to pay is fully incorporated into markets if there is adequate information pertaining to the risk. Property market values encompass an array of implicit prices relating to a range of factors. Economic, social, environmental and physical factors help determine the choice of property and the willingness to pay for the said property. The hedonic pricing method can elicit prices for these individual factors using either cross-sectional or time series data.

In applying the HPM it is necessary to first focus on estimating the cost of properties with marginally better views, *ceteris paribus*. To do this, it becomes important to collect information on all the relevant attributes that would theoretically affect the affect property value. This often includes the use of geographic information systems (GIS) and aerial photography to assist them in determining these factors. Secondly, the analyst estimates the 'willingness to pay' for a better view, controlling for income and other socio-economic factors.

Statistical techniques (such as multiple regression analysis) can be used to estimate the influence of these possible 'explanatory' (independent) variables on house and property prices. Often it is assumed that the model has a multiplicative functional form of the type:

$$P = \beta_0 CBD^{\beta_1} Size^{\beta_2} View^{\beta_3} NBHD^{\beta_4} e^{\epsilon} \quad \text{Equation 2}$$

Where P is the property price, CDB is a measure of the distance of the house from the central business district, SIZE denotes the floor space of the house, VIEW measures the level of its view, and NBHD is a variable indicating the neighbourhood characteristics.

The hedonic pricing method, however, has a number of problems that can limit its usefulness in SIDS. Specifically, application of hedonic pricing to the environmental functions of the natural and environmental resources of SIDS requires that these values be reflected in surrogate markets. The approach may be limited where markets are distorted, choices are constrained by income, information about environmental conditions is not widespread and data are scarce. Additional challenges that confront the technique are discussed below:

- **Multicollinearity.** According to Ison, et al., (2002) the variables influencing house prices may themselves be correlated, so that it may be impossible to separate out the influence of the environmental variables. For example, if detached houses with larger numbers of rooms tend to be located in areas with least noise pollution, then it will be difficult to quantify the separate influences of these variables on house prices.
- **Identification Problem.** House prices depend on a variety of factors, affecting both the demand for property (such as environmental quality) and the supply of such properties (such as land availability for house building and government incentives to house builders). Changes in house prices, therefore, may be influenced by variables which are not considered in the model and which are unrelated to environmental factors. As such, the demand curve for housing cannot be clearly 'identified'.

- **Data shortages.** The array of factors determining property prices are extremely broad and identifying all relevant determinants for a specific area is fraught with difficulty. The data requirements to identify implicit prices for these factors can severely limit this method's utilisation, especially in a developing country environment as obtains in most SIDS.
- **Overestimation.** Problems may also arise if the property market is not in equilibrium, if the wage effects arising from the source of the environmental risk is ignored and also if the issue of selectivity is ignored. The last issue relates to the fact that it is often the case that individuals with the lowest willingness to accept²¹ often locate near sources of environmental risk; leading to bias that may overestimate the willingness to pay of the population as a whole.
- **Lack of awareness.** The hedonic method will also only capture perceived risks, costs and benefits from factors. A lack of education or information in society can reduce the ability to perceive accurately these phenomena and thus the true costs of environmental risks are not captured in property prices. This again can limit the use of hedonic pricing in a developing country scenario.

Expressed preference methods

But for many of the goods and services provided by the environment and natural resources in SIDS no market price exists. In such situations, it is best to solicit the way these resources are valued through expressed demand by applying surveys or questionnaires to determine how much individuals would be **willing to pay** for some specified environmental improvement, such as improved water quality or the preservation of a threatened local amenity (Tietenberg, 2002, Stavins, 2005). The menu of measures applied under this category is referred to as **contingent valuation methods** (CVMs). These include:

- 1 **Bidding games:** where individuals are simply asked how much they are willing to pay to bring about a particular environmental improvement (or willingness to avoid a particular environmental degradation). The 'option' and 'existence' values of an environmental characteristic can be assessed in this way.
- 2 **Convergent direct questioning:** where the individual is asked questions within pre-existing 'low' values (above which they would certainly be willing to pay; below which they would certainly be unwilling to accept) and 'high' values (above which they would certainly be unwilling to pay; below which they would certainly be willing to accept). These extremes are progressively narrowed (minimum raised, maximum reduced) until an 'equilibrium' value is attained.
- 3 **Trade-off games:** where each individual must rank various combinations of two items: one a sum of money, the other some environmental characteristic (e.g. clean water). For any pair of combinations, the individual must state a preference for one combination over the other, or state the indifference between the two combinations. The marginal rate of substitution between money and a particular environmental characteristic can then be estimated at the point of indifference.
- 4 **Priority evaluation:** where each individual is given a hypothetical sum of money to spend on different combinations of everyday products and environmental characteristics with 'assumed' prices (which are allowed to vary between different combinations).

In other words, an 'expressed preference' approach is taken to valuation. They can help capture 'use value' where market prices are inappropriate or do not even exist, as well as 'option' and 'existence' values. This latter point is particularly significant in SIDS comprised of ecosystems under great stress from human impacts, where increasing attention is being given to non-use values. The general approach of all the methods is as follows.

First, a sample of respondents is asked questions about their valuations of some good. Second, their responses provide information that enables analysts to estimate the respondents' WTP for the good. Third, these WTP amounts are extrapolated to the entire population. If the respondents are a random sample of the population, then their average WTP would simply be scaled up to reflect their proportion in the population.

But CVMs are not without their drawbacks. These are often highlighted in the literature as follows:

- **'Free rider' problem.** According to Ison, et al. (2002:32) 'Analysis shows that people often understate their WTP in questionnaires by between 10 and 30 per cent of the amount they actually do eventually pay.' This finding, they argue, may indicate the respondents attempt to 'free ride', i.e. understating their true value WTP with the intension of restricting any actual payments, believing that the WTP of others will ensure that the environmental amenity is provided.
- **Biases.** The values given for WTP depend to some extent on the ways in which the questions are framed and respondents' understanding of the questions:
 - ◆ Starting point bias: the higher the initial values suggested for any starting bid, the higher the eventual WTP value declared is likely to be.
 - ◆ Route bias: the less realistic the route chosen for collecting the monies involved (e.g. charitable giving), the smaller the eventual WTP value declared.
 - ◆ It is often found that the observed distributions of WTP in CV are skewed toward extreme values. Thus, it is often necessary to draw larger samples for CV than other samples drawn for other purposes to increase the probability of achieving reliable estimates of population means. This is especially true for the dichotomous-choice method.
 - ◆ Non-response: This bias remains a critical issue in surveys either from refusal to respond or unavailability to respond. In the first case, stressing the legitimacy of the exercise may help. In the latter case, researchers typically account for under-representation and over-representation in the sample when extrapolating to the target population.
 - ◆ Interviewer bias: To minimise the interviewer bias, it is important to ensure that CV respondents do not perceive that any particular answer is preferred by the interviewer.
 - ◆ Hypotheticality bias: A major concern of CV is whether respondents would indeed be able to understand and conceptualise the questions they are being asked, and consequently, whether they can accurately value the good in question. Furthermore, the perception of the good in question may not be

Table 8.2. A summary of the major strengths and weaknesses of different CV elicitation methods

Elicitation method	Major strengths	Major weaknesses	Generic weaknesses
Open-Ended WTP Method	No starting point bias. May directly measure exactly what the researcher wants to know. A good check when used in conjunction with other methods.	High information complexity leads to unrealistic responses in hypothetical situations.	
Closed-Ended Interactive Bidding Method	Bidding provides 'thinking time' to elicit maximum WTP, as desired.	Sensitive to starting value. 'Bidding frenzy' may lead to some very high valuations.	
Contingent Ranking Method	Ordinal ranking requires low information complexity. Links quantities to prices, reducing hypotheticality.	Ordinal responses cannot be aggregated. Requires analyst to have statistical skills. Anchoring bias and highly dependent on the specific alternatives. Requires fairly large sample size.	Apply to most survey methods: sample selection bias, non-response bias, outliers, unintended interviewer bias.
Dichotomous-Choice Method	'Take it or leave it' choices reduce hypotheticality and approximate the market. Small strategic bias; very small starting point bias.	Less information per respondent so large samples are needed. Requires analyst to have statistical skills.	Apply especially to CV methods: Hypothetical bias, non-commitment bias, embedding bias, strategic bias.
Payment Card With Comparative Tax prices	Encourages realistic assessment of WTP, thus reducing hypotheticality and non-commitment bias.	Moderate to high information complexity. May be too sensitive to particular comparisons.	
Payment Card with a Range of Prices for the good	Moderately low complexity. Low interview bias.	Anchoring bias. Often, requires personal interviews. Anchoring bias. Often requires personal interviews.	

independent of the quality or quantity of the information provided. Given that the quantity and quality of information that can be provided when describing complex goods are virtually unlimited, there is no clear standard.

- ◆ Non-commitment bias: It is a well established fact that persons tend to overstate their willingness to pay or willingness to accept compensation for an environmental damage that may have occurred since they are not compelled to honour their statement.
- ◆ Embedding affects bias: A fundamental axiom of economics is that individuals value more of a good more highly than less of it. If CV respondents' valuations are only slightly higher for large changes in the amount of the good offered than for small changes, then the validity of their responses becomes a concern.
- ◆ It is constantly argued that respondents in CV surveys have incentives to behave strategically, that is, to answer dishonestly.

Non-demand curve valuations

Both the expressed and revealed preference methods make use of demand curve analyses to value environmental goods and services and natural resources that can then inform policy. However, a number of valuation methods may be used which depart from this approach.

Damage Cost Technique (DCT)

Damage cost avoided techniques are particularly useful in assessing land degradation, sea defence breaches, and damages resulting from natural disasters. This technique attempts to value an environmental good by assessing the cost avoided if the good is not damaged. For example, soil erosion can be measured by assessing the cost of removing sediment from rivers. These techniques, however, have many limitations. Firstly, costs do not always provide a good measure of benefits and can only be used as a rough approximation of economic value. These techniques as well are only accurate to make an ex-post assessment of projects.

Replacement Cost Method (RCM)

The RCM technique analyses the cost of replacing or restoring a damaged environmental asset that may have been affected, for example, during a flood. For example, it can be used to value land degradation by estimating the cost of physically recovering and replacing lost soil, nutrients and water. This estimate is used as a measure of the 'benefit' from such replacement or restoration. For example, if it costs \$5m to restore the soil lost by flooding, then this \$5m cost is used as an estimate of the benefit of the environmental improvement. But the same criticisms that were levelled against the DCT above are applicable here as well.

Preventative Expenditure Method (PEM)

Where SIDS may have the resources available to them, it is possible for them to take a proactive approach to natural disasters. In such instances, the PEM may be a useful valuation technique in determining how the resources should be allocated. PEM uses the costs incurred in an attempt to prevent some potential environmental damage as a measure of 'benefit'. For example, the repairing of sluices and dredging of canals to avoid flooding might be used as proxy variables of the value placed by policy-makers on abating floods. But like the other methods, PEM also has its drawbacks. First, it assumes implicitly that

individuals quickly adjust to the new equilibrium. It may actually take some time for individuals to adjust their purchases to return to equilibrium where the marginal cost of the substitute input equals its marginal benefit. Second, a defensive expenditure may not remedy entire damage so that reductions in this expenditure do not fully measure benefits. Third, the defensive expenditures may have benefits other than remedying damage. Lastly, not all of the defensive measures are purchased in markets. Some people clean their own drains – reductions in their opportunity costs should also be included as benefits.

Cost Effectiveness Analysis (CEA)

What can be done to guide policy when the requisite valuation for benefit-cost analysis is either unavailable or not sufficiently reliable? Without good measures of benefits, making efficient choices is no longer possible, hence compromising efficiency and, in some instances, productivity.

In such instances, it frequently is the case to set a policy target on some other basis other than strict comparisons of benefits and costs. One example is pollution control. What level of pollution control should be established as the maximum acceptable level? To answer this question, analysts often apply a cost effectiveness analysis (CEA).

Cost effectiveness analysis frequently involves an optimisation procedure. An optimisation procedure in this context is merely a systematic method of finding the lowest cost means of achieving the specific objective. This procedure does not, in principle, produce an efficient allocation of resources because the predetermined objective may not be efficient. Hence, cost-effectiveness analysis can be used to find the least-cost means of meeting a particular standard and its associated cost (Boardman, et al., 2001). Using this cost as a benchmark case, the analyst can then estimate how much costs could be expected to increase from the minimum if policies which are not cost effective are implemented.

Impact Analysis (IA)

What can be done when the information needed to perform a benefit-cost analysis or a cost-effectiveness analysis is not available? In such circumstances, we use an impact analysis. An impact analysis, regardless of whether it focuses on economic impacts or environmental impacts or both, attempts to quantify the consequences of various actions. It makes no attempt to convert all consequences into a one-dimensional measure, such as dollars, to ensure compatibility. Further, it makes no attempt at resource optimisation. Rather, it places a relatively large amount of information at the disposal of the policy-maker, and it is up to the policy-maker to assess the importance of the various consequences and act accordingly. In principle, IA is meant to apply to the entire process, from the inception of a proposal through to environmental auditing and post-project analysis. In practice, IAs have tended to improve the quality of proposals rather than result in their abandonment. However, their main weaknesses are in the subjectivity of the positions reached and placing a lot of 'undigested' information at the disposal of the policy-maker.

Benefit-Cost Analysis (BCA)

The most ambitious and arguably best known technique is the BCA. While it is the most precise of all the techniques discussed thus far, it also imposes upon the analyst the greatest

demand for information. Hence, the techniques discussed above are sometimes applied to assign monetary values to the gains and losses to different individuals and groups. These values are often weighted according to some perception of the contribution of these individuals or groups to social utility (social welfare). It is for this reason that this approach is sometimes referred to as 'social' benefit-cost analysis (Boardman, et al., 2001, Ison, et al., 2002).

There are at least two decision rules often applied to assist us in arriving at the best allocation of the societies' scarce resources. In the first instance, if the proposed reallocation of resources via new investments in some (environmental) project is estimated to create a greater benefit than those who lose, then the project is potentially viable from society's perspective. In other words, if the present value to society of a project is positive, then the project is at least worthy of consideration. Whether or not it will be undertaken may depend on what restrictions, if any, apply to the level of (finance) resources available. In some instances, decision-makers are called upon to pursue the project with the largest net present value to society.

In the second instance, the **benefit-cost ratio** criterion is utilised. The decision rule contends that an investment should be pursued if the ratio of the present value of benefits to the present value of costs exceeds 1.0.

A number of criticisms have been levelled against BCA in terms of valuing environmental and natural resources projects:

- By reflecting human preferences in the form of their willingness to pay, BCA is often criticised for paying too little attention to valuing nature and conservation for its own sake, independent of individual preferences.
- The BCA often suggests a piecemeal approach to environmental considerations and benefits are often excluded because of thin or absent markets. But such weaknesses are being addressed under some of the measures identified above.
- It is quite often the case that political decisions often override the 'efficient' considerations of BCA. While not a conceptual difficulty with BCA, it does demonstrate that decisions do not always follow rationale and reasoning.
- CBA does not explicitly identify who gains and who loses from a project. Data are invariably at the aggregate rather than the individual level, and redistributive issues between individuals (or groups) tend to be avoided.

Environmental accounting

As is often the case, the growth of gross national product (GNP)²² may result in rising environmental damage, and hence, costs. It is often important to capture these costs so that we have a more accurate estimate of the 'true' GNP rate. This is a new and expanding branch of resource economics termed **environmental accounting** (Jackson et al., 1997). An *Index of Sustainable Economics Welfare* (ISEW) has been calculated for the USA and UK. Essentially, any increase in the GNP figure is adjusted to reflect the following environmental factors which are often associated with rising GNP:

- 1 Expenditure correcting environmental damage (i.e. 'defensive' expenditures);
- 2 Decline in the stock of natural resources (i.e. environmental degradation);

3 Pollution damage (i.e. monetary value of any environmental damage not otherwise counted).

By failing to take these environmental impacts into account, the conventional method of calculating GNP underestimates the sustainable economic welfare impacts. It is often argued that some of the growth in GNP is due to expenditures undertaken to mitigate (offset) the impact of environmental damages that are not factored into the GNP calculus (Hecht, 1999). Such expenditure may include efforts made by households to insulate themselves against noise and dust pollution, and the expenditure associated with a declining stock of natural resources, particularly those of the non-renewable type like gold, bauxite and petroleum. For example, the monetary value of minerals extracted from rock is included in GNP but nothing is subtracted to reflect the loss of mineral deposits. This type of 'environmental depreciation' ought to enter the GNP calculations and the conventional method needs to be adjusted accordingly.

Valuing human life

Many government programmes, including providing safer drinking water or reducing hazardous pollutants have, as their main aim, the saving of lives. Thus, the allocation of resources amongst the programmes is often a reflection of the value we place on life (Teitenberg, 2002; Viscusi, 1993). The economic approach often used to value life-saving reductions in environmental risks is calculated by estimating the change in the probability of death resulting from the reduction in environmental risk and to place a value on the change (Stavins, 2005). The value that is derived from this procedure is then translated in an implied value of human life, which is achieved by dividing the amount each individual is willing to pay for a specific reduction in the probability of death by the probability reduction (Tietenberg, 2002).

Furthermore, pollution remains endemic in many parts of the SIDS, where insufficient regulations and enforcement have left legacies of water and air pollution (Hanrahan, et al., 2007). Even when shut down or re-configured to reduce emissions, old facilities and mined-out areas often leave behind a legacy of toxic materials such as lead and mercury, that continue to poison local populations (Leigh and Hoskin, 2005). According to the World Health Organization (WHO) and the World Bank these pollution problems affect nearly a billion persons globally (mainly in developing countries), resulting in increased burden of diseases and reducing the quality of life and life expectancy.

In an attempt to estimate the cost of reducing these negative effects on the local populace in SIDS, policy-makers can apply low cost, efficient and practical strategies. These strategies are based on the concept that initial cleanup efforts at uncontrolled sites can produce large improvements at modest cost. This is a practical approach to making the maximum possible use of limited resources and falls under the rubric of the cost effectiveness approach to investment in health (Pruss-Ustun, et al., 2007).

The essence of the approach lies in the concepts of DALY (disability adjusted life years) and QALY (quality adjusted life years), both of which calculate the years of 'healthy life' lost due to the impacts of a particular cause or disease, in a specified area. Once this measure

of health impact has been estimated, the benefits and cost effectiveness of different interventions and projects can readily be evaluated. The methodology has been developed and refined by WHO as part of their 'Burden of Disease' programme and is widely accepted by both the health sector and the regulatory agencies (such as USEPA) as a basis for making decisions on investments in disease prevention and pollution control.

A QALY is a comparable measure to a DALY. It is the arithmetic product of both life expectancy and a measure of the quality of the remaining life-years. A QALY assigns specific weights on time in different health states. A year of perfect health is assigned the number 1, a year of life spent in less than perfect health is assigned a number less than one and 0 signifies death.

Calculations for our cost-effectiveness study are as follow:

$$\begin{aligned}\text{Cost per person} &= \text{Project cost/affected population} \\ \text{Cost per DALY(QALY)} &= \text{Cost per person/ DALY(QALY) impact}\end{aligned}$$

Many studies have indicated that the health benefits gained by the local population are substantial indicating that remediation of some active and abandoned sites is extremely cost effective (Trasande, et al, 2005; Chuang, et al, 2005). Millions of lives could be saved with further investments in this area. In addition to increasing life expectancy, these investments reduce health expenses for local communities. The low cost of this kind of intervention, along with its enormous health impact, justifies strong support for a concerted effort to deal with this issue frontally.

Conclusions

Within this chapter we have examined some of the techniques that are used, and which can be applied by SIDS policy-makers to mainstream environmental and natural resource concerns into development policy, plans and programmes. The list presented here is by no means exhaustive. The BCA does provide the most concrete examples of applying the techniques. However, these techniques merely offer us a guide in addressing the resource allocation and technical efficiency issues for countries.

Throughout the techniques, however, there are some recurring issues, especially for SIDS. These surround the quality and volume of data often required to implement these frameworks, and the availability of skilled and experienced professionals. Furthermore, the absence of such information can often lend itself to the introduction of biases. While we must remain cognisant of the issues involved, the techniques provide a useful starting point to commence to ensure that we arrive at more consistent values of our environmental, natural and human resources.

References

- Alberini, Anna and James Khan (2006). *Handbook on Contingent Valuation*. Elgar Original Reference Press. New York.
- Barbier, Edward B (2000). 'Valuing the environment as input: review of applications to mangrove-fishery'. *Ecological Economics*, Volume 35, Issue 1, October 2000, pp. 47–61.

- Bateman, IJ and KG Willis (1999). *Valuing Environmental Preferences: Theory and Practice*. Oxford University Press. London.
- Benneworth, Lori, Robert Stavins and Alexander Wagner (2005). 'Using Revealed Preferences to Infer Environmental Benefits: Evidence from Recreational Fishing'. *Journal of Regulatory Economics* 28 #2. Springer Netherlands.
- Boardman, Anthony, David Greenberg, Aidan Vining and David Weimer (2001). *Cost-Benefit Analysis: Concepts and Practice* (2nd Edition). Prentice Hall. London.
- Briguglio, L, G Cordina, N Farrugia and S Vella (2005). 'Towards the Development of the Concept and Measurement of Economic Resilience', Paper presented at a Conference on 'Building the Economic Resilience of Small States'. Commonwealth Secretariat and University of Malta, Malta. March.
- Bromley, DW (1990). 'The ideology of efficiency, searching for a theory of policy analysis'. *Journal of Environmental Economic Management* 19, 86–107.
- Chuang, Hung-Yi, Kun-Yu Chao and Jung-Der Wang (2005). 'Estimation of Burden of Lead for Offspring of Female Lead Workers: a Quality-Adjusted Life Year (QALY) Assessment'. *Journal of Toxicology and Environmental Health*: 1485–1496.
- Clark, Timothy (2002). *The Policy Process: A Practical Guide for Natural Resources Professionals*. Yale University Press. Connecticut.
- Encontre, P (2004). 'Economic Vulnerability of Small Island Developing States: The United Nations Approach', in *Economic Vulnerability and Resilience of Small Island States*. L Briguglio and E Kisanga (eds). Formatek Malta Press. Malta.
- Foster, John Bellamy (2007). *Marx and the Global Environmental Rift*.
<http://www.monthlyreview.org/mrzine/foster281107.html>
- Freeman, Myrick (2003). *The Measurements of Environmental and Resource Values: Theory and Methods*. Resources for the Future. Washington DC.
- Gul, Faruk and Wolfgang Pesendorfer (2005). 'The Revealed Preference Theory of Changing Tastes'. *Review of Economic Studies* 72 (2), 429–448.
- Hackett, Steven (2006). *Environmental and Natural Resources Economics: Theory, Policy, and the Sustainable Society* (Third Edition). M.E. Sharpe Press. New York.
- Hanrahan, D, R Fuller and A Singh (2007). *Cost Effectiveness and Health Impact of Remediation of Highly Polluted Sites in the Developing World*.
<http://www.blacksmithinstitute.org/docs/costEff1.pdf>
- Hausman, Jerry (1996). *Contingent Valuation: A Critical Assessment*. North-Holland. London.
- Hecht, Joy (1999). *Environmental Accounting; Where Are We Now?* Resources for the Future. Washington DC.
- Hidano, Noboru (2003). *The Economic Valuation of the Environment and Public Policy: A Hedonic Approach*. Edward Edgar Press. New York.
- Ison, Stephen, Stephen Peake and Stuart Wall (2002). *Environmental Issues and Policies*. Prentice Hall. New York.
- Jackson, T, N Marks, J Ralls and S Strymne (1997). *An index of sustainable economic welfare for the UK 1950–1996*. Guildford: Centre for Environmental Strategy, University of Surrey.
- Kneese, Allen, Robert Ayres and Ralph d'Arge (1975). *Economics and the Environment: A Materials Balance Approach*. John Hopkins University Press. Baltimore.

- Leigh, J, and Alan F Hoskin (2005). 'Remediation of Contaminated Sediments: a Comparative Analysis of Risks to Residents vs. Remedial Workers.' *Soil and Sediment Contamination* 9 (2005): 291–309.
- Londero, Elio (2003). *Shadow Prices for Project Appraisal: Theory and Practice*. Edward Elgar Publishing. London.
- Martinez-Alier, Joan (2004). 'Marxism, Social Metabolism and Ecologically Unequal Exchange'. *World Systems Theory and the Environment*. Lund University.
- Mendes, Isabel and Isabel Proenca (2005). 'Estimating the Recreation Value of Ecosystems by Using a Travel Cost Method Approach'. Institute for Economics and Business Administration, Technical University of Lisbon, *Working Paper Series*, 2005/08.
- O'Doherty, R (1994). 'Pricing Environmental Disasters'. *Economic Review* 12, p. 1.
- Pearce, David and Edward Barbier (eds) (2001). *Blueprint for a Sustainable Economy*. Earthscan Publications Ltd. London.
- Pearce, David (1991). 'Economics and the Environment'. *Economics XXVII*, Pt 1, p. 113.
- Pearce, DW and T Seccombe-Hett (2000). 'Economic valuation and environmental decision-making in Europe', *Environmental Science & Technology*, vol. 34, no. 8, pp. 1419–25.
- Portney, Paul (1994). 'The Contingent Valuation Debate: Why Should Economists Care?' *Journal of Economic Perspectives* 8 (4) (Fall): 3–17.
- Prasad, Naren (2007). 'Research Proposal and Project Document on Social Policies in Small States'. A joint project of the Commonwealth Secretariat & United Nations Research Institute for Social Development (UNRISD).
- Pruss-Ustun, Annette, Lorna Fewtrell, Philip J Landrigan and Jose L Ayuso-Mateos (2007). 'Chapter 19', Comparative Quantification of Health Risks. Global and Regional Burden of Disease Attribution to Selected Major Risk Factors. <http://www.who.int/publications/cra/chapters/volume2/1495-1542.pdf>
- Rubinstein, A (2006). 'Dilemmas of an economist theorist'. *Econometrica* 74 (4): 865–883.
- Stavins, Robert (2005). *Economics of the Environment: Selected Readings* (Fifth Edition), W W Norton & Company. Cambridge.
- Trasande, Leonardo, Philip J Landrigan and Clyde Schechter (2005). 'Public Health and Economic Consequences of Methyl Mercury Toxicity to the Developing Brain'. *Environmental Health Perspectives* 113. (2005): 590–596. 31 May 2007. <http://www.ehponline.org/members/2005/7743/7743.pdf>
- Tietenberg, Thomas (2002). *Environmental and Natural Resource Economics* (Sixth Edition) Addison Wesley. New York.
- Triplett, Jack (2006). *Handbook on Hedonic Indexes and Quality Adjustments in Price Indexes*. OECD Online Bookstore.
- Turner, Kerry, David Pearce and Ian Bateman (1993). *Environmental Economics: An Elementary Introduction*. Prentice Hall. London.
- Viscusi, WK (1993). 'The Value of Risks to Life and Health'. *Journal of Economic Literature* XXXI, Dec.
- World Bank (2006). *World Development Indicators, 2006*. Washington, D.C.: World Bank

Environmental economic websites

<http://www.ecosystemvaluation.org>
<http://lnweb18.worldbank.org/ESSD/envext.nsf/44ByDocName/EnvironmentalEconomicsandIndicators>
<http://www.elaw.org/resources/text.asp?id=1999>
<http://www.ucl.ac.uk/~uctpa15/envecontexts.pdf>
<http://www.elaw.org/resources/topical.asp?topic=Economics>
<http://www.elaw.org/resources/text.asp?id=2039>
<http://www.darp.noaa.gov/legislat.htm>
<http://www.elaw.org/resources/text.asp?id=1997>
<http://yosemite.epa.gov/ee/epa/eed.nsf/webpages/homepage>
<http://www.whitehouse.gov/omb/circulars/a094/a094.html#top>
<http://www.elaw.org/resources/text.asp?id=1976>
<http://www.elaw.org/resources/text.asp?id=1978>

Useful internet searches on the natural resources economics

International Experiences with Economic Incentives for Protecting the Environment.
 Economic Impact of Tourism Visitation at National Parks in the U.S.
 Estimating National Park Visitor Spending and Economic Impacts – The MGM2 Model.
 Valuing Environmental and Natural Resources: The Econometrics of Non-Market
 Valuation: Eco-Economy: Building an Economy for the Earth.
 ConservationEconomy.net
 Economics, Trade Policy, and CITES (Convention on the International Trade in
 Endangered Species).
 Environmental Valuation Reference Library.

Notes

- 1 According to the United Nations Statistics website, HIV prevalence in 15–49 year olds in the Atlantic, India Ocean, Mediterranean and South China Seas (AIMS) region varies from 0.1 per cent in Bahrain to 3.8 per cent in Guinea Bissau against the benchmark values of 0.4 per cent for developed regions, 1.19 per cent for developing regions and 7.3 per cent for sub-Saharan Africa.
- 2 It is a misnomer to think that the foundations for resource economics were laid in the 1960s. In fact, resource economics shares with other mainstream areas of economics certain foundations that go back at least to the 18th Century (Turner, et al., 1993), though there are indications that neo-classical environmentalism dates back to biblical times at least. Both the Bible and the Koran are replete with the metaphor of the 'garden' as the model of ecological balance; pursuit of MDG 7 target 10 Indicators 30 and 31 might be dated back at least to the Romans in their management of water systems; indeed one of the earliest examples of public investment in environmentalism might be seen as the first European water closet in Ionian times found preserved in Knossos on the small island developing province of Crete.
- 3 In analysing the metabolic rift Marx and Engels did not stop with the soil nutrient cycle, or the town-country relationship. They addressed at various points in their work such issues as deforestation, desertification, climate change, the elimination of deer from the forests, the commodification of species, pollution, industrial wastes, toxic contamination, recycling, the exhaustion of coal mines, disease, overpopulation and the evolution (and co-evolution) of species.
- 4 This is often referred to as the Materials Balance Approach.
- 5 A market is often defined as a place where buyers and sellers meet for the purpose of trading.

Many of the goods and services performed by environmental and natural resources, such as carbon sequestration, reduced soil erosion, and nitrogen fixation impacts of tropical forests are not traded at the market place.

- 6 This is a technique for the evaluation of projects, where all costs and benefits (direct and indirect) are considered. Costs and benefits would be quantified, but where this is not possible they are often listed.
- 7 These would include the provisions of subsidies on pesticides or taxes on agro-processed items.
- 8 This term refers to economic decisions that result in 'costs' (unfavourable outcomes) or 'benefits' (favourable outcomes) not included in the prices and which may affect the persons involved in the trading and others not involved. The externalities of unsafe vehicles affect vehicle users and non-users; tobacco use affects smokers and non-smokers as well as causing litter and accidental fires; private parkland benefits the private users and those beyond its boundaries. The core concept is unpriced costs and benefits.
- 9 This is the difference between what consumers were willing to pay and what they actually paid.
- 10 This is the difference between the price producers were willing to supply their product at and that which they actually received.
- 11 Some writers refer to them as hypothetical valuation surveys. Also see Portney (1994) and Hausmann (1996).
- 12 Demand curves are estimated directly through eliciting preferences from surveys, such as CVM, or indirectly through revealed preferences such as hedonic pricing and the travel cost method.
- 13 In general, non-demand curve approaches do not measure the entire surplus that accrues from what a consumer was willing to pay and what he/she actually paid, and hence they only provide a minimum measure of environmental value
- 14 These are pollutants that are not biodegradable.
- 15 It is the value of forgone opportunities or alternatives unable to be achieved because of time or money towards some other option.
- 16 This is a term used by economists to describe the condition where the allocation of goods and services by a market is not efficient. It is viewed as a scenario in which individuals' pursuit of self-interest leads to bad results for society as a whole. This phenomenon occurs for three main reasons. First, an agent in a market can gain market power, allowing them to block other mutually beneficial gains from trade from occurring. This can lead to inefficiency due to imperfect competition, which can take many different forms, such as monopolies or cartels. Second, the actions of an agent can have externalities, which are innate to the methods of production, or other conditions important to the market. Finally, some markets can fail due to the nature of certain goods, or the nature of their exchange. For instance, goods can display the attributes of public goods or common-pool resources, while markets may have significant transaction costs, agency problems, or informational asymmetry. In general, all of these situations can produce inefficiency, and a resulting market failure due to the fact that certain values are not included in prices (or are ignored) and consequently prices do not send correct messages about the true value of a resource, or the true extent of damage caused by an action, i.e., for example, ignoring the carbon sequestration benefits of increased tree planting will result in too few trees being planted.
- 17 In other words, price does not reflect marginal social cost.
- 18 Failure to act may also create similar negative consequences.
- 19 This is a good which when consumed by one individual does not reduce the amount of the good available for consumption by others; and no one can be effectively excluded from using that good.
- 20 People living closer to a site and facing a lower travel cost are likely to visit that site more than persons living a considerable distance away, *ceteris paribus*.
- 21 Willingness to accept is analogous to willingness to pay. It expresses people's desire to accept changes in goods (usually negative) for some amount of compensation.
- 22 This is an estimate of the total value of goods and services produced in any specified country in a given year.

Mark Bynoe

Mainstreaming of sustainable development in national and sectoral budgets

Introduction

Since its popularisation in the World Commission on Environment and Development (WCED) report (1987), sustainable development (SD)¹ has come to mean many things to many different people. For example, some writers have tended, based on their narrow focus on production parameters, to view SD as a process of achieving a buoyant economy with continued economic growth (Stepanov, 2004; Adesanya, 2004; Runnalls, 2008). Others have tended to focus on the biophysical environment and contend that the major tenet of SD is achieving ecological balance (Taranets & Alyona, 2004). However, the process goes beyond what is expressed in these two narrow perspectives, to include what humanity and nature require for their coexistence currently and in the future. This last perspective is particularly evident in *Our Common Future* which states that SD is ‘a process in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations’ (WCED, 1987:43). Despite the varying definitions, what remains consistent is the need to address interconnected issues, inclusive of environmental degradation, hunger, resource inequality and deprivation, and poverty. These issues remain pivotal to social and economic advancement, and environmental protection. As such, for SD to have any practical meaning for the average citizen, it must encapsulate the principles of human development, equity and social justice, pursued within the restraints of life’s support systems on our planet (Kates, et al., 2005).

Given the evolving definition of sustainable development, many small island developing states (SIDS)² have been seeking to pursue the principles of sustainable development as essential and integral components of their development agendas. However, efforts now need to shift in some cases and be continued in others, to policies and projects, known as ‘mainstreaming’, that promote integration of sustainability principles into development strategies, plans, programmes and budgets, rather than as an ‘add-on’ component. Rather, sustainable development principles must have a central role in the national and sectoral budgets of SIDS if their peoples are to enjoy a better quality of life.

Through mainstreaming within national and sectoral budgets SD principles are expected to support the attainment of the Millennium Development Goals (MDGs) of the United Nations (UN). These goals include halving the proportion of people living below the poverty line; halting and reversing the spread of HIV/AIDS; halving the proportion of underweight under-five year olds; halving the proportion of people without access to safe drinking water;

and achieving universal primary education. Others include reducing maternal mortality ratios by three-quarters; reducing under-5 mortality by two-thirds; reversing the loss of environmental resources by 2015; and achieving equal access for boys and girls to primary and secondary schooling by 2015.

The purpose of this chapter is two-fold. In the first instance, it seeks to introduce the reader to the benefits of using national and sectoral budgets within SIDS to mainstream SD concerns. Secondly, it demonstrates, both theoretically and practically, the range of techniques available, indicating their strengths and weaknesses where possible. The remainder of the chapter looks at the reasons for mainstreaming SD concerns. In the third section we present a discussion on the nature of the problem, while the final section presents the approaches available via national and sectoral budgets for mainstreaming, presenting a case study example to demonstrate the applicability of one of the approaches. The chapter concludes by synthesising the discussion presented and highlighting a few considerations for SIDS in seeking to apply these approaches.

Why mainstreaming within the national and sectoral budgets?

As the former United Nations (UN) Secretary-General, Mr. Kofi Anan, noted in 2001, the greatest challenge about SD is how to translate it into practical realities in the lives of people. The framework of mainstreaming SD into national and sectoral budgets, would require revisiting and reorienting existing development paradigms³ followed in many SIDS to include a clear focus on the inclusion and expansion of budgetary instruments related to sustainability. Necessary objectives, therefore, would include the fostering of creative and innovative budgeting, effective planning, and applying appropriate information and communications technologies.

Furthermore, using national and sectoral budgets in SIDS to mainstream SD requires systematically seeking to incorporate these concerns as early as possible in the decision-making process. Such inclusion can facilitate the aligning of policies, plans, and programmes along with the long-term requirements of SD. Additionally, the benefits that can accrue from SD mainstreaming in the budgetary process are manifold, and include the following:

- i) since mainstreaming places emphasis on a precautionary approach it can aid in anticipating and avoiding negative consequences of inadequately designed plans, inappropriate budgeting, and wasteful spending of valuable resources;
- ii) helping to deal with cumulative and indirect impacts from all projects, even those considered small, allowing all resources to be properly accounted for; and
- iii) giving environmental concerns a status on par with social, economic, and cultural considerations.

But why should governments, particularly in SIDS, be concerned with, *inter alia*, 'greening' their budgets?

The answer to such a question is not necessarily straight-forward, although beginning to incorporate SD parameters into national and sectoral budgets will commence the process of conveying to resource users that some ecosystem goods and services are not free, thus encouraging greater value to be attached to such resources. Additionally, given the limited

resources present in some of these SIDS relative to their demands (IPCC, 2007), it is helpful to use a mainstreaming approach that allows for prioritisation of development efforts as it may be a futile exercise trying to carve out another separate budgetary head called 'Sustainable Development'. In fact, conceptually, SD is not a separate issue at all, but should be integrally woven within the fabric of a number of other developmental objectives! At the same time, it is inappropriate to assume that sustainable development lies solely within the precinct of natural science, as it is equally a cross-cutting issue impinging on cultural values, ethics, and human behaviour with significant relevance to the humanities and social sciences.

It has to be recognised that the budgeting processes in many SIDS are politically charged since critical decisions have to be reached about the most appropriate allocation of scarce resources, given the many demands that include:

- i) aspiring to fulfil the MDGs mentioned earlier;
- ii) undertaking rehabilitation and construction of infrastructural projects necessary to ensure that their goods and services remain internationally competitive, while facilitating growth expansion in these economies; and
- iii) meeting debt servicing payments to remain internationally solvent (Runnalls, 2008).

But inappropriate budgeting can aggravate the social and environmental degradation problem in seeking to meet the expanding demands of a growing population. This occurs when budgets explicitly or implicitly undervalue or do not allocate sufficient resources to manage social and ecological goods and services⁴. In some instances, they may cause the carrying capacity⁵ of biological systems to be exceeded or non-renewable resources to be diminished⁶.

Lastly, via taxes, subsidies and other innovative budgetary methods, governments can constrain, stimulate or otherwise guide economic behaviour⁷. Unfortunately, too many policies still work counter to, or are disconnected from, the wider goal of long run sustainability. Instead, policies, taxes, subsidies and other budgetary mechanisms should be aimed at harnessing economic behaviour that is both socially and environmentally sound.

The current 'base budget' approach of 'let us see what we gave them last year and give them a bit more' keeps providing institutions who are not necessarily pursuing SD to do the same, only a little more of it year after year. What would seem necessary to meet the challenges of SD for SIDS in today's changing global environment is for all budgetary officers to seek to justify the existence of their programmes and the resources required in answer to the following questions:

- 1 What is the justification for the existence of this ministry or agency, does it need to exist, or could another agency in the public or private sector do the job better? Why was the ministry or agency set up, what problems is it trying to solve and how is it proposing to integrate SD principles in its programmes; (functional and legislative intent)?
- 2 How has the problem changed since the agency's creation; i.e., how has the outside world changed, how does the problem manifest itself in today's environment, how extensive is it and who is affected by it? What further adaptation is required to keep pace with the defined trends (adaptive capacity)?
- 3 What plans exist that identify the problems to be solved, and what resources and

timescale are required to implement these plans, that justify the agency's budget request (zero-based budgeting)?

The budget-setting process provides the prime opportunity to help agencies renew their missions and create plans to solve the SD problems consistent with their legislative mandate and justify their respective budgets.

Market failures, environmental degradation and social inequity

Environmental degradation and social inequities remain important sustainability issues in SIDS. To be in a position to adequately address them, it is necessary that attention is focused on the root causes of these problems. The essential economic root causes of environmental degradation and social inequity are cited as pricing and poverty (Hollander, 2003; Duraipappah, 2008). However, this chapter concentrates on dealing mainly with the pricing problem since this is primarily what economic instruments seek to rectify through the budgetary process and the reallocation and redirecting of resources. The issue of pricing can further be broken down into four components: externalities, under-pricing, the lack of markets for environmental services and policy failure (Barbier, 1992 & 2007; OECD, 2000).

Externalities, whether positive or negative, are often used to refer to a situation where the spin-off effects of production or consumption behaviours are imposed on others but cannot be traced or charged back to the source. The main characteristic of an externality is the separation between the affected individual and the source of the effects. Because of this, it is difficult to get the perpetrator to pay for the costs of the harmful effects or to reimburse those who created the cost to society. Thus, externalities are not built into the market price of a good or service. Furthermore, since many ecological services are public goods⁸, managing these resources tends to fall to governments to ensure equity and social justice (Pagiola et al, 2003).

Under-pricing occurs when all the costs of an input or activity are not included in the price of an output. This is particularly the case for many environmental resources. For example, since the role forests play in regulating climate does not reach the market, this function is often not priced. This is generally due to the fact that the free market system only makes provision for pecuniary costs⁹ and not the environmental and social costs of production. Environmental economics seeks to incorporate non-pecuniary costs into the price of outputs through shadow pricing, economic opportunity costs, and contingent valuation techniques (Diamond and Hausman, 1994; Portney, 1994). Further, through the budgetary process, governments can charge these non-pecuniary costs against the public purse.

A lack of information also leads to incorrect pricing because it gives a distorted impression of the scarcity of a resource (Stiglitz, 2002). However, while insufficient information can lead to a commodity being overpriced, it is when it leads to under-pricing that environmental degradation is most likely to occur and the achievement of sustainable development principles becomes so much more difficult.

Government policies are also common causes of under-pricing. Through government subsidies for certain inputs, such as agro-chemicals in the agricultural sector, the consumer

bears less cost and thus gains a false impression of the (non)scarcity of a resource. Furthermore, the 'lower' cost will tend to induce an individual to use more of a resource (which is after all the point of a subsidy) with the possible consequence of negatively affecting some other resource in the process. For example, using too much fertiliser often leads to contaminated groundwater.

The final market failure has to do with situations where no property rights (and hence no market) exist for certain goods (whether resources, services, or products used by producers or consumers). These are generally referred to as open-access resources or public goods which are usable by all without payment, such as the air, the fish in the sea and common land. Since such resources are difficult to value, they tend to be overexploited due to their negligible user charges (Munasinghe, 1993; Pearce and Markandya, 1989).

Tackling the problem

It is a well-established fact that the market in many SIDS fails to contribute towards environmental protection and social advancement, two critical goals in the pursuit of sustainable development, because of a pricing problem. The function of price, and hence the market, is to allocate resources efficiently. However, when it comes to many ecological goods and services, they are often zero rated, making it difficult for the market to allocate these resources in their optimum capacities. Historically, governments have sought to deal with the under-valuing of these resources in relation to the market by distributing them (sometimes directly and at other times through privatisation) via the definition and enforcement of property rights. Prices are a consequence of the distribution of property rights that underlie market exchange. Theoretically then, if a government were to define property rights in such a way that allowed for efficient pricing of ecological goods and services, then their actual scarcity and cost would be reflected in these prices, and since economic theory holds that price is a reflection of value (Stavins, 2005), environmental degradation resulting from economic activity should then decline.

From this follows the redefinition of the role for governments within SIDS in seeking to pursue the principles of sustainable development. At least three options are available to governments for this purpose:

- i) to educate consumers so that they can make more informed decisions and be aware of the impact their actions and consumption behaviour may be having on the pursuit of SD;
- ii) to place quotas on the use of certain resources or ban producers from using them altogether since they are strategic in sustaining life on earth; and
- iii) to create market-based incentives (MBIs)¹⁰ to induce both consumers and producers to adjust their behaviour.

The advantages of MBIs are that they tend to encourage consumers and producers towards efficient choices, save scarce resources, and reduce transaction costs. However, they are difficult to implement in many SIDS because of a limited information base and less than efficient markets.

As such, governments in general have been more inclined to adopt what has been referred

to as a command-and-control (CAC) strategy. In other words, they regulate activities that degrade the environment, that encourage social deprivation, and that exacerbate poverty in accordance with some legislated or agreed performance or technology standard (Keohane and Olmstead, 2007). In some cases this involves the use of quotas or bans for restricting the use of renewable resources such as fish and prawns, restrictions on air pollution emissions, controls on hazardous waste transport and dumping, zoning laws, ambient water and air quality standards, and the type of technology to be employed. These controls are usually mandatory and enforced through litigation, licensing and fines and other penalties for non-compliance.

However, there are certain disadvantages to the command-and-control approach. Regulations can be difficult to enforce and costly to administer. Furthermore, rising costs and budget constraints have made regulation less attractive than economic instruments with their promise of efficiency and built-in compliance. Additionally, regulations tend to offer lesser incentives than MBIs for exploiters of the environment to attain standards higher than those imposed by the law (Stavins, 2001). They are also generally inflexible. Those subject to regulations may have no choice on how they reach these environmental and social goals. Logistics pose an additional problem. Pollution, for instance, may be caused by a large number of individuals making it difficult to enforce standards. Finally, consumers may have little financial incentive to purchase 'environmentally-friendly' goods. 'Green' products are often more expensive than conventional products (Bynoe and Bettina, 2004).

With the realisation that regulation is not as effective and efficient as it could be, the focus has swung towards the use of budgetary instruments. Budgetary instruments are policy measures which explicitly affect private cost and benefits. The motivation behind their application, and of particular relevance for SIDS, is that rational decision makers will base their decisions on a comparison of various options. Their rational choice will tend to be the option which has the least cost for the number of benefits received, based on current and historical information available to the decision maker. Budgetary instruments therefore can make SD-appropriate behaviour more rewarding to the decision-maker. In this way individuals may be induced to change their behaviour and freely choose a more socially desirable alternative.

This rationale is based on the arguments of AC Pigou in *The Economics of Welfare* (1932) dealing with the divergence between private and social costs, resulting in externalities. Pigou was of the opinion that the party causing damages, such as the destruction of mangrove forests necessary for coastal defence, for example, should be forced to compensate the victim. Since it is not always easy to compensate every individual affected by a negative social action because of difficulty in identifying the party due to the fact that there are many persons causing the externality, or a lack of clearly define property rights (Coase, 1960: 28–31), the offending parties should have to pay the state who will then decide how to allocate and distribute the resulting funds. This is what led to the adoption of the polluter pays principle by the Organisation for Economic Co-operation and Development (OECD) countries in 1972, and why it continues to be advocated for implementation in many SIDS.

A commonly used theoretical instrument under this regime is the Pigouvian tax. This tax

is usually set equal to the pecuniary value of the marginal damage caused by pollution at the point of 'optimal' pollution. Optimal pollution is not a point of zero pollution but rather a point at which the cost of reducing pollution any further outweighs the environmental, social and economic benefit received. At this point, the net benefits to society will be their greatest. Implementing such a tax is not without its problems, however. Firstly, it is next to impossible to determine the optimal level of pollution (due to difficulty in measuring the value of the damage and the cost of clean-up). Secondly, it is also difficult to calculate the level of tax required to achieve it. In practice, environmental taxes are often set at one level and then iterated up or down depending on their effect. In some cases repair of environmental damage is impossible (species extinction, for example) (Pearce, 1988).

Policy-makers, having been confronted by this problem with Pigouvian taxes, have found other ways of approaching the result. They have resorted to charges, fees, tradable and marketable permits. However, they have also recognised that similar results can be achieved by providing compensation for not using polluting substances or technologies. Subsidies, tax allowances, and grants have been used in this manner. Other policy-makers have opted for a combination of the two approaches utilising deposit-and-refund systems, distributive credits and fee-bates (Barbier, 1992; Gale and Barg, 1995). In some cases, policy-makers have even adopted a victim pays stance whereby similar methods are used to get victims to compensate polluting parties for not being able to pollute.

Choosing a budgetary instrument

There are at least three main categories of budgetary instruments to mainstream SD principles in national and sectoral budgets. These instruments are: public expenditure instruments (PEIs), revenue generating instruments (RGIs), and budget neutral instruments (BNIs). Within these categories, policy-makers have a variety of options as discussed below. It is important to realise, however, that these instruments can have positive or negative effects in the pursuit of sustainable development depending on how they are implemented. Further, it is important to note that to achieve sustainable development it may be necessary to have an array of design elements that can assist to improve policy results. However, what will be necessary is that the elements are designed in a complementary fashion. This is important since the effects of these instruments may be neutralised by other policies which have not taken SD consequences into consideration, such as increased soil erosion that would affect food production and ultimately livelihoods and food security. Policy-makers need to take account of these factors and other criteria when choosing an instrument to achieve a certain SD goal. It has also been found that budgetary instruments can be most effective when used in conjunction with regulation (Barbier, 1992; Gale and Barg, 1995).

Public Expenditure Instruments (PEIs)

Public expenditure instruments (PEIs) take the form of subsidies, grants and tax allowances and are familiar tools of intervention to achieve a specific policy objective. This is generally because, for governments, it is more politically acceptable to hand out benefits than to impose costs on individuals. The possible application of PEIs in SIDS would be to provide a

financial incentive for individuals and firms to undertake an SD activity that they would not otherwise have undertaken. For example, in Sri Lanka, the government has often provided grants to research institutions to develop environmentally-friendly technologies. Similarly, in Singapore, through elements of CAC at the beginning and later on price support, policy-makers have taken steps to encourage the development of the recycling industry. Other countries have used tax allowances to improve energy conservation.

Further to the political palatability of PEIs, there are other substantial reasons why some SIDS governments may feel justified in providing financial assistance to producers in certain markets and industries. For example, it is often argued that given that one of the objectives of SD is to reduce poverty (which remains a main threat to the environment), the application of PEIs can control the rate of inflation and boost real living standards, particularly of lower income households, thus facilitating the poverty-mitigating objective. Furthermore, the use of PEIs are believed to encourage the provision and consumption of merit goods and services which are said to generate positive externalities in the form of increased social benefits, while conversely under-consumption or insufficient provision of merit goods can lead to market failure, causing a loss of social welfare, and a greater difficulty in achieving the SD principles.

Other attractive features of PEIs that help in the achievement of the SD goals are that they can maintain or increase the revenues (incomes) of producers during times of vulnerability or commodity price troughs. Since the effects are often felt most by low-income households, through providing support to these households, governments, via the budgetary process, are able to tide families over in difficult times.

But one of the strongest arguments for the use of PEIs in seeking to mainstream SD concerns in national and sectoral budgets is that they tend to reduce the cost of capital investment projects, which can, in the future, help to stimulate economic growth by increasing long-run aggregate supply. This strategy also has the possibility of increasing employment opportunities and hence the livelihood of a number of households. Once this is not done at the expense of the environment, it remains a viable option for pursuing SD in SIDS.

Despite the obvious attractions of PEIs, there are a number of issues with these measures which policy-makers need to understand in seeking to apply them to promote SD principles. At all times, the economic and social case for PEIs should be judged carefully on the grounds of economic efficiency and also fairness (or equity). It is always important to be careful to measure and evaluate who gains from any particular PEI and who pays. For example, the final cost of a subsidy usually falls on consumers (tax payers) who themselves may have derived no benefit from the subsidy. A question that must be asked, therefore, is might the money used up in PEI provisions be better spent elsewhere? These are critical choices which policy-makers will be called upon to make, and can be assisted in such decisions through the application of other techniques, such as cost-benefit analyses. PEIs inevitably carry an opportunity cost and in the long run there might be better ways of providing budgetary support to producers and employees in specific industries.

Neo-classical economists have argued that PEIs distort the workings of the free market

mechanism, leading to a misallocation of resources, and can eventually lead to government failure where government intervention actually leads to a worse distribution of resources and further debilitating rather than enhancing the effect on SD. For example, export subsidies distort the free trade in goods and services and can severely curtail the ability of SIDS to compete in the markets of some industrialised countries.

Additionally, it is contended that the opportunity cost associated with PEIs can be substantial, with governments artificially protecting inefficient firms that may need to restructure, delaying the need for economic reforms from which resources can be acquired to promote social and environmental programmes. As such, some economists have argued for alternatives that have less distorting effects, such as direct income support (Feldstein, 2008) through a tax and benefit system to support families in some SIDS that may be living on the margins of poverty.

Revenue generating instruments (RGIs)

Revenue generating instruments (RGIs) include taxes, charges¹¹, and fees¹². In seeking to implement budgetary measures in SIDS to mainstream SD principles and issues, there are at least three important considerations. The first is to note that the behavioural response of stakeholders affects the effectiveness and often the revenue consequences of RGIs, depending on the elasticity of demand with respect to price; with low elasticity, as with tobacco tax, demand may decline but government revenue increase. Second, the effects on economic efficiency or deadweight loss¹³ depend on stakeholders' compensated behavioural responses, i.e. on the behavioural effects excluding pure income effects (Feldstein, 2008). And, third, behaviour is important for understanding the short-run macro-economic consequences of RGIs on aggregate demand and employment.

Unfortunately, there is no reason to be pleased about the analysis in policy discussions of the efficiency effects of RGIs. This is so because despite policy-makers understanding that higher taxes hurt the economy by distorting behavior – reducing work effort, saving, and risk-taking – there is often little attempt to quantify these adverse effects or translate them into reductions in economic efficiency.

Similarly, the short-run macro-economic consequences of RGIs in SIDS, such as tax changes, depend to a large extent on how monetary policies are amended in response to the tax change. If a tax change produces a fiscal stimulus that exceeds what the Central Bank in some SIDS believe to be prudent, they may neutralise it by raising interest rates. Alternatively, a fiscal stimulus may simply substitute for an easier monetary policy that the Central Banks would otherwise implement. As a general rule, it would seem best to assume that a change in fiscal stimulus would be offset by the induced change in monetary policy. One exception would occur when interest rates are so low that the Central Bank cannot lower rates any further. In such a liquidity trap, a fiscal stimulus would raise aggregate demand. A second exception would occur when financial market conditions or the availability of bank capital make it difficult for the Central Bank to stimulate economic activity. In this case, the Central Bank would welcome a fiscal stimulus and would not seek to offset it. Because of these exceptions to the general rule, the possible fiscal stimulus effect of a tax change must be considered on a case-by-case basis to assess the likely reaction of the Cen-

tral Bank to the proposed change in tax rates or tax rules. Note that this discussion of the cyclical effects of tax policies is very different from the longer-term supply side effects of tax changes on GDP that cannot be offset or reversed by monetary policy. As more SIDS move towards regional policies on fiscal and monetary integration they will become more affected by common guidelines on such policies.

When deciding on an RGI to implement, it would also be desirable to know what current or future change in taxes or spending will be made to maintain an unchanged level of national debt. This would be easy if the purpose of the tax increase is to finance some particular programme, e.g., a revenue increase to fund increased social service benefits or to allow the elimination of another tax like the alternative minimum tax. In such cases, SIDS should follow the same analytic approach that was done by Richard Musgrave and others in their studies of tax incidence, i.e., to assume a concurrent budget balance achieved by a lump sum change in taxes or spending (Musgrave, 1957).

In short, RGIs are viewed, to some extent, as the 'price' to be paid for affecting development and the environment. RGIs have both an incentive impact and a revenue impact. The incentive impact is that those firms that are able to reduce their impacts, whether through innovation or other means, are able to take advantage of the incentives presented, stealing a march on their competitors and increasing market share (Porter and van der Linde, 1995).

But RGIs also have the effect of increasing the price of a particular good or service being paid by consumers, *ceteris paribus*, resulting in less of that commodity being demanded. RGIs also have effects on investments and share prices. For example, taxes embedded within supply costs (e.g. tax on labour costs) will reduce the amount of capital that can be purchased with \$1 of investment, whereas a subsidy will have the opposite effect, allowing \$1 of investment to purchase more capital. Embedded taxes in supply prices can be bad for business because it means that they have to borrow more money to finance a project with a given expected amount of return, while the opposite is true when supply prices are reduced through subsidies (or through a competitive market).

But in practice, taxes, charges and fees tend to be too low to have any effect on environmentally-damaging behaviour and so serve mainly as revenue generators (Bynoe, 2001). Usually this income is earmarked and used for clean-up operations, new abatement technologies or subsidising new investment. Effluent charges on sulphur dioxide emissions, tax differentiation between leaded and unleaded petrol, user charges for public waste disposal, depletion taxes on mineral exploitation and stumpage fees for timber demonstrate how RGIs are used (Gale and Barg, 1995).

Budget neutral instruments

Budget neutral instruments (BNI) represent a relatively new class of instruments within the policy arena, the most common of which is the deposit refund scheme. These deposit refund schemes are desirable instruments for environmental and social regulation where monitoring of emissions is difficult (see the example in the case study below, where monitoring is generally difficult, policy-makers are opting for budget neutral instruments, though not

always with the desired result). Such systems may gain additional political acceptability, however, if implemented so that no net revenues accrue to the SIDS government. The revenue neutrality constraint causes the deposit to drop below the efficient level, and the refund to rise. The extent to which this constraint leads to efficiency losses varies with the price elasticity of demand, with compliance costs, with the degree of correlation between willingness to pay and compliance costs, and with the magnitude of the externalities.

Furthermore, the deposit refund schemes are designed to lay a surcharge on a potentially harmful substance or activity and then refund that surcharge if that substance is recycled, restored or use is avoided. In such cases, the government acts as the intermediary, transferring funds from one group to another. To date there are three types of BNIs in use, viz., deposit refund schemes, fee-bates, and distributive credits. Common deposit refund schemes are for the recycling of glass and plastic bottles, aluminium cans and other containers. This provides the government the opportunity to achieve a particular objective without having to incur the cost to do so. Given the limited resources that most SIDS are working with, this remains an attractive option.

Fee-bates refer to a system where producers or consumers of certain substances are required to pay a certain rate for that action regardless of the legal limits permitted. Those who consume or produce less of the substance than the legal limits are then compensated for restraint. Those consuming or producing more than the legal limit receive little or no compensation depending on how the system is set up. Examples of fee-bate systems would be reforestation rebates on timber stumpage fees. Distributive credits are most often used in the area of waste management where a credit against waste collection fees is offered to households who recycle their waste. The credit should theoretically be equal to the savings incurred by not having to collect and process this waste and therefore remains an attractive policy option for governments.

CASE STUDY

Institutionalisation of an environmental bond on the small scale gold mining sector in Guyana

The policy in brief

Economic instrument: An Environmental Bond

Problem: The gold mining sector of Guyana is dominated by small itinerant miners whose activities cause severe environmental problems in terms of freshwater pollution, soil degradation and erosion, and the destruction of some valuable tree species. But it is difficult to monitor these miners' activities because of their itinerant nature and limited capacity within the monitoring agency.

Goal: To transfer the responsibility for environmental protection to the miners; to encourage miners to internalise the environmental costs of their activities; and to provide an incentive for miners to seek the most cost effective way of conducting their operations.

Description: The mining sector is one of the most important sectors in the Guyanese economy contributing 13 per cent of the country's gross domestic product (GDP), 35 per cent of its export earnings and employing approximately 5 per cent of its labour force, whose activities present a number of environmental and social challenges. To regulate the small miners, the responsible agency, i.e., Guyana Geology and Mines Commission (GGMC), has used command and control (CAC) for regulating the sector in an effort to reduce environmental damage and encourage sustainable development, through instituting an environmental bond on each small miner before they receive their licences. This bond amounts to approximately US\$1,000 and is expected to be a deterrent to miners destroying the environment, polluting water ways, and disrupting rural livelihoods.

Administering institution: Guyana Geology and Mines Commission (GGMC)

Key stakeholders: Miners, the Guyana Gold and Diamond Miners Association, Environmental Protection Agency, and Amerindian Associations.

An Overview

The gold mining sector remains pivotal to Guyana's development thrust. The sector is dominated by small- and medium-scale miners. In seeking to pursue sustained development, the Government of Guyana amended its Mining Act in 1989. The amended Mining Act, No. 20 of 1989 provides the legal framework governing the utilisation of mineral resources in Guyana, including aluminium, gold, precious stones and quarriable materials. The Act vests all materials in Guyana in the State, but preserves the rights of persons in possession of land grants before 1903 to all base metals, as well as the privileges of Amerindians in relation to prospecting, mining, and quarrying for any mineral. Additionally, the Act provides for a system of mineral agreements and licences for the regulation of prospecting, mining, and quarrying activities; and integrates plans to deal with social and environmental issues arising from mining activities.

As such, licensees must put forward work proposals and show technical competence when applying for a mining licence. No mining licence can be issued unless the GGMC is satisfied that the applicant would pursue cost-efficient and optimal use of the mineral resources concerned. Mining licences may be granted subject to conditions that include the process used to mine minerals. Further, a performance bond for adherence to these conditions can be required. Also, licensees may only dispose of, stack or dump any mineral or waste product resulting from mining in a manner approved by the GGMC.

Based on a memorandum of understanding (MOU) that the GGMC signed with the Environmental Protection Agency (EPA), the GGMC is to work to ensure that miners integrate environmental protection in all their mining activities. Currently, large-scale mining operations are subject to an environmental impact assessment (EIA) as provided for under the Environmental Protection Act, while medium-scale miners are expected to prepare an Environmental Management Plan (EMP) which is a legally binding document, before they are issued a mining licence. However, there is no such provision under the EP act for small-scale miners.

Recognising that regulating small-scale miners is also important, if decidedly more difficult, the GGMC drafted and implemented an Environmental Management Agreement (EMA) for these operations in 1994.

The EMA covers all aspects of mining, including the use of equipment, sedimentation control, vegetation removal, storage and disposal of chemicals and fuel handling, and the use of mercury. Specifically, it attempts to transfer the responsibility for managing the environment to the miners and states that:

‘The Miner shall be responsible for all damages to the environment resulting from normal mining activities within the boundaries and confines of the areas stipulated in the Agreement, until formally discharged, in writing, by the Commissioner of all obligations under the Agreement.’

A significant component of the EMA is the institutionalisation of an **environmental bond**. This bond is in the form of a fixed sum of G\$200,000 (US\$1,000) to be deposited with the GGMC before the miners commence operations. Upon completion of one’s mining activities and to the extent that the GGMC is satisfied that the environment was returned to an acceptable manner and that every effort was taken to minimise environmental damage, the entire bond may be recouped by the miner. If not, a part of, or the entire bond may be used to restore the physical environment. This approach was expected to be budget neutral and aid in the sustainable development process.

Policy issues

The drive to institute this bond was occasioned by events occurring at the Earth Summit in 1992, and later Guyana’s drive to demonstrate that it was committed to the principles of sustainable development. Furthermore, the cyanide spillage by a large external mining interest in 1995 further demonstrated the need to institute even firmer regulations on the sector. This was occurring at a time of great interest in Guyana’s gold mining industry due to a buoyant gold market.

Results:

- As of 2006, less than 10 per cent of miners had reclaimed their bond as many preferred to forfeit the sum and continue with their normal *modus operandi*.
- While the bond was expected to be revenue neutral it has resulted in increased public expenditure as it was indirectly subsidising the small miners, given that the rate was set very low.
- Environmental degradation has continued almost unabated.

Lessons:

- While command and control measures can be effective like the environmental bond, it is necessary to conduct some preliminary work to ascertain what a realistic fee is. A fee set too low would result in what we see and one too high can discourage persons entering the sector.
- These measures work best when most persons are onboard. This idea was vehemently opposed by the miners’ associations and the small miners. Discussions before implementation are useful in moving forward.

Conclusions

This chapter sought to provide an overview of the evolution and applicable budget instruments available to policy-makers in SIDS for the mainstreaming of sustainable development principles in national and sector budgets. It sought to establish the need for a mainstreaming approach, given the resource constraints of many SIDS, the cross-cutting nature of a number of the issues, and the often tangential manner in which they are treated.

It identified three main sets of instruments and looked at both their strengths and weaknesses. Clearly, no one set of measures is more efficient than the other, but rather all have some degree of merit and would tend to benefit the SIDS more should they be pursued jointly and in a complementary manner. While there has been a case for the application of economic instruments to replace the often applied CAC in most SIDS, their relatively weak market structures and lack of information has often precluded the effective implementation of these instruments for the attainment of SD. However, this has not prevented economists from noticing the potential which economic instruments offer, particularly in advancing technological innovation and development. This can particularly be seen in the adoption of fee-bate and distributive credit systems. The focus in the application of economic instruments has also shifted to one of prevention rather than cure. They are no longer used to generate revenue to cover clean-up costs but rather to act as incentives for individuals to change their behaviour. These findings are increasingly being backed up by empirical evidence.

References

- Adesanya, LA (2004). 'Economic Empowerment for Sustainable Development: The case of a Nigerian poverty reduction project'. Paper presented at the UN Decade of Education for Sustainable Development Conference, Braga, Portugal, May 19–22.
- Barbier, EB (1987). 'The concept of sustainable economic development'. *Environmental conservation* 14 (2) (Summer).
- Barbier, Edward (1992). 'Taking Nature into Account: Proposed scheme of resource and environmental accounting'. *Environmental and Resource Economics* 2 (4), pp. 435–437.
- Barbier, Edward (2007). 'Frontiers and sustainable economic development'. *Environmental and Resource Economics* 37 (1), pp. 271–295.
- Briguglio, L and E Kisanga (eds) (2004). *Economic Vulnerability and Resilience of Small States*. Commonwealth Secretariat and the University of Malta, 480 pp.
- Bynoe, M and Bettina Balmer (2004). 'Export Market Opportunities: The British Organic Sector'. GEO Technical Report No. 77, Order No PN-ADA-005, Washington DC.
www.dec.org/search/dexs/index.cfm?fuseaction=dexs.fieldresults&author=Bynoe%2C%20Mark
- Bynoe, ML (2001). 'The Effects of Environmental Regulatory Policies on the Efficiency of Firms: An Empirical Analysis', unpublished Ph.D. thesis submitted for the Doctor of Philosophy in October 2001 at the University of East Anglia, Norwich.
- Coase, Ronald H (1960). 'The Problem of Social Cost'. *Journal of Law and Economics* 3 (1): 1–44.

- Diamond, Peter and Jerry Hausman (1994). 'Contingent Valuation: Is Some Number Better than No Number?' *Journal of Economic Perspectives* (Autumn 1994): 45–64.
- Duraiappah, Anantha (2008). 'Poverty and Environmental Degradation: A Literature Review and Analysis'. *CREED Working Paper* No. 8, International Institute for Sustainable Development; Vrije Universiteit Amsterdam.
- Edward Barbier (1992). 'Taking Nature into Account: Proposed scheme of resource and environmental accounting'. *Environmental and Resource Economics* 2 (4), pp. 435–437.
- Feldstein, Martin S (2008). 'Effects of taxes on economic behaviour'. Working Paper 13745, NBER WORKING PAPER SERIES.
- Gale, Robert and Stephan Barg (1995). 'The Greening of Budgets: The Choice of Governing Instrument'. pp. 1–27 in Robert Gale and Stephan Barg (eds) *Green Budget Reform: An International Casebook of Leading Practices*. Earthscan Publications Ltd, London.
- Hollander, Jack (2003). *The Real Environmental Crisis: Why Poverty, Not Affluence, Is the Environment's Number One Enemy*. University of California Press, California.
- Inter-Governmental Panel on Climate Change (2007). Fourth Assessment Report, United Nations, New York.
- Kates, Robert, Thomas M Parris, and Anthony A Leiserowitz (2005). Environment: *Science and Policy for Sustainable Development* 47 (3), pp. 8–21.
- Keohane, Nathaniel O and Sheila M Olmstead (2007). *Markets and the Environment*. Washington DC. Island Press.
- Munasinghe, M (1993). 'Environmental economics and sustainable development'. *World Bank Environment Paper* No. 3. Washington DC. World Bank.
- Musgrave, Richard A (1957). 'A Multiple Theory of Budget Determination', *FinanzArchiv (Public Finance Analysis)*, New Series 25(1), pp. 33–43.
- OECD (2000). *Reducing public policy failures: challenges for regulatory compliance*. Paris.
- Pagiola, Stefano, Joshua Bishop and Natasha Landell-Mills (eds) (2003). 'Selling Forest Environmental Services: Market-based Mechanisms for Conservation and Development'. *Environmental and Resource Economics* 26 (3) (November) pp. 496–498.
- Pearce, DW (1988). 'The Sustainable Use of Natural Resources in Developing Countries'. In: *Sustainable Environmental Management: Principles and Practice*, ed. R.K. Turner. London: Belhaven Press.
- Pearce, DW and A Markandya (1989). *Environmental policy benefits: Monetary valuation*. Paris, OECD.
- Pearce, DW and K Turner (1990). *Economics of natural resources and the environment*. New York. Harvester Wheatsheaf.
- Pigou, AC (1932). *The Economics of Welfare (4th edition)*. London: Macmillan.
- Porter, Michael and Class van der Linde (1995). 'Green and Competitive: Ending the Stalemate,' *Harvard Business Review* 73 (5): 120–124.
- Portney, Paul (1994). 'The Contingent Valuation Debate: Why Should Economists Care?' *Journal of Economic Perspectives* 8 (4) (Fall): 3–17.
- Runnalls, David (2008). *Why aren't we there yet? Twenty years of sustainable development*. International Institute for Sustainable Development, Manitoba.

- Stavins, Robert (2005). *Economics of the Environment: Selected Readings*. Fifth Edition (Paperback). MIT Press. Boston.
- Stavins, Robert (2001). 'Experience with Market-Based Environmental Policy Instruments', Discussion Papers dp-01-58, *Resources For the Future*.
- Stepanov, V (2004). 'Ethics in System of Economic-Ecological Relations'. Paper sent to the UN Decade of Education for Sustainable Development conference, Braga, Portugal, May 19–22, 2004.
- Stiglitz, Joseph (2002). 'Globalization and Its Discontents'. *Economic Notes* 32 (1), pp. 23–142.
- Taranets, I and E Alyona (2004). 'Environmental Education in Russian Protected Areas for Sustainable Development'. Paper sent to the UN Decade of Education for Sustainable Development conference, Braga, Portugal, May 19–22.
- World Commission on Environment and Development (1987). *Our Common Future*. Oxford University Press, London.

Environmental economic websites

<http://www.ecosystemvaluation.org>
<http://lnweb18.worldbank.org/ESSD/envext.nsf/44ByDocName/EnvironmentalEconomicsandIndicators>
<http://www.elaw.org/resources/text.asp?id=1999>
<http://www.ucl.ac.uk/~uctpa15/envecontexts.pdf>
<http://www.elaw.org/resources/topical.asp?topic=Economics>
<http://www.elaw.org/resources/text.asp?id=2039>
<http://www.darp.noaa.gov/legislat.htm>
<http://www.elaw.org/resources/text.asp?id=1997>
<http://yosemite.epa.gov/ee/epa/eed.nsf/webpages/homepage>
<http://www.whitehouse.gov/omb/circulars/a094/a094.html#top>
<http://www.elaw.org/resources/text.asp?id=1976>
<http://www.elaw.org/resources/text.asp?id=1978>

Useful internet searches on the natural resources economics

International Experiences with Economic Incentives for Protecting the Environment.
Economic Impact of Tourism Visitation at National Parks in the U.S.
Estimating National Park Visitor Spending and Economic Impacts – The MGM2 Model.
Valuing Environmental and Natural Resources: The Econometrics of Non-Market Valuation: Eco-Economy: Building an Economy for the Earth.
ConservationEconomy.net
Economics, Trade Policy, and CITES (Convention on the International Trade in Endangered Species).
Environmental Valuation Reference Library.

Notes

- 1 Sustainable development is defined as development '... that meets the needs of the present without compromising the ability of future generations to meet their own needs'. World Commission on Environment and Development (WCED) (1987), *Our Common Future*, Oxford University Press, New York, p. 8.

- 2 While not a homogenous mass, many have common features according to the IPCC (2007) that include small land masses surrounded by ocean, and are frequently located in regions prone to natural disasters, often of a hydrometeorological and/or geological nature. In tropical areas they host relatively large populations for the area they occupy, with high growth rates and densities. Many small islands have poorly-developed infrastructure and limited natural, human and economic resources, and often small island populations are dependent on marine resources to meet their protein needs. Most of their economies are reliant on a limited resource base and are subject to external forces, such as changing terms of trade, economic liberalisation, and migration flows (Briguglio and Kisanga, 2004).
- 3 Some persons have argued for a 'top-down' approach (governments and international organisations being the main agents of change), while others have argued for a 'bottom-up' approach (community and civil society organisations are the main agents of change) to economic development. Others, like the development assistance agencies, have focused on structuralist and trade models to encourage development.
- 4 These are the benefits arising from the ecological functions of healthy ecosystems. Such benefits accrue to all living organisms, including animals and plants, rather than to humans alone. Examples of ecological goods are clean air and abundant fresh water, while ecological services include purification of air and water, maintenance of biodiversity, decomposition of wastes, soil and vegetation generation and renewal, pollination of crops and natural vegetation, groundwater recharge through wetlands, seed dispersal, greenhouse gas mitigation, and aesthetically pleasing landscapes
- 5 Carrying capacity refers to the number of individuals who can be supported in a given area within natural resource limits, and without degrading the natural social, cultural and economic environment for present and future generations. The carrying capacity for any given area is not fixed. It can be altered by improved technology, but mostly it is changed for the worse by pressures which accompany a population increase.
- 6 This is often referred to as market failure and implies that the allocation of goods and services by a free market is not efficient.
- 7 For example, raising taxes on the exportation of logs can encourage more value-added in the timber industry and less wasteful logging. Conversely, a subsidy on agro-chemicals can encourage their over-use, leading to greater localised freshwater and air pollution problems.
- 8 This is a good that is non-rivalled and non-excludable. This means, respectively, that consumption of the good by one individual does not reduce availability of the good for consumption by others; and that no one can be effectively excluded from using the good.
- 9 These are costs borne by some individuals which are entirely offset by gains accruing to other people, so that there are no net costs (or benefits) to society as a whole.
- 10 These are policy instruments that use price or other economic variables to provide incentives for polluters to reduce harmful emissions. They seek to address the market failure of negative environmental externalities either by incorporating the external cost of production or consumption activities through taxes or charges on processes or products, or by creating property rights and facilitating the establishment of a proxy market for the use of environmental services.
- 11 The government may also use product charges, a per unit tax on the offending generating product, to decrease the negative externality. Such a tax could be placed on agro-chemicals to decrease residual discharge from overuse of these chemicals.
- 12 This instrument effectively assigns a price to the subject causing the externality. There are numerous advantages to this type of policy. For firms, it allows those with low abatement costs to make pollution control investments and avoid the tax. This policy also motivates firms to advance their abatement technology in order to decrease the costs of abatement. As the tax leads to higher production costs for firms and subsequently higher prices for consumers, citizens may alter their consumption patterns to account for this price change.
- 13 The amount that individuals would have to be paid to make them as well off as they would be without the proposed tax change.

Fathimath Ghina, Lindsey Higgs and Michael Tran

Youth perspectives on sustainable development for SIDS

Introduction

Sustainable development in small island countries cannot be adequately addressed without including one very important stakeholder – the young people. Island youth are not only the leaders of tomorrow, in many cases they are also highly engaged today with the current issues facing their countries. Young people represent a special segment of society; they are dynamic and innovative but they often lack the concrete skills and tools necessary to implement their ideas. Furthermore, young islanders are highly mobile, with many leaving their islands to pursue employment or education in other countries. The effective engagement of this energetic group in small islands requires a balance between providing guidance and support on the one hand, and on the other, encouraging youth-led project development and implementation that creates opportunities at home.

The Youth Visioning for Island Living initiative of the United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to empower young people in small island countries to take action for sustainable living and development, and by doing so encourage locally-based development of new skills and opportunities. Youth Visioning was initiated towards the end of 2003, and it continues to grow with more than thirty projects in the Caribbean, Pacific and AIMS (Atlantic, Indian Ocean, Mediterranean and South China Sea) regions. Young people are becoming involved and taking the lead in implementing their own ideas on sustainable living and development in their communities.

Origins and background

In 1994, the Global Conference on the Sustainable Development of Small Island Developing States (SIDS), held in Barbados, set out a specific Programme of Action. In January 2005, governments, civil society and youth representatives met in Mauritius to evaluate progress and chart a way forward.

While most organisations were focused on the consultations among governments and civil society, the Permanent Secretary in the Ministry of Education and Scientific Research in Mauritius, the host country for the review meeting, posed the following question to a UNESCO representative in July 2003: ‘How are youth to be involved in this process?’ This was the catalyst for the Organization, through its Coastal Regions and Small Islands (CSI) Platform and in association with the Section for Youth, to initiate a process that has become known as Youth Visioning for Island Living.

Youth Visioning for Island Living is a process whereby young people living in small island developing countries and territories envision how they would like to see their islands develop and change over the coming decade; and then work to implement their proposals and plans on the ground in their islands.

Supported by many organisations at the national, regional and inter-regional level, Youth Visioning seeks to:

- build capacity among island youth;
- give youth a voice in sustainable living and development matters; and
- make positive changes at the local and national level.

The approach and framework

In this section, a step-by-step account of the initiative is provided for readers who may want to adopt a similar approach or activity.

A successful project framework requires active partnerships. Hence, starting in November 2003, a project outline was sent to national, regional and inter-regional organisations, governmental and non-governmental, as well as to numerous other contacts around the world. The document outlined three phases:

- 1 A preparatory phase.
- 2 An interactive event for youth representatives in Mauritius in conjunction with the main UN meeting.
- 3 A follow-up phase during which youth would undertake project implementation.

The document was continually revised on the basis of comments and suggestions received. As the preparation evolved, several of the tentative expressions of support became concrete and major partners emerged.

Phase I: Preparatory activities

Defining youth

In all SIDS, youth make up a significant section of the population, however their collective voice and role in decision-making is only just beginning to emerge. One of the first problems that arises is a definition of 'youth'; in the Pacific region, an upper age limit of 40 years is sometimes applied, while in the Caribbean and AIMS regions, lower age limits are used. After consultation with partners and based on the objectives, it was decided to use the 13–23 years age group for Youth Visioning. The rationale was that this group had the maturity, vision and energy to effect positive change. However, for the purposes of Phase 2, the youth meeting in Mauritius, the focus would be on the 18–23 years age group, since these individuals would be sufficiently mature to travel alone.

Selection of themes

Since September 2002, UNESCO's Small Islands Voice initiative has conducted a semi-moderated internet forum for youth (www.sivyouth.org with username *view* and password *only*). At the end of 2003, there were approximately 35 schools in 11 island countries spread across the three regions taking part.

The e-forum was assessed in 2003 and it became apparent that there were clear patterns emerging with several priority concerns among the students. These could be grouped in three themes, as follows:

- 1 Life and love in islands – island lifestyles and cultures.
- 2 My island home – safeguarding island environments.
- 3 Money in my pocket – economic and employment opportunities.

These became the themes for Youth Visioning and were integrated into each phase of the initiative.

Testing the Youth Visioning for Island Living approach

The approach was put to the test during preparatory meetings for the Mauritius event, which took place in the Bahamas (26–30 January 2004) and St Lucia (25–27 October 2004). Some valuable lessons were learned, especially about fine-tuning the framework for the youth to develop their projects and follow-up activities. These include:

- The three themes selected provide a good basis for discussions on sustainable living and development and some overlap between the themes was not a major problem.
- A dense meeting programme with several panel discussions, while informative, greatly reduces discussion time.
- Attaching commitments or an action plan to the resolution or declaration that comes out of the meeting is important. Otherwise the youth participants leave without a clear picture of next steps.
- National organisations in islands often do not have the time or resources to co-ordinate youth follow-up action and hence require considerable support.

In response to these lessons learned, changes were made to the programme for the event in Mauritius. During the preparatory meeting in St Lucia, a project template was developed for youth participants to use when developing their follow-up projects and activities.

Selecting the youth representatives

During the course of 2004, counterparts in SIDS were requested to select their youth representatives for the major event in Mauritius. Co-ordination and selection was done by in-country organisations such as youth councils, government ministries responsible for youth, non-governmental organisations, and National Commissions for UNESCO. The latter was ultimately responsible for conveying the names of the representatives to UNESCO Headquarters in Paris, France.

In addition, activities were undertaken in certain SIDS to raise awareness about the Youth Visioning themes and to seek the participation of young people interested in attending the event in Mauritius. These included an essay competition in St Kitts and Nevis, a poetry competition in St Vincent and the Grenadines, and youth consultations in Seychelles.

The criteria established for the selection of youth to participate in the Mauritius event were as follows. Participants should:

- be sufficiently mature to travel alone and be no older than 23 years;
- be actively involved in implementing and/or planning youth projects and activities in his or her island; and

- have good communication and motivational skills.

The counterparts in SIDS were initially informed that they would need to obtain financial support from local or regional sources for travel of their youth participants to Mauritius. UNESCO guaranteed to provide accommodation, meals and local support for two youth delegates per island country or territory. However, travel costs proved to be a major hurdle for most of the islands. In the end, very few countries were able to cover the international travel for their youth delegates. As a result, UNESCO in partnership with the German-based Lighthouse Foundation that promotes integrated sustainable development and responsible behaviour to protect the marine environment had to support most of the travel costs of the Caribbean youth delegates. The Indian Ocean Commission supported the travel for those from the AIMS region while travel for delegates from the Pacific was supported by the Secretariat of the Pacific Community and United Nations Children's Fund.

Launching the initiative

A dedicated multilingual website was established in April 2004 by the internationally recognised, youth-led non-governmental organisation TakingITGlobal. The website (www.takingITglobal.org) had the following objectives, to:

- provide information about Youth Visioning for Island Living;
- provide pedagogical information, for example on starting a project;
- document and promote local and national activities; and
- promote inter- and intra-island dialogue and discussion.

The website was promoted through regular announcements sent out to a large e-mailing list and through word of mouth. While the website was effective in providing information about the Mauritius event and in documenting local and national activities, it did not fully achieve the fourth objective, namely to widen discussion about the three themes.

Discussion was slow to start on the e-forum facility on the website, and it was only after arranging conference calls with a small group of committed island youth contacts that it made progress. Thereafter, discussion was kept alive, for the most part, by a few core contributors. Many avenues were employed to encourage youth to use the e-discussion forum – through announcements, personal contacts, meetings and Small Islands Voice partners. Despite these efforts the results of the discussions via the website proved disappointing.

Among the factors influencing the limited use of the website discussion facility is undoubtedly the inadequate access to the internet in many small islands. In general, internet access is limited to the main towns and even then it suffers from high costs and slow connections. The need to register as a member of the TakingITGlobal network and log in to the Youth Visioning site may have been deterrents.

Within the context of the Small Islands Voice initiative, it has been found that internet-based discussion forums work well only under certain specific conditions. For instance, the Small Islands Voice Youth Forum (www.sivyouth.org with username *view* and password *only*), a semi-moderated forum, works well because of a dedicated network of teachers and other partners in the islands, who encourage the students to use the forum and also sometimes incorporate the forum into their curricula. As well, the Small Islands Voice Global

Forum (www.sivglobal.org), a fully moderated forum that targets the general public in small islands, also receives a good response. While being hosted on a website, the postings are also sent out by email about 50,000 addresses. Reactions are almost exclusively received from the email distribution, and not the website.

The Youth Visioning website was seen as one of the main mechanisms for getting the word out about the initiative, but other means were used as well, including monthly email announcements and a poster that was distributed to contacts in the SIDS. In addition, with the assistance of the United Nations Cyber School Bus, an online education component of the UN's Department of Public Information's Outreach Division, an island youth art competition was launched in August 2004. The competition was open to school and non-school youth in three age categories: 9–13, 14–17 and 18–23 years old. The competition was effective, especially in widening the exposure of island youth to Youth Visioning and for involving a younger age group.

Phase II: Youth visioning event in Mauritius

The programme

In April 2004, an in-country committee led by the Mauritius National Commission for UNESCO was established to co-ordinate local arrangements, including the selection of the host country's youth participants. This committee consisted of representatives from government ministries and local organisations.

The event ran from 7 to 12 January 2005 and had 94 young people taking part: 43 from the AIMS region, 36 from the Caribbean and 17 from the Pacific. They came from 31 SIDS and 6 islands with other affiliations. The event was held in parallel with the main UN meeting for the 10-year review of the Programme of Action for the sustainable development of SIDS.

Focusing on the three main themes (life and love in islands, my island home, money in my pocket), panel discussions were led by youth participants from each of the three regions. Participants were then divided into small groups where they discussed and prioritised the issues relating to one of the themes, after which they reported back to the plenary. Thereafter, they returned to their small groups to discuss possible youth-led activities relating to the priority issues. They used the project template (developed in the St Lucia meeting) to prepare in detail one or more sample project proposals, which were presented to the plenary.

The main issues emerging from the discussions are presented below to illustrate the diversity of topics addressed by the youth.

The main issues relating to the theme on *Life and love in islands – island lifestyles and cultures* were:

- substance abuse: drugs, alcohol;
- HIV/AIDS education;
- culture: inclusion of culture in educational curriculum, influences of western culture and mass media, linkages with tourism, festival of the arts;
- family structure, dysfunctional families, inter-generational exchange;
- youth involvement in policy-making and governance;
- unemployment;

- environmental depletion, balancing environment and development;
- trade issues, balance between foreign investors and locals;
- differences between rural and city youth; and
- island pride.

The main issues covered in the discussions on *My island home – safeguarding island environments* were:

- environmental pollution – land, air and water;
- solid and liquid waste disposal, recycling;
- water management and water scarcity;
- coastal zone degradation, soil and beach erosion;
- deforestation;
- biodiversity loss and invasive species;
- natural disasters and sea-level rise;
- lack of human resources and expertise;
- limited environmental law enforcement;
- exploitation of natural resources by foreigners;
- overpopulation, population growth and urbanisation; and
- environmental education and awareness, and environmental respect.

Finally, the main issues emerging from the group work on *Money in my pocket – economic and employment opportunities* were:

- lack of job opportunities and resulting youth unemployment, brain drain;
- educational deficiencies: training for youth, teachers sometimes not paid, need for more local teachers, lack of training in starting own business, structure of the education system, literacy rates, high cost of tertiary level education;
- discrimination;
- gender issues;
- exploitation of youth;
- schemes to share ideas and skills between islands;
- need for career guidance and apprenticeships;
- difficulty of obtaining loans for local investors and young entrepreneurs, successful young entrepreneurs not helping other youth;
- high taxation and low standard of living;
- trade issues;
- foreign investment and workers; and
- prostitution and money laundering.

The composition of the small groups was changed each day so as to provide as much interaction as possible between delegates from different countries and regions. Every group was interregional and gender balanced. A group of resource people played a very important role in providing guidance to the small groups as required. The resource people came from UNESCO, Ministries of Education and of Environment from various islands, and other organisations.

Three youth-led drafting committees were established to work on the final declaration. Each group compiled the information gathered in the discussion groups for one of the three

themes. After the drafting on all three themes were completed, participants met together in country groups to decide on their follow-up projects.

Overall, the programme was very intense, and a day of field trips to places of interest in Mauritius provided a welcome diversion for the youth. In addition, regional cultural evenings when youth shared aspects of their national culture (dance, song, poetry, drama) were popular and entertaining.

The two main outcomes of the event were:

- 1 The Youth Visioning Declaration, which articulated the views of the delegates on the three themes and the role of young islanders in sustainable living and development.
- 2 The Commitment for Follow-up Activities, which set out the project plans for each island's delegates.

The event came to an end with a closing ceremony that was attended by Mr Kofi Annan, UN Secretary-General at the time, and Mr Koichiro Matsuura, Director-General of UNESCO. A three-person youth team made a presentation, after which Mr Annan and Mr Matsuura answered questions posed by the youth. Subsequently, each country delegation, dressed in their national costume, presented their commitments for follow-up action. The presence of Mr Kofi Annan and Mr Matsuura are indicative of the importance the international community places on the participation of young people in the sustainable development of SIDS.

Presenting the Youth Visioning message worldwide

On 12 January 2005, a small group of youth, selected regionally by their peers, presented the Youth Visioning Declaration to the main UN meeting and then took part in a press conference.

There was widespread coverage of the event in national media in SIDS and the young people successfully managed to imprint their views on the government representatives at the main UN meeting by being mentioned in the final Mauritius Declaration. The Declaration makes reference to the important role youth play in the sustainable development of SIDS and the need to encourage their efforts (Paragraph 15). It also recognises the disproportionate impact of HIV and AIDS on women and youth in SIDS and the need to address this issue.

Phase III: Follow-up and project implementation

The youth left Mauritius with well-developed project ideas and enthusiasm to get started. However, it took some time for the projects to get underway, as the youth first of all had to return to their islands and report on the outcome of the meeting in Mauritius. As well, the Youth Visioning Committee needed to finalise criteria and templates for proposal preparation and review. An immediate project funding request (received in January 2005) from the Singaporean youth participants for an inter-generational activity to celebrate the Chinese New Year provided an important testing ground for project design, review, funding and implementation. In September 2005, additional financial support was obtained from the Lighthouse Foundation.

The majority of project proposals are received from Youth Visioning participants through email. However, proposals also come in via the website and networks through which

newsletters and promotional materials are sent. Two notable avenues have been:

- 1 Collaboration with the youth-led organisation Youth for a Sustainable Future Pacifika.
- 2 Involvement in youth forums organised by the UNESCO Section for Youth, including the 2005 Youth Forum in Paris.

Project selection and monitoring

All decisions related to project selection and funding are taken jointly by the Youth Visioning Committee. The Committee is composed of members based both at UNESCO Headquarters in Paris and in the Organization's field offices. Conscientious efforts are made to engage with the project leaders and offer suggestions and feedback on their proposals.

Project leaders receive a relatively small amount of funding, which is adequate for them to start up a project. However, they are encouraged to search for additional funding and in-kind support with the goal of building sustainability into their projects through local support.

Once funding has been approved for a particular project, the project is assigned to a Youth Visioning Committee member for detailed and regular follow-up by email and phone.

Box 10.1. Project: Setting the stage for social issues awareness in Solomon Islands

Project title: Dream Cast Drama Awareness Program

Location: Honiara, Solomon Islands

A team of out-of-school and unemployed young people in Solomon Islands, led by Kennedy Folas, developed a series of theatrical acts to raise awareness about social issues affecting young people. Issues addressed included HIV/AIDS, teenage pregnancy, poverty, and domestic violence.

The group was supported in their efforts by the branch office of Save the Children Australia, local community peer educators, the Family Support Centre, and the police.

The challenges that the group faced during the project included erratic transportation services and difficulties to communicate with small villages without a telephone.

Nonetheless, the group is looking at touring other provinces to spread their message. They hope to eventually establish a permanent base where they can hold meetings and rehearsals as well as train new members of the group.

The community has been very supportive and the group has received positive feedback from the parents regarding the improved behaviour of the young people following their exposure to, or involvement with, Dreamcast's activities.

The project has also had a positive impact on the participants who have attained higher levels of self-esteem. They have been empowered by the new skills that they have learnt. Some participants have moved on to work in the health sector or non-governmental organisations and one male participant decided to go back to school after realising the importance of education.

For more information visit www.youthvisioning.org

Informing and sharing Youth Visioning project news

In December 2005, the Youth Visioning website was reorganised and re-designed to reflect the dynamic project implementation phase. In doing so, it was important to build a consistent brand for Youth Visioning for Island Living. Thus the domain name www.youthvisioning.org was registered, and the original www.islandyouth.org redirected accordingly. A distinctive logo and colour scheme were also created.

The website was once again redesigned and updated in March 2010. The new site displays content dynamically as it becomes available. It highlights outputs from the different projects including videos and photo galleries. Each project has its own page with full project information, photos, documents to download, and progress reports. It also syndicates relevant UNESCO news to inform users of the wider work done on the subject of Youth and HIV/AIDS. The website is updated as new information becomes available.

Where are we now?

During the first phase of project implementation, 35 Youth Visioning projects were implemented. A glimpse of the diversity of activities undertaken by youth during this phase are presented in the list below:

Projects implemented

AIMS Region:

- Cape Verde, Youth Against HIV/Aids
- Madagascar, Environmental Education for All
- Maldives, Prevent Erosion & Green Coastal Vegetation
- Mauritius, HIV/AIDS Awareness Workshop
- Mauritius, Beach/Fun Games for Disabled Youth
- Seychelles, Helping Create More Youth Employment
- Singapore, Project Joy 2005
- Zanzibar, HIV/AIDS Awareness for School Going Youth

Caribbean Region:

- Antigua & Barbuda, Youth Employment and Small Business Development
- Dominica, Palé Kwéyòl
- Dominica, Sensitisation and Clean-Up Campaign in Gutter Village
- Grenada, HIV/AIDS Project Management Capacity Building For Youth Groups, Grenada
- Haiti, Environmental Awareness Raising
- Jamaica, Photovoice: My Island through My Eyes
- Jamaica, Enviro Kids Programme at Holywell
- San Andres (Colombia), Role Playing Game My Island Home
- Seychelles/Dominica, Creole Festival Exchange
- St Kitts and Nevis, Camp Sanguine
- St Vincent and Grenadines, Folkways of Bequia

Pacific Region:

- Cook Islands, Recycling Stations for Schools
- Fiji, Young Leaders for a Sustainable Fiji
- Samoa, Teaching and Promoting the Fire-Knife Dance
- Samoa, Youth Volunteering With the Needy and Elderly
- Solomon Islands, Dream Cast Drama Awareness Program
- Tonga, On the Spot MDGs Radio Show
- Marshall Islands, Preserving the Marshallese Handicrafts Exhibition
- Micronesia, National Pride and Unity
- Niue (New Zealand), Traditional Treasures
- Niue, Village Beautification
- Papua New Guinea, Kolgpeng Fish Farm
- Papua New Guinea, HIV/AIDS Awareness within Institutions
- Solomon Islands, Empowerment Workshop and Training on Career Development Skills Honiara Youths
- Tonga, Tonga National Canoe Festival
- Tuvalu, Home Gardening
- Vanuatu, Anelcauhat Waste Management 'Yes' Project

Following the end of the first phase of project implementation, Youth Visioning has issued two calls for proposals for projects in the area of HIV/AIDS awareness and prevention. Funding for this phase of Youth Visioning is provided through financial support from the UNAIDS Unified Budget and Workplan. As a result of the first call for proposals, 11 projects were implemented in the three main SIDS regions during 2008–09. Based on the success of the projects, the second call for proposals was issued in April 2010. It is expected that approximately 15 Youth Visioning projects will be implemented under the HIV/AIDS theme during the 2010–11 biennium.

At the same time, discussions are under way with UNESCO field offices to explore the possibilities of further extending and developing Youth Visioning activities under other topics of key relevance to youth in small islands.

Lessons learned

The following lessons have been learned throughout the evolution of Youth Visioning for Island Living and may prove useful to others seeking to develop similar initiatives:

- Due to the dynamism of young people, working with them can be unpredictable. When this is combined with the remote locations of some SIDS, one is confronted with an interesting set of challenges to maintain communication and momentum.
- The ability to test the approach and framework early on in a similar working environment proved to be an invaluable experience.
- The co-ordination of the projects, including proposal-development assistance and project evaluation and monitoring, has proven to require a larger time commitment than originally foreseen by the Youth Visioning Committee.
- Many countries selected academically gifted students as their delegates to the Mauritius event, and many of these youth subsequently left their islands to study abroad, thereby creating a vacuum for the implementation of follow-up activities. In

these cases, considerable time has had to be spent in identifying and engaging new youth partners.

- In almost all cases, the youth implementing the projects appeared to have no experience with designing, implementing, reporting on and evaluating a project. They are also rarely familiar with the technicalities involved in entering into a contract. Youth Visioning, therefore, has become a major capacity-building exercise and this is undoubtedly one of the most important outcomes of the initiative.
- Effective promotion of the Youth Visioning projects requires a wide range of media tools including a website, newsletter, promotional posters and leaflets. This promotion is inadequate without an effective network of contacts and promotion of the projects by youth leaders themselves.
- Maximising the impact of this initiative is key and one important avenue is with the photos and video footage that are being collected from each project. The potential is there to develop a video that will showcase the work being done by the youth and will also inspire other young people living in small islands to realise their own 'island vision'.
- It is essential that projects be youth led with the objective of capacity building strictly applied. There have been a number of proposals where major non-governmental organisations or government ministries would be taking the lead and these had to be declined. However, there are of course exceptions, for instance where the youth are not connected to the internet nor have a bank account for their group or organisation; these exceptions have been and are considered on a case-by-case basis.
- To best understand the impact and work done by the youth, it is ideal to have someone that can physically visit the project sites and report back to the Youth Visioning Committee. It is therefore essential to continue to form and maintain partnerships with people in the islands and regions.
- Another important indication of the impact of the initiative is to assess the extent to which and what the youth have actually learned or gained from their participation and experiences. In 2007, a survey was undertaken to obtain information related to building youth capacity in understanding and visioning sustainable development, project management at all stages (conceptualising, designing and writing project proposals, implementing the project, monitoring and evaluation) and contributing to sustainable island living.

Box 10.2. Project: Revitalising the Creole culture in Dominica

Project title: Palé Kwéyòl (Speak Creole)

Location: Roseau, Dominica

Under the leadership of Jahisiah Benoit, the Youth Heritage and Culture Movement developed a series of activities designed to revitalise interest in Creole language and history among young people.

Activities organised as part of this project included a spelling bee, a radio programme, an arts and cuisine festival, and free Creole lessons taught by young people to their peers.

The project is now in its second year and due to its success and support from the community the Government's Cultural Division agreed to sponsor the Kwéyòl March and Spelling Bee to make it an annual event and there is strong interest from other Caribbean nations (including Martinique and Guadeloupe) who would like to see the project implemented in their own island.

One of the most effective tools has been the Kwéyòl Radio show, which has been able to reach a wide audience and has even received callers from Guadeloupe. Its success has prompted a radio station to invite them to host a number of important broadcasts including the World Creole Festival.

Taking advantage of the project's momentum, Jahisiah proposed the first ever Dominica-Seychelles Kwéyòl Exchange, which took place in October 2005. Sponsored by Youth Visioning, he travelled to Seychelles to promote the Palé Kwéyòl project as well as to experience the Creole festivities the Seychellois way. The aim was to exchange recommendations on how to improve each other's Creole programmes.

For more information visit www.youthvisioning.org

Conclusion

A key factor differentiating Youth Visioning for Island Living from many other tools or initiatives that aim to involve youth in sustainable development, is the focus on the implementation of concrete projects and activities that youth design and implement themselves. In fact, throughout the Youth Visioning process it is the project implementation phase that has been emphasised as being the most important. While discussions and declarations are useful to articulate a particular viewpoint, they are not sufficient in themselves to thoroughly engage young islanders in sustainable living and development. Young people need to acquire hands-on experience with all stages of the project cycle in order to truly take ownership of the activity. It is this experience that allows for long-term capacity building, as well as tangible and sustainable project results. Indeed, capacity building is important in creating a basis for action on sustainable development. However, a clear framework is also required to ensure a structured environment where the necessary guidance and support is available. These initiatives by island youth are small but important steps on the road to sustainable development and, when replicated and expanded, the impact can become much greater than the sum of its parts.

The fruitfulness of the Youth visioning initiative was summed up by one participant from the Pacific islands in this way:

'Realising that youth can really make a difference – I can make a difference. Adults will sit up and listen to what we have to say. Learning how to make project proposals and how to mobilise youth. I feel empowered to do something for not only Niuean youth but for youth in general. What I learnt I can pass on to others.

(Lynsey Talagi, Niue)

Acknowledgement

We would like to express our sincere thanks to all the youth involved, especially those continuing with follow-up projects, to Gillian Cambers and Claire Green for their enormous inputs at various stages of the initiative, as well as to Khalissa Ikhlef and Dirk Troost for reviewing drafts of this paper.

Further reading

All about Youth Visioning for Island Living – www.youthvisioning.org
UNESCO's Coastal Regions and Small Islands Platform – <http://www.unesco.org/csi/>
UNESCO's Section for Youth – www.unesco.org/youth
Small Islands Voice – www.smallislandsvoice.org
UNESCO and SIDS – www.unesco.org/en/sids
UN and youth – <http://www.un.org/esa/socdev/unyin/agenda.htm>

International agreements related to young people in SIDS

Youth Visioning for Island Living Declaration (01/05) –
http://www.unesco.org/csi/YV/documents/declaration_e.htm
Report of the UNESCO Youth Forum (10/05) –
http://www.unescoyouthforum.org/documents/YouthForum_EN.pdf
Mauritius Declaration (01/05) – http://portal0.unesco.org/en/ev.php-URL_ID=33112&URL_DO=DO_TOPIC&URL_SECTION=201.html
Mauritius Strategy (01/05) – http://portal0.unesco.org/en/ev.php-URL_ID=33112&URL_DO=DO_TOPIC&URL_SECTION=201.html
Youth Earth Charter – http://www.earthcharter.org/innerpg.cfm?id_page=50
Agenda 21 Youth chapter –
<http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21chapter25.htm>

Towards social development in SIDS

Introduction

Since the UN Conference on the Human Environment in Stockholm, Sweden in June 1972, there has been a pronounced shift away from a preoccupation with economic growth to a more integrated perspective, encompassing all matters relating to the development of the person¹. This expanded view of development has been crystallised through a series of UN Conferences held between 1985 and 2005². The participatory and consultative nature of these events has helped to build global consensus that economic growth is not a sufficient condition for the attainment of social development and cannot be sustained in the absence of social development and environmental protection. Equally importantly, the events have prompted the adoption of a more inclusive decision-making process at the national and global level involving state and non-state actors.

Conceptual framework

Notwithstanding the spate of events held over the past two decades on social development issues, global consensus on its definition has proved elusive. This reflects the numerous economic, political, cultural, religious and environmental variables that influence the social development process and the interplay between them. It is also reflective of the immense challenges that are involved in facilitating its attainment, especially in SIDS. There is a growing recognition that SIDS are inherently vulnerable by virtue of their small size, small populations, thin domestic markets, the absence of economies-of-scale, openness to international trade, high dependence on strategic imports and hence high exposure to price shocks of products such as energy³.

The essence of the challenge for development in general, and social planning in particular, is arriving at an appropriate conceptual framework that captures the role of each of these variables in the development process: in terms of their own characteristics; as aspects of a greater whole; and both in relation to the others and to the greater whole, of which they form part. To address this challenge, devising a set of indicators is helpful in illuminating the economic, social and environmental landscape. These indicators should cover such factors as the social behaviours, skills, attitudes, customs, traditions, systems, formal organisations, non-formal institutions, cultural values, beliefs, opinions, systems of thought, ideas, theories, and spiritual values) and the way in which they interact and influence each other to advance or impede the development process. Later in this chapter we examine some the challenges involved in establishing these indicators.

The main conclusion of development theory over the past five decades is that the human being must be placed at the centre of both the process (as agent) and ends (as beneficiary) of development. Society is discovering that providing maximum human choice to its individual members (regardless of their gender, origin, race, religion or other social distinctions) is the most effective means of releasing human energy, creativity and initiative for the maximum development of the citizenry. Economic planners now increasingly understand and accept that economic growth cannot be treated as an end in itself but as a means of enabling all individuals to live healthy, happy and rewarding lives. Social planners now understand that their policies must work in tandem with economic policy and must help to establish the ideal conditions for sustained economic growth. And both social and economic planners now recognise that their policies must draw on natural resources in a sustainable manner – that meets present day needs without compromising the ability of future generations to meet their own needs (WCED, 1987)⁴.

Aggregating these perspectives, we propose, for the purposes of this chapter, a definition of social development as: *an integrative and participatory process that makes optimal use of the economic, financial, human, cultural, spiritual, and natural resources of a country to engender in citizens a sense of wellbeing and positive thinking and cohesion among them*. This definition is consistent with the post-modernist approach to development in general and social development in particular, in terms of the shift away from State-dominated planning and decision-making towards a more participatory approach involving civil society actors. It regards development as a process that should result in positive outcomes and impacts at the individual, household, and community levels. It also suggests that social development programmes have both a promotional and an intrinsic value, because, as will be established later, they seek to create appropriate conditions for economic development and broader opportunities for sharing in the results of economic performance. This is not to say that dealing with negative social, economic, cultural shocks and influences is not an essential part of the development process. The way a society interprets and responds to such shocks to its system determines its resilience profile and the outcomes of the development planning process.

The role of social policy

Social policy is generally regarded as a combination of implicit and explicit forms of state-facilitated intervention that directly affect wellbeing, social institutions and social relations⁵. Generally, these policies aim to:

- enable and empower as many people as possible to determine the things that affect their daily lives;
- promote collaboration and cohesion between people at all levels;
- engender a functioning 'civil society' in which people take their social rights and obligations seriously; and
- ensure that the necessary minimum of material and social infrastructure is established so that services can be provided to cover basic needs.

The goals of social policy

Social policy interventions should at a minimum target five overarching goals, namely: redistribution, production, reproduction, protection and cohesion⁶. We examine each of these in turn.

Redistribution

The redistributive aspects of social policy usually involve an explicit determination of the manner in which the benefits of economic growth, whether from national income foreign exchange reserves and other state assets such as land resources and capital will be distributed either along geographic, community or sector lines to spur additional or more balanced economic growth, to finance social welfare reforms and improvements, or to enhance the productivity potential of members of a society.

Protection

The protectionist aspects of social policy usually involve a clear indication of the interventions that the State will undertake and those it will promote to protect the more vulnerable actors in the economy and society (people who are poor, young, elderly, or physically challenged) from the vagaries of the market. Some of the more common state interventions such as pre-emptive savings through social security schemes have been found to have a positive impact on economic and social development by encouraging capital formation, which in turn is used to finance social development programmes. Historically non-state actors as individuals, co-operatives, churches, corporations and philanthropic organisations have played an incisive role as advocates, innovators and as providers of aid, social assistance and social services, and continue to do so.

Production

Enhancing the productive potential of members of a society should be the centrepiece of any social or economic policy. This position is justified in part by the established linkages between unemployment and underemployment and other negative social phenomena such as poverty, disease, crime, violence and environmental degradation; as well as the positive linkages between high employment levels and strong economic performance, especially in sectors such as health, education, housing, and social services. For this reason, some social development policies expound labour market policies that aim at job creation and career fulfilment through the establishment of a high quality and responsive education system that supports the needs of a knowledge-driven society; and an adaptable and flexible workforce that possesses the skills sets required in a competitive global economy. In addition, the production aspects of social policy should aim at ensuring that shocks or disruptions to the productivity of the economic system are minimised or eliminated. Sound investments towards the establishment of public health and cost-effective health care systems, including efficient strategies to combat the spread of communicable and non-communicable diseases; as well as the adoption and implementation of comprehensive disaster risk management (CDRM) strategies, should be essential elements of the production aspects of social development policy.

Reproduction

This aspect of social policy is usually concerned with, and influenced by wide-ranging social, economic, cultural and religious issues, factors and concerns, including the reproductive rights of women and men; poverty, homelessness, gender and age-related sensitivities and biases, gender-based violence, constraints to increasing the participation of women, the availability of affordable childcare services, levels of educational achievement and teenage pregnancy. Further, social policies should also be concerned about adapting to shifts in the dependency ratio.

Cohesion

While the policy interventions described above are critical to promoting social development, in several countries, notably in Europe, there is growing support for the view that social development does not guarantee social cohesion. Social cohesion is defined by the Council of Europe as ‘... the capacity of a society to ensure the welfare of all of its members, minimizing disparities and avoiding polarization’⁷. The Canada Council on Social Development (CCSD) defines it as ‘... the ongoing process of developing a community of shared values, shared challenges and equal opportunities, based on a sense of trust, hope and reciprocity’⁸. It is regarded as being centrally about the willingness of people to co-operate and engage in voluntary partnerships; and it is manifested directly in socially-cohesive activities such as participation in formal and informal social networks, group activities and associations and participation in civic life (CCSD, 2000).

The general objective of cohesion policy is to facilitate the involvement of all communities, countries and regions in the growth effort and to give all people the chance to contribute to development. The cost of not pursuing a vigorous cohesion policy, to tackle racial and cultural tensions and disparities in income and access to resources, is measured not only in terms of a loss of personal and social well-being but also in economic terms, in a loss of the potential real income and higher living standards. Given the interdependence inherent in an integrated economy, these losses are not confined to the less competitive countries and regions or to individuals who are not working or who are in unproductive jobs, but affect everyone (COE, 2003).

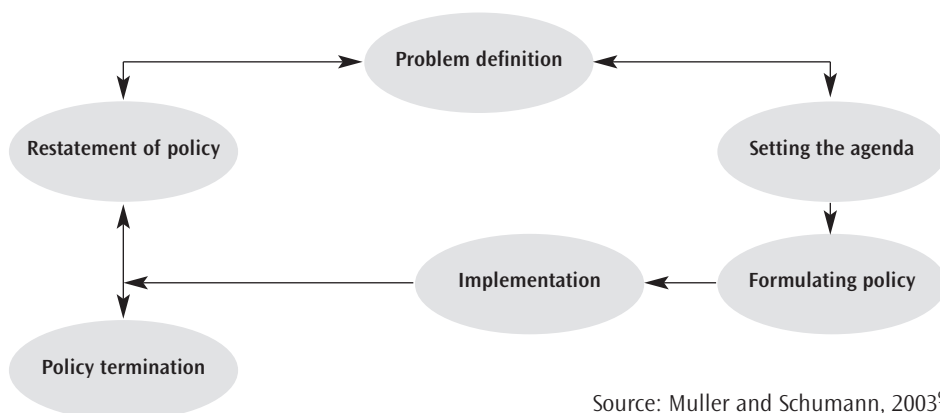
Designing social policy

A recurring cautionary note in much of the literature is that the goals of social policy should be approached in an integrated manner and that no one goal should be pursued at the exclusion of others as this might undermine the pursuit of a chosen goal. UNRISD observes that a focus only on the distributive functions of social policy would ultimately be economically unsustainable; while a focus only on the productivist approach would generate social and political instability that would undermine the growth objective.

One of the legacies of social policy reform, globally, over the past three decades is the entrenchment of integrative, consultative and participatory approaches to policy formulation. The adoption at national level of these approaches, which have been at the core of the history of democratic political theory, has not been a straightforward matter. In some coun-

tries it continues to generate much tension between elected representatives in Government, who perceive that they have the ultimate mandate from the electorate to effect policy, and the voice of Unelected people in civil society whose advocates call for citizens to have a say in what options are taken and what priorities are set in any development policy. Generally, however, there is a growing recognition that as Government representatives do not understand all the questions and do not have all the answers so the direct participation of citizens can help to produce more effective policies. In many countries non-state (non-governmental) actors have become integrally involved in fashioning social policy.

Figure 11.1. The policy cycle



Source: Muller and Schumann, 2003⁹

The content of social policy

The eventual scope, content and direction of social policy should be dependent on the results of the analysis that informed the policy; and the quality of the analysis is highly dependent on the quality of the data that is available. Instructively, many social policies aim to establish or improve the collection, collation and interpretation of data on social phenomena. Some of the challenges involved here are reviewed in greater detail later in this chapter.

Financial and economic considerations

Sustainable growth is the result of multiple interlinked factors, including a country's stock of physical, human and environmental capital and the efficiency and fairness with which it is formed and used. Efficient capital formation depends on the quality of the macroeconomic, structural, social and environmental policies and institutions (WB, 2006)¹⁰. Thus, it is critical that the knock-on effects of social, economic and environmental policy are carefully analysed, in time, space and degree of impact, to ensure that: (a) the desired results are achieved; and (b) any unintended consequences are quickly addressed. Economic policy must also ensure that investment (public and private) is spatially balanced. In this regard, Governments carry a special responsibility to move public investment and social assistance programmes into depressed areas as well as promote private investment in such areas.

Another important social consideration in economic policy is to ensure that there is equality of access to essential 'public goods' such as water resources. Many countries have designed water policies and strategies which usually describe the manner in which water will be allocated among competing uses (domestic, industrial, touristic and commercial), while ensuring that the preservation or the regeneration of environmental assets is not compromised: others have yet to do so.

A sector which increasingly is attracting the attention of economic and social policy analysts alike is the housing sector, which typically accounts for 2 per cent to 8 per cent of the gross national product and plays a key role in the profitability of financial and insurance companies, and in the labour market – it absorbs a sizeable number of skilled and unskilled workers (World Bank, 1993)¹¹. A number of policies affect housing provision, including the regulation of infrastructure, the regulation of land and housing development, the organisation of the construction and materials industry, security of tenure, and the quality of institutional arrangements (such as those relating to the land registration and titling, physical planning and development control).

Poverty alleviation

Many countries have social policies aimed at alleviating or eradicating poverty in its various dimensions. Poverty is regarded by them as the root of many other socio-economic problems facing both individuals and societies. It has many socio-cultural strands including:

- a) *Lack of opportunity*: low levels of consumption and income usually relative to a national income poverty line; this is generally associated with the level and distribution of human capital and social and physical assets, such as education facilities, housing, transport, land, and market opportunities, that determine the return to those assets.
- b) *Low capabilities*: little or no improvement in educational performance and health status indicators among a particular socio-economic group.
- c) *Low level of security*: exposure to risk and income shocks that may arise at the national, local, household or individual level.
- d) *Empowerment*: the capability of the poor and other vulnerable groups to participate in, negotiate with, change and hold accountable the institutions that are accountable for their wellbeing.¹²

The more popular classifications of poor people include those that are influenced by the causes of poverty and those that are framed by their ability to meet their basic needs. The profile of poor people which has been captured in many UN documents points to: low educational levels and skills, with lesser accessibility to secondary schooling; poor housing and environmental conditions; limited access to potable water; high levels of malnutrition, especially among children in poor households; high levels of unemployment in the formal sector; and lack of self dignity and self worth.

Poverty alleviation strategies must be tailored to suit the particular socio-economic circumstances that exist at the national, community and household level and to help the poor to identify their strengths and to use these strengths to propel themselves out of poverty. There is also broad agreement on the positive correlation between the efficiency and sustainabil-

ity of economic growth and poverty reduction, especially income poverty. Other factors found to increase the efficiency of growth in reducing poverty are investments that increase access by poor people to housing and utilities such as water, sanitation, electricity and other services from infrastructure; and measures that ensure market access for rural producers, investments in productivity-increasing agricultural technologies and labour market regulations that create attractive employment opportunities for poor workers (World Bank, 2005)¹³.

The nexus between unemployment, underemployment and poverty, crime and environmental degradation warrants closer attention. In many countries, especially SIDS, contractions in employment have been experienced that have been linked to globalisation and an accompanying push for competitiveness in the traditional labour-intensive economic sectors such as agriculture, manufacturing, construction, and the public sector through sectoral efficiency reform. The ability of poor people to participate in economic growth depends on the extent to which such growth is driven by productivity increases in sectors where a large number of poor people have been working and can work in decent jobs; how much growth translates into job creation and how well poor people are equipped to take advantage of such job growth. Against this background, the World Bank cautions social planners to consider where poor people live; how they earn their income and what constrains growth in those areas. They also need to consider the constraints to the inter-sectoral mobility of poor people, such as those with low skills and who lack education or lack access to capital, infrastructure or market outlets (World Bank, 2006).

Health considerations

For the reasons already stated, social development is of crucial importance for the state of a society's health, which has been defined by WHO as a '... condition of complete physical, mental and social well-being'. Social development programmes need to be integrated into the preventive and curative health policy of a society (WHO, 1946). Health considerations cut across all the main goals of social policy, directly and indirectly. Weak or ineffective health care delivery systems can:

- a) seriously impede the productivity of the workforce as well as the educational achievement of children;
- b) undermine the integrity of social security systems by placing an inordinate burden on social security funds to cover illnesses, thus reducing the contribution that these funds can make to capital accumulation and infrastructural development; and
- c) increase child mortality and reduce life expectancy rates.

It is against this background that the management of the spread of HIV/AIDS has begun to warrant special attention in all social policies and social development programmes. Over the past two decades, the epidemic has come to be seen as a development problem, because it strikes at the heart of the development process as well as prospects for development. In many countries, infection rates are highest in the 15–44 age cohort – which is the largest and most active group in the labour force. In addition, HIV/AIDS poses a real threat to social cohesion in homes, creating many orphans, and in the workplace and in communities.

Health can also be affected by policies that have little to do with health care or services such

as environmental pollution, insecurity and instability (whether caused by unemployment, poverty or violence, economic regulation or deregulation), contaminated water and poor sanitation, changing family structures, increased urbanisation and low educational achievement. This reality strengthens the case for an integrated and participatory approach to the formulation and implementation of health policy in particular and development policy in general. As countries pass through stages of economic and social transition so the pattern of health and disease changes and the more developed countries are beset increasingly with health problems of non-communicable disease and accidents linked to tobacco use, alcohol abuse, nutrition, and lack of physical exercise and the risks of urban life, especially the use of high speed transport.

Education

The consensus amongst social analysts is that the education system in the 21st century must meet the rapidly growing demand for adaptable workers who can quickly acquire new skills and can readily cope with stresses and shocks in society. Education, like health, underpins virtually all aspects of human development. It has long been established that higher literacy facilitates poverty reduction because it increases the share of the population that can take advantage of better employment opportunities created by growth while providing entrepreneurs with a larger pool of skilled labour. In recent times SIDS, especially those in the Caribbean have had to contend with an additional challenge: the displacement and replacement costs associated with the migration of trained teachers to more developed countries such as the USA. Increasingly, many SIDS in the Caribbean and Pacific regions have regionalised their education strategies as a means of overcoming the supply-side challenges identified earlier.

As effective as these regional approaches have been, there are many educational challenges that demand national responses, especially those that are aggravated by economic performance, poverty, gender inequities, juvenile delinquency, teenage pregnancy, and underachievement especially among boys. Some of the more common recommendations in social policy for reforming the education sector include:

- Increasing investments on primary, secondary and tertiary education to achieve wider access to higher quality education that prepares people to work in a continuous learning process and keep up with changes in technology and new market demands.
- Encouraging stronger private sector involvement in critical education and training activities, especially in areas such as enterprise development, computer literacy and science and technology.
- Increasing investments in technical and vocational training, especially for young people.
- Upgrading teacher training facilities, with special attention given to developing science, mathematics and language arts teachers.
- Establishing access points to the global information network in schools, post offices and community centres.

Environmental considerations

A sound physical environment is the foundation of all forms of development. Neither economic nor social development is possible on a degraded environmental base. This is especially the case in SIDS, where there is heavy reliance on the tourism sector to provide jobs, national income and foreign exchange; and on rural agriculture to provide food and sustenance to growing populations. The salient lessons from the robust discourse on sustainable development over the past three decades is that the environment and the economy cannot be treated as separate domains and that one impacts and defines the other. The challenge for Governments and the private sector is to ensure that the policies, projects and programmes used to spur economic growth and social development are 'respectful' of the 'natural' limits to such growth. Thus, a mix of preventative and precautionary policies and strategies (including the use of tools such Environmental Impact Assessment – EIAs) are required to predict the possible negative environmental impacts of economic policies and investment projects; to abate these impacts; and/or avoid them altogether. Further, continuous monitoring of the physical environment is required to identify imminent or long-term environmental changes; to quantify their economic and social impacts; and to plan, test and implement effective adaptation and/or mitigation responses.

Addressing the needs of vulnerable and disadvantaged groups

Women

The importance of promoting the equal rights and human dignity of women has been a recurring and prominent theme in numerous global agreements including the Charter of the UN to the Universal Declaration of Human Rights; the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW); the Convention on the Rights of the Child; and the Declaration on the Right to Development. Empowering women and facilitating their full participation in the decision-making process and access to power and resources are increasingly being embraced by Governments and the international community as vital to the success of virtually all development strategies, especially those dealing with economic growth, poverty reduction, environmental protection and social justice.

The high number of single, female households in many SIDS means that the position of women has a significant impact of the social fabric of these countries. While the participation rate of women in the workforce has increased in many SIDS women still tend to have high unemployment rates, encounter greater barriers to entering work, earn lower wages and perform a high proportion of insecure, vulnerable and/or unpaid jobs (DFID, 2007)¹⁴. In approaching these issues, social policy should seek out any underlying cultural factors and recognise that removing some of these factors may require a long-term approach involving intensive public education and awareness programmes. In some countries, the introduction of policies such as, equal pay for equal work have had the unintended effect of creating discord within the family and community, necessitating extensive mediation and in some cases a withdrawal of the policy. However, there is increasingly broad consensus within the international community that women's education should be given the highest priority in social and economic policy.

Youth

Perceptions of youth in developing countries range from one extreme where they are generally regarded as the essence of a country's current and future dynamism; to the other extreme where they tend to be viewed as social liabilities. Most social policies reflect the former view and seek to ensure that young people can become dynamically integrated into the development process, assuming the role of protagonists in driving the changes that countries inevitably will have to process within the framework of a knowledge society (Rodriguez, 2003)¹⁵.

Like so many aspects of social policy, youth development is a shared responsibility involving parents, families, communities, the school system and the State. For this reason, providing for young people in social policy presents considerable challenges. Identifying positive roles for the multiple actors in the home, community and the wider society in the socialisation process is considered to be the easiest part of the challenge. However, managing the socialisation process and ensuring its consistency is where real difficulties arise.

At a minimum, social policy should aim to achieve youth development through education, employment, health, sports and recreation. It is critical that the interventions pursued in each of these domains be integrated and properly targeted and that youth dynamics are carefully monitored and understood over time and in the context of various societal influences (internal and external). Often the best insights into youth policy are provided by young people themselves. Thus, social policy should aim to promote regular consultation and discussion with young people within the home, school, community and society. It should aim to provide trained counselors within schools and the community to help young people to understand and manage their emotions. It should also aim to provide adequate sporting, recreational and talent building facilities and programmes in areas such as music, arts and drama.

The elderly

The steady improvements in mortality and life expectancy rates made possible by enhancements in medical care have helped to give greater prominence to the needs of elderly people in social policy. Catering for them presents numerous challenges especially in developing countries where the infrastructure for geriatric care is lacking and where the traditions of family care of elderly people are quickly disappearing. The viability of social security programmes especially in SIDS is being threatened by an increasing burden of claims for pension, gratuity, sickness and invalidity benefits from rapidly ageing populations.

Progressive social policies seek to identify positive roles for the elderly in the development process, including as mentors to troubled youth and as advisers and consultants to Government. Many countries have extended the compulsory retirement age partly out of a recognition that people are living longer, healthier and more active lives, partly because they wish to retain the skills, experience and institutional memory of the elderly for longer periods and partly in response to the raising of the statutory retirement age in line with concerns about the costs of pensions policies. This move has also helped to avert the collapse of social security systems by extending the period of compulsory contribution as well

as delaying the pay-out of terminal benefits. Also, keeping elderly people healthy for as long as possible reduces the strain on limited health resources and extends their capacity for continued effective activity in work and in the social setting.

The physically-challenged

Over the last three decades there has been wider recognition of the importance of fully integrating physically-challenged people into the development process. This recognition has been accelerated and reinforced by compelling images from global events like the Paralympics which have emphasised the fact that in the many cases, people with disabilities are only partially incapacitated, and are still capable of making outstanding contributions in sport and thus in other aspects of social life and the broader process of social development. This view is increasingly reflected in national social policies. Some policies have gone as far as declaring any form of discrimination against persons with disabilities as a crime. The more common features of social policies include the provision of special education facilities and programmes for the visually-handicapped, including the provision of Braille textbooks in schools and libraries; requiring that ramps, elevators and other measures be provided in all public buildings and business places; the provision of incentives to businesses to hire persons with disabilities; and the provision of budgetary support to associations and groups that cater to the needs of physically-challenged persons.

Implementing social policy

The implementation of social policy, like all other national policies must be treated as a shared responsibility involving numerous actors in many domains including the State, the family, the private sector, civil society and the international community.

The role of Government

The success of all development efforts ultimately depends on the quality of governance in country or region. From the viewpoint of social development, the essential elements of governance are accountability to the state's citizens and application of the principles of justice and effectiveness of state work. Four main types of state institutions are needed for the smoothest possible social development. These are:

- Political institutions: because they are used for governing the state and provide the legal foundation and supervisory authority over the implementation of political measures for solving specific problems.
- Legal institutions: because they provide for justice and therefore play an important role in every functioning society.
- The public service: since public service represents the state for people in their day-to-day lives, it should work professionally and efficiently as well as being accessible and accountable.¹⁶

Earlier in this chapter, we noted the importance of adopting a consultative and participatory approach to policy formulation. If this principle is fully embraced and practised, it becomes much easier for the various actors to accept their respective roles in implementing

the policy and thus raises significantly the likelihood that the objectives of the policy will be achieved. However, it is critical that the initiators of the policy – usually the State – fully appreciate that consultation and participation cannot be treated as light switches to be turned on and off at the whim or fancy of Government officials. Further, because of the integrated nature of social policy, a firm and irrevocable commitment to these twin principles is required if the legitimacy and integrity of any development policy is to be achieved and maintained.

The disposition adopted by state actors in the policy process is also a critical consideration. Once the policy process is set in train, it is highly advisable that Government officials assume the role of facilitators of the process, and limit their involvement to providing essential information on the main drivers of the policy; the resource limitations being experienced by the Government; and the broad expectations of the Government regarding the goals and objectives that the policy should achieve. Other principal tasks of Government in implementing social policy include:

- a) providing leadership;
- b) establishing effective public sector institutions with full accountability, and transparent decision-making;
- c) mainstreaming social issues and concerns in national strategies for sustainable development;
- d) promoting consultative and participatory decision-making in the policy design and implementation process;
- e) using appropriate legal and financial instruments to balance economic development priorities with impacts on social structures, livelihoods and the environment; and
- f) protecting the constitutional rights of the public (especially of the poor).

The role of civil society

Civil society organisations (CSOs) i.e. all non-state organisations such as the private sector and non-governmental organisations (NGOs) in which people come together to satisfy certain needs, pursue goals and take an active part in state affairs, help to fill a critical gap between citizens in the community and the State. Schmitt opines that CSOs are an essential element of social development, because they help to:

- convey the concerns of citizens to the state;
- ensure that the work of the Government brings about real improvement in the circumstances in which people live and promotes their interests;
- ensure that the bureaucratic system does not pursue its own interests, but works in the best interests of the citizens;
- preserve cultural values on which a functioning society is founded; and
- provide the stage on which the various ethnic, religious and cultural actors in society learn to develop understanding for one another and to live in harmony.¹⁷

Additionally, CSOs can play a key role in:

- a) monitoring the responses of government and the private sector to the demands of consumers;

- b) enabling the poor and other marginalised groups to determine their livelihoods and gain access to essential and appropriate services;
- c) disseminating information and knowledge within communities about new sustainable livelihood approaches;
- d) monitoring the impact of the policy through indicators and monitoring systems; and
- e) assessing the relevance and effectiveness of social development indicators.

The role of the private sector

The dynamism of the private sector is critical to accelerating the pace and deepening the impact of social development. Consequently, social policies should provide a more direct and involved role for the private sector in assisting in innovation and the management and expansion of existing social services provided by Government, through various approaches such as contracting-out, management concessions and direct investment. Social policy should require and encourage the private sector to adopt sound corporate governance practices based on deep corporate values and strong social responsibility which should include exemplary environmental stewardship. In some cases the private sector has taken a lead, especially in the technical development of environmental services and utilities and in the funding of innovation in social, health and education policies, programmes and research either directly or through linked charitable foundations. The principles of such traditional corporate social responsibility are now coming again into the headlines with shareholders holding boards of management to account for their performance in these fields, especially though private sector initiatives in environmental accounting.

The role of the citizen

In any policy process, the centrality of the citizen in helping to attain the objectives of the policy must be acknowledged and re-affirmed in the policy itself. The citizen must be seen as playing a proactive role in articulating his or her needs in relation to his/her livelihood priorities. This will help to inform decisions regarding the allocation of resources, as well as assist in improving livelihood prospects and reducing risks and uncertainties. The citizen is also expected to take full responsibility for arming themselves with appropriate information to guide decisions, whether at corporate level or at that of the individual or community, regarding personal and social development.

The role of the international development community

In recent times, the international development community has demonstrated a growing commitment to help developing countries achieve their minimum social development goals and objectives. The most recent example of this commitment is the Millennium Development Goals (MDGs) which have helped to provide a focus and context for international development assistance as well as a set of universally-accepted indicators of social development. The international community will be better able to contribute to the attainment of national development objectives that are presented in a clear and predictable environment in which co-ordinated interventions can be made and received. More specifically, the international development community should be invited to assist in:

- supporting good practice and providing guidance to the private and public sector on efficient and sustainable service provision;
- providing targeted financial and technical assistance;
- assisting the public sector to compile and disseminate accurate information about social services;
- supporting the institutions that provide training and education;
- encouraging the growth of the indigenous private sector; and
- sharing more effectively the existing knowledge that can contribute to meeting various human development challenges.

Monitoring and evaluating the impacts of social policy

Several social development indicators have emerged over the last two decades, reflecting the lack of consensus on a definition of social development. A full examination of these indicators is not possible here and so this section provides only a brief review of three of the more prominent indicators that have a bearing on the arguments and observations made in this chapter, namely the MDGs, the Human Development Index (HDI) and the Social Cohesion Indicators.

The Millennium Development Goals

The MDGs were adopted in 2000 by world leaders as a blueprint for building a better world in the 21st century. Responding to the world's major challenges and to calls from CSOs, the MDGs promote poverty reduction, education, maternal health, gender equality, and aim to combat child mortality, HIV/AIDS and other diseases. The MDGs also function as a set of universally accepted indicators of progress towards the attainment of the social development goals and targets described in Table 11.1 on the following page.

A 2006 Global Monitoring Report (GMR) prepared by the World Bank has revealed that while the world is still far from achieving the MDGs, they are helping to influence social policy as well as to provide an acceptable system of indicators for monitoring social development at the national and international level. In countries where the MDGs have been exceeded, new targets have been set and supporting policy interventions are being implemented. In other countries (especially in SIDS) the global goals and targets are being supplemented with others related to the specific issues of the BPOA and the Mauritius Strategy and its 19 priority thematic areas not adequately covered in the MDGs.

The Human Development Index (HDI)¹⁹

The HDI is a comparative measure of life expectancy, literacy, education and standard of living for countries worldwide. It is also a standard for measuring wellbeing, especially child welfare. It is used to determine whether a country is developed, developing or underdeveloped and also to measure the impact of economic policies on quality of life. The HDI measures the average achievements in a country in three basis dimensions of human development:

- a long and healthy life as measured by life expectancy at birth;
- knowledge as measured by the literacy rate (with two-thirds weight); and the

Table 11.1. Millennium Development Goals and targets¹⁸

Goals	Targets
1 Eradicate extreme poverty and hunger	T1 Reduce by half the proportion of people living on less than \$1 per day. T2 Reduce by half the proportion of people who suffer from hunger.
2 Achieve universal primary education	T3 Ensure that all boys and girls complete a full course of primary schooling.
3 Promote gender equality and empower women	T4 Eliminate gender disparity in primary and secondary education at all levels by 2015.
4 Reduce child mortality	T5 Reduce by two-thirds the mortality rate among children under five.
5 Improve maternal health	T6 Reduce by three-quarters the maternal mortality ratio.
6 Combat HIV/AIDS, malaria and other diseases	T7 Halt/reverse the spread of HI/AIDS. T8 Halt/reverse the spread of malaria and other diseases.
7 Ensure environmental sustainability	T9 Integrate the principles of sustainable development into country policies and programmes; reverse loss of environmental resources. T10 Reduce by half the proportion of people without sustainable access to safe drinking water. T11 Achieve significant improvement in the lives of at least 100 million slum dwellers by 2020.
8 Develop a global partnership for development	T12 Develop further an open, predictable, non-discriminatory trading system. T13 Address the special needs of the LDCs. T14 Address the special needs of land-locked countries and SIDS. T15 Deal with the debt problems of developing countries. T16 In co-operation with developing countries, develop and implement strategies for decent and productive work for youth. T17 In co-operation with pharmaceutical companies, provide access to affordable essential drugs in developing countries. T18 In co-operation with the private sector, make available the benefits of new technologies, especially information and communications.

combined primary, secondary and tertiary gross enrolment ratio (with one-third weight); and

- a decent standard of living as measured by the log of gross domestic product (GDP) per capita at purchasing power parity (in US\$).

Statistics on life expectancy, literacy, enrolment and achievement levels and GDP per capita are already standard features of Statistics Bureaux in many countries, leading some developmentalists to question the true value-added of the HDI. For they are not all included in MDGs. It has been argued that the cross-country comparison of human development which the HDI is meant to provide is of limited value given the indeterminable number of causal factors involved at the national level and the background structural difference including that of employment, housing, infrastructure, food security, equity, good governance, and social and environmental conditions.

Indicators of social cohesion

As was noted earlier in this chapter, the evolution of social cohesion indicators has been driven by the need to capture progress towards the creation of a community of shared values, shared challenges and equal opportunities, based on a sense of trust, hope and reciprocity. The European System of Social Indicators (under construction) has so far identified the need for indicators for the following 'life domains': population, household and family, housing, education and vocational training, labour market and working conditions, health, income, standard of living and consumption patterns. The CCSD has identified five major economic conditions (and accompanying indicators) that impact socially cohesive activity as follows:

- a) distribution of income;
- b) income polarisation;
- c) poverty;
- d) employment; and
- e) mobility.

A common concern in all the indicators is to measure the direct and indirect effect of economic conditions on the ability of individuals to earn an adequate income and the importance of addressing disparities in income. The concern is well placed as theoretically, income disparities suggests that buying power is not in the hands of the majority to induce the production of the quantities and types of goods countries need for survival²⁰.

Conclusion

Social development is both a critical contributor to and a direct beneficiary of sustained economic growth and environmental protection. Consequently, development planners and, in particular, social planners are encouraged to adopt an integrated approach to the management of the social policy cycle, taking full account of the redistribution, protection, production, reproduction, population and cohesion goals of social policies and programmes within the economic, social and environmental spheres.

References

- Briguglio, L (2004). *Economic Vulnerability and Resilience: Concepts and Measurements in Economic Vulnerability and Resilience of Small States*. In Briguglio and Kisanga (eds). University of Malta, Small States Institute, Malta.
- CCSD (2000). *Social Cohesion in Canada: Possible Indicators*. Canada Council on Social Development, November 2002. Reference SRA 542.
- Council of Europe (COE) (2003). *Social Cohesion: Developments – Integration of people with disabilities – Special issue No. 3*, May 2003
http://www.coe.int/t/e/Social_Cohesion
- DFID (2007). *Draft Regional Assistance Plan*. Department for International Development – Barbados.
- ECLAC. *Review of the Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States in the Caribbean sub-region*. ECLAC Sub-regional Headquarters for the Caribbean – Trinidad and Tobago.
- Muller, R and W Schumann (2003). *Teaching Politics*. D@dalos. UNESCO.
- OECS (2004). *The OECS: The Challenges to Building Strength Through Resilience*. OECS Secretariat, December 2004. OECS Secretariat – Saint Lucia.
- Rodriguez, E (2003). *Latin American Youth: Strategic Actors of Development in: Social Development in Latin America: Issues for Public Policy*. World Bank. Washington DC.
- Schmitt, K (2007). *Social Development*. Novartis Foundation for Social Development.
- Springer Cletus (2006). 'Economic Resilience and Social Cohesion: The Case of the Small Island States in the Southern Caribbean' in *Building the Economic Resilience of Small States* edited by Eliawony J Kisanga, Gordon Cordina and Lino Briguglio. London: Commonwealth Secretariat.
- UNRISD (2006). *Transformative Social Policy: Lessons from UNRISD Research: Research and Policy Brief 5*. United Nations Research Institute for Social Development. Geneva, Switzerland.
- World Bank (1993). *Towards a New Housing Policy Agenda: The Instruments of an Enabling Housing Policy Agenda*. World Bank. Washington DC.
- World Bank (2002). *A Sourcebook for Poverty Reduction Strategies*. J Klugman (ed). World Bank. Washington, DC.
- World Bank (2003). *Social Development in Latin America: Issues for Public Policy*. Washington DC.
- World Bank (2005). *Pro-poor Growth in the 1990s: Lessons and Insights from 14 Countries*. World Bank. Washington DC.
- World Bank (2006). *Annual Review of Development Effectiveness*. The World Bank/Independent Evaluation Group. Washington DC.
- World Bank and International Monetary Fund (2006). *Global Monitoring Report on the Millennium Development Goals (MDGs): Strengthening Mutual Accountability – Aid, Trade and Governance*. Washington DC: World Bank and the International Monetary Fund.
- WCED (1987). *The Bruntland Report: Our Common Future*. Oxford University Press.
- World Health Organization (1946). WHO definition of Health, Preamble to the

Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19–22 June 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.

Notes

- 1 The Conference produced a Declaration on the Human Environment, an Action Plan for the Human Environment and a Resolution on Institutional and Financial Arrangements. The Action Plan contained 109 recommendations spanning six broad issues: human settlements, natural resources management, pollution of international significance, educational and social aspects of development and the environment, and international organisations.
- 2 These events include: Social Development (Copenhagen, 1985); Population and Development (Cairo, 1994); Human Settlements (Istanbul, 1996); Environment and Development (Rio, 1992); The Millennium Summit, (New York, 2000); World Summit on Sustainable Development (Johannesburg, 2002) and the International Meeting to Review the Implementation of the Barbados Programme of Action (Mauritius 2005).
- 3 See Briguglio, 2004: *Economic Vulnerability and Resilience: Concepts and Measurements*.
- 4 World Commission on Environment and Development: *The Bruntland Report*, Oxford University Press, 1987.
- 5 After the UN Research Institute for Social Development (UNRISD) Research and Policy Brief 5.
- 6 UNRISD, op cit; also see Springer, C, (2006) *Economic Resilience and Social Cohesion: The Case of Small Island States in the Eastern Caribbean*.
- 7 Website of Council of Europe: http://www.coe.int/T/E/social_cohesion/social_policies
- 8 Social Cohesion Research Work Plan March 1997, Policy Research Sub-Committee on Social Cohesion of Canada.
- 9 From *Teaching Politics*, Ranger Muller and Professor Dr Wolfgang Schumann. (www.dadalos.org/politik)
- 10 <http://www.worldbank.org.ieg>
- 11 *Towards a New Housing Policy Agenda: The Instruments of an Enabling Housing Policy Agenda*. World Bank, 1993.
- 12 Klugman, Jenny (2001). *A Sourcebook for Poverty Reduction Strategies*.
- 13 *Pro-poor Growth in the 1990s: Lessons and Insights from 14 Countries*. World Bank, et al., 2005.
- 14 Department for International Development – Draft Regional Assistance Plan for the Caribbean, March 2007.
- 15 Rodríguez, Ernesto (2003). *Latin American Youth: Strategic Actors of Development in Social Development in Latin America: Issues for Public Policy*.
- 16 Karin Schmitt, Novartis Foundation for Sustainable Development. http://foundation.novartis.com/en/publications/sustainable_development/social_development.htm
- 17 op cit.
- 18 Source: http://www.undp.org/mdg/tracking_targetlist.shtml
- 19 http://en.wikipedia.org/wiki/Human_Development_Index
- 20 Basic needs may be interpreted in several different ways: as minimum specified quantities of such things as food, clothing, shelter, water, sanitation; as the satisfaction of consumers' wants as perceived by the consumers themselves; or as embracing individual and group participation in the formulation and implementation of projects and in some cases political mobilisation.

Rolph Antoine Payet

A review of environmental impact assessment and sustainable development in small island states

Introduction

Small islands states (SIDS) spread across the planet form a distinctive group which share many characteristics and whose vulnerability and special situation has been recognised by the international community (Payet, 2007). The sustainability of SIDS in particular drew the attention of the international community in 1989 when the United Nations General Assembly (UNGA) adopted a resolution (GA 44/206) on SIDS, which later became enshrined in Agenda 21, Chapter 17G (UN, 1992). This was further recognised by the 1994 Barbados Programme of Action for Small Island States (BPOA) and the 2005 Mauritius International Meeting of the Small Island States (Koonjul, 2004; UN, 2005)

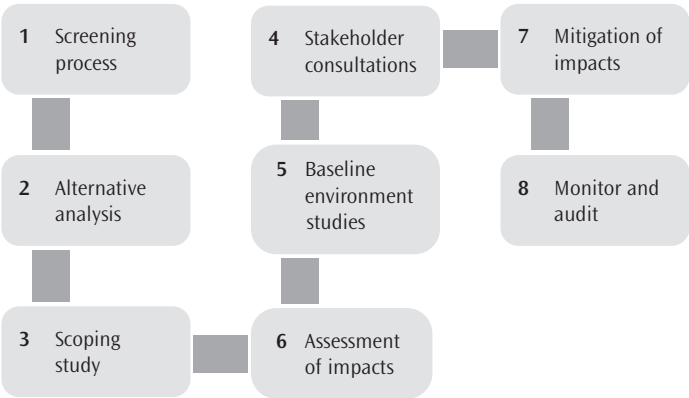
However, despite this global consensus on sustainable development its translation into practice has not been so straight forward. Efforts by the United Nations have been driven mainly by three global environmental conventions and a suite of tools, some of which are referred to in Agenda 21, to ensure that the environmental and social consequences of development are addressed (UN/DESA/DSD, 1999, Strachan et al., 2005). One tool that has become synonymous with the management of environment and development in many countries is the environmental impact assessment (EIA) process. Simply put, the EIA process ensures, through a legal and decision-making framework, that development projects such as roads, housing estates, factories, hotels and other types of development have the minimum impact on the environment during the entire lifetime of the project – that is design, construction, use, and eventual demolition (Lee & George, 2000). In fact, the EIA process is acknowledged as an important tool in the implementation of sustainable development especially for decision-making and planning at the national level (Jacobs & Sadler, 1989). Schrage (1999) further notes that EIA brings together the precautionary principle and the principle of preventing environmental damage, and ensures public participation.

Whilst it seeks to minimise the impacts of development on livelihoods and the environment, the EIA process also seeks to ensure the maintenance of key ecosystem functions and services, and achieve net benefits for society. A second consideration is the potential for trade-offs to ensure that the goals of sustainability – environment, economic and social – are met at some optimum level (Wood, 1995). The short-comings of the free market and of centrally planned economies in accounting for the real economic value of ecosystems have led to the degradation of the environment, the destruction of habitats, pollution and over-exploitation of resource. The use of ecosystem valuation has been shown to significantly contribute to improved decision-making; however, its use remains isolated in impact assess-

ments (Slootweg & van Beukering, 2008). The EIA process needs to be grounded in clear scientific environmental and ecological economic analyses so that it improves management and decision-making and addresses equity concerns. The EIA process is also relevant in the further engagement of the local community and affected parties which in turn can significantly influence project outcomes.

Kennedy (1998) argues that EIA is both a science and an art. The EIA process consists of a number of steps which vary from country to country, as shown in Figure 12.1. Detailed descriptions of these steps can be found in the UNEP Environment Impact Assessment Training Resource Manual (UNEP, 2002).

Figure 12.1. Typical EIA Process



A study of EIA effectiveness at the global level by Sadler (1996) concluded that for EIA to be effective it has to: (i) meet international requirements and practice; (ii) provide decision-makers and project proponents with the environmental and social consequences of their actions and activities; and (iii) identify and evaluate alternative actions or activities and propose mitigation actions for activities which should be implemented to avoid irreversible loss or damage to the environment and society. Although approaches vary from country to country, the end result of the EIA process is to make provisions for the mandatory monitoring and implementation of those decisions. In effect, the EIA process establishes a baseline environmental analysis, as well as a transparent framework from which project environmental performance may be measured over the lifetime of the project.

To meet the requirements of a variety of situations and concerns, other types of assessments have emerged as specialised elements of the EIA process which are summarised in Table 12.1. One is the Strategic Environmental Assessment process or SEA. SEA considers the environmental and social impacts of policies, plans and programmes. It is considered to be a more encompassing tool which overcomes the limitations of the EIA process in meeting sustainable development goals at the macro or national level (Dalal-Clayton and Sadler, 2005).

This chapter provides an overview of EIA in small island states, and examines how its implementation can contribute to mainstreaming sustainable development and bringing

Table 12.1. Specialised elements of the EIA method

Assessment types
Climate Impact Assessment
Demographic Impact Assessment
Development Impact Assessment
Ecological Impact Assessment
Economic and Fiscal Impact Assessment (EFIA)
Environmental Health Impact Analysis (EHIA)
Health Impact Assessment (HIA)
Disaster Risk Assessment
Risk Assessment
Social Impact Assessment
Technology Assessment
Sustainability Impact Assessment (of trade measures)

about better environmental policies and governance. Various elements of the EIA process are analysed within the context of several examples from small island states in the Pacific (Fiji, Papua New Guinea), Indian Ocean (Mauritius, Seychelles) and the Caribbean (Jamaica).

The international and regional context of Environmental Impact Assessment

Developed in the US in the early 1970s, and adopted internationally in a number of non-binding agreements, the EIA process is now a legally binding requirement in more than 100 countries (Donnelly et al., 1998). The EIA is the subject of a specific international convention – the Convention on Environment Impact Assessment in a Transboundary Context. In its preamble the Convention, also known as *Espoo 1991 EIA Convention*, states that it is:

Aware of the relationship between economic activities and their environmental consequences;

Affirms the need to ensure environmentally sound and sustainable development.

Schrage (1999) provides an in-depth discussion on the transboundary implications of the EIA process and the national requirements to minimise environmental impacts beyond national borders. This is the first multilateral treaty that specifies the procedural rights, the duties of parties and the procedures which are today standard components of national EIA legislation.

Early consideration of the EIA process and sustainable development can be found in Principles 17 and 19 of the 1992 Rio Declaration on Environment and Development.

Principle 17: Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

Principle 19: States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith.

Agenda 21, in particular Chapter 8, which calls for the integration of environment and development in decision-making, promotes the use of EIA and other tools for sustainable development.

The Barbados Programme of Action (BPOA) makes explicit reference to EIA in the following articles:

34. A. (vii) Increase attention to national physical planning in both urban and rural environments, focusing on training to strengthen physical planning offices, including the use of environmental impact assessments and other decision-making tools.

40. A. (ii) ... requiring environmental impact assessments for all tourism projects ...;

49. A. (vi) ... including specific legislation for appropriate environmental impact assessment for both public and private sector development.

Other texts in the BPOA refer to the training, legal and institutional needs of Small Island States to implement EIA at the national and regional levels. The Mauritius Statement (arising from the 2005 Mauritius International Meeting of the Small island States) emphasises certain specific aspects of EIA and introduces the concept of the social impact assessment;

VI.38 ... These strategies should include environmental impact assessments and identify the necessary policy changes and capacity-building needs within the framework of the three pillars of sustainable development ...

VI.45 (d) The evaluation of mineral sector projects, including using environmental and social impact assessment to identify opportunities and risks and ensuring compliance with mitigatory and ameliorative measures where impacts are negative, as well as dealing with mining tenement issues and raising land 'owner' awareness and participation.

The scope and need for the EIA process in small island states is thus clearly reflected in international instruments and is well established as an international framework for addressing environmental issues. For example in the International Court of Justice (ICJ) case of *New Zealand vs France* (Elworthy & Holder, 1995) the ICJ ruled that 'it is unlawful for France to conduct such nuclear tests (on the Atolls of Mururoa and Fangataufa) before it has undertaken an Environment Impact Assessment according to acceptable international standards ...'. This ruling may have well set the precedent for strengthening the EIA process in international law.

A number of international agencies have also galvanised the development and implementation of EIAs as a project development tool. Since 1974, the Organisation for Economic Co-operation and Development (OECD) has been urging member states to adopt EIA legis-

lation and has tied such measures with the granting of aid (Wathern, 1988). The European Union (EIA Directive 85/3337/EEC and subsequent amendments) requires the European Community to subject certain development projects to an environmental impact assessment as part of the planning permission process. Consequently, all overseas territories of the European Union, which are mostly islands, are also subject to this directive. The EU, in some cases, has mandated the need for EIAs for projects under its agreement within the African-Caribbean-Pacific (ACP) group of countries

In 1989, the World Bank also introduced measures for EIA (World Bank, 1991), and EIA is now one of the ten Environmental and social Safeguard Policies of the Bank (World Bank, 1999). The Asian Development Bank, which also provides development loans and assistance to a number of SIDS (e.g. Maldives, Cook islands, Fiji, Kiribati, Micronesia, Palau, Samoa and Tuvalu) adopted its environmental policy in 2002, and published detailed guidelines for EIA in project development (ADB, 2003). For example in Samoa, ADB has funded a number of integrated water and sanitation projects which required EIAs (Samoa, 2003). The Caribbean Development Bank (CDB), which provide loans to and implements projects in a number of Caribbean SIDS (e.g., Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Haiti, Jamaica, St Kitts and Nevis, St Lucia, and Trinidad and Tobago), adopted an environment policy in 1993 which was followed by environment guidelines in 1995 (CDB, 1995). The CDB's environment guidelines provide for environmental assessment requirements throughout the project cycle, including environmental screening and classification categories and associated illustrative lists of projects and sample formats for environmental screening memorandum, initial environmental evaluation, environmental impact assessment summaries and environmental audit reports. The UNEP Regional Seas Programme, which includes island states from the Caribbean (Cartagena Convention), the Indian Ocean (Nairobi Convention) and the Pacific (Apia Convention) includes general language on environmental impact assessment.

At the global and regional levels, especially where project and investment funding is concerned, it seems that the EIA process is well defined in bilateral and development bank policies. However, it is not clear whether such EIAs play a definitive role in project decision-making and whether monitoring of EIA implementation is undertaken during and after project implementation.

Many SIDS are party to a number of global multilateral environment agreements which specify approaches to EIA. For example article 14 of the Convention on Biological Diversity entitled 'Impact Assessment and Minimizing Adverse Impacts' calls each party to introduce procedures for EIAs and implement SEA for programmes and policies (CBD, 1992).

Article 206 of the United Nations Convention on the Law of the Sea (UNCLOS, 1982) also states that 'when States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in Article 205'.

Legal and institutional context of EIA in SIDS

Prior to the development of EIA legislation in SIDS, environmental considerations were limited to planning issues such as wastewater management, drainage, development density, noise control, landscaping and building codes. In some SIDS, such as Seychelles, these requirements were prescribed into Town and Country Planning legislation but lacked specific environmental considerations such as integrated coastal management and development within sensitive areas. In addition, many physical development plans, such as the first Barbados Physical Development Plan of 1970, focused on orderly development of land with little reference to environmental issues and was executed without proper public consultations (Barbados National Report, 2004). However, it was soon recognised that in order to develop in a sustainable way, environmental and social concerns had to be integrated. Consequently, the government of Barbados established, in the early 1980s, institutions responsible for the environment and conservation and developed appropriate legislation to address those issues.

A survey of the regulatory framework for EIA in SIDS revealed that the majority have a national framework for EIA (see Table 12.2). For example in the Cook Islands the EIA legal framework is embedded in the Environment Act of 2003, whereas in Seychelles, the EIA framework is established under the 1996 Environment Protection Act (Payet, 2003). Tonga enacted a specific Environment Impact Assessment Act of 2003 and in Comoros the provisions for EIA are enshrined in a Presidential decree (Comoros National Report, 2004). Singapore has no legislation for EIA and EIA are prescribed at the discretion of the Ministry of the Environment (Tan, 1998).

The survey also revealed that the EIA legislative frameworks indicated in Table 12.2 had the basic requirements for EIA best-practice, as recommended by Sadler (1996). However, there were significant challenges in their implementation and limitations in meeting sustainable development goals. In general, these laws prescribe the requirements for the EIA, the criteria for projects requiring EIA (for the screening process), the EIA process including the stakeholder consultation components, as well as provisions for administering the EIA process.

In principle, EIAs should be applied to those projects that are likely to have significant effects on the environment (Wathern, 1998). However, in the context of small islands, entire islands are deemed sensitive to the environment. Consequently various approaches to screening projects have emerged, which differ from those used in larger countries. In Seychelles, the EIA screening process is first subjected to two classes of EIA, an EIA Class I which is a complete typical EIA and an EIA Class II which is rapid assessment-based EIA for very small projects such as individual houses (Payet, 2003). An EIA Class II is prescribed in situations where a small development project is located on the coastal plateau, hilly slopes and close to sensitive habitats.

Typically, the next level of screening is the listing of a number of activities that would be subject to an EIA. In Mauritius, for example, the list consists of over 50 activities ranging from manufacturing to hotel developments. Further, screening criteria entails specification of the magnitude of the activity and its resulting impact. Jamaica specifies that EIAs

are required for housing projects of 10 houses or more, office complexes above 5,000 m² and hotel complexes of more than 12 rooms (Reeson, 2000). Other screening criteria, as is the case in Seychelles, include developments within or close to sensitive areas such as beach dunes, wetlands and forests, historical sites, water catchments and natural risk areas (Payet, 2003).

An interesting approach used in Fiji requires that developers subscribe to a 'user pays' system involving the payment of an environment bond for mitigation purposes for mining projects (McLeod, 2000). This is a widely accepted approach in many developed countries which implement the 'polluter pays principle' which allows the Government to rehabilitate an area if a project is abandoned. It is also seen as an incentive for industry to take appropriate mitigation measures during the lifetime of their operations. Since 1998, all exploration tenements in Fiji have been subject to a bond level of 20 per cent of the exploration budget.

In many SIDS the regulatory authority for implementation of the EIA legislation is the government agency responsible for environment, although there are notable exceptions. In Barbados, the EIA legislation is administered by the Town and Country Planning Office, which is responsible for co-ordinating the EIA process as well as the planning and development aspects of the project (Anon., 2000). In the case of Seychelles, government strives to enable trade-offs by separating the development and environment decision-making. In the case of non-agreement between the two authorities, the matter is referred to the Cabinet of Ministers for a final decision (Payet, 2003). Jamaica went as far as modifying its Town and Country Planning Act so that no approval can be granted for any development without being approved by the environment agency (Reeson, 2000). One advantage is that developers have to satisfy the environmental authorities before submitting their planning applications to the development authority. This enables the consideration of the project from an environmental perspective before determining its planning implications. The disadvantage is that the process can sometimes exceed six months. A similar situation arose in Trinidad and Tobago, where foreign investors complained about the perceived lack of delineation of authority for final investment approvals between the various agencies. In response, the authorities introduced the Certificate of Environmental Clearance Rules in 2001 and placed all environment approvals under one authority, the Environment Management Authority (Trinidad & Tobago National Report, 2004).

One of the more critical components in the EIA process is scoping (Bowers Marriott, 1997). The scoping process enables the EIA to focus on the most significant impacts that may arise as a result of the project and involves the public to ensure that issues important to the public are also considered in the EIA. However, only a handful of EIA laws in SIDS (e.g. the Federated States of Micronesia Environment Protection Act of 2001) make any explicit mention of scoping. Morgan (1999) argues that such failure to incorporate the scoping phase in the legislation leads to various interpretations and standards for the scoping process, and can result in voluminous but poorly focused impact assessment documents. A summary of the problems in EIA caused by poor scoping and vice versa is explored in detail in Morgan (1999).

Table 12.2. Summary of EIA structure in SIDS

SIDS	EIA legal provision (Year)	EIA consultative process	Main sector
Bahrain	✓ Bahrain Environmental Code of Conduct		Industrial
Fiji	✓ (2007) Environment Management (EIA) Regulations	✓	Tourism
Samoa	✓ (1998) Lands, Surveys and Environment (EIA) Regulations	✓	Tourism
Seychelles	✓ (1996) Environment Impact Assessment Regulations	✓	Tourism
Mauritius	✓ (1993) Environment Protection Act	✓	Tourism
Cook Islands	✓ (2003) Environment Act	✓	Tourism
Comoros	✓ Presidential Decree		
Tonga	✓ (2003) Environment Impact Assessment Act	✓	Land use changes
Antigua & Barbuda	✓		
Papua New Guinea	✓	✓	Mining
Jamaica	✓ (1991) Natural Resources Conservation Authority	✓	Tourism and land use changes
Trinidad & Tobago	✓ (2001) Certificate of Environmental Clearance		
Dominica			Tourism
Palau	✓ Environment Quality Protection Board Regulations		Tourism
Barbados	✓	✓	Tourism
St Lucia	✓ (2001)	✓	Tourism
Solomon Islands	✓ (1998) The Environment Act	✓	

Source: National Reports on Progress on Barbados Plan of Action, retrieved from: www.sidsnet.org

In situations where the EIA mandate rests with the agency responsible for the environment, various institutional mechanisms are in place to ensure timely approval of EIA, including EIA Appraisal Committee (Seychelles); Interagency meetings (Barbados); EIA Committee (Tonga); or by the relevant technical unit, e.g. coastal zone, wildlife protection (Jamaica). In most cases, once the EIA review has been completed, recommendations are sent to the responsible government minister for a decision.

Public consultation is a necessary process in the implementation of EIA (Philip, 2001). The Cook Islands Environment Act of 2003 prescribes the manner in which the public are to be consulted with particular emphasis on accessibility of EIA information, availability of EIA information for review, and procedures for the receipt and processing of comments from the public. The Seychelles EIA regulations even prescribe the frequency of public advertisements for review of the EIA. To respond to comments from the public, the Seychelles authorities recently prescribed the hosting of public meetings at community level to present the project during the scoping process, and publicity on national television and a simplified version of the EIA to facilitate public review and comments. Similarly, in Guyana, public participation occurs at three key stages of the EIA process, namely the scoping, the preparation of the EIA, and the EIA review (Bynoe, 2006). The Belize Environment Impact Assessment (amendment) Regulations 2007 even includes a definition of public consultation:

Section 2: 'Public Consultation for the purpose of this regulation means a two-way flow of information from the project proponents and the EIA team, to the general public and vice versa, with the objective of deliberating together, allowing the general public, especially local communities close to the project site, opportunities to express their opinions, advise or point of view, while simultaneously ensuring that the project proponents or the EIA team provide details and explanations of the proposed undertaking, project, program or activity for which an Environmental Impact Assessment is being prepared. This process should be open and accessible to the public.'

The Belize regulation and others (e.g. Federated States of Micronesia) also provide for a formal public hearing to enable the public to provide comments on the EIA. Despite these efforts the participation of the public is still limited and constrained by the technical nature of an EIA.

Sustainable development issues in the implementation of EIA in SIDS

Small island states face a number of challenges in the implementation of EIA. A review of SIDS National Reports to the Review of the BPOA provided sufficient evidence to show that EIA implementation in SIDS needs to be strengthened in terms of legal, institutional, capacity, monitoring and implementation requirements.

Policy and procedural issues

The public and investors for the most part perceive EIAs as an additional layer and cost in government bureaucracy (Payet, 2003). Awareness of the importance of the EIA as a means of facilitating planning, addressing potential hurdles and public issues, reducing project risk and ensuring that key local issues that are often not immediately evident to investors are addressed, establishes EIAs as end-products as well as processes which are key to achieving sustainable development. In many SIDS the screening process is still subject to the discretion of the government, with no clear guidance on which criteria will be used to select those projects to be subject to an EIA. This approach is to provide the government with an opportunity to consider all projects in light of their potential impacts. In some cases, certain government projects that would have normally required an EIA are exempt,

for example government housing projects. This naturally causes mistrust in the system and undermines the potential support required to establish a respected national EIA mechanism.

Samoa has adopted an integrated approach which incorporates land use planning, coastal zone management, tourism projects, energy and wastes, land degradation and proper management of eco-attractions into the EIA process (Samoa National Report, 2004). Such adaptations to the EIA process require an adequate institutional and research framework to ensure that the EIA process takes into account current scientific knowledge and the analytical requirements such an integrated assessment would entail. Increasingly, integrated assessments of climate change impacts are becoming a necessity for small island states and linkages to development are primordial. Thus, for lack of appropriate mechanisms, the EIA process is being extended to take into consideration broader sustainable development issues as well as emerging global crises such as climate change and the energy crisis. Tuvalu has initiated EIA procedures to encompass disaster risk reduction arising from severe extreme events and sea level rise, and uses EIA outcomes to influence policy and development on the coast (Tuvalu National Report, 2004). The need to integrate the EIA process into the social, economic and environmental plans and policies was seen as a priority in Antigua & Barbuda (National Report, 2004).

One often ignored step in the EIA process is the consideration of alternatives (Steinemann, 2001). This area of analysis requires a consideration of the cost-benefit of each option as well as significant impacts arising from the alternative. A review of Jamaica's EIA process conducted in 1997 revealed that analyses of alternatives are non-existent or weak (Reeson, 2000). Similarly in Mauritius, Ramjeawon & Beedassy (2004) are of the view that 'alternatives, including the option of "no development" are generally not addressed'.

The lack of baseline data due to lack of resources for sustained research and environmental monitoring seriously undermines the potential for the EIA process to contribute to sustainable development (Porter & Fittipaldi, 1998). In the same manner, analysis and publication of research when done is not easily achievable for many SIDS. Funding for basic climate, terrestrial and ocean observing systems, as well as monitoring and evaluation mechanisms for social development are not available or are fragmented (UNFCCC, 2007). In many instances there is little remote sensing coverage and access to the data, and there is insufficient quantitative and qualitative research capacity to analyse socio-economic dynamics in general and for social impact assessments in particular.

Capacity and institutional issues

There are serious capacity constraints in SIDS that affect the implementation of the EIA process. These capacity issues stem from a lack of technical experts to undertake EIA studies, engage stakeholders, conduct EIA reviews and generally to ensure the EIA is up to standard and meets the minimum international best-practice (Payet, 2003; Ramjeawon & Beedassy, 2004). For example, the capacity to handle various types of EIAs in Seychelles is seriously constrained by lack of staff in the Environment Department. Despite efforts to recruit, many move to the private sector for better remuneration. Furthermore, lack of in-house capacity affects the monitoring and auditing of the EIA process. Similarly preparation

of an EIA is often sub-standard and causes enormous delays in the planning approval process, as reports move back and forth between EIA consultants and reviewers. A quality assurance framework is lacking in all of the EIA cases evaluated in SIDS.

To address capacity weaknesses, the South Pacific Environment Programme (SPREP) has organised a number of EIA awareness and training programmes for the Pacific islands. Similarly in the Western Indian Ocean, the Global Environment Facility funded the Western Indian Ocean Land-based Sources of Pollution project and organised a series of EIA and SEA training at regional level. However, EIA also requires a certain amount of field experience, multidisciplinary skills and a good foundation in environmental science. In St Kitts and Nevis the problem is acute as the government finds it difficult to retain well-qualified and trained individuals in the environment management sector (St Kitts and Nevis National Report, 2004). A number of online resources are currently available (see page 223) which could be used to support capacity building at the local level.

Institutional issues are highlighted in the particular case of St Lucia where the responsibility for land management is currently overseen by a number of governmental, parastatals and even project-oriented setups (St Lucia National Report, 2004). Consequently, there is considerable overlap of responsibilities, lack of clarity in who implements which laws and EIAs are not routinely undertaken as part of development applications.

EIA implementation in practice

A lack of follow-up and monitoring of the implementation of the EIA management plan defeats the entire purpose of an EIA, which is meant to predict and mitigate the impacts of a particular activity. There are various approaches and methods for monitoring and auditing EIA (Bisset & Tomlinson, 1988), however implementation of these measures presents a challenge to government authorities in SIDS, especially when the number of ongoing projects outstrips available resources. Hence, the significant benefits and contributions to sustainable development arising from the continuous assessment of the impacts are not integrated within the overall EIA process (Shepherd, 1998). The EIA process in Jamaica includes the preparation of the management plan, which includes the mitigation actions and the monitoring programme. A regulatory and compliance unit is responsible in co-operation with local government authorities to monitor the implementation of the impact mitigation measures and compliance to the conditions of the planning approval. Reeson (2000) is of the view that monitoring the implementation of those mitigation measures and the planning conditions are poor. Ramjeawon & Beedassy (2004) and Turnbull (2002) identified similar weaknesses in the monitoring of mitigation measures in EIA implementation in Mauritius and Fiji, respectively.

The EIA process is also constrained by the nature of land ownership in small islands. In the Cook Islands, whilst the Land Use Act provides for land zoning, the land tenure system of the Cook Islands does not conform to zoning as land use rights lie with the individual landowning families (Cook Islands National Report, 2004).

Social Impact Assessment and Strategic Impact Assessment

Glasson (1999) argues that EIA should cover an assessment of the social, economic and environmental impacts of projects. This approach emphasises the integrated nature of development and the fact that social impacts cannot be treated in isolation of economic and environmental impacts or vice versa. However, in practice, both social and economic impact assessments are not adequately addressed in EIA due to the lack of sufficient expertise in the EIA team.

Social Impact Assessments (SIA) and Strategic Environment Assessments (SEA) are not legislated in the majority of SIDS. An SIA analyses the consequences of projects on human populations in terms of their livelihood, general well-being and societal needs, which includes cultural issues (Vanclay & Bronstein, 1995). In many SIDS, the social impact is considered part of the EIA process and thus the SIA becomes limited in scope and application.

On the other hand, the SEA is a relatively new concept in SIDS. The link between EIA and SEA is that the latter process can significantly streamline and strengthen the project EIA process and thus follow similar steps, including screening, scoping, impact assessment, and monitoring (Wood, 2003). This is especially significant in small islands where land allocation, habitat encroachment and natural resource constraints are very closely linked. One of the key constraints to the implementation of SEA in SIDS is capacity, which is further compounded by a lack of capacity to properly implement the existing EIA process.

However, there are numerous efforts aimed at introducing SEA in several SIDS. As part of a regional project to develop a regional environment strategy, the World Wide Fund for Nature (WWF) partnered with the Asian Development Bank to undertake an SEA of the Fiji Tourism Development Plan (Levett & McNally, 2003). The SEA was undertaken to determine whether the tourism development plan was sustainable through a consideration of the likely environmental and social impacts of the plan. The study concluded that (i) a precautionary approach should be adopted to tourism development and (ii) complete implementation of the EIA process is a prerequisite for the plan to be sustainable.

An important consideration which is often not adequately addressed in the EIA process is the cumulative impacts of the development as well as the carrying capacity or absorptive capacity of the surrounding environment or resource (Bonnell et al., 2000). The concept of environmental limits and thresholds needs to be further elaborated in EIAs, as these are important contributors to sustainability. The Precautionary Principle is considered best practice for establishing 'safety margins' based upon critical loads or environmental pressure so that ecosystem function and services can be maintained and even enhanced in the long-term. Managing uncertainty is also an important consideration in the implementation of EIA (Glasson, 1999). However, various tools have been developed to minimise uncertainty or address uncertainty within the EIA context (Wood, 2005).

Mitigation and compensation mechanisms

Prevention of environmental degradation and mechanisms to ensure restoration of degraded habitats, while enshrined in EIA documents, are ineffective without an adequate

auditing and compensation mechanism (Sadler, 1996). The application of the 'Polluter Pays Principle' is an important sustainable development concept rarely integrated within the EIA process. The bonding system in Fiji was given as an example where government requests the deposit of a bond in case of default by the company during project decommissioning. However, this approach only caters for the final remediation for the site, post-EIA process, rather than considering the management of impacts during the construction and operating phases of the development project. Therefore, to ensure sustainability the EIA process must adequately cover the temporal and spatial dimensions of impact assessment.

In Papua New Guinea (PNG), even where EIA procedures are in place, the impacts of ongoing mining projects are routinely observed. The dumping and disposal of chemicals and other mining wastes in the river systems causes further damage to communities downstream, an issue often not considered in EIAs. Consumption of contaminated fish downstream leads to health problems which can only be compensated if the community takes the company to court and provided they can prove a direct connection between the pollutant source and the impact on their health (PNG National Report). It is therefore critical that the EIA process should be able to address those issues in a proactive manner, at all times ensuring that the impacts, whether downstream or in the immediate locality, are minimised (World Bank, 2008). To make the company liable for those short-comings, post-EIA, the PNG government has established a Mining and Sustainable Development Programme and Mine Closure policies to reduce the negative impacts and at the same time enable contributions to the sustainable development of affected areas (Perkins, 2007). One such programme is the BHP Billiton's exit agreement which allocates two-thirds of the receipts of its dividends to a long-term fund for use after mine closure and one third towards supporting current sustainability projects such as poverty alleviation through microfinance, renewable energy, forestry and water projects. An independent company (PNG Sustainable Program Ltd, www.pngsdp.com) based in Singapore manages the funds within a low-risk investment framework. At the end of 2005, the PNG SDP had US\$175.5 million in its Long Term Fund (for post-mine-closure activities) and US\$81.8 million in its Development Fund (for pre-mine-closure).

A similar approach is being adopted in Seychelles to ensure that tourism development contributes to the restoration and conservation of the country's natural capital (Payet, 2006). The Alphonse Foundation, set up to manage Alphonse Atoll, is an independent organisation funded by the Alphonse Resort and Hotel to manage conservation on the Atoll. The Island Conservation Society, an NGO, has the management contract to ensure conservation activities contribute to sustainable development at the island level. Since the island has no permanent residents, the funds are used for conservation and restoration of habitats exclusively. In contrast to the case of PNG, the Alphonse Foundation is an outcome of the EIA process which prescribed that aside from the mitigating measures to be implemented during the construction of the hotel, there is a need for the development of a long-term financial mechanism to sustain conservation activities on the island. This model is now being adopted throughout Seychelles.

Communications and outreach for sustainable development

Agenda 21 and other sustainable development declarations emphasise education, communications and awareness (Chapter 28 of Agenda 21). It is therefore vital that the EIA process encourages the development of appropriate outreach and communication materials to engage stakeholders, the public and even school children in the process. Webler (1995) argues that successful public participation goes beyond just participation in decision-making; rather it should initiate social learning processes which translate unco-ordinated individual actions into collective actions and from individual interests into shared interests. Therefore, effective communication and outreach is fundamental to addressing the intra-generational and inter-generational dimensions of sustainable development.

However, the tools to do so are lacking in SIDS. For example, no educational kits for EIA awareness at school level in SIDS were observed, although guidelines for the public were available. The Bahamas, Mauritius, Seychelles and Malta have published publicly available EIA guidelines in hard copy and on the web (see page 223). These guidelines, which cover particular sectors such as tourism, industry, mining, fisheries and infrastructure development, provide the lay person with key information on the EIA process and what the common impacts and issues are. Seychelles organises periodic television and radio programs on the EIA process, and the recent decision to advertise and report on EIA public meetings on national television serves to increase national awareness of the EIA process. One observation is that journalists and bloggers tend to cover EIA processes for controversial projects purely as a news item rather than creating awareness on the EIA process.

One of the biggest challenges of the EIA process is the provision of a layman's version of the EIA findings, with sufficient information for informed comments and questions. To circumvent this problem some EIAs prepare a public summary and also present the findings through a public EIA hearing. The role of parliamentarians in the EIA process is equally important but often ignored by central government or consultants. Parliamentary debates on particular EIAs are often useful in providing input into the scoping process.

To be consistent with the principles of sustainability it is therefore vital that EIA processes in SIDS are transparent, provide adequate and timely information, and encourage participation, debate and access to justice in cases where public rights have been ignored by the development.

Conclusions

Despite the proliferation of environmental and development tools and their shortcomings, environment impact assessments (now implemented together with social impact and strategic impact assessments) have remained the only legally binding government instrument to require that projects and policies to be undertaken in the most sustainable way. Emerging issues such as climate change adaptation and the assessment of carbon footprints are now essential components of EIAs. In many small island states consideration of the impacts of climate change and risks to development and other forms of human intervention are becoming important considerations in environment impact assessments, despite the significant gaps that exist in the implementation of the EIA process.

SIDS face specific constraints in terms of their small spatial size and limited space available for development, limited human resource capacity, the sensitivity and interconnectedness of ecosystems and globally significant habitats. However, these characteristics provide an opportunity for the EIA process to influence in a major way national development trends and to balance development and environment concerns. Whilst some of the larger countries may have the luxury of setting aside large tracks of land for conservation, migration corridors and buffer zones, development in small islands generates direct and indirect impacts on the whole ecosystem and the communities. As a result, the development of the EIA policy and associated legal frameworks in SIDS should be enshrined in a continuously evolving process, with sustainability objectives driving the EIA process at all levels of society.

References

- ADB. *Environment Assessment Guidelines*, Asian Development Bank, 2003. Online version only:
http://www.adb.org/documents/Guidelines/Environmental_Assessment/default.asp
- Anon. __ 2000. *Review and Analysis of the EIA process in Barbados. Review of Environment Impact Assessment in Selected Countries of Latin America and the Caribbean*. Inter-American Development Bank. Washington, US.
- Antigua & Barbuda National Report 2004. *National Assessment Reports to the Mauritius International Meeting from Small Island States*. Government of Antigua & Barbuda, Antigua & Barbuda. Accessed from:
<http://www.sidsnet.org/Mauritius2004/NAR.html>
- Barbados National Report 2004. *National Assessment Reports to the Mauritius International Meeting from Small Island States*. Government of Barbados, Barbados. Accessed from: <http://www.sidsnet.org/Mauritius2004/NAR.html>
- Bisset, R and P Tomlinson (1988). 'Monitoring and auditing of impacts'. In Wathern, P (ed), *Environmental Impact Assessment: Theory and Practice*. Routledge, London.
- Bonnell, Steve and Keith Storey (2000). 'Addressing cumulative effects through strategic environmental assessment'. *Journal of Environmental Assessment Policy and Management* 2 (4): pp. 477–499.
- Bowers Marriott, B (1997). *Environmental Impact Assessment: A Practical Guide*. McGraw-Hill Professional, USA. 320 pp.
- Boyle, J (1998). 'Cultural influences on the implementation of EIA: Insights from Thailand, Indonesia and Malaysia'. *Environmental impact assessment review* 21: pp. 95–113.
- Bynoe, ML (2006). 'Citizen Participation in the Environmental Impact Assessment Process in Guyana: Reality or Fallacy?' *Law, Environment and Development Journal* 2/1 p. 34, available at <http://www.lead-journal.org/content/06034.pdf>
- Carroll, B and T Turpin (2002). *Environmental Impact Assessment Handbook: A Practical Guide for Planners, Developers and Communities*. Thomas Telford Publishing. US. 175 pp.
- CDB (1995). *Environmental Checklist for Financial Intermediary Projects*. Caribbean Central Bank. Barbados.

- Comoros National Report 2004. *National Assessment Reports to the Mauritius International Meeting from Small Island States*. Government of Comoros, Comoros. Accessed from: <http://www.sidsnet.org/Mauritius2004/NAR.html>
- Convention of Biological Diversity (CBD) (1992). Article 14. Impact Assessment and Minimizing Adverse Impacts. <http://www.cbd.int/convention/articles/?a=cbd-14>
- Cook Islands National Report 2004. *National Assessment Reports to the Mauritius International Meeting from Small Island States*, Government of the Cook Islands, Cook Islands. Accessed from: <http://www.sidsnet.org/Mauritius2004/NAR.html>
- Dalal-Clayton, DB and B Sadler (2005). *Strategic Environmental Assessment: A Sourcebook and Reference Guide to International Experience*. OECD, UNEP and IIED in association with Earthscan Publications.
- Donnelly, A, B Dalal-Clayton and R Hughes (1998). *A Directory of Impact Assessment Guidelines*. 2nd Edition. London. International Institute for Environment and Development.
- Elworthy, S and J Holder (1995). *Environment Protection, International Court of Justice Communiqué 95/22*: p. 155.
- European Economic Community (1985). Council Directive of 27 June 1985 on the 'Assessment of the effects of certain public and private projects on the environment.' *Official Journal of the European Communities L 175*: pp. 40–48.
- Glasson, J (1999). 'Environmental impact assessment – impact on decisions'. In Petts, J (ed) *Handbook of Environmental Impact Assessment* Vol. 1. Oxford, Blackwell Publishing, UK.
- Goodland, R and H Dal (1992). *Environmental Assessment and Sustainability in the World Bank*. World Bank, Washington DC, USA.
- Grant, Michelle (2003). Assessment of the implementation of recommendations and mitigation measures as outlined in an environmental impact assessment and specified in terms and conditions of the Permits/Licences.
- Jacobs, P and B Sadler (eds) (1989). *Sustainable Development and Environmental Assessment: Perspectives on Planning for a Common Future*. Ottawa. Canadian Environmental Assessment Research Council.
- Jardine-Comrie, Adonna (1999). *An Analysis of Cumulative Impact Assessment in the Jamaican EIA System*.
- Kennedy, W (1998). 'Environmental impact assessment in North America and Western Europe: what has worked where, why and how', *International Environmental Report* 11 (4), pp.1239–1258.
- Koonjul, J (2004). 'Sustainable development and SIDS – balancing vulnerability and economic growth'. UNEP *Our Planet* 15 (1): pp. 22. Nairobi, Kenya.
- Lee, N and C George (eds) (2000). *Environmental Assessment in Developing and Transitional Countries*. Wiley Publishers. Chichester.
- Levett, R and R McNally (2003). *A Strategic Environmental Assessment of Fiji's Tourism Development Plan*. WWF. Fiji. 132 pp.
- Mcleod, H (2000). 'A Review of the Bond system in Fiji'. *SOPAC Technical Report* 305. Suva. Fiji.
- Morgan, RK (1999). *Environmental Impact Assessment: A Methodological Perspective*. Kluwer Academic Publishing. Netherlands. 307 pp.

- Onorio, K (2000). 'Environmental impact assessment in Pacific Island countries'. Unpublished, PhD dissertation. Centre for Impact Assessment Research and Training, Department of Geography, University of Otago, New Zealand.
- Payet, RA (2003). 'Effectiveness of the Environment Impact Assessment Process in Managing Tourism Development in Seychelles. In *International Environmental Law and Policy in Africa*, (Chaytor B and KR Gray, eds) *Environment & Policy Series 36*: pp. 327–349. Kluwer Academic Publishers. Netherlands.
- Payet, RA (2006). 'Sustainability in the context of coastal and marine tourism in Seychelles'. PhD Thesis. Department of Biology and Environmental Science, University of Kalmar, Sweden.
- Payet, RA (2007). *Policy Brief Small Island States. Global Forum on Oceans, Coasts and Islands*. Delaware, USA.
- Perkins, D (2007). *Review of the Papua New Guinea Sustainable Development Program* (PNG SDP). Retrieved online from:
http://www.pngsdp.com/_pdf/reports/SDP_Independent_Program_Review.pdf
- Philip, R (2001). *A Basic Guide to the Public Participation Process of an Environmental Impact Assessment* (Horsholm: DHI Water and Environment, 2001) available at:
<http://www.dhi.dk/courses/AlumniCafe/LectureNotes/Files/Public%20participation.pdf>
- Porter, A and J Fittipaldi (eds) (1998). *Environmental Methods Review: Retooling Impact Assessment for the New Century*. The Press Club, Fargo, USA.
- Ramjeawon, T and R Beedassy (2004). 'Evaluation of the EIA system on the Island of Mauritius and development of an environmental monitoring plan framework'. *Environment Impact Assessment Review* 24: 537–549.
- Reeson, P (2000). 'Review and Analysis of the EIA process in Jamaica' Vol. 1. *Review of Environment Impact Assessment in Selected Countries of Latin America and the Caribbean*. Inter-American Development Bank. Washington, US.
- Sadler, B (1996). International Study of 'The Effectiveness of Environmental Assessment'. Ministry of Supply and Services. Canada, 248 pp.
- Sadler, B (1999). 'A framework for environmental sustainability assessment and assurance'. In (Petts, J, ed) *Handbook of Environmental Impact Assessment* Vol. 1.: pp. 12–32. Oxford: Blackwell.
- Sadler, B and AvB Weaver (1999). 'Impact assessment and sustainable development: A framework for change and an agenda for research and action'. Plenary paper presented at the 19th Annual Meeting of the International Association for Impact Assessment, June 1999. Glasgow, Scotland.
- Samoa (2003). Barbados Programme of Action. National Assessment Report. Apia, Samoa
http://www.sidsnet.org/docshare/other/20031230154838_Samoa_NAR_2003.pdf
- Samoa National Report (2004). *National Assessment Reports to the Mauritius International Meeting from Small Island States*. Government of Samoa, Samoa. Accessed from:
<http://www.sidsnet.org/Mauritius2004/NAR.html>
- Schrage, W (1999). 'The Convention on Environmental Impact Assessment in a Transboundary Context'. In (Petts, J, ed) *Handbook of Environment Impact Assessment 2, Environment Impact Assessment in Practice: Impact and Limitations*. Blackwell Publishing, UK. pp. 85–97.

- Shepherd, A (1998). 'Post-project impact assessment and monitoring'. In Porter A and J Fittipaldi (eds) *Environmental Methods Review: Retooling Impact Assessment for the New Century*. The Press Club. Fargo, USA.
- Shimwaayi, M (1995). 'Public participation in environmental assessments for World Bank projects in sub-Saharan Africa'. In Mastri, L (ed) *Environmental assessment in Africa: A World Bank commitment*. Proceedings of the Durban World Bank Workshop, June 1995. Washington. World Bank, pp. 65–79.
- Slootweg, R and P van Beukering (2008). *Valuation of Ecosystem Services and Strategic Environmental Assessment Lessons from Influential Cases*. Netherlands Commission for Environmental Assessment. Utrecht, Netherlands. 40 pp.
- Smith, Nicole (1999). *Review of the Scoping Associated with the Jamaican Environmental Impact Assessment Process and the Development of Guidelines to Support the EIA Process*.
- St Kitts and Nevis (2004). *National Assessment Reports to the Mauritius International Meeting from Small Island States*. Government of St Kitts and Nevis. Accessed from: <http://www.sidsnet.org/Mauritius2004/NAR.html>
- St Lucia National Report (2004). *National Assessment Reports to the Mauritius International Meeting from Small Island States*. Government of St Lucia. Accessed from: <http://www.sidsnet.org/Mauritius2004/NAR.html>
- Steinemann, Anne (2001). 'Improving alternatives for environmental impact assessment'. *Environmental Impact Assessment Review* 21 (2001) pp. 3–21.
- Strachan, JR, J McHarry, G Ayre and R Callway (2005). *The Plain Language Guide to the World Summit on Sustainable Development*. Earthscan. USA. 252 pp.
- Tan, AKJ (1998). *Preliminary Assessment of Singapore's Environmental Law*. Asia-Pacific Centre for Environmental Law (APCEL). University of Singapore, Singapore.
- Trinidad & Tobago National Report (2004). *National Assessment Reports to the Mauritius International Meeting from Small Island States*. Government of Trinidad & Tobago. Accessed from: <http://www.sidsnet.org/Mauritius2004/NAR.html>
- Turnbull, J (2003). 'Environmental impact assessment in the Fijian state sector'. *Environment Impact Assessment Review* 23: 73–89.
- Tuvalu National Report (2004). *National Assessment Reports to the Mauritius International Meeting from Small Island States*. Government of Tuvalu, Tuvalu. Accessed from: <http://www.sidsnet.org/Mauritius2004/NAR.html>
- UN (United Nations) (1992). *Agenda 21*. United Nations. New York, NY, USA.
- UN/DESA/DSD (1999). *Review of progress in the implementation of the Programme of Action for the Sustainable Development of Small Island Developing States*. Report of the Secretary-General to be Submitted to the CSD7.
- UN (2005). *Report of the International Meeting to Review the Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States*. A/CONF.207/11. United Nations, New York.
- UNCLOS (1982). Article 206 – *Assessment of potential effects of activities*. http://www.un.org/Depts/los/convention_agreements/texts/unclos/part12.htm
- UNECE. 'Application of EIA principles to policies, plans and programmes'. *Environmental Series* 5. UNECE, New York.
- UNEP (2002). *UNEP Environmental Impact Assessment Training Resource Manual*, Second

- Edition (Sadler, B and M McCabe, eds). Geneva, Switzerland. 573 pp. Downloadable from: <http://www.unep.ch/etb/publications/EIAMan2edition.php>
- UNFCCC (2007). 'Vulnerability and adaptation to climate change in Small island developing states'. Background paper for the expert meeting on adaptation for small island developing states. Bonn, Germany.
- Vancley, F and D Bronstein (eds) (1995). *Environmental and social impact assessment*. London: Wiley–Blackwell.
- Wathern, P (ed) (1988). *Environmental Impact Assessment: Theory and Practice*. Routledge. London.
- WCED (World Commission on Environment and Development) (1987). *Our common future*. New York: Oxford University Press.
- Webler T, H Kastenholz and O Renn (1995). 'Public Participation in Impact Assessment: A Social Learning Perspective'. *Environmental Impact Assessment Review* 15: 443–65.
- Wood, C (2003). *Environmental Impact Assessment: A Comparative Review*. 2nd Edition. Pearson Education Ltd. UK.
- World Bank (1991). *Environmental Assessment Sourcebook*. 3 Vols. The World Bank. Washington.
- World Bank (1999). *Operational Policy (OP)/Bank Procedure (BP) 4.01: Environmental Assessment*. The World Bank. Washington. Downloadable from: <http://go.worldbank.org/OSARUTOMPO>
- World Bank (2008). *Project appraisal document on a proposed credit in the amount of sdr 10.4 million (US\$17 million equivalent) to the Independent state of Papua New Guinea for a second mining sector institutional strengthening technical assistance project*. Document accessed at: <http://go.worldbank.org/EOA5L51H70>
- Wood, C (1995). *Environmental Impact Assessment: A Comparative Review*, Essex: Longman Scientific and Technical Publications.

Environment Impact Assessment Resources

EIA Online training and manuals

EIA Open Educational Resource <http://eia.unu.edu/>

The United Nations University, RMIT University, and the United Nations Environment Programme (UNEP) jointly developed this open educational resource on Environmental Impact Assessment (EIA). The University of the South Pacific is listed as a partner.

UNEP Environmental Impact Assessment Training Resource Manual, Second Edition
<http://www.unep.ch/etu/etp/acts/manpols/index.htm>

The UNEP Environmental Impact Assessment (EIA) Training Resource Manual, Second Edition, has been updated to reflect the developments in EIA law, process and practice that have occurred since the preliminary version was published in 1996.

University of West Indies, Mona, Jamaica

<http://www.mona.uwi.edu/geoggeol/EMU/emumscpro.htm#eia>

The University offers a resident MSc in Integrated Urban and Rural Environmental Management; several theses are on EIA implementation in SIDS.

EIA Country websites and online resources

Arctic Region – <http://arcticcentre.ulapland.fi/aria/>

Australia – <http://www.environment.gov.au/epbc/assessments/index.html>

Canada – <http://www.acee-ceaa.gc.ca/>

Espoo Convention – <http://www.unece.org/env/eia/>

European Community – <http://europa.eu.int/comm/dg11/eia/home.htm>

Malta – <http://www.eia-malta.org>

Mauritius – <http://www.gov.mu/portal/site/menvsite/>

Seychelles – [http://www.env.gov.sc/html/eia - guidelines.html](http://www.env.gov.sc/html/eia_-_guidelines.html)

Sweden – <http://www.mkb.slu.se/engelsk/indexe.htm>

US-EPA – <http://www.epa.gov>

International organisations and journals

IAIA: International Association for Impact Assessment – <http://www.iaia.org/>

Environment Impact Assessment Review – <http://www.elsevier.com>

African Journal of Environmental Impact Assessment and Management –
<http://www.ajeam-ragee.org/>

Indicators of sustainable development and SIDS

Introduction

Indicators of Sustainable Development are intended to measure the extent to which society is moving towards or away from sustainable development. The main attraction of indicators is that they can be used to represent complicated phenomena in a measurable format and this permits comparisons over time within a particular country or region or across countries or regions.

Sustainable Development Indicators, as their name implies, require some workable definition of Sustainable Development. Although it is frequently argued that such development is difficult to define¹, there is, in reality, widespread consensus that its aim is to improve the quality of life of human beings and that it is multifaceted, in that it has environmental, economic and social dimensions. This implies, amongst other things, that if society promotes economic growth that leads to environmental and social degradation, society will be winning one battle and losing another, with the possibility of ending up worse-off in the long run. At the same time, it is generally agreed that sustainable development is not compatible with economic and social backwardness – the term development itself implies improvement in material wellbeing. These general notions relating to Sustainable Development lead to the conclusion that a holistic approach needs to be adopted to attain a balance between the different dimensions of such development.

It is also generally agreed that Sustainable Development has ethical underpinnings, involving inter- and intra-generational equity and effective stakeholder participation in decision-making, and other matters which lead one to take into consideration the quality of life of persons other than oneself.

Sustainable Development Indicators generally relate to these notions, and as such they tend to cover a wide spectrum of actual and potential realities.

This chapter is organised as follows. The first section, which follows this introduction, presents the *raison d'être* of Sustainable Development Indicators, while the next section deals with function, desirable criteria and problems in the formulation of indicators. The third section considers the special characteristics of small island developing states, and argues that Sustainable Development Indicators for such states should take these special characteristics into consideration. There then follows a case study, the Sustainable Development Indicators proposed by the Maltese National Commission for Sustainable Development. The chapter concludes with an overview of the main arguments proposed.

Indicators of Sustainable Development

Background

Bruntland laid down a definition of Sustainable Development which was formulated in more practical terms at UNCED (2002) in the form of Agenda 21², which in article 40 called on governments as well as on non-governmental organisations to develop and identify Sustainable Development Indicators that can provide a solid basis for decision-making at all levels.

In 1996, the UN Commission on Sustainable Development (UN-CSD) responding to this call, proposed a set of 134 indicators (United Nations, 1996), defined by reference to the principles and policy guidance provided by Agenda 21. As a result of this exercise Sustainable Development Indicators and related methodologies were developed, and these were made available to national governments.

In 2001, at its ninth session, the UN-CSD decided to recommend indicators of sustainable development and amongst other things encouraged further work on indicators 'for the purpose of sustainable development in line with national conditions and priorities in defining and implementing national goals and priorities for sustainable development, including integration of gender aspects' (Decision 9/4, 3d)³. The Commission also encouraged the involvement of all national stakeholders, as appropriate.

The Johannesburg Plan of Implementation (JPOI), adopted at the World Summit on Sustainable Development in 2002, referred to this decision and encouraged further work by governments on Sustainable Development Indicators (articles 130 and 131).

In 2005, the UN-CSD in resolution 13/1 again encouraged Member States to continue to work on the development and application of Sustainable Development Indicators at the national level, including integration of gender aspects, on a voluntary basis in line with their national conditions and priorities, and in this regard invited the international community to support the efforts of developing countries.

Indicator frameworks

Generally speaking, Sustainable Development Indicators are intended to measure variables related to areas of concern to which society should be alerted, such as poverty, pollution, waste generation, loss of biodiversity, health problems and related issues assumed to affect the quality of life of the population. Each indicator is supposed to show whether the country or region to which the indicator is applied is moving towards or away from Sustainable Development. Sometimes, the indicators are accompanied by targets or goals to be attained within a specific time period.

Interest in Sustainable Development Indicators has grown in recent years and many countries have developed or are in the process of developing such indicators. Indicator sets have also been developed at the global and regional levels, including those proposed by the United Nations⁴ and the European Union⁵. Another set was developed by the Mediterranean Commission for Sustainable Development, where the special features of countries bordering the Mediterranean Rim are taken into account⁶. These three sets have been developed follow-

ing extensive consultation and are meant as guidelines for countries who are members of the relative organisations.

Various frameworks have been proposed for sustainability indicators. Initially there was a tendency to adopt a pillars-based framework with each pillar typically relating to environmental, economic and social concerns, and the indicators themselves were classified in terms of pressure, state or response (PSR)⁷. Recently, more importance has been given to the policy relevance of the indicators, and to the fact that certain issues do not fall exclusively under one of the three pillars of Sustainable Development. For example, the set of indicators developed by the UN-DSP are grouped by themes, and are not classified in terms of the environmental, economic and social pillars. The PSR framework has also been done away with. Moreover, there is a deliberate attempt to relate the indicators to the Millennium Development Goals.

Indicators of Sustainable Development and SIDS

The need for indicators has been echoed in major documents relating to small island developing states (SIDS). The Barbados Programme of Action for the Sustainable Development of Small Island States (BPOA)⁸, adopted in 1994, recognised that a major sustainable development constraint with regard to SIDS was economic vulnerability and in Articles 113 and 114 called on SIDS, in co-operation with national, regional and international organisations and research centres, to continue work on the development of vulnerability indices and other indicators that reflect the status of small island developing States and integrate ecological fragility and economic vulnerability.

The Mauritius International Meeting on the 10-Year Review of the BPoA, held in 2005, adopted the so-called Mauritius Strategy⁹ which in article 74(c) called for the development of appropriate national targets and Sustainable Development Indicators that can be incorporated into existing national data-collection and reporting systems in order to, *inter alia*, respond to the requirements of the internationally agreed development goals, including those contained in the Millennium Declaration and other relevant global and regional targets.

Functions and desirable criteria of Indicators

Indicators for Sustainable Development, like other indicators, need to be constructed on the basis of desirable criteria, in line with their functions, to render them useful and credible. However, for various reasons indicator construction faces a number of problems which sometimes render the exercise difficult. This section discusses these issues.

Functions

The literature on Sustainable Development Indicators (see for example Pintér et al., 2005; Shah, 2004; Briguglio, 2003; European Commission, 2001; Bossel, 1999; European Community (1998); Moldan et al., 1997; Hardi & Zdan, 1997; and United Nations, 1996) identifies various functions associated with such indicators, including the following:

- **Supporting decision-making.** Sustainable Development Indicators can produce systematic and coherent data to enable the government and other authorities to take

informed decisions. The indicators may also be used to identify priority areas for action.

- **Setting targets and establishing standards.** The fact that indicators are often quantitative permits the setting of targets or goals. For example, the reduction of emissions of greenhouse gasses can be measured and targets sets for their gradual reduction over time.
- **Monitoring and evaluating developments.** Indicators could be useful in assessing whether a given policy or decision is yielding the desired results and to assess whether changes of direction are needed. In this way, decisions are not taken blindly or based only on hunches and feelings, but will be based on scientific information presented in indicator format.
- **Dissemination information.** Indicators can be used to make the public more aware of certain problems. In this regard, indicators can be used to alert stakeholders about dangers, failures and success stories associated with Sustainable Development.
- **Focusing the discussion.** Indicators that require quantitative estimation have to be clearly defined and this can help to develop a common language for discussion, resulting in a more focused discussion.
- **Promoting the need for a holistic approach.** The fact that Sustainable Development Indicators attempt to capture the different dimensions of Sustainable Development could help to foster an awareness of the need for a holistic approach to development and to the need for integrated action.

Desirable criteria

The literature also identifies a number of criteria which should underpin the construction of Sustainable Development Indicators¹⁰. These can be synthesised as follows:

- **Relevance.** The indicators should relate to Sustainable Development and to the realities of the country or region using them. For example, indicators pertaining to the mountainous regions will not be relevant to countries without mountains. Likewise, important specificities should be taken into account when constructing such indicators. This argument is very relevant for small island developing states, as we shall argue below.
- **A clear guiding vision.** Sustainable Development Indicators should be based on an underlying guiding vision of sustainability. If it is agreed that the ultimate goal of sustainable development is improvement in people's quality of life, the indicators chosen should relate to this vision.
- **Transparency.** The indicators should be replicable and the data used should be verifiable by persons other than those producing the indicators. This criterion is important to foster trust and credibility in the indicators.
- **Simplicity.** The indicators should be easy to understand and not overly complicated to construct. Simplicity, however, is a matter of degree, and in reality the exercise involves some sort of trade-offs between rigour and simplicity.
- **Holistic approach.** Sustainable Development Indicators should capture the multidimensionality of Sustainable Development. A holistic approach requires that

due recognition is given to the interrelationships between environmental, economic and social concerns, and the quality of each element.

- **Affordability.** The objectives or targets accompanying indicators should be attainable at reasonable cost in terms of money and time. Here again, affordability is a matter of degree and varies from one country to another and from one institution to another. This criterion however is important because overly ambitious indicator construction may be counterproductive. It is important to note that objectives that are often set without reference to costs and to the technological requirements are difficult to attain.

Problems in indicator construction

Indicator construction is strewn with difficulties which render the exercise problematic in practice.

- **Data problems.** An indicator without accompanying data will not be of much use, given that a main purpose of indicators is to monitor changes. In practice, some important indicators are difficult to back with data. The EU system of indicators, for example, is divided into two categories, namely 'best available' and 'best needed'. The best available indicators are those for which data exists, but some of these are not the 'best needed' ones. The latter, in fact, include indicators for which data does not exist.
- **Number of indicators.** There is no ideal number of indicators within a particular framework. Hart (2007) argues that if the indicators are to be used to keep the public informed, a small number of 10 to 20 indicators would make sense as long as they cover all the issues that are important to the community. A problem often encountered in this regard is that when a broad spectrum of society is consulted, different interest groups push for their pet indicators to be included, and it may not be easy to achieve consensus as to which indicators are to be left out. Another problem in this regard relates to redundancy – a particular indicator is redundant when it replicates another indicator or captures the same tendency. It may be possible to identify which indicators are redundant through correlation analysis, but this requires appropriate time series data.
- **Time factor.** When Sustainable Development Indicators relate to human time scales there is the problem of how to factor in the concerns of future generations. The problem becomes even more pronounced when ecosystem time scales are involved. Here we may be talking of thousands of years, rendering the indicators as not very relevant to current users.
- **Policy relevance.** Sustainable Development Indicators should be policy relevant. As such they should not measure inherent realities, namely those which cannot be changed as a result of policy, even if these are harmful. For example, exposure to natural disasters, such as earthquakes or lack of precipitation in a desert should not feature as indicators, given that these are inherent features and not changeable by human action. In such cases the indicators could be related to policy measures intended to mitigate the harm caused by the inherent realities or which enable the

affected country or region to adapt to or withstand the negative effects of such realities.

- **Participation and access.** Participation by stakeholders has two major benefits. Firstly, participation can empower people both individually and collectively and reduce social exclusion and alienation. Secondly, decisions taken through participatory processes are based on a broader spectrum of knowledge and may be easier to implement when they are owned by a wider group of people. However, such participation often ushers in problems associated with vested interests and time delays when, as often happens, stakeholders' conflicting views are difficult to reconcile.
- **Lack of capacity.** The drawing up of Sustainable Development Indicators, and the process of using them to monitor changes and to conduct continual assessments of the indicator requires appropriate knowledge and expertise as well as adequate technological and institutional capacity. This poses serious constraints for developing countries, particularly small island states.

Sustainability indicators for SIDS

There is now a considerable body of literature showing that SIDS have special characteristics, arising mostly from their small size and insularity, which constrain their development options (see for example Briguglio, 1995; Atkins et al. 2000; United Nations, 1994; 2005).

It would of course make a lot of sense if these special characteristics were given importance in indicator sets pertaining to SIDS. For this reason, transposing global sets like those of the EU and the UN-CSD, lock stock and barrel, may give rise to two problems, namely:

- 1 certain indicators included in global or regional frameworks may not be applicable for SIDS, and
- 2 certain indicators relevant to SIDS may not be included on global or regional sets.

The first type of problem was encountered by the Malta Observatory for Sustainability Indicators (SI-MO)¹¹ when it tried to transpose the 130 indicators proposed by UNEP-MAP for Mediterranean countries. The indicators used for assessing the extent of threatened species was not applicable to Malta due to the fact that the area associated with threatened species was larger than the total area of the Maltese Islands.

The second type of problem is probably more serious for SIDS, given their special sustainable development constraints. For example, problems associated with small economic size and insularity do not generally feature in global indicator sets. Table 13.1 proposes a list of some special considerations that should be made when devising sustainability indicators for SIDS.

In many cases, SIDS encounter problems similar to those faced by large states, but with a higher degree of intensity. For example, the economy of many SIDS depends heavily on activities which occur on or near the coast, such as tourism, and therefore sea-level rise occurring as a result of climate change is likely to result in a very high degree of harm to the economy of SIDS. The coastal areas of SIDS are also associated with socio-cultural developments in these states and sea-level rise will therefore also have an impact on their

cultural assets. Sea-level rise will therefore lead to heavy material and cultural losses for SIDS and will affect practically all aspects of life in such states. This problem is of course particularly severe for low-lying islands, the very existence of which may be threatened by sea-level rise. This reality is particularly harsh for SIDS because greenhouse gas emissions produced by these states are negligible when compared to those emitted by larger developing and developed countries.

Another common problem relates to the degree of domestic competition. Import and distribution channels in SIDS can be easily controlled by one or a few dominant firms. Monopolistic or oligopolistic structures are common in telecommunications, energy generation and distribution and in transport. These realities arise because of the small size of the domestic market, and can lead to the curtailment of competition to the detriment of the consumer.

A problem that arises with regard to the special features of SIDS is that many of them are inherent and permanent, and not easily subject to reversal. For this reason, indicators related to these features should not measure the incidence of the features themselves but should relate to policy measures aimed at withstanding or mitigating the negative effects of these features. Table 13.1 presents a number of policy related indicators that can be utilised for this purpose.

Table 13.1. Special features of SIDS and possible indicators

	Special feature	Possible (policy related) indicator
Economic	High exposure to external economic shocks due mainly to the high degree of economic openness and dependence on a few categories of exports.	Score on the economic resilience index (see Briguglio et al., 2006).
	High incidence of indivisibilities leading to high overhead costs per capita, especially those relating to government services and infrastructure.	Score on a Government Efficiency index (see IMD, 2007).
	High incidence of market failures leading to the need for economic instruments to rationalise demand and supply.	Number of economic instruments effectively in use to reduce negative environmental externalities and to rationalise demand for environmental goods and services.
	Limited ability to reap the benefits of economies of scale leading to high per unit costs of production.	Score on the Producer Price Index (IMF, 2006).
	High incidence of monopolistic or oligopolistic structures.	An index measuring the effectiveness of competition legislation.

Environmental	High proneness to sea-level rise.	An index of expenditure on measures leading to adaptation to climate change as a ratio of total government expenditure.
	High rate of endemism and biodiversity threats.	An index of the ratio of the built/developed areas to total land area.
	High incidences of water shortages.	An index of demand for freshwater per capita of population, in relation to precipitation, reflecting the degree to which water resources are used efficiently.
	High generation of waste per square kilometre of land due to higher population density.	An index of expenditure on waste management, as a ratio of total government expenditure.
Social	Overcrowding, congestion and other social pressures, due to higher population density.	An index of population per square kilometre in urban areas, reflecting government policy regarding land use.
	High proportion of the population exposed to natural disasters.	An index of expenditure on preparedness for natural hazards, as a ratio of total government expenditure.

Malta's Sustainable Development Strategy

Location and major characteristics

Malta is a small island state located in the middle of the Mediterranean Sea. It has a population of just over 400,000 and a land area of about 320 km², rendering it one of the most densely populated states in the world, with about 1,200 persons per square kilometre.

Malta became a member of the European Union in 2004. Between 1992 and 2004 it formed part of the Alliance of Small Island States (AOSIS) and participated actively in many meetings that sought to promote the Sustainable Development of SIDS, including the Barbados Global Conference held in 1994.

Like many other small island states Malta is highly dependent on coastal zone activities, notably tourism, and has a very fragile ecosystem. Its high population density ushers in major problems associated with waste management and land-use. It also has a small domestic market, which can be easily dominated by one or a few firms, and is highly dependent on exports and imports. A small market is also characterised by high overhead costs due to the problem of indivisibility. The Sustainable Development Strategy of Malta assigns major importance to these realities.

Figure 13.4. Map of Malta



Drafting the Strategy

The process of drafting the Malta Strategy for Sustainable Development was initiated during the 5th meeting of Malta's National Commission for Sustainable Development (NCSD), held in December 2002. This decision was taken in line with the functions of the Commission, as indicated in Article 8(7) of the Environmental Protection Act (2001).

A consultation process was set in motion involving major civil society and governmental stakeholders and focus groups, culminating in two national conferences. The NCSD adopted the strategy for the period 2007 to 2016 in December 2006,¹² which was endorsed by the Cabinet of Ministers of the government of Malta a year later. It is currently being revised and updated.

The strategy and the need for indicators

The Malta Strategy for Sustainable Development states that the effective monitoring of the strategy requires the compilation of appropriate indicators, and calls for the establishment and funding of an entity responsible for compiling and evaluating sustainability indicators¹³ working closely with the National Commission for Sustainable Development and the National Statistics Office. The strategy recommends that the entity should establish targets based on sustainability indicators for key sectors and use the indicators to assess the extent to which these targets are being reached.

Strategic directions

The strategy sets out a number of strategic directions with regard to five main themes, namely economic, environmental, social, cross-cutting issues and implementation of the strategy itself. In all 245 strategic directions are set, of which 20 are identified as meriting priority.

The environmental priority strategic directions are mostly associated with problems common to small island states, including waste generation, sea-level rise, coastal zone management, loss of biodiversity, land use and water shortage.

The economic strategic directions refer to major problems commonly occurring in small states, including the problem of indivisibilities of overhead expenditure (such as expenditure of government) and monopolistic/oligopolistic practices due to the small size of the domestic market.

All priority strategic directions are accompanied by indicators (labelled headline indicators), by targets to be attained in a specific time frame, and by 'policy-drivers' namely the government documents or institutions relating to the target set. This ensures that the targets set are coherent and consistent with existing policies and with government commitments to the EU and to other international/regional organisations.

The non-priority strategic directions are intended to serve as guidelines for the government and civil society and to inform policy-makers for the attainment of sustainable development goals. Again here, matters with high negative impacts on Malta, as a small island state, are highlighted.

Malta's sustainable development strategy acknowledges that small states have problems similar to those of larger states, including the need to generate economic growth and employment, which in turn have environmental and social repercussions. However, it also assigns major importance to the issues, discussed above, which are of special relevance to small island states.

Conclusion

This chapter has briefly reviewed the functions and desirable criteria which should underpin Sustainable Development Indicators. The chapter argues that indicators are needed for a systematic identification of problems, to enable the government and civil society to take informed decisions, and to set targets in this regard. It was argued that one of the main functions of such indicators is to alert stakeholders about dangers, failures and success stories associated with Sustainable Development.

The chapter also describes the special characteristics of SIDS and argues that these characteristics require specially devised indicators. A few examples of relevant indicators in this regard were proposed.

It was argued that many of the special features of SIDS are inherent and therefore permanent or quasi-permanent. For this reason, the relative Sustainable Development Indicators should not attempt to measure the incidence of the features themselves but should be related to policy measures aimed at mitigating or withstanding the negative effects of these features.

References

Atkins, J, S Mazzi and C Easter (2000). *A Commonwealth Vulnerability Index for Developing Countries: The Position of Small States*. London. Commonwealth Secretariat.

- Bossel, H (1999). *Indicators for Sustainable Development: Theory, Method, Applications*. Canada: International Institute for Sustainable Development.
- Briguglio, L (1995). 'Small Island Developing States and their Economic Vulnerabilities'. *World Development* 23(9): 1615–1632.
- Briguglio, L (2003). *The Vulnerability Index and Small Island Developing States: A Review of Conceptual and Methodological Issues*. Paper Presented at the AIMS Regional Preparatory Meeting on the BPOA+10 Review, 1–5 September 2003, Praia, Cape Verde.
- Briguglio, L, G Cordina, N Farrugia and S Vella (2006). 'Conceptualising and Measuring Economic Resilience'. In Briguglio, L, G Cordina and E Kisanga, *Building the Economic Resilience of Small States*. University of Malta and Commonwealth Secretariat.
- European Commission (2001). *Measuring Progress towards a more Sustainable Europe – Proposed Indicators for Sustainable Development*. Luxembourg: European Commission.
- European Communities (1998). *Indicators of Sustainable Development – A Pilot Study following the Methodology of the United Nations Commission on Sustainable Development*. Luxembourg, European Communities.
- Hardi, P and T Zdan (1997). *Assessing Sustainable Development: Principles in Practice*, Canada. International Institute for Sustainable Development.
- Hart, M (accessed 29 March 2007). *Everything you want to know about Indicators*. <http://www.sustainablemeasures.com/Indicators/Organize.html>
- IMD (2007). *World Competitiveness Yearbook 2006*. Switzerland: Lausanne.
- IMF (2006). *International Financial Statistics*. Washington DC: IMF.
- Moldan, B, S Billharz and R Matravars (eds) (1997). *Sustainability indicators: A Report on the Project on Indicators of Sustainable Development (SCOPE 58)*, Chichester and New York: John Wiley.
- Pintér, L, P Hardi and P Bartelmus (2005). *Sustainable Development Indicators*. Prepared for the United Nations Division for Sustainable Development (UN-DSD).
- Plan Bleu (2006). *Methodological Sheets of the 34 Priority Indicators for the Mediterranean Strategy for Sustainable Development*. Sophia Antipolis: Regional Activity Centre.
- Reed, MS and AJ Dougill (2003). 'Facilitating Grass-Roots Sustainable Development through Sustainability Indicators'. Paper Presented at the International Conference on Sustainability Indicators, organised by the Islands and Small States Institute of the University, Valletta, Malta, 6–8 November.
- Shah, R (2004). *CSD Indicators of Sustainable Development – Recent Developments and Activities*. United Nations Division for Sustainable Development Department of Economic and Social Affairs.
- United Nations (2005). *Report of the International Meeting to Review the Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States*. Available at: http://www.sidsnet.org/docshare/other/20050622163242_English.pdf
- United Nations (1996). *Indicators of Sustainable Development: Framework and Methodologies*. New York: United Nations.
- United Nations (1994). *Report on the Barbados Global Conference on the Sustainable Development of Small Island Developing States*. Available at: <http://www.unohrrls.org/UserFiles/File/SIDS%20documents/Barbados.pdf>

Notes

- 1 The Bruntland Commission defines sustainable development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.
- 2 <http://earthwatch.unep.net/agenda21/contents.php> This and other cited web pages have been accessed on 9 August 2009.
- 3 This was reiterated in 2005, at the 13th session of the UN-CSD, in resolution 13/1 which again encouraged Member States to continue to work on the development and application of indicators for sustainable development at the national level, including integration of gender aspects, on a voluntary basis, in line with their national conditions and priorities, and in this regard invites the international community to support the efforts of developing countries.
- 4 The set contains 96 indicators, including a subset of 50 core indicators. The methodology is available at: <http://www.un.org/esa/sustdev/natlinfo/indicators/factSheet.pdf>
- 5 <http://themes.eea.europa.eu/IMS/CSI>
- 6 See <http://www.planbleu.org/actualite/uk/MediterraneanStrategySustainableDevelopment.html>
See also Plan Bleu (2006).
- 7 A discussion on the PSR framework is available at <http://www.virtualcentre.org/en/dec/toolbox/Refer/EnvIndi.htm>
- 8 <http://www.unohrrls.org/UserFiles/File/SIDS%20documents/Barbados.pdf>
- 9 http://www.sidsnet.org/docshare/other/20050622163242_English.pdf Other major meetings related to the sustainable development of SIDS included the regional and inter-regional meetings in preparation for the Barbados Global conference and the Mauritius International Meeting.
- 10 A interesting list of criteria that may be used to evaluate Sustainable Development Indicators, accompanied by references to relevant literature, is given in Reed and Dougill (2003).
- 11 See <http://www.um.edu.mt/islands/si-mo/>
- 12 http://www.um.edu.mt/data/assets/pdf_file/0003/64812/SD_Strategy_2006.pdf
- 13 Although sustainability indicators have been compiled for Malta (<http://www.um.edu.mt/islands/si-mo/>), there are still a number of issues that need to be addressed, in particular regarding the institutional set-up for ongoing development of such indicators.

The MDGs and SIDS: Issues of performance and use

Introduction

The UN Millennium Development Goals (MDGs)¹ were designed to provide a toolbox for monitoring progress in sustainable development and for guiding investment. The framework of the MDGs covers 8 Goals, 18 Targets and 48 indicators which are included within the UN Statistics Division database. The 8 Goals are to:

- 1 Eradicate extreme poverty and hunger;
- 2 Achieve universal primary education;
- 3 Promote gender equality and empower women;
- 4 Reduce child mortality;
- 5 Improve maternal health;
- 6 Combat HIV/AIDS, malaria and other diseases;
- 7 Ensure environmental sustainability; and
- 8 Develop a global partnership for development.

This chapter sets out how the basic MDG toolbox can be adapted to the needs of policy-makers in small island developing States to strengthen its value as a framework for action. The chapter bases this prescription on an assessment of how far the MDG system can be used to monitor progress towards sustainable development by the AIMS Group of countries² within the context of progress by the 55 million population living in small island developing states (SIDS) as a whole³. It critically reviews the limitations of the MDG toolbox as an aid for policy-making and for monitoring key aspects of sustainable development in SIDS. It examines the MDG system against the priorities adopted in the UN SIDS Mauritius Strategy of 2005, taking into account the more general improvements in the system being promoted in the work of the UN Expert Group on MDGs. The chapter commends the continuing adaptation of the essential concepts of MDGs, to meet the varying needs and priorities of countries and regions⁴.

Method of assessment of progress

This assessment of current information in the MDG system principally uses the UN Statistical Division database figures compiled by the UN from reports provided by the countries themselves up to August 2006 and made available in December 2006⁵. Most of the goals and targets were set by the UN with a 1990 baseline and a target year for achievement of 2015. For the purpose of the present assessment, performance status on each indicator,

Table 14.1. Performance of AIMS group countries in pursuit of MDGs all Goals 1–8

Country totals AIMS region	Achieved	On track	Off track	Missing data	Total	% progress		
						all data	excl. missing data	% missing data
Bahrain	9	7	3	19	38	42	84	50
Cape Verde	8	8	3	19	38	42	84	50
Comoros	8	8	7	17	40	40	70	43
Cyprus	11	7	5	15	38	47	78	39
Guinea Bissau	8	6	6	20	40	35	70	50
Maldives	6	9	7	16	38	39	68	42
Malta	11	7	3	17	38	47	86	45
Mauritius	10	8	4	16	38	47	82	42
São Tôme & Príncipe	7	5	3	24	39	31	80	62
Seychelles	9	6	3	20	38	39	83	53
Singapore	12	4	4	18	38	42	80	47
						Total	Total	Total
All above	99	75	48	201	423	174	174	201
Per cent	23	18	11	48	100	41	78	48

Source: UN Statistics Division, downloaded December 2006

for each of the AIMS Group countries, is defined in terms of three values:

- ‘Achieved’: target value reached,
- ‘On track’: movement towards the target value, and
- ‘Off track’: movement not towards the target value.

The term ‘Progress’ refers to the sum of ‘Achieved’ and ‘On Track’ values. The status ‘Missing Data’ has been assigned where either the baseline value or a latest value or both are not shown in the UN database.

Results

The AIMS countries have made substantial progress towards attaining the MDGs (see Table 14.1). Across all the Goals the 11 AIMS countries have made progress towards 41 per cent⁶ of the indicator target values, of which 23 per cent are already achieved and 18 per cent are on track. On 11 per cent of the indicators the AIMS countries are off track. But this overall assessment is affected by missing data for 48 per cent of the indicators. Excluding these missing data, the AIMS countries have made progress with 78 per cent of the indicators, with 45 per cent already achieved and 34 per cent on track.

AIMS country achievements by Goal

Progress by the AIMS countries in the pursuit of each of the MDGs is shown in Table 14.2.

Table 14.2. Performance of AIMS region in pursuit of MDGs by indicators for Goals 1–8

Goal totals AIMS region	Achieved	On track	Off track	Missing data	Total	% progress all data	% progress excl. missing data	% missing data
1 Poverty	0	4	5	46	55	7	44	84
2 Education	1	15	7	10	33	48	70	30
3 Gender equality	11	19	5	9	44	68	86	20
4 Child Health	1	28	4	0	33	88	88	0
5 Maternal health	2	6	4	10	22	36	67	45
6 Disease control	15	0	5	56	76	20	75	74
7 Environment	34	1	13	40	88	40	73	45
8 Partnerships	35	2	5	30	72	51	88	42
						Total	Total	Total
All above	99	75	48	201	423	174	174	201
Per cent	23	18	11	48	100	41	78	48

Source: UN Statistics Division, downloaded December 2006

The principal achievements have been:

- Goal 4, Improving child health: 88 per cent progress.
- Goal 3, Increasing gender equality: 68 per cent progress.
- Goal 8, Promoting partnership: 51 per cent progress (especially in the field of technical transfer in telecommunications and computing).
- Goal 2, Improving education: 48 per cent progress.
- Goal 7, Ensuring environmental sustainability: 40 per cent.

Least progress has been made in:

- Goal 1, Poverty relief: 7 per cent.
- Goal 6, Disease control: 20 per cent.
- Goal 5, Maternal health: 36 per cent.

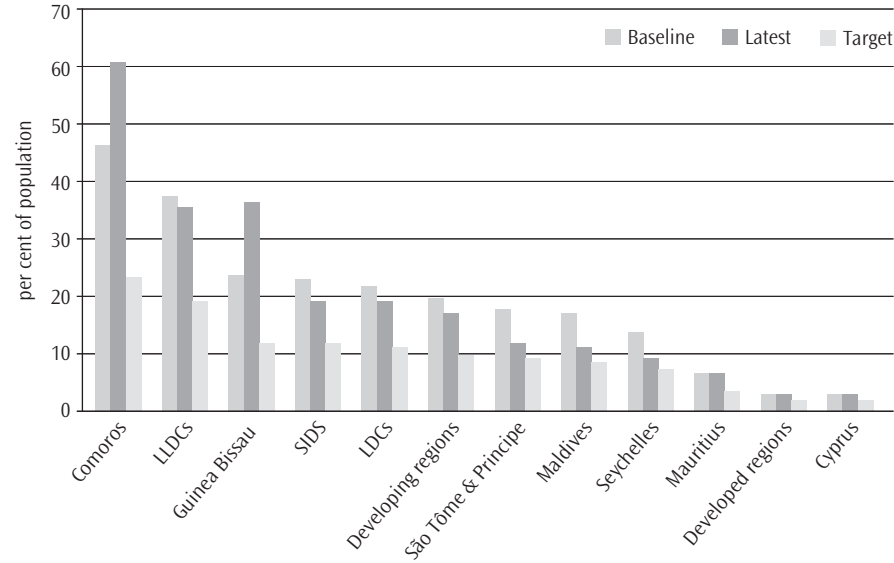
Performance of SIDS and International Benchmarks

The UN MDG database reports progress with MDGs by ‘region’. One of the ‘regions’ specified is SIDS⁷. The database reports summaries of SIDS regional data for only 10 of the 48 indicators⁸. Set out below is a selective review of progress for each of the eight MDGs, using available UN summaries of SIDS, plus detailed data from the SIDS AIMS region and some comparative data from other SIDS and from other small states⁹.

Goal 1: Poverty reduction

Progress on this Goal is generally poorly reported in SIDS. 84 per cent of the data is missing in the AIMS countries. Data on malnourishment, however, shows that 19 per cent of people in SIDS are malnourished. The target is to reduce this to 11 per cent by 2015. (See Figure 14.1.) Overall the SIDS countries are on track to achieve this target. The latest report

Figure 14.1. Goal 1, Poverty reduction. Indicator 5, per cent population below minimum dietary levels. Target: Reduce by half by 2015 the 1990 poverty level.



Source: UN Statistics Division 2006–07

from the Comoros in the AIMS group of SIDS is that 62 per cent of the population is malnourished and below the minimum dietary level, and for Guinea Bissau the latest reported level is 37 per cent of population below this level. In the AIMS region for whom data are reported, over 1 million people (9 per cent) are malnourished living below the level of minimum dietary energy consumption; in the Comoros, there are 476,000 (68 per cent) below this poverty level and in Guinea Bissau 555,000 (40 per cent).

Goal 2: Educational improvement

Three of the AIMS group countries (Bahrain, Maldives and Malta) have more than 90 per cent of their children enrolled in primary education; (Goal 2, Indicator 6). The Comoros has 55 per cent, and Guinea Bissau 45 per cent, both falling well below the latest average value for least developed countries (LDCs).

Goal 3: Gender: Seats held by women in national parliaments

Overall the per cent of seats held by women in national parliaments in SIDS has increased from 14 per cent in 1990 to 18 per cent in 2006¹⁰, (Goal 3, Target 4, Indicator 12). For the AIMS countries, the median per cent of seats held by women in their national parliaments was 14 per cent, with the highest being in Seychelles, 29 per cent, and the lowest in Bahrain, 0 per cent. The rate of increase in Seychelles, if continued, would indicate a provision of 35 per cent seats for women by 2015, but still short of the target of gender equality. The world highest reported national levels¹¹ are in Sweden 45 per cent, in Norway 38 per cent, and in Rwanda 49 per cent.

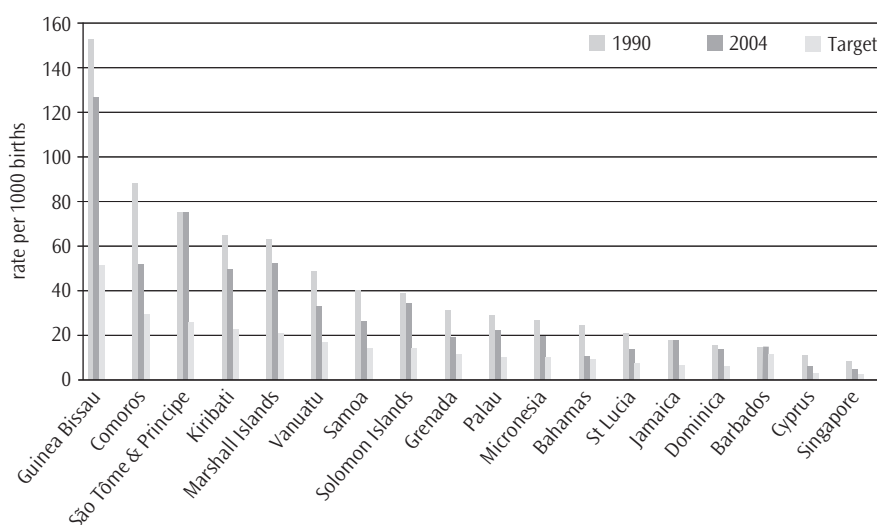
Goal 4: Child health

Figure 14.2 shows the Infant Mortality Rate¹² (IMR), Goal 4, Target 5, Indicator 14, for 18 of the 46 UN SIDS¹³ for 1990 and 2004. The target values for these SIDS range from an IMR of 51 for Guinea Bissau to an IMR of 2 for Singapore. All of the 18 SIDS included here are 'on track', moving in the direction of the targets, except Jamaica whose reported value (IMR 17) for 2004 was the same as for 1990, and also São Tôme & Príncipe, which had an IMR of 75 in 1990 and the same value for 2004. In the period 1990–2004, SIDS had overall a downward linear trend on IMR of 22 per cent. This downward trend however varied between the SIDS regions. In the Caribbean, it was 28 per cent; in the AIMS region, 22 per cent and in the Pacific, 8 per cent.

Infant mortality in SIDS is strongly negatively related to GDP per capita, measured at purchasing power parity¹⁴ (see Figure 14.3). The richer the country, the fewer the infant deaths. Beyond the point of GDP per capita of US\$5,000 the rate of decline of IMR is sharply reduced. This is consistent with diminishing returns to investment in high technology interventions, such as neonatal intensive care, and higher priorities in other aspects of economic and social development.

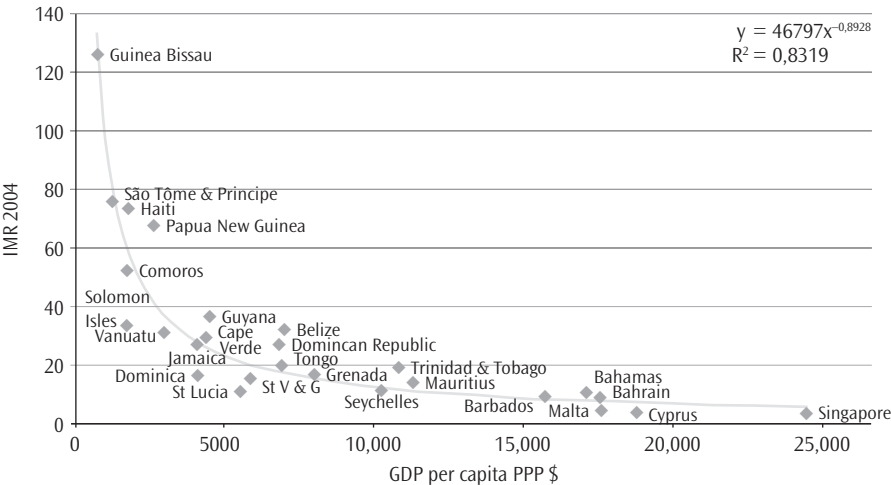
In 1990, 87 per cent of the 70,000 infant deaths in the 35 SIDS covered by the data came from just four of the SIDS countries: Haiti, in the Caribbean region (37 per cent), Papua New Guinea, in the Pacific region (19 per cent), Guinea Bissau in the AIMS region (16 per cent), and the Dominican Republic in the Caribbean region (15 per cent). Fourteen years later, in 2004, 88 per cent of the 52,000 infant deaths in these 35 SIDS came from these same four countries which are amongst the poorest of all the SIDS. There is a downward trend in infant deaths in SIDS, with countries mostly moving towards their targets, but from a policy and economics perspective, the priority should be to seek the greatest reduction in the remaining total 52,000 annual infant deaths in SIDS from the total resources

Figure 14.2. Goal 4, Target 5, Indicator 14, Infant Mortality Rate. 1990, 2004 and target values



Source: World Bank World Development Indicators: Data downloaded February 2007

Figure 14.3. Goal 4, Target 5, Indicator 14, Infant Mortality Rate 2004 and GDP per capita PPP



Source: World Bank 2007, UNDP 2006

available. The format of MDGs does not take into account inter-country inequity, nor does it directly encourage regions to focus on those countries offering the greatest returns to investment.

Goal 5: Maternal health

The maternal mortality ratio¹⁵ (MMR) varies in the AIMS region from 1,100 in Guinea Bissau to 24 in Mauritius and 21 in Malta. The MDG target is to reduce by three-quarters the 1990 levels in each country by 2015. Only Mauritius has already achieved this target. Four AIMS countries are ‘on track’, moving in the direction of the target, but four other AIMS countries are ‘off track’.

Within the AIMS region the current relative risk of maternal death for mothers is 46 times greater in Guinea Bissau than in Mauritius. If the current birth rates and MMR continue from 2007 until 2015 there will be over 6,000 maternal deaths in Guinea Bissau compared with 36 maternal deaths in that period in Mauritius.

The differences in MMR are doubtless related to differences in services and resources. In Guinea Bissau, 41 per cent of the population lack safe water, 65 per cent lack safe sanitation and 75 per cent lack access to essential drugs¹⁶; in Mauritius, none lacks access to safe water, only 6 per cent lack access to safe sanitation and 2 per cent lack access to essential drugs¹⁷. In Guinea Bissau, there are 17 physicians and 45 nurses per 100,000 population; in Mauritius, the comparative figures are 85 physicians and 241 nurses per 100,000 population¹⁸.

The MDG system provides signals that need re-assessment in terms of regional and global justice, the priorities for which may not be immediately evident from the individual national indicator values and the arbitrary numerical targets themselves. The MDG system is being

developed and adapted and substantial progress has been made by the UN through certain of its agencies, such as UNDP, UNESCO and the Millennium Development Project to promote a sharper focus on priorities and relevant action¹⁹. Achieving the MDGs is worthwhile, but more attention is needed to the issue of reducing the gross inter-country differences through the most cost-effective deployment of available resources.

Goal 6: Disease control, HIV/AIDS, Malaria and TB

HIV/AIDS

In the UN database, disease control is poorly reported for SIDS. Latest values for HIV percentage prevalence in 15–49 year olds is reported for 6 of the 11 AIMS countries. The values range from 0.1 per cent in Bahrain and Singapore to 3.8 per cent in Guinea Bissau. This compares with international benchmarks for 0.4 per cent for developed regions and 1.19 per cent for developing regions. The highest AIMS value on this indicator is lower than the average for Sub-Saharan Africa which is reported to be 7.3 per cent. This should not imply there is no need for action. Establishing control programmes on HIV/AIDS, before it infiltrates the population at large, is a key opportunity in those SIDS which have low HIV/AIDS prevalence. But data from the UN database on intervention in HIV/AIDS, Indicators 19 and 20, is poorly documented, with 'missing data' for 10 of the 11 AIMS countries. Improvements in this element of the MDG data base are being strenuously promoted with an EU-funded programme in the Indian Ocean countries²⁰.

Malaria

The control of malaria is not reported in the UN database for the SIDS region as a whole. Where data are reported (4 countries), the latest rates vary from 3 deaths per 100,000 population in the Maldives to 80 per 100,000 in São Tôme & Príncipe and the same for the Comoros. Effective treatment is reportedly available for 23 per cent of cases in São Tôme and Príncipe and for 63 per cent in the Comoros. Malaria has been eradicated in Mauritius but this is not recorded in the UN database.

TB

TB death rates have been reduced in all the AIMS SIDS. But the TB death rates vary from 0.4 per 100,000 population in Cyprus, accounting for 3 deaths per year, to 43 per 100,000 in Guinea Bissau, accounting for 565 deaths a year. The relative risk of death from TB in Guinea Bissau is 188 times that in Cyprus. The MDG system of national targets obscures the issue of the regional and inter-country distribution of the total burden of disease.

WHO is promoting the use of a Burden of Disease index²¹ for regions. This index shows the health burden from groups of diseases taking into account loss of life years and years of disability. This index helps countries to focus on those disease groups such as heart disease, diabetes, cancers and traumatic injury that are responsible for the greatest burden of loss of life years and disability. Neither expectation of life nor noncommunicable diseases are included in the MDG indicators. The burden of disease index in the health sector, at regional level, is now complementary to the use of the Expectation of Life at birth as an indicator of comparative health status.

The level of expectation of life at birth in Cyprus is 79 years, and with Singapore it has the

highest level of all SIDS; this compares with Guinea Bissau where expectation of life at birth is 45 years, the lowest of all SIDS²². The monitoring of health in SIDS and the delivery of health services is not adequately encompassed in the MDG system in general, and is not covered at all in the UN regional summary database for SIDS. At country level in SIDS adaptation of the MDG data base is being made to provide a sharper focus on these issues.

The deficiencies in the health data in the UN system for SIDS are now being rectified through both regional and national initiatives. Improving the health of the local populations and the ability of these countries to attract tourists both depend on reducing disease and promoting a healthy environment and supportive social culture. This is an important target for sustainable development in SIDS. Recent initiatives in promoting better health at national and regional level depend on improvements in information and a sharper focus of this part of the MDG data system and its relevant application to SIDS²³.

Goal 7: Environmental sustainability

Protected areas

From the UN regional summary tables it appears that SIDS have overall increased their protected areas, under Goal 7, Target 9 Indicator 26, from 2 per cent to 3 per cent of their territorial areas since 1990. This compares with LDCs whose protected areas now stand at 10 per cent; developing regions have 12 per cent protected areas and developed regions have 16 per cent of their territorial areas protected. But the value of this indicator is highly debatable. The area of a country under accorded 'protected area' status by itself means little. As a comparator, it means even less. Some countries may have more or less reason than others to place lands in protected area status and the variation in absolute size of the national areas is concealed by the use of percentages. From a global perspective it is the size not the percentage that provides the environmental gain.

Slums

On Goal 7, Target 32, the global aim is to improve the lives of at least 100 million slum dwellers. The UN reports that in the SIDS region overall 24 per cent of the urban population live in slums; this compares favourably with the figure of 43 per cent for developing regions, and 78 per cent for LDCs. But the level of urban slums in SIDS is four times higher than the level for developed regions of the world. In 2001, 7 million people (13 per cent) were living in slums in SIDS. Improved housing, income support, employment, and related social facilities are key elements in poverty relief, but none encompass the basic MDG system.

Safe water

Goal 7, Target 10, Indicator 30 is to halve by 2015 the proportion of people without sustainable access to safe drinking water. Progress with this target, assessed on the basis of the 21 SIDS with complete data sets, shows that 8 have already achieved their target, 3 are 'on track', 10 are 'off track'. Excluding the 25 SIDS with missing data, this shows a progress rate of 52 per cent. In reviewing priorities for action, however, it is necessary to turn from these percentage gains to the absolute numbers of people without safe water.

For the 34 SIDS for whom there are data for 2004, 10 million people lack safe water. 86 per cent of people in these SIDS without safe water come from just 5 of the 34 countries;

Haiti 35 per cent, Papua New Guinea 32 per cent, Cuba 9 per cent, Guinea Bissau 6 per cent and Fiji 4 per cent.

In the 10 out of 11 AIMS countries who reported on this indicator in 2004 (Bahrain is the exception), 911,000 people (9 per cent) lack sustained access to safe water supply. 89 per cent of these people without safe water live in three of the AIMS SIDS, namely Guinea Bissau (612,000), Comoros (108,000) and Cape Verde (93,000). Only one of these (Comoros) is signalled as 'off track' in the formal assessment of progress towards targets in the MDG system. This regional perspective should be used to focus scarce resources for improvement in water supplies on the needs of the largest numbers, where the returns to investment are likely to be greatest.

Air pollution

Target 9 is to reverse the loss of environmental services. The highest level of emissions reported for SIDS for 2002 was for Singapore with 58 million metric tonnes. This volume constitutes 0.2 per cent of the global total. The total CO₂ emissions for the 33 reported SIDS in 2002 was 206 million metric tonnes, which is 0.8 per cent of the global total. In the period 1990–2002 the reported global CO₂ emission declined by 18.6 per cent; the total for the 33 reported SIDS declined by 18.1 per cent. 21 of the 33 SIDS reported increased total emissions; in 5 there was no reported change; in 7 the reported CO₂ emissions were reduced. The largest reductions since 1990 were in Cuba and in Singapore. The highest level of per capita emissions in the 33 reporting SIDS in 2002 was 31.8 metric tonnes per year in Trinidad and Tobago – an increase of more than 100 per cent over the level of 13.9 recorded in 1990. CO₂ emissions in SIDS, whilst small in total volume by international standards, provide an indicator of potential for energy conservation in these small states who are increasingly turning to more efficient and renewable sources.

Goal 8: Partnerships

Telecommunications

SIDS have increased the number of telephone lines and cellular subscribers per 100 population (Indicator 47) from 7 per cent in 1990 to 38 per cent in 2004, an increase of 418 per cent. The level achieved by SIDS in 2004 is twelve times higher than for LDCs (3 per cent) but three times lower than that reported for developed regions of the world (130 per cent). In the AIMS region, all eleven countries have increased their level of telecommunications on this indicator since 1990. The more rapid development of telecommunications in SIDS is a vital means of reducing the impact of their geographical isolation.

Personal computers

SIDS have increased their use of personal computers (Indicator 48) from 4 per cent of population in 1990 to 13 per cent in 2004, an increase of 241 per cent. The average level reported for LDCs in 2004 was 1 per cent and the global level for that year 14 per cent.

In the AIMS region, the highest reported level of use of personal computers in 2004 was in Singapore (62 per cent), an increase of 848 per cent since 1990. The lowest was in the Comoros (1 per cent). The median level in the AIMS region in 2004 was 16 per cent.

SIDS have generally followed world trends in the increase in telecommunications and per-

sonal computers since 1990, but the levels achieved fall well short of developed regions of the world. Wider use of computer technology in SIDS can boost their resilience in the face of globalisation and is a key element in their future economic and social development.

Methodological issues and the interpretation of results

The basic system of MDGs provides an incomplete tool box for aiding policy in SIDS and small states. A number of key elements in the design and management of the MDG system act as critical constraints on the whole system being adopted at national and regional level as a tool for economic and social policy. The principal issues are considered below.

Gaps in indicator system relevant to SIDS: For SIDS there are certain vital missing elements in the MDG system which are of special relevance to them and which are incorporated in the UN SIDS Mauritius Strategy of 2005 (MSI), to which the future sustainable development in SIDS is intimately linked. These include: climate change and sea level rise (MSI Chapter 1), natural and environmental disasters (MSI Chapter 2), management of wastes (MSI Chapter 3), the state of coastal and marine resources (MSI Chapter 4), tourism (MSI Chapter 8), biodiversity (MSI Chapter 9), management (MSI Chapter 18), and indigenous culture (MSI Chapter 19). Other elements in sustainable development not included in the MDG system but relevant to many countries include demographic change, non-communicable disease and injuries, governance and security, competitiveness, and probity. In adapting the MDG system to local use in SIDS these gaps are beginning to be recognised and supplementary data sets added to adapt the basic system to local needs in line with priorities for action.

Missing data: In Downes'²⁴ assessment of progress with MDGs for 73 small states of the Commonwealth, he found, overall, 29 per cent missing data; the missing data levels ranged from 12 per cent missing on Goal 4, Child Health, to 59 per cent missing on Poverty Reduction. In the African regional assessment of 53 states in that region, UNEP²⁵ found there were between 2 per cent and 74 per cent missing data on the 7 indicators examined. In this assessment for the AIMS group of countries, 48 per cent of the indicators were with missing data, thus inhibiting a complete assessment of the status on progress towards many of the targets.

If the system of MDGs is to be used seriously by policy-makers and for international comparisons, the problem of missing data must be a priority for action²⁶. The collection and collation of these figures should be mainstreamed, as in Mauritius for example, within statistical services and subjected to consistent audits for timeliness, accuracy and conformity to international standards.

UN use of interpolated and modelled data: To fill the missing data gaps the UN database puts in values adjusted by UN agencies 'to achieve international comparability'; these include modelled values inserted by the UN where data are absent, simulated values using UN statistical models, running averages spread over a short period of 2–3 years, and reported data which may not cover the full reference period of time. Care needs to be used in policy development in interpreting trends where such devices have been used to avoid the problems of missing data. Interpolated data can provide a false sense of progress on critical targets.

Arbitrary 1990 baseline: The use of an arbitrary baseline of 1990 tends to obscure how far results are affected by both major differences in baseline values between countries and variations in the secular trends of values within the time period of assessment.

For example, Malta's latest reported levels of CO₂ emissions per head, under Goal 7, Target 9, Indicator 28, gives a status of 'off-track' with a higher level of emissions now than in 1990, despite a 23 per cent reduction in emissions in the past three reported years. These implications of the design of the UN system need to be taken into account in adapting the system as a mainstream tool for policy-makers.

Equity and inequity in the definition of targets: The methods advanced in the MDG system for the definition of target values vary across the MDG system. Policy-makers, especially at regional level, need to handle this issue with care.

The promotion of global and inter-country equity is limited to two of the eight Goals, namely Goal 2, Target 3, Education, and Goal 3, Target 4, Gender Equality. For all the other six Goals the method adopted for target setting varies in relation to the baseline 1990 values on the indicators. Thus for six Goals, the target values tend to promote the preservation of inter-country inequity and obscure the size of country differences.

Absence of an economics framework: In the design of the MDG system, the UN did not agree to adopt an economics framework. No assessment was made of the economic implications of the baseline levels on country indicators nor the total or the marginal costs and impact of meeting the arbitrary targets that are part of the system. Under the MDG process assessment of costs has been undertaken at a global and regional level but none of the detailed work took into account the special circumstances of SIDS²⁷.

For example, infant deaths can be reduced in poor countries with high infant mortality by increasing safe water and sanitation and other low cost public health measures rather than by the high cost, high technology intervention required in developed countries with low IMR. Policy-makers, using the MDGs as a tool, need to consider both the technical requirements for intervention and the marginal and total costs and benefits²⁸.

Denominators: many of the indicators in the MDG system and their related targets are expressed as ratios or percentages without reference to the denominators on which they depend. This has the effect of concealing the size of the difference in tasks presented to different countries in achieving their targets. Thus for example, an increase of the ratio of area of the country protected in Guinea Bissau by 1 per cent of total land requires the designation of 361 square kms of its area; in Seychelles, 1 per cent of land is a mere 6 square kms. Where the targets and the denominators also vary greatly, the size of the impact can be further magnified. A two-thirds reduction in IMR deaths in Guinea Bissau would save nearly 6000 lives; in Singapore, a two thirds reduction of IMR would save 40 lives. The identification of the hidden denominators is a key step in the process of policy development in the pursuit of the MDG targets and the assessment of national and regional impact and relative priorities (see Table 14.3).

Table 14.3. AIMS region: MDG targets to be met

	Goal 1 Target 4 Indicator 5	Goal 4 Target 5 Indicator 14	Goal 7 Target 9 Indicator 25	Goal 7 Target 9 Indicator 28	Goal 7 Target 9 Indicator 30
	Malnourished to be fed	Infant lives to be saved	Forest cover to replace	CO ₂ emissions to reduce	Safe water for more people
Units	Pop'n ×1000	Infants	Square kms	Million tonnes	Population ×1000
Countries					
Bahrain		56	0	5.2	
Cape Verde		144	0	0.0	
Comoros	296	644	78	0.0	81
Cyprus	10	20	0	1.7	0
Guinea Bissau	373	5,550	1,842	0.0	
Maldives	8	95	0	0.2	48
Malta		8	0	0.0	0
Mauritius	37	133	19	1.5	0
São Tôme & Príncipe	5	250	0	0.0	
Seychelles	2	19	0	0.4	5
Singapore		41	0	0.0	0
Totals	730	6,960	1,939	9.1	133

Cultural values and the relevance of targets: MDGs are indifferent to cultural variation, resulting in targets that may not be supported in national policy. For example, under Goal 2 all countries are pressed to ensure universal enrolment in education; but this goal may be in conflict with national and local cultural and demographic factors not represented in the MDG system. In Malta, where only 15 per cent of the population is under 15 years and where only 3 per cent of the GDP is derived from agriculture, the country has 94 per cent enrolment in primary education. In Guinea Bissau, where 48 per cent of the population is under 15 years and 69 per cent of GDP is derived from agriculture, only 55 per cent of children are enrolled in primary education. In such countries, helping with farm-work is part of technical and cultural education and is what many children do at a very young age, to prepare them for their roles in family and community businesses. Cultural values and demographic factors can thus affect differences in enrolment at school and act as constraints on change and the impact of investment in educational facilities.

In some countries, for cultural reasons, politics has not been a field of activity for women. Seychelles has 29 per cent of national parliamentary seats held by women; Bahrain has none; whilst both countries have nearly identical educational enrolment and literacy levels, cultural values doubtless have a major affect on these differences in political representation. They serve as strong constraints on change, motivation and the movement towards the nominal UN targets, some of which may not exist as priorities at national level in every country.

Policy implications

Table 14.3 shows for selected MDG indicators the volumes of services to be planned to meet gaps in provision for five target areas²⁹: Hunger, Child Health, Forest cover, Air quality, and Safe water.

The table shows that for the AIMS region to meet the MDG targets country by country:

- 730,000 malnourished people need to be fed (Goal 1, Target 4 Indicator 5)³⁰;
- 6,960 infant lives need to be saved each year (Goal 4, Target 5, Indicator 14);
- 1,939 square km of forest cover should be re-established (Goal 7, Target 9, Indicator 25);
- 9.1 million tonnes of CO₂ emissions should be cut (Goal 7, Target 9, Indicator 28); and
- 133,000 people should be provided with safe water (Goal 7, Target 9, Indicator 30)³¹.

From a regional policy perspective, however, the table shows that 79 per cent of the malnourished people in the AIMS countries are from Guinea Bissau; 90 per cent of the infant lives to be saved are in the Comoros and Guinea Bissau; 95 per cent of the forest cover to be re-established is in Guinea Bissau; 92 per cent of the CO₂ emissions to be cut are from Bahrain, Cyprus and Mauritius; 97 per cent of the safe water to be provided is for the Comoros and the Maldives. This regional perspective highlights the implications of the anomalies in the MDG system and can help to promote reassessment of priorities at national and regional levels³².

Next steps in policy development

The probable next steps for policy-makers and their teams will be to:

- Assess the technical interventions to deliver the services; the resources required; the financial plans, financial mobilisation, capacity building and management arrangements; the involvement of the public and private sectors and NGOs; the needs for capital infrastructure, equipment, human resources, management and maintenance; and the environmental, economic and social impacts.
- Calculate the total and the marginal costs of the developments, the expected timescale of expenditure and realisation of benefits.
- Develop strategic and operational plans and monitoring mechanisms within the financial policy timescales of the country necessary for establishing inter-sectoral political, financial and social support for the proposals.
- Promote plans through the mainstream of annual and medium-term resource allocation.
- Review progress and revisit policy, resource allocation and technical management procedures in the light of results.

Adaptation of the MDG concept to local needs and priorities

The MDGs at country level are now being adapted to local, national and regional needs. Such issues are increasingly being put on the agenda. These include a review of the arbi-

trary nature of the baselines and the arithmetic of target calculation, the absence of an economic context for reviewing priorities, the variation in technical requirements at national level and the other broader issues of development capacity that chiefly constrain political commitment for implementation.

Despite the modest levels of economic and social development in some SIDS, recent analysis shows that their ecological footprint is generally lower and their efficiency in securing human welfare, in terms of length of life and life satisfaction, exceeds that of many developed countries; Vanuatu comes out on top, whilst the UK and USA have poorer results, coming out 108th and 150th respectively³³. If life in SIDS is beautiful but costly³⁴, the local people seem to like it that way. So their pathway to development and their policy tool-box should be oriented accordingly.

Most SIDS are facing pressure from population increase. The population of SIDS is expected to increase by 1.3 per cent a year from 55 million³⁵ to 63 million by 2015. The pattern is uneven. For a few SIDS their populations are slightly declining, by about 0.1 per cent per year, including Guyana³⁶, Micronesia, Tokelau and the US Virgin islands; whilst others have growth rates of 2 per cent a year or more, including Comoros, Guinea Bissau, Kiribati, and Timor Leste. The projected 15 per cent overall population growth in population of SIDS by 2015 presents the prospect of an increasingly heavy ecological footprint with an increase in population densities, and more physical infrastructure imposing itself in terms of housing, schools, roads, transport, waste production and energy use. This makes the need for responding to these pressures in an ecologically sustainable manner even more urgent in such vulnerable environments. Demographic change is not included in the MDG system, although it is a fundamental factor in the pursuit of global, regional and national policy on sustainable development.

Conclusions

Substantial progress towards the achievement of MDGs has been made by SIDS although missing data precludes effective assessment of certain vital aspects of development, including well-being, poverty reduction, improvements in environmental quality and the control of disease.

The basic MDG system, whilst popular internationally, lacks many features that are necessary for it to be useful to policy-makers in SIDS. But substantial adaptation is now being introduced at national level. At regional level, some of the difficulties in using the basic MDG system can be overcome if policy-makers divide countries into groups in terms of their stages of economic and social development. The MDG framework can then be adapted for priority setting, taking into account the wide variation in marginal and total costs and expected results that can be achieved by interventions in each country and in the region as a whole³⁷. Lists are available of the type of interventions that are appropriate for the pursuit of each of the targets³⁸. Standard costs have been developed from UN studies in the African region which provide an indication of the costs involved³⁹. But the range of indicators needs to be extended for SIDS to include features of their countries which are vital for future sustainable development, and many of which are key themes in the UN SIDS Mauritius Strategy, yet not embraced in the basic MDG system.

The UN data system has begun to present data for SIDS as a defined region. When this process is completed it will be more helpful for policy-makers.

Development and adaptation of the basic MDG system has been progressing, urged on by the UN Expert Group on MDGs and by action at country and regional level. The UN Expert Group has been promoting capacity building of statistical services and mainstreaming MDG data systems through focal points such as the central statistics office in each country. In many countries closer links are being made between the MDG data and the national policy and budget systems. This is particularly evident in the more developed SIDS, such as Malta, now part of the European Union, Mauritius⁴⁰ working with a variety of regional organisations, and Barbados as part of the Caribbean SIDS region⁴¹.

Recommendations

To assist policy-makers and their teams at regional and national levels to adapt the MDGs as a tool for policy development and planning, SIDS should:

- Rationalise the assignment of countries to the SIDS regional group and their stages of social and economic development, to promote more effective advocacy of their collective interests⁴².
- Differentiate the technical and financial investment required in line with the stages of economic and social development of each country.
- Assess priorities taking into account the environmental impact (ecological footprint) of proposed development, the social welfare gains and economic growth that can be expected.
- Assess the marginal and total costs and benefits of making progress towards specific targets on each indicator and identify priorities.
- Develop a more systematic documentation of the scientific and technical evidence basis for interventions within an economics framework that includes social and environmental costs and benefits.
- Remedy the problems of missing data that inhibit the effective assessment of progress with MDGs.
- Establish data audits to improve the quality and timeliness of data sets.
- Promote strengthening of the UN system of review of SIDS and the implementation of the 2005 SIDS Mauritius Strategy.
- Promote comprehensive UN documentation of data from SIDS as a region and extend in other UN agencies, e.g. UNEP, WHO, UNICEF, UNDP.
- Support UN system agencies working with SIDS countries to develop credible methodologies and accurate data sets on MDG-related goals.
- Build mainstream commitment and capacity at country level, with regional support where necessary, within the central national statistics offices, linking the process of data collection and dissemination of analyses to economic and social policy and to medium term financial budget systems.
- Extend the MDG framework for SIDS to cover priority areas in the Barbados Programme of Action and the Mauritius Strategy of Implementation.
- Establish a review at regional and national levels of the social and economic

implications of the equity issues inherent in those targets based on proportional changes in baseline values⁴³.

Further reading

- Coomaraswamy, I (2006). *Small States, Economic Review and Basic Statistics* Vol. 10. Commonwealth Secretariat. London.
- Data on MDGs: <http://MDGs.un.org/unsd/MDG/Data.aspx>
- MDGs Expert Group (2007). *Millennium Development Goals Report*.
www.un.org/millenniumgoals/pdf/mdg2007
- Sachs, J (2005). *Investing in Development: a Practical Plan for Achieving Millennium Development Goals*. New York: UN.
- The World Bank (2005). *World Development Report 2006: Equity and development*. New York: OUP.
- UN (2000). *The Millennium Declaration*, A/RES/55/2 UN New York.
- UN (2001). Road Map towards the Implementation of the UN Millennium development Declaration; A/56/5/32b, PDF, 450 KB.
- UN (2005). *MDG Handbook*. <http://MDGs.un.org>
- UN (2005). *Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States*. A/CONF.207/CRP.7: <http://www.sidenet.org/docshare/other/20050201154324-Mauritius-Declaration.pdf>
- UN General Assembly 2006. Follow-up to the UN SIDS Mauritius Strategy: A RES/61/196: www.un.org UN General Assembly 200
- UN DESA (2011) List of SIDS. New York: UN. <http://www.un.org/special-rep/ohrrls/sid/list.htm>
- UNDP (2006). *The Sustainable Difference, energy and the environment*. Bureau for Development Policy, New York: UNDP.
- UNESCO (2006). Follow up to the implementation of the Mauritius Strategy, report to the UN Secretary General, General assembly 61st session: <http://www.unesco.org/en/sids>

Notes

- 1 See: www.unmillenniumproject.org www.undp.org/MDG/ <http://unstats.un.org/unsd/MDG/>
- 2 The AIMS region is one of three regions of small island developing States (SIDS) officially recognised by the UN. The Group was formed in 2003 with 11 countries (Bahrain, Cape Verde, Comoros, Cyprus, Guinea Bissau, Maldives, Malta, Mauritius, São Tôme and Príncipe, Seychelles, and Singapore). The name AIMS derives from the capital letters of the names of the marine areas in which the countries are located (Atlantic, Indian Ocean, Mediterranean, and South China Sea).
- 3 The international lists of SIDS vary and lack consistency in their classification. (See Encontre, P (2004) 'SIDS as a category, adopting criteria would enhance credibility', in: Ouane, H et al. (2004) *Is special treatment of small island developing States possible?* UNCTAD, Geneva, UNCTAD/LDC/2004/1 UN). Not all 46 SIDS listed on the UN website are 'small'; not all are 'islands'; not all are 'developing'; and not all are 'States'. The 46 UN SIDS have a total population of 55 million (Source: UNICEF, 2011); divided between the Caribbean SIDS 35 million (64 per cent); the AIMS SIDS 11 million (20 per cent) and the Pacific SIDS 9 million (16 per cent).

- 4 See, for example, Multinational Development Banks (2004) *Better Data for Better Results; An Action Plan for Improving Development Statistics; Second International Roundtable on Managing Development Results, Marrakech*; www.afristat.org/contenu/pdf/initiaves/marrakech-en.pdf; Ganoo, M (2008) *MDGs the Mauritius experience*; www.mdgs.un.org/Mauritius; and MDG Expert Group (2007) *Millennium Development Goals*, Report 2007, UN; www.un.org/millenniumgoals/pdf/mdg2007
- 5 Supplementary data are from other sources including the World Development Indicators database of the World Bank, the Commonwealth Secretariat *Small States Economic Review and Basic Statistics*, UNICEF, country reports, and from *World Factbook*, www.cia.gov/cia/publications/factbook
- 6 For simplicity of presentation in this assessment all percentages are reported as rounded to the nearest whole number and 'percentages' are used where 'proportions' are specified in the indicators.
- 7 For this purpose the UN adopts the UN Secretariat list of 46 SIDS.
- 8 Source: <http://unstats.un.org/unsd/MDG> downloaded 6 February 2007. The indicators included in the SIDS summaries are: 5–10, 26, 32, 47, 48. These cover aspects of: Goal 1: Poverty; Goal 2: Education; Goal 7: Environment; and Goal 8: Partnerships.
- 9 Coomaraswamy, I (2006). *Small States, Economic Review and Basic Statistics*, Economic Affairs Division, Commonwealth Secretariat, ISBN-10:0-85092-831-1.
- 10 The UN regional tables do not specify how many of the 46 SIDS are included in the report.
- 11 UNDP (2006). *Human Development Report*, tables; www.undp.org downloaded November 2006.
- 12 The number of deaths in the first year of life per 1000 live births, for the reported calendar year.
- 13 World Bank, World Development Indicators database, downloaded February 2007. The UN database summary by region, generally used in this assessment, does not include regional figures for SIDS for this indicator.
- 14 A method adopted by UNDP and the World Bank, based upon UN survey data to adjust GDP at exchange rate values for the relative purchasing power of the local currency for a standard basket of goods and services.
- 15 The number of maternal deaths per 100,000 live births.
- 16 www.undp.org *Human Development Report 2006*, Tables.
- 17 Sources: Un Statistics Division 2007 and UNDP 2006.
- 18 Coomaraswamy I et al. (2005). Op. Cit. Table 43.
- 19 www.undp.org/MDG/MDGNET
- 20 AIRIS-COI project see IOC website www.coi-ioc.org
- 21 Murray, C and A Lopez (2002). *Reducing risks and promoting healthy life*. World Health Report, Geneva, WHO.
- 22 Source: www.undp.org *Human Development Report, 2006*, Tables.
- 23 See for example Binger A (2008) and Ganoo A (2008). Op. cit.
- 24 Downes AS (2005) 'Progress towards achieving the millennium development Goals in the Small States of the Commonwealth', in: Coomaraswamy I et al. (2005) *Small States economic review and basic statistics*, pp. 27–39, Commonwealth Secretariat, ISBN–10: 0-85092-831-1.
- 25 Chenje, M et al. (2006). *Africa Environment Outlook 2*. UNEP ISBN 92-807-2691-9, Progress Press Ltd, Malta, for UNEP.
- 26 www.undp.org/mdg
- 27 Sachs, J (2005). *Investing in Development: A practical plan for achieving millennium development goals*. New York: UN.
- 28 See Millennium Development Project (2005) *Handbook on MDGs*, New York, UN, www.un.org This provides guidance for review of the most cost-effective interventions. Also see <http://ddp-ext.worldbank.org/ext/GMIS> Millennium Development Goals, achieving the targets, and research and country studies; www.undp.org MDG country reports, including for SIDS: Jamaica 2004, Bahrain 2003, Mauritius 2003 and a sub-national report for the island of Rodrigues 2003. These reports link the pursuit of MDGs with the formulation of national

- programmes of intervention by the public, private sectors and by NGOs. Levels of expected outcome are however not directly linked to investments.
- 29 The table has been calculated excluding the missing data which are identified for each of the target areas.
- 30 Data are missing for four countries (Bahrain, Cape Verde, Malta, Singapore).
- 31 Data are missing for Bahrain, Cape Verde, Guinea Bissau and São Tôme & Príncipe.
- 32 See, for example, UNDP (2004). *Jamaica, MDG Report*, p. 50, www.undp.org/mdg country reports; downloaded February 2007.
- 33 See Marks, N (2006). *Happy Planet Index*. New Economics Foundation; downloaded from www.neweconomics.org September 2006
- 34 Winters, LA and PMG Martins (2004). *Beautiful but costly, business costs in small remote economies*. Commonwealth Secretariat.
- 35 See UNICEF, UNDP, Commonwealth Secretariat and World Fact Book, CIA.
- 36 Guyana is included in the UN list of SIDS as a low lying state.
- 37 See Roberts, JL (2006). 'Environmental management and resilience in the AIMS Small States', Appendix 1 'A framework for investment in Development for the AIMS countries, differentiated by stage of Development'; in Briguglio, L et al. (2006) *Building the economic resilience of small states*. University of Malta and the Commonwealth Secretariat, London. ISBNB 99909-49-23-9.
- 38 UN (2005). *MDG Handbook*, <http://mdgs.un.org>
- 39 Sachs, J (2005). *Investing in development: a practical Plan for Achieving Millennium Development Goals*, New York: UN.
- 40 Ganoo, M (2008). MDGs the Mauritius Experience, see www.un.org/Mauritius
- 41 See Binger A (2008). *Vulnerability of Caribbean SIDS, High level Roundtable on International Co-operation for Sustainable development in Small Island Developing States*; www.un.org/esa/sustdev/sids/2008-roundtable; emphasises the importance for SIDS of data on renewable energy production, waste management and food security, which are not embraced in the basic MDG system.
- 42 i.e. omit from the UN core group those countries that are not small, not developing, not islands and not states; but recognise the common interests of many other territories which are small islands but not states.
- 43 Such as Goal 1, Targets 1 and 2, Halving poverty; Goal 4, Target 5, Reducing by two-thirds under five mortality.

The sustainable small state

Sustainable development in SIDS and national sustainable development strategies

This chapter offers the basis for identifying the characteristics of an 'ideal case' of a sustainable small state.

Since the first call for NSDS was made at the United Nations Conference on Environment and Development (Earth Summit) in Rio de Janeiro in 1992, SIDS have had to prepare, develop and implement such strategies, often with low institutional and individual capacities; '... while SIDS have made commendable progress in recent years, they still have a far way to go in creating the kind of systemic, institutional and individual capacity commensurate with the challenges of sustainable development'¹. Subsequent international meetings also noted that NSDS must address the Barbados Programme of Action (BPOA, 1994), the Millennium Development Goals (MDGs, 2000), the World Summit on Sustainable Development (WSSD, 2002), and the Mauritius Strategy (2005).

Small states and SIDS working separately face severe challenges such as limited funding, inappropriate scale and scope, scarcity of technical expertise, and poor infrastructure. These have persuaded many to turn to regional institutions for specialised assistance. In addition, international donor agencies also find it more cost effective to fund projects through regional institutions. The Pacific SIDS have developed a well-organised structure of regional intergovernmental organisations, co-ordinated through the Council of Regional Organisations in the Pacific (CROP). In the Caribbean, the establishment of the CARICOM Single Market and Economy (CSME) is seen as a critical element of the growth and development strategy of the Caribbean Community. The main objective of the strategy is to help Caribbean countries transform their regional integration process into an effective instrument of global integration, competitiveness and economic growth.

Mauritius, Cape Verde, Seychelles, and Maldives have adjusted policy and planning systems to focus on sustainable development as distinct from programmes for environmental protection. The process of policy-making within these countries is varied. Some of the countries have changed their institutional frameworks for policy-making and planning by adding a new advisory body to oversee issues which distinguish sustainable development from previous policies, where some countries with already complex policy formulation networks merely referred to sustainable development issues.

Whilst most SIDS have some form of NSDS and/or integrated development plans, it was recognised at the UN 2005 Mauritius meeting that there is a need to intensify national efforts by giving greater priority to the NSDS, to develop mechanisms for regional collaboration, and for sources of international assistance to be identified. The Caribbean Region has since implemented under ECLAC, the Regional Coordinating Mechanism on the Mauritius Strategy. The lack of basic data and statistics to build sustainable development indicators as well as poor understanding of their role in decision-making, together with the lack of political will, finance and human resources, and decrease in ODA, all act as major barriers in the implementation of NSDS. Additionally, emerging challenges such as the high cost of oil and food during the period 2007 through 2008, the HIV/AIDS pandemic, global security concerns and the 2008/2009 economic crisis are impacting the progress made in sustainable development in recent years. Until these issues are resolved, it will be very difficult for SIDS to meet national sustainable development targets and goals.

Benchmarking the ‘ideal case’ of a sustainable small state

An analysis of the sustainable development policies and strategies employed by SIDS and the resulting progress toward sustainable development show many to be fractured, distant and disconnected from the ‘ideal’ of a sustainable small state. My view of the ideal state is one whose development is:

- a) grounded in the principle of synergy and sector integration, with the energy sector playing a pivotal role against the background of state-owned utilities;
- b) driven by active citizen participation and successful partnerships that lead to harmonisation, reduce duplication and sustain interventions;
- c) led by a cadre of focal points central to governments that act as ‘catalysts’;
- d) supported by a high level of capacity to negotiate, plan, implement and monitor programmes and activities; and
- e) informed by an up-to-date socio-economic, environmental and governance database.

In key sectors that pose severe challenges – such as energy, water and waste management, land use, tourism, the marine environment, trade, disaster risk reduction, and adaptation to climate change – two SIDS (Mauritius and Barbados) provide valuable lessons in making progress with NSDS and an integrated approach to sustainable development, which can serve as a model for other SIDS. The main reason for progress with implementation of select policies and strategies in these SIDS seems to be attributable to informed political leadership committed to the integration of sectors and ministerial portfolios and to providing resources to achieve sustainable development goals.

In many SIDS, Government structures have been modelled on those of the United Kingdom. Today, it is still a reflection of the system in big countries, with individual ministries managing sectors and national development progress being treated as the sum of parts, rather than as contributors toward the attainment of defined milestones reflecting a high degree of synergy and integration. The sector-based approach to measuring progress may function more effectively in larger countries where natural resources are not as limited, but, as the existing situation in SIDS shows, it presents special problems for many small countries. For example, one of the main uses of electricity in SIDS is for the distribution of

potable water; however, there are no linkages between the water and energy sectors. The tourism sector is the fastest growing user of energy and water, but these three sectors have very limited synergy and integration.

For SIDS, sustainable energy is the foundation of sustainable development and access to affordable energy is a major component in how SIDS address sustainable development. Energy dependence is a major source of economic, social and environmental vulnerability for many SIDS. Many remote and rural communities in SIDS have little or no access to modern and affordable energy services. At the same time, inability to expand electricity generation to meet growing demand is likely to remain the single most important constraining factor in the economic development of the majority of SIDS. Ideally, the sectors with which energy has to be better integrated are waste management, water supply, agriculture and forestry. This strategy helps promote and contribute to sustainable development.

An integrated water resources management (IWRM) plan ensures that water policies are developed to complement and be consistent with NSDS, land and environment and key policies, thus ensuring an integrated and co-ordinated approach between all agencies. Lack of IWRM plans and failure to implement plans is contributing to several SIDS not meeting the MDG 7. Efforts by the Pacific to formally develop the IWRM management approach within governance structures at the national level were inhibited due to, 'inherited colonial government structures with their inherent line ministries and poor inter-ministerial liaison and collaboration, with a general tendency for government administrations to be inadequately resourced and weak compared to local and traditional governance structures'².

Barbados has implemented an integrated approach to planning and management of its natural resources through the National Sustainable Development Policy which was passed in Parliament in 2004 as a means to strengthen the ability of the country to implement national policy priorities for natural resource management and update national land use policy and planning to improve its responsiveness to future physical and economic development³. The policy seeks ultimately to provide a framework which will promote the development of the island's economic and social capital while ensuring the wise and proper stewardship of environmental capital.

As clearly outlined in the BPOA, most aspects of environmental management in SIDS are directly dependant on, and influenced by, the planning and utilisation of land resources, which in turn is intimately linked to coastal and marine management and protection. The Pacific Islands are heavily reliant on their tuna-based offshore fisheries for the livelihoods of their peoples. The region supplies 55 per cent of the world's canning tuna, yet the majority of Pacific Islands that are party to the Pacific Plan⁴ do not have NSDS-linked sectoral plans and priorities involving coastal and marine resources. However, at least three countries, Fiji, Samoa and Tuvalu, whose NSDS are based on an integrated approach, are showing early positive results. For example, in Fiji all sector-level corporate plans are being developed to reflect priorities in the NSDS and activities that focus on community level outcomes.

The Caribbean faces similar challenges. The two most important aspects of the Caribbean common fisheries policy pertain to:

- 1 agreement on access to the resources of the CARICOM Fisheries Zone by Member States; and
- 2 resource access of Third Parties (distant water fishing states) that have a historic presence in the region⁵.

However, the Caribbean Community (CARICOM) Regional Fisheries Mechanism (CRFM) has not been involved with the management of the exploitation of regional stocks, an indispensable requirement for sustainable fisheries development⁶.

SIDS continue to face many challenges in the sustainable management of their forest and tree resources, uniquely planning in the most biologically diverse environment characterised by a high degree of endemism of many species. Mauritius was the first country to sign and ratify the Convention on Biological Diversity in 1992, and intends to achieve the 2010 target. The Mauritius National Biodiversity Strategy Action Plan 2006–15, is divided into three thematic areas: Forest and Terrestrial Biodiversity; Freshwater, Coastal and Marine Biodiversity; and Agricultural Biodiversity, Biotechnology and Biosafety. Five strategic objectives are addressed: Establishment of a Representative and Viable Protected Area Network (PAN); Management of Key Components of Biodiversity; Enabling of Sustainable Use of Biodiversity; Maintenance of Ecosystem Services; and Management of Biotechnology and its Products. The country's Third National Report states that many native fauna species have become extinct but, in some cases (e.g. some bird species), population has increased due to successful species recovery programmes.

Other lessons learned from the Pacific Islands include integration of environmental concerns into the tourism and fisheries sectors, a number of policy and regulatory measures taken at the national level to mitigate and reduce the threat of pollution and habitat degradation, and concerns regarding the potential impacts of climate change on resources – these have all been taken into consideration in the National Development Strategies as well as in recent conservation programmes.

SIDS tend to be particularly vulnerable because of their small size and insularity. Their small size encourages them to resort to international trade. They need to find export markets due to their small domestic market, and they need to import heavily, due to lack of natural resources. At the same time, the small market size limits possibilities for diversification. Over the last two decades, the share of SIDS in global merchandise trade diminished by half (from 0.4 per cent of world exports of goods in 1980 to 0.2 per cent in 2003), while their share of global trade in services remained stable (0.7 per cent of world exports of services). SIDS are estimated to be economically 34 per cent more vulnerable than other developing countries, partly for the following reasons: agricultural production in SIDS has been 31 per cent more unstable than that of other developing countries, and their exports of goods and services have been 10 per cent more unstable, mainly due to their exposure to natural disasters⁷.

Negotiations between African, Pacific and Caribbean (APC) countries and the European Union for a new Economic Partnership Agreement (EPA) saw APC SIDS using regional mechanisms in their trade negotiations, i.e., the Pacific Regional Economic Integration Programme (PACREIP), Caribbean Regional Negotiation Machinery (CRNM). Both entities

support regional economic integration. In seeking to integrate into the global economy, ACP SIDS have accepted that an integrated regional approach is the most effective strategy for engagement in the global economy.

Tourism is emerging as a major economic strategy for many SIDS due to its multiplier and spill-over effects on the rest of the economy. Prior to the 2008/2009 global economic recession, tourism was a US\$7 trillion dollar economy, accounting for a tenth of global GDP and 8.3 per cent of employment (231 million jobs). It was projected to grow at an annual growth rate of 3.9 per cent expanding to a \$13 trillion industry by 2017. These projections bode well for tourism-dependent SIDS, given the direct relationship between the growth of international tourism arrivals and the growth of economic output as measured in GDP⁸.

Like the integration of energy with all sector plans, so too is the integration of tourism critical for sustainable development in SIDS, given their vulnerability to global events, which are almost always beyond their control. Knowledge and understanding of destination vulnerability are key factors in planning for and managing resiliency. For example, in Barbados, the Ministry of Tourism, in collaboration with the Central Emergency Relief Organisation and the Caribbean Disaster and Emergency Response Agency, is in the process of developing a comprehensive disaster management strategy for the tourism sector⁹.

SIDS need to improve their disaster preparedness and emergency planning, and integrate and mainstream these into development planning. Disaster Risk Reduction (DRR) measures have a high benefit-to-cost ratio, save lives and property, and are also highly cost-effective in bringing significant developmental benefits in normal times, a lesson that is reinforced by the current focus on climate change. The South Pacific Applied Geosciences Commission (SOPAC) has developed a comprehensive set of guidelines for Comprehensive Hazard and Risk Management (CHARM), defined as a tool and/or process within the context of an integrated national development planning process.

In addition, the Pacific Dialogue on Water and Climate was established as a 'platform through which policy-makers and water resource managers have better access to and make better use of information generated by climatologists and meteorologists' in order to 'improve the capacity in water resources management to cope with the impacts of increasing variability of the world's climate'. The Caribbean Disaster Emergency Response Agency (CDERA) is the agency of the Caribbean Community and Common Market (CARICOM) responsible for disaster response in any of the 16 participating states. CDERA works to create a methodical and preventative approach for comprehensive disaster management through the assessment of vulnerability.

SIDS face a wide range of challenges and concerns in implementing social development programmes thus integration of these programmes into the wider planning process is imperative. The management of the spread of HIV/AIDS, poverty, migration, trade, education, food security, environmental considerations, population growth, youth development, the physically challenged, and the needs of vulnerable and disadvantaged groups has begun to warrant special attention in all social policies and social development programmes. HIV/AIDS is devastating for SIDS, and exerts severe pressure on SIDS economies that have

the potential to undermine the social fabric. The Caribbean now ranks second to sub-Saharan Africa among the regions that are hardest hit by HIV/AIDS, with a 2.3 per cent adult HIV prevalence rate, while in the Pacific, although known prevalence has remained relatively low, the prevalence of risk factors for HIV transmission is considered high. Papua New Guinea has the highest reported rate of HIV infection, with an estimated HIV prevalence of over 1 per cent among pregnant women attending antenatal clinics in three urban sites around mining areas in Port Moresby¹⁰.

Achieving social development will require that the initiators of social development policies and programmes – usually the State – fully appreciate that consultation and participation cannot be treated as light switches to be turned on and off at the whim or fancy of Government officials. Further, because of the integrated nature of social policy, a firm and irrevocable commitment to these twin principles is required if the legitimacy and integrity of any development policy is to be achieved and maintained. Civil society organisations, the private sector, the public and the international development community are essential elements of social development.

Young people, particularly those with higher education, are increasingly migrating to other countries. It is going to be difficult to engage them without providing and pointing to concrete opportunities. Initiatives such as the Youth Visioning for Island Living initiative of the United Nations Educational, Scientific and Cultural Organization (UNESCO) allows some young people to become involved and take the lead in implementing their own ideas on sustainable living and development in their communities.

Lessons learned from implementing a national sustainable development plan: Best practice lessons from Mauritius

Mauritius, an African SIDS, is considered an ideal example of a SIDS that has developed and implemented an NSDP, and from which best practice concepts might be drawn that might lead to positive development outcomes in other countries.

In 2005 the government launched a wide ranging reform strategy that has begun to bear fruit. Trade and investment were liberalised, some price controls were lifted, taxes were reduced, a fiscal consolidation strategy was initiated, and monetary policy was strengthened.

Mauritius has made strong progress with many of the MDG targets. According to the latest UNDP Human Development Report, Mauritius ranks among the countries with a high Human Development Index of 0.804 in 2005¹¹. In 2006/2007, the proportion of people living in extreme poverty was approximately 1 per cent, and the country has already achieved Goal 2 by reaching nearly 100 per cent enrolment in primary education and a literacy rate estimated at 95 per cent for 15–24 year olds. Mortality rate for children under five (per 1000 live births) has decreased from 23.1 per cent in 1990 to 17.0 per cent in 2007¹².

In 2007 the HIV prevalence rate among pregnant women aged 15–24 years declined to 0.25 per cent (from 0.31 per cent in 2006), a notable success given that the rate had been steadily increasing from 2000 to 2006. The Government is currently carrying out public

awareness campaigns on HIV and AIDS, along with instituting preventive measures. The whole population of Mauritius enjoys sustainable access to clean water and sanitation. The rate of growth in CO₂ emissions has begun to decline.

The Government undertook a bold economic reform programme in 2006 to address major issues relating to national output, budget deficit, debt, unemployment and the business environment in the country. There are already clear signs of recovery with higher GDP growth and investment, and lower budget deficit and unemployment in 2007. The World Bank and the International Finance Corporation have rated Mauritius second on the *Ease of Doing Business* among the 33 SIDS economies, in its *Doing Business Report 2009*. While Singapore is the easiest place in the world to do business, Mauritius is leading the way in Africa, and placed 24th on the *Ease of Doing Business* globally. During the period 2005–07, Mauritius registered a steady increase in its annual growth rate – from 2.2 per cent in 2005 to 5.4 per cent in 2007. Unemployment has dropped from 9.6 per cent in 2005, to 8.5 per cent in 2007¹³.

Forty years ago, Mauritius was a low-income agriculturally-based economy with a single crop, sugar, which accounted for over 90 per cent of the total value of merchandise exports. Today, Mauritius is a middle-income SIDS, with a diversified economy with growing manufacturing, tourism and financial sectors and where agriculture, although important, no longer dominates the economy. This steady growth started in 1983 with the introduction of Export Processing Zones (particularly the textile sector) to promote greater economic diversification and which led to a manufacturing boom.

In 1997 Mauritius redefined its development agenda to articulate a national vision up to year 2020 (Vision 2020) and a framework for long-term socio-economic development for the country. In 2000, the government presented the National Strategy for Sustainable Development 1999–2005, which identified an action programme to achieve the goals of Vision 2020 and to provide a programme for its implementation. In 2005, the government took a number of measures to reform the economy which was being negatively impacted by a number of economic shocks including loss of EU preferences, increasing energy costs, and the erosion of its textile markets.

Three years later, these efforts have delivered results including the doubling of annual employment creation since 2005 and an increase in the economy's growth rate from 5.5 per cent in 2007.

A plan for economic transition

Following the elections of July 2005 the authorities designed and proposed a 'plan for economic transition' which included:

- Passage of a Business Facilitation Act simplifying procedures for incorporating business, opening up the economy to foreign investors, reducing bureaucratic procedures and streamlining regulations that affect business start-ups.
- Faster procedures to obtain work and resident permits.
- Simpler procedures for acquiring property for business development.
- Phased tariff reduction to achieve a duty-free country.

- Unification of tax and regulatory regimes for EPZ and non-EPZ enterprises.
- Reduction of international private leased circuits (IPLCs) to turn the country into an ICT Free Trade Zone.

Energy access and security – Synergy and sector integration

- The way forward for Mauritius is through the **Maurice Ile Durable** vision, and shift to local renewable sources of energy away from imported fossil fuels and to protect the environment through recycling, to encourage more efficient use of energy and to increase reliance on renewable energy¹⁴.
- The Mauritius Research Council (MRC) set up in May 1992 acts as a central body to advise Government and to influence the direction of technological innovation by funding research projects in areas of national priority and encouraging strategic partnerships. Their work has included a *Synthesis Report on Renewable Energy* and a review of the prospects for biofuels, recommendations from which emerged from broad discussions and consensus by participants to a two-day workshop. This document has been used as an input to the forthcoming Energy Policy for the Republic of Mauritius¹⁵.
- **Land Based Oceanic Industry (Ocean Thermal Energy Conversion – OTEC)** is a new mechanism for the commercial exploitation of the deep Indian Ocean water of Mauritius's EEZ, to generate new wealth from the ocean and provide direct and indirect jobs over the next five years, drawing on successful technology already in use in Hawaii¹⁶.

Lessons from Barbados: The merits of sustainable development in a small state

Barbados provides another model case study for SIDS. It started with a national process to implement the BPOA for sustainable development in SIDS. The country shifted from an agrarian dominated by sugar to a service-based economy, with tourism now being the single largest foreign exchange earner. Barbados, a small island of 430 km² with a population of 293,894, has been classified by the World Health Organization (WHO)¹⁷ in the top ten most arid countries in the world, and has one of the highest population densities in the world (654 persons per sq. km).

In Barbados, economic growth has been matched by steady social progress, a central feature of the country's development profile. This is evident in the development of a wide and strong social safety net including education and services for the improvement of health. Government is the dominant provider of these services¹⁸.

Barbados is an upper-middle-income country ranked 31 on the United Nations Development Programme (UNDP) 2007/2008 Human Development Index (HDI). Only two countries in this hemisphere – the USA and Canada – have surpassed Barbados on this Index.

The UNDP 2007/2008 Human Development Report ranked seven SIDS with high levels of human development, all Caribbean SIDS except for Mauritius.

Table 15.1. Human Development Index – Value and Rank: Top 7 SIDS (2005)¹⁹

Country	HDI Value	HDI Rank
Barbados	0.892	31
Bahamas	0.845	49
Cuba	0.838	51
St Kitts and Nevis	0.821	54
Antigua and Barbuda	0.815	57
Trinidad and Tobago	0.814	59
Mauritius	0.804	65

Progress towards the attainment of the Millennium Development Goals in Barbados has been strong. Specifically, the country has achieved Goal 1, the eradication of extreme poverty and hunger; Goal 2, universal primary education; Goal 3, the promotion of gender equality and the empowerment of women, although only 10 per cent of seats in the national parliament are held by women; Goal 4, the reduction of child mortality; Goal 5, improvement in maternal health; Goal 6, halting the spread of malaria and other diseases.

With the economic and social progress have also come new challenges to the well-being of Barbadians. Chronic non-communicable diseases are now the leading causes of death, illness and disability in Barbados and other health and social problems are emerging including HIV/AIDS, drug abuse, violence, accidents and migration of skilled workers.

The country has moved to the introduction of MDG-Plus²⁰, with localisation of the existing MDGs to better reflect national realities and address specific country issues.

In pursuing its specific country development issues, Barbados provides lessons in the areas of:

- Energy security and access.
- Sustainable tourism.
- Coastal and marine resources management.
- Citizen participation.
- Economic diversification.

Energy security and access

Barbados has some indigenous energy consisting of oil and natural gas reserves of 2.2 million barrels and 141.6 million cubic metres respectively. Despite this endowment and sound impressive economic data, the country's energy security situation is critical, as it must still import petroleum to provide nearly 90 per cent of its energy needs. In 2007, the country produced 1,111 barrels of oil per day, but consumed in excess of 8,674 barrels per day²¹.

Barbados, like most SIDS, is dependent on petroleum imports of which takes massive amounts of foreign exchange earnings. The government of Barbados aims to have renewable energy contribute 40 per cent of the island's primary energy by 2010. The main renewable energy sources are sugar cane bagasse and solar which contribute about 15 per cent of the island's primary energy supply; solar photovoltaic (PV) systems currently produce 37,000

watts peak (Wp); solar crop dryers and solar stills for producing distilled water are also employed. Further projects include a cogeneration plant to burn bagasse and fossil fuel, a waste combustion plant, wind farms, ocean thermal energy conversion plant, distributed photovoltaic systems, and wave power²².

The solar water heater industry of Barbados is one of the best known examples of the exploitation of a renewable energy technology in the Caribbean. The industry benefited from the Fiscal Incentives Act of 1974, which allowed manufacturers to benefit from import preferences and tax holidays. In 1980, the Government introduced the Homeowner's Tax Benefit which allowed homeowners to claim the cost of the solar water heater on their income taxes, and the industry received a major boost. The solar water heater promotion has been so successful that in 2007 the Government announced that it would invest in developing and protecting the intellectual property rights (documentation, legal cost and technical details) of the Barbados' solar water heater model. This will include the global advertising of this 'model' to other developing countries²³.

In 2000, there were over 32,000 solar water heaters installed in homes, commercial businesses and hotels in Barbados, saving the country approximately US\$6.8 million per year in imported fuel representing 5.3 per cent of total fuel imports²⁴. Additionally, consumers save about \$US19.2 million, under the assumption that they would have used electricity at normal rates to heat the water. Over 50 hotels now use the renewable energy method. The large-scale integrated designs cover a hotel roof with solar collectors which allow the heat from the central air conditioning system to be used to preheat the water²⁵.

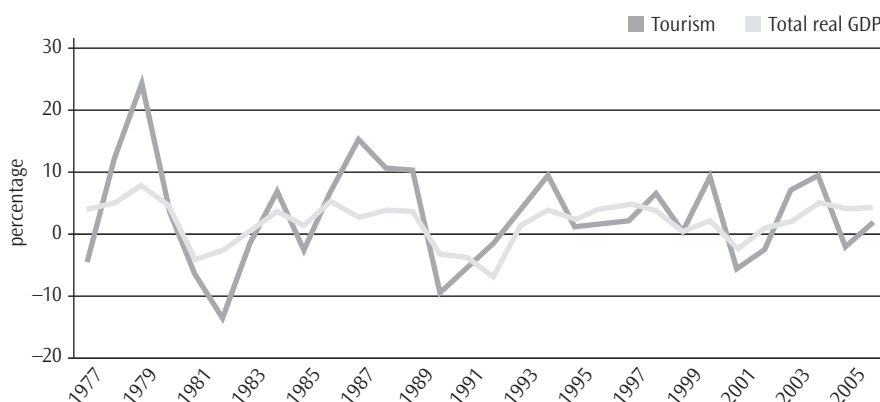
The promotion of solar water heating systems demonstrates Barbados' ability to achieve sustainable development using renewable energies, namely solar power. With the necessary technology and political will, solar energy can replace fossil fuel technologies. This generates national as well as global benefits insofar as international efforts to decrease GHG emissions are concerned.

Sustainable tourism

By the end of 2007, tourism's value-added in Barbados accounted for 15.5 per cent of real GDP, surpassing both manufacturing and agriculture, both of which had declined considerably during those three decades (from 12.3 per cent to 6.6 per cent and from 10.7 per cent to 5.4 per cent, respectively). Furthermore, downturns in tourism activity as shown pictorially in Figure 15.1 tended to lead to downturns in total value added, indicating that Barbados' strong reliance on the sector²⁶.

The Government of Barbados has identified in its sustainable tourism strategy the need to build strong linkages between tourism and other sectors as one way of promoting growth in other sectors and broadening the benefits of tourism in the local economy. The Commonwealth Secretariat is working with the Barbados Ministry of Tourism and International Transport and with the Inter-American Institute for Cooperation on Agriculture (IICA) Caribbean regional office to develop a strategy for Barbados aimed at promoting linkages between the tourism and agriculture sectors²⁷.

The project was conceived from a Caribbean regional workshop on export competitiveness

Figure 15.1. Relationship between growth in tourism, value-added and total real GDP expansion.

organised by the Trade Section in Barbados in May 2006. The workshop identified weak linkages between tourism and other sectors as one of the main hindrances to competitiveness and sustainable development. It was recognised that despite the flourishing tourism sector other sectors and local entrepreneurs have failed to capitalise on the opportunities that the tourism market provides. Thus, the project will look at supply factors affecting farmers, demand factors on the tourism side, marketing and contractual arrangements, logistical support services, infrastructure, institutional framework and capacity building needs. The results of the project are expected to be applied in other countries in the region²⁸.

The Ministry of Tourism is in the process of developing a comprehensive disaster management strategy for the tourism sector. According to the Ministry of Tourism and International Transport, this is being done in collaboration with the Central Emergency Relief Organisation and the Caribbean Disaster and Emergency Response Agency. Additionally, the Ministry has established a Tourism Emergency Management Committee (TEMC) and a Tourism Emergency Operations Centre (TEOC). The TEMC plans and co-ordinates the tourism sector's response during emergencies, while the TEOC will mirror the operations of the National Emergency Operations and will serve as a command centre from which persons will jointly co-ordinate the management of disasters in the tourism context. The Ministry has collaborated with the Royal Barbados Police Force and stakeholders in the industry to address the area of safety and security codes of practice for all tourism establishments, and initial draft standards are being developed.

Coastal and marine resources management

Barbados has a highly varied coastline of unique geological formation that is one of the island's most valuable economic and social assets. The Government of Barbados considers the implementation of integrated coastal zone management (ICZM) as the best way forward for the effective management of Barbados' coastal resources. Over the last 25 years, the Government has systematically developed its capacity to implement ICZM through the Coastal Zone Management Unit (CZMU), established in 1996, which is responsible for advancing the knowledge, use, development, conservation and management of the coastal zone and its resources. The Unit's strategic objectives and policies are summarised in the

Integrated Coastal Management: The Barbados Policy Framework. Barbados has also completed detailed Draft ICZM Plans for the west, south and east coasts of the island²⁹.

Barbados has put in place several strict regulations to sustainably protect and manage its coastal zone resources. The primary statutes used by the Coastal Zone Management Unit include:

- **Coastal Zone Management Act 1998** – provides a comprehensive, statutory basis for coastal zone management and planning in Barbados.
- **Fisheries Act 1993** – covers formulating and reviewing fisheries management and developed schemes; also gives the Minister responsible for fisheries the authority to create new regulations for the management of fisheries as and when necessary.
- **Fisheries (Management) Regulations 1998** – Regulations stipulate: mesh size restrictions for seine nets and fish traps; mandatory installation of escape panels and identification marks on fish traps; and prohibits the use of trammel nets and other entangling nets among other regulations. The maximum penalties for breaking any of these regulations are a fine of Bds \$50,000 and/or two years imprisonment.
- **Draft Recreational Diving Operations Regulations 1998** – governs dive operations for hire and reward. The focus of the regulations is to ensure the safety of dive operators and their clients and the preservation of fragile marine ecosystems.

Targets include resolving the following issues:

- Removal of coastal vegetation.
- Coastal erosion and beach mining.
- Illegal dumping into the marine environment.
- Drainage of storm water and waste water into the marine environment.
- Driving on beaches.
- Illegal development in the coastal zone.

Barbados model for coastal erosion risk mitigation: Lessons learned³⁰:

Pre-event

- 1 Monitoring of priority beaches for reference change.
- 2 Designing protection structures for specific return period events (e.g. design for 1:50 storm; inclusion of a freeboard of 0.5m to compensate for water level fluctuations; and engineering design has to allow for a reasonable component of increased sea level using IPCC predictions for region or local projections when they become available).
- 3 Monitoring wave climate (internet) to estimate (1) how soon the event will arrive and (2) the length of time the event will affect the island.

Post-event

- Processing nearshore wave data to determine the wave parameters associated with the storm event especially wave height and wave period.
- Performing beach profiles and reef assessments at select locations around the island; detailed documentation of observed damage (measurements photographs/video and descriptions of shoreline damage) at the beaches and beach front properties along

the coastline. An equivalent evaluation is also prepared for the marine environment; post-monitoring of significantly eroded beaches to determine rates of recovery or non-recovery.

- Report preparation on shoreline damage (on and off shore); coastal structures maintenance/inspections.
- Respond to property owner requests for site visits and advice on possible options for repair to the property or its protective structure.
- Public education and outreach information dissemination on event, damage caused and current action being taken.

Citizen participation

Democratic principles are based on citizen participation – at least indirect participation through elected representatives – in decisions that affect them. Barbados is an independent democratic state with a two-party system of governance that revolves around a Westminster model of parliamentary democracy.

The newly elected Government of Barbados is seeking to strengthen both the quality of democracy and the delivery of social services through a new initiative called Constituency Councils, ‘a legally established body of local representatives, who have been appointed and given the authority to voice the concerns of the residents of the Constituency; to maintain links with Central Government and other agencies; and to effectively and efficiently manage resources for the development of the given Constituency’ (CCB, 2009). The matter of the establishment of Constituency Councils is a new form of local governance in Barbados, and is a proposal which will create history by introducing fundamental changes in the way Barbados is governed and will affect many stakeholders³¹. The Government plans to establish 30 such councils. Initial start-up funding for the Councils was made by the People’s Republic of China. The Government, under the newly created Ministry of Social Care, Constituency Empowerment, Urban and Rural Development established a website inviting all community organisations, NGOs, political organisations and special interest groups to nominate candidates to participate in the process of establishing Constituency Councils³².

Public participation is ensured by the Town and Country Planning Act, whereby Environmental Impact Assessments (EIA) cannot be approved without public consultation. During this discussion period, or prior to this whilst the EIA is being conducted, the Town and Country Planning Office co-ordinates a public consultation about the project, or requires the developer to do so. The inter-agency Government Committee reviews comments arising out of the public consultation. The Chief Town Planner submits the comments of the inter-agency Committee on the EIA report and on the public consultation to the proponent. The legal policy document currently used by the Town and Country Planning Office to request an EIA in Barbados is the National Physical Development Plan (1998). This was ratified in 2000³³.

In Barbados, advocacy is under-girded by provision of mechanisms for technical consultation, financial subventions to NGOs, as well as popular participation. Examples of these include continued provision of financial support to institutions such as the Barbados Family Planning Association, purchase of accommodation for the Barbados Cancer Society and

more recently, the provision of land to allow the Heart Foundation of Barbados to construct a permanent base for its preventive education and rehabilitation efforts. In addition to the interagency mechanisms used in the planning process, town hall meetings are fast becoming standard processes to obtain public inputs and comment on specific policies and programmes at both national and community level³⁴.

The high cost of living – rising world fuel and food prices – has had a significant impact on external balances in the Caribbean. All CARICOM countries are oil importers (with the exception of Trinidad and Tobago) and net food importers. In 2007, CARICOM countries spent in excess of US\$3 billion on food imports³⁵ and over US\$12 billion for fuel imports, up from US\$6.5 billion in 2004–5³⁶. The Government moved to involve as many interest groups and the wider society in its ongoing efforts to address the matter of the cost of living. To this end, in June 2008, the Cabinet hosted a one-day Consultation on the Cost of Living. Several public and private sector entities, the social partnership, heads of government departments, academia, NGOs and the news media were represented at the forum. According to the Government, ‘the rationale behind hosting such a session is Government’s desire to hear the views of the representatives of the various sectors; so, we can interface, put our heads together, seek to build consensus and come up with appropriate strategies to address this present day phenomenon. We expect them to bring serious and practical contributions to the table that would help us as a collective body to earnestly tackle this problem’³⁷.

Economic diversification

Given the heavy dependence that Barbados has on tourism, and the vulnerability of the main elements of the tourism product to climate change impacts, it is imperative that Barbados implements strategies to diversify its economy. In this regard, Barbados awarded its first offshore oil-exploration rights. In January 2009, the Government licensed the Melbourne, Australia-based company BHP Billiton to evaluate two undersea blocks south-east of the island. Barbados plans to open as many as 26 blocks for exploration and believes multinational oil companies could boost the island’s energy production enough to rival tourism as its biggest industry. Barbados has considered offshore drilling since the 1990s, when a study by a US oil company noted promise in nearby areas³⁸.

Further, with the end of market preferences for sugar – which the country has not fully abandoned due to social implications – the Government has come up with a novel idea to save the sugar industry. Rather than trying to compete in the bulk-commodity sugar market, Barbados has capitalised on its strong historical reputation by claiming to make the ‘best sugar in the world,’ and has developed a new generation of sugars that it believes distinguishes it from its competition, allowing it to supply niche markets around the globe.

Barbados has been partially successful at diversifying its economy away from sugar which still dominates trade as the sector continued to reduce the acres of sugarcane planted in its ongoing struggle to realign itself following the removal of preferential trade arrangements. Relative to many in the region, the Barbados economy is significantly more diversified, and the economic importance of agriculture and manufacturing is relatively low, with agriculture in long-term decline but manufacturing growing – in 2007, manufacturing contributed US\$32 million to GDP, while agriculture contributed US\$25 million.

Conclusion

The ideal sustainable small state operates on the principle of synergy and sector integration. It has active citizen participation and successful partnerships, adequate capacity to negotiate, plan, implement and monitor programmes and activities, and possesses an informed socio-economic, environmental and governance database. The case study on Mauritius highlights the benefits derived to the economy through synergy and sector integration and the emphasis placed on sustainability of the energy sector. The Barbados case study highlights integrated planning in the tourism sector and coastal and marine resources management as well as the role played by citizen participation in sustainable development planning. As shown in both case studies, diversification of the economic base is an important step in pursuit of a sustainable small state.

References

- Associated Press (2009). 'Barbados gives BHP Billiton first oil exploration licence'. *Jamaica Gleaner*, 23 January 2009.
- Binger, Al (2000). 'Country Capacity Development Needs and Priorities, Report for Small Island Developing States'. New York: Global Environment Facility-United Nations Development Programme Capacity Development Initiative. Available at: http://207.190.239.143/Documents/enabling_activity_projects/CDI/documents/SIDS_Assessment.pdf
- Brewster, Leo (2007). 'Coastal Erosion Risk Mitigation Strategies applied in a Small Island Developing State: The Barbados Model'. Bridgetown, Barbados: Coastal Zone Management Unit. Presented at UNFCCC Expert Meeting on SIDS Adaptation to Climate Change, Kingston, Jamaica. 5–7 February 2007. Available at: http://unfccc.int/files/adaptation/adverse_effects_and_response_measures/art_48/application/pdf/200702_barbados_risk_management.pdf
- Caribbean Community (CARICOM) Secretariat (2008). Remarks by Ambassador Lolita Applewhaite, Deputy Secretary-General of The Caribbean Community at The Twenty-Seventh Special Meeting of The Council for Trade and Economic Development, 19–21 May 2008. Georgetown, Guyana. Available at: http://www.caricom.org/jsp/speeches/27spcoted_applewhaite.jsp
- Caribbean Energy Information System (CEIS) (2004). *Petroleum Energy Statistics in the Caribbean* (16 Caribbean countries) PETSTATS CD-ROM Series No.1, Caribbean Energy Information System 2004. Kingston, Jamaica.
- CDERA (2007). *Disaster management plan for Barbados tourism sector*. Bridgetown, Barbados: Caribbean Disaster Emergency Response Agency. Available at: http://www.cdera.org/cunews/news/barbados/article_1813.php
- Central Intelligence Agency (2010). *The World Factbook – Barbados*. Available at: <https://www.cia.gov/library/publications/the-world-factbook/geos/bb.html#Econ>
- Centre for Resource Management and Environmental Studies (2010). *Climate Change and Tourism in Barbados: A vulnerability and capacity assessment of the tourism sector in Speightstown in response to climate change*. Belmopan, Belize: Caribbean Community Climate Change Centre. Mainstreaming Adaptation to Climate Change (MACC) Project.

- Constituency Councils of Barbados (CCB) (2009). *Constituency Councils At A Glance: How To Get Involved*. Bridgetown, Barbados. <http://www.councils.gov.bb>
- Cumberbatch, Janice, Natalie Hutchinson, Adanna Aisha Robertson, Winston Moore, Adrian Cashman and Leslie Walling (2008). 'Climate Change and Tourism in Barbados: A vulnerability and capacity assessment of the tourism sector Speightstown in response to climate change.' CARICOM Secretariat. Mainstreaming Adaptation to Climate Change (MACC) Project.
- Dundas, Carl and Carlyle Mitchell (2004). *A Common Fisheries Regime for the Caribbean Sea*. Georgetown, Guyana: CARICOM Secretariat. Available at: http://www.caricom-fisheries.com/website_content/publications/documents
- Global Environment Fund (GEF) (2007). *Sustainable Integrated Water Resources and Wastewater Management in Pacific Island Countries*. National IWRM Diagnostic Report – Independent State of Samoa, Project Development Facility Block B. World Bank: Washington D.C.
- Goddard, Richard (2007). 'Biofuels in Barbados'. Bridgetown, Barbados: Ministry of Energy and the Environment. Presentation on 28 September 2007 at conference hosted by Latin American Energy Organization (OLADE). Available at: <http://www.olade.org/biocombustibles2008/Documents/ponencias/d%C3%ADa3/Sesion11-Dia3/RichardGoddard.pdf>
- Government of Barbados, *Coastal Zone Management Unit (CZMU)*. Available at: <http://www.coastal.gov.bb>
- Government of Mauritius (2008). *Budget Highlights: Energy – Building a Green Mauritius*. Port Louis, Mauritius: Government of Mauritius. Available at: http://www.gov.mu/portal/site/Mainhomepage/menuitem.a42b24128104d9845dabddd154508a0c/?content_id=0a7cee8b5d69a110VgnVCM1000000a04a8c0RCRD
- Government of Mauritius (2008). *Budget Presentation 2008/2009. Building an Attractive, Modern, Inclusive, Green, Open Mauritius*. Port Louis: Government of Mauritius Available at: <http://www.gov.mu/portal/goc/mof/files/bud0809.pdf>
- Headley, Oliver (2001). *Barbados Renewable Energy Scenario – Current Status and Projections to 2010*. Bridgetown, Barbados: Centre for Resource Management and Environmental Studies, University of the West Indies, Cave Hill Campus. Available at: <http://www.terryally.com/library/oheadleyrenewable.html>
- Mauritius Research Council (2007). *Developing a Land Based Oceanic Industry in Mauritius*. Rose Hill, Mauritius: Mauritius Research Council. Available at: <http://www.mrc.org.mu/LBOI.htm#0>
- Mauritius Research Council (2008). *Energy Efficiency and Renewable Energy Projects*. Rose Hill, Mauritius: Mauritius Research Council. Available at: <http://www.mrc.org.mu/EnergyRenewable.htm>
- SIDSNet (2010). *Promotion of Solar Water Heating Systems*. New York: SIDSnet. Available at: <http://www.sidsnet.org/successtories/11.html>
- United Nations Conference on Trade and Development (2002). *UN recognition of the problems of small island developing States*. Geneva: UNCTAD Available at: <http://www.unctad.org/Templates/Page.asp?intItemID=3620&lang=1>
- UNDESA (2007). 'Addressing climate change in national sustainable development strategies – common practices'. New York: United Nations Division of Sustainable

- Development, Expert Group meeting Integrating Climate Change into National Sustainable Development Strategies, New York, 12–13 November. Available at: http://www.un.org/esa/sustdev/natlinfo/nsds/egm_ClimateChange/barbados.pdf
- United Nations Department of Economic and Social Affairs (2005). 'Unlocking the Human Potential for Public Sector Performance.' *World Public Sector Report 2005*. New York: UNDESA. Available at: <http://unpan1.un.org/intradoc/groups/public/documents/UN/UNPAN021616.pdf>
- United Nations Development Programme (2008). *Human Development Report 2007/2008*. 'Fighting climate change: Human solidarity in a divided world'. Geneva: UNDP. Available at: http://hdr.undp.org/en/media/HDR_20072008_EN_Complete.pdf
- United Nations Economic and Social Council (2007). 'Draft Barbados National Energy Policy: Development strategies that work'. Country experiences presented at the ECOSOC Annual Ministerial Review. New York: ECOSOC. Available at: <http://webapps01.un.org/nvp/frontend!policy.action?id=171&tab=analysis>
- United Nations Environment Programme (2005). *Caribbean Environment Outlook, Special Edition for the Mauritius International Meeting for the 10-year Review of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States*. Ciudad de Panama, Panama: UNEP. Available at: http://www.unep.org/publications/search/pub_details_s.asp?ID=3582
- United Nations World Tourism Organization (2007). 'International tourism challenged by deteriorating global economy' in *UNWTO World Tourism Barometer*, Vol 7. (1), January 2009. Madrid: UNTWO. Available at: http://www.unwto.org/facts/eng/pdf/barometer/UNWTO_Barom09_1_en_excerpt.pdf
- World Bank (2008). *Doing Business in Small Island Developing States 200 – Comparing Regulation in 33 Economies*. Washington, DC: World Bank. Available at: <http://www.doingbusiness.org/reports/special-reports/small-island-developing-states-2009>

Notes

- 1 United Nations Development Programme – Global Environment Facility (UNDP-GEF) 2000. Capacity Development Initiative – Country Capacity Development Needs and Priorities: Report for Small Island Developing States.
- 2 GEF (2007).
- 3 Expert Group Meeting on Integrating Climate Change into National Sustainable Development Strategies. Presented by Ministry of Energy and Environment, Government of Barbados, at the United Nations, New York, November 12, 2007. http://www.un.org/esa/sustdev/natlinfo/nsds/egm_ClimateChange/barbados.pdf
- 4 Leaders of Pacific Island Countries agreed on the Pacific Plan in October 2005. The plan forms the basis of ongoing strengthening of regional co-operation and integration efforts for the benefit of the people of the Pacific.
- 5 Caribbean Regional Fisheries Mechanism (CRFM), *A Common Fisheries Regime for the Caribbean Sea*. <http://www.caricom-fisheries.com/publications/commonpolicy.asp>
- 6 Caribbean Regional Fisheries Mechanism (CRFM), *A Common Fisheries Regime for the Caribbean Sea*. <http://www.caricom-fisheries.com/publications/commonpolicy.asp>

- 7 <http://www.unctad.org/Templates/Page.asp?intItemID=3620&lang=1>
- 8 United Nations World Tourism Organization. 'International tourism challenged by deteriorating global economy'. *UNWTO World Tourism Barometer* Vol. 7 (1), January 2009. http://www.unwto.org/facts/eng/pdf/barometer/UNWTO_Barom09_1_en_excerpt.pdf
- 9 Disaster management plan for Barbados tourism sector. CDERA News Centre. Tuesday, 6 February, 2007. http://www.cderra.org/cunews/news/barbados/article_1813.php
- 10 United Nations Educational, Scientific and Cultural Organization. *Youth Visioning for Island Living*, 'AIDS Emerges as a Major Threat for Small Islands, Especially in the Caribbean and the Pacific'. 3 April, 2004. Available at: http://www.unesco.org/csi/YV/news/news_03APR04_aids.htm
- 11 UNDP *Human Development Report 2007/2008*.
- 12 United Nations Development Programme. MDG Monitor – Tracking the Millennium Development Goals. *Mauritius MDG Profile*. Available at: http://www.mdgmonitor.org/factsheets_00.cfm?c=MUS&cd=
- 13 *Doing Business Report 2009* http://www.doingbusiness.org/documents/subnational/DB2009_Small_Island_developing_states.pdf
- 14 Government of Mauritius. *Budget Highlights: Energy – Building a Green Mauritius*. June 17, 2008. http://www.gov.mu/portal/site/Mainhomepage/menuitem.a42b24128104d9845dabddd154508a0c/?content_id=0a7cee8b5d69a110VgnVCM1000000a04a8c0RCRD
- 15 Mauritius Research Council (MRC). *Energy Efficiency and Renewable Energy Projects*. <http://www.mrc.org.mu/EnergyRenewable.htm>
- 16 Mauritius Research Council. *Developing a Land Based Oceanic Industry in Mauritius*. <http://www.mrc.org.mu/LBOI.htm#0>
- 17 Caribbean Environment Outlook. *State of the Environment, Freshwater*. <http://www.centrogeo.org.mx/unep/documentos/Ceo/CEOfreshwater.pdf>
- 18 PAHO. <http://www.paho.org/English/HPP/RepBarbados.pdf>
- 19 UNDP HDR 2007/2008. http://hdr.undp.org/en/media/HDR_20072008_EN_Indicator_tables.pdf
- 20 At the 2002 World Summit on Sustainable Development in Johannesburg, the international community created additional targets related to environmental sustainability, sometimes referred to as 'MDG-Plus' targets. These targets specifically incorporate pro-poor elements related to sustainable management and use of ecosystems, such as application of the ecosystem approach in conserving biodiversity as well as maintaining or restoring fish stocks to levels that can support sustainable yields.
- 21 CIA *World Factbook*.
- 22 Headley (2001).
- 23 OLADE. *Biofuels in Barbados*. Ministry of Energy and Environment, Government of Barbados, 28 September, 2007. <http://www.olade.org/biocombustibles/Documents/ponencias/d%C3%ADa3/Sesion11-Dia3/RichardGoddard.pdf>
- 24 Caribbean Energy Information System, 2004. *Petroleum Energy Statistics in the Caribbean* (16 Caribbean countries) PETSTATS CD-ROM Series No. 1.
- 25 SIDSNet. *Promotion of Solar Water Heating Systems*. <http://www.sidsnet.org/successtories/11.html>
- 26 CARICOM Secretariat. Mainstreaming Adaptation to Climate Change (MACC) Project. *Climate Change and Tourism in Barbados: A vulnerability and capacity assessment of the tourism sector in Speightstown in response to climate change*. Cumberbatch, et al., 2008.
- 27 Commonwealth Secretariat. *Tourism*. <http://www.thecommonwealth.org/Internal/164124/tourism/>
- 28 Commonwealth Secretariat. *Tourism*. <http://www.thecommonwealth.org/Internal/164124/tourism/>

- 29 Government of Barbados, CZMU.
- 30 *Coastal Erosion Risk Mitigation Strategies applied in a Small Island Developing State: The Barbados Model*. Dr Leo Brewster, Director, Coastal Zone Management Unit, Barbados. Presented at UNFCCC Expert Meeting on SIDS Adaptation to Climate Change, Kingston Jamaica, 5–7 February, 2007.
http://unfccc.int/files/adaptation/adverse_effects_and_response_measures_art_48/application/pdf/200702_barbados_risk_management.pdf
- 31 Organization of American States (OAS). Statement by HE Michael I King, Permanent representative of Barbados to the Organization of American States, On the Occasion of the First Meeting of Ministers and High Authorities of Social Development, July 9–10, 2008, Renaca, Valparaiso Region, Chile.
www.sedi.oas.org/ddse/documentos/Desarrollo%20Social/1minist/post_reunion/7.%20presentacion_embajador%20king_barbados.doc
- 32 Government of Barbados. Constituency Councils. <http://empoweringcommunities.com.bb/>
- 33 IDB. *The Environmental Assessment Process in Barbados*.
<http://www.iadb.org/sds/doc%5CMIREIA-Barbados.pdf>
- 34 PAHO. Division of Health Promotion and Protection. Report of Barbados Achievements in Health Promotion With Respect to the Commitments in the Mexico Declaration.
<http://www.paho.org/English/HPP/RepBarbados.pdf>
- 35 CARICOM website.
- 36 CEIS, 2004.
- 37 Government of Barbados. Government Information Service. Public Consultation on Cost of Living. <http://www.barbados.gov.bb/ViewNews.asp?ID=6615&Dat=6/13/2008>
- 38 Government of Barbados. Associated Press (2009).

About the contributors

Albert Henry Binger is a research scientist with over 30 years experience in diverse scientific areas, including Chemical Engineering, Biophysics, Agronomy, Energy, Climate Change and Sustainable Development. Dr Binger currently serves as Advisor to the Executive Director for the Caribbean Community Climate Change Centre (5Cs), located in Belize, and Technical Coordinator for the Alliance of Small Island States (AOSIS), New York. He is a former Professor and Director of the University of the West Indies Centre for Environment and Development (UWICED), the regional institution in the Caribbean designated to provide research, training and information related to developing capacity on environment and development issues affecting small island states, and since 1993 he has been a Visiting Professor at Saga University, Japan, where he is involved in research on Ocean Thermal Energy Conversion (OTEC). Dr Binger is the former Chair, Strategic Planning for the Global Environment Division at the Rockefeller Foundation in New York, where he was responsible for directing the planning process for the development of the Foundation's activities in global energy and environmental protection management, and has been credited for forming the Biomass Users Network (BUN), Costa Rica, which was established by and for developing countries to promote South-South co-operation in strengthening national capabilities to plan and implement more sustainable natural resource development programmes, especially energy from biomass resources. Dr Binger holds a Bachelor of Science in Chemical Engineering from the University of California, Los Angeles, and a PhD in Agronomy from the University of Georgia.

Albert Nita. The late Dr Nita held a PhD in Environmental Sustainability and Resource Management. He was a lecturer in Environmental Science and Geography at the University of Papua New Guinea and has, among other things, worked as a consultant to UNDESA on Sustainable Development.

Cletus Springer is a Development Planning Specialist, and a former Permanent Secretary in the Ministries of Tourism, Planning and Development in St Lucia. He now serves as Chief of the Caribbean Division in the Department of Sustainable Development of the Organization of American States based in Washington DC.

Constance Vigilance works at the Commonwealth Secretariat as the Economic Adviser responsible for Small States. She holds a Masters in International Affairs in Economic Policy Management from Columbia University, New York and has worked as an Economist for several years.

Derrick Oderson is an Environmental Policy Analyst, a trained Physical Planner and a qualified Attorney-at-Law. He has a BSc in Earth Sciences, including in Physical Geography and Geology; a Masters in Physical Planning and Environmental Management; and an LLB in Law. Mr Oderson has held various positions in the Public Sector of Barbados including the positions of Senior Town Planner and Senior Environmental Officer. Mr Oderson is a former climate change negotiator for the Government of Barbados and was responsible for the National Climate Change Programme. He is currently the Vice Chair of the UNFCCC Joint Implementation Supervisory Committee (JISC) having already successfully completed a two-year period as an Expert member.

Mr Oderson is a lecturer at the Barbados Community College and the University of the West Indies in the Faculty of Law and the Centre for Resource Management and Environmental Studies (CERMES). Mr Oderson provides legal and environmental consulting services to several clients in Barbados, the Caribbean, North America and England. His clients include various United Nations agencies, Caribbean Governments, regional inter-governmental organisations, private companies and individuals. His services include legislative and institutional reviews and analyses, Environmental Impact Assessments, environmental and planning policy reviews, training, litigation, planning appeals and legal opinions. Mr Oderson has consulted on subject matters that include Climate Change, Land Degradation, Biodiversity, Law of the Sea, Ozone Depletion, Disaster Management, and Sustainable Development.

Fathimath Ghina is currently the National Coordinator for GEF-SGP in Maldives, after spending six years working at the United Nations Educational, Scientific and Cultural Organisation (UNESCO) based in Paris, France. At UNESCO she worked primarily on promoting sustainable development in small island developing states (SIDS) through its intersectoral platform on SIDS including co-ordination of specific initiatives on islands: Small Islands Voice, Youth Visioning for Island Living, Sandwatch and climate change education in SIDS. She has a BSc (Hon) in Biology and Applied Social Sciences from the University College of Ripon and York, UK and an MSc in Human Ecology from the Vrije University of Brussels, Belgium. She also holds a Post Graduate Certificate in Education from the University of Bristol, UK.

John L Roberts is a British international consultant on macroeconomics and sustainable development, working at present on assignments with the Indian Ocean Commission and the Commonwealth Secretariat. In 2007, he was appointed Associate Professor at the University of Mauritius teaching on natural resources management in an MSc programme. He is a graduate of the University of Birmingham, UK, and took his MSc and PhD degrees there, specialising in information systems for health economics and planning. He has been a contributor to the United Nations Environment Programme's Global Environment Outlook and the African Environment Outlook series and published case studies for UNEP on malaria eradication and on cyclone early warning systems. He is a co-author of the Commonwealth Secretariat 2010 publication *Saving Small Island Developing States*.

Lindsey Higgs currently works as a Youth Engagement Consultant at Plan Canada. She spent two years working at the United Nations Educational, Scientific and Cultural Organisation (UNESCO) in Paris, France, and Apia, Samoa, where she focused on youth programming

and engagement, including the UNESCO Youth Forum and the Youth Visioning for Island Living initiative. Lindsey has a BA(Hon) in political science and international studies from Queen's University and an MA in international affairs from the Norman Paterson School of International Affairs at Carleton University.

Lino Briguglio is the director of the Islands and Small States Institute of the University of Malta and head of the Economics Department of the same University. He has published many works on small island developing states. He is a member of the Malta National Commission for Sustainable Development.

Margaret Ann Harris holds an MA in Journalism from the University of Havana, Cuba and has read the MA in International Trade Policy at the University of the West Indies. An experienced Caribbean journalist of more than 10 years, Ms Harris worked with the UK-based English Speaking Caribbean office of Oxfam for seven years, three of which were as regional co-ordinator. She is fluent in Spanish and currently works as a consultant for international and local development agencies in Barbados. Ms Harris is an avid reader and is interested in the literary and artistic output of developing countries.

Mark Bynoe is an economist with wide ranging experience in development, trade, and environment related issues. He is currently a CFTC Expert attached to the CARICOM Climate Change Centre as an Environmental/Resource Economist. He is also a past Director of the School of Earth and Environmental Sciences at the University of Guyana, a post he held between 2002–09. He has also worked at various times with national and international organisations, including the Office of the President, the Department of International Economic Cooperation, the Private Sector Commission and the Canadian International Development Agency Programme Support Unit. He has undertaken a variety of consultancies for public, private and international organisations. Mark has published widely in refereed regional and international journals on environmental and development issues.

Mark D Griffith is an environmental and legal specialist. He has a PhD in Geography with specialisation in Remote Sensing of the Environment and Geographical Information Systems and a Bachelor (LLB Hons) and Masters in Law (LLM) with specialisation in corporate, commercial law, commercial arbitration and European Union Law. Dr Griffith is also a Member of the Chartered Institute of Arbitrators, United Kingdom as well as a Member of the Honorable Gray's Inn, United Kingdom.

Dr Griffith played the leading role, within the context of the Preparatory Process, for the United Nations Conference on Environment and Development (UNCED) in the conceptualisation and articulation of the concept of small island developing states (SIDS) and the need for the international community to consider them as a special case for environment and development. This laid the foundation for the adoption by the international community of Chapter 17 (G) of Agenda 21 on Small Island Developing States. He also led Barbados's preparation for the hosting of the First United Nations Conference on the Sustainable Development of Small Island Developing States, serving as Head of the Interim National Secretariat for the Conference (1992–93) and Technical Advisor to the GOB on the Conference (September 1993–May 1994). Dr Griffith has also served as Head of the Environment Unit, Ministry with responsibility for Environment between 1986 and 1992

and led Barbados's negotiations on environment and sustainable development issues during the period 1987–94. In 1994, he was the recipient of the Barbados Governor General's Award for Environmental Excellence.

Dr Griffith has contributed to the development of a number of key institutions in the Caribbean, including the institutionalisation of environment in public administration in Barbados and the Centre for Resource Management and Environmental Studies (CERMES), the University of the West Indies, Cave Hill Campus, where he played a leading role in its establishment and is one of the founding fathers of the Caribbean Community Climate Change programme, having conceptualised and designed the GEF project, Caribbean: Planning for Adaptation to Climate Change. Dr Griffith is a co-author/Editor of *Economic Policy and Environment in the Caribbean* and the author of *The Caribbean, Discover The Region, Its Assets and Investment Opportunities* and co-author of *The Strengthening of the Inner Circle for Environment and Sustainable Development: The Case of the Caribbean Community*, both prepared for CaribInvest (West Indies) Ltd.

Dr Griffith has served in the United Nations Environment Programme (UNEP) as a Senior Officer for almost a decade and a half in various capacities. He was responsible for re-establishing the Scientific and Technical Advisory Panel (STAP) to the Global Environment Facility (GEF) where he served, with distinction, for seven and half years, as STAP Secretary. He has also served in the UNEP Regional Office for Latin America and the Caribbean (ROLAC) in various capacities, including UNEP/GEF Coordination for Latin America and the Caribbean.

Michael Tran worked as a consultant from 2003–09 for the Small Islands and Indigenous Knowledge Programme at UNESCO in Paris, France. He provided web and project co-ordination support to the Youth Visioning for Island Living and On the Frontlines of Climate Change initiatives. He has a BA in Computing and is currently studying graphic design.

Michael Witter is a senior lecturer in the Department of Economics, the University of the West Indies, Mona. His main research interests are in the theory and problems of economic development with special attention to the Caribbean, and more broadly, to small island developing countries. He has served on several technical teams supporting international meetings on SIDS since 2000.

Padma Narsey Lal now works at IUCN and is the Sustainable Development Adviser at the Pacific Islands Forum Secretariat (PIFS), which serves the independent Small Island States of the Pacific. She has over two decades of experience as a resource and environment economist, working in the Oceania region, including in Australia and most of the Pacific SIDS. She has published widely on the subject of natural resource and environmental management. Since joining the PIFS she has led the Pacific Plan Initiative on strengthening NSDS-based planning and budgetary processes and decision-making at other levels. Her work with member countries has produced some very tangible outcomes, including in improving aid effectiveness.

Rolph Payet is an international policy expert and researcher on environment and island issues. He is presently the President and Vice-Chancellor of the University of Seychelles. He is also special advisor to the President of the Republic of Seychelles on sustainable devel-

opment, biodiversity, climate change, energy, and international environment policy. He is also a trustee and board member of a number of international and national organisations. He has received numerous international awards and recognition for his work including sharing in the 2008 Nobel Peace Prize as an IPCC Lead Author and also a Young Global Leader by the World Economic Forum. Webpage: www.rolphpayet.com Academic qualifications – BSc (Hons), MBA, MSc, PGD Econ, PhD, FRGS.

Tighe Geoghegan has more than 25 years of experience in the fields of participation, natural resources and development, mainly in the Caribbean. Currently based in the UK, she is a member of Green Park Consultants, an independent consulting and research group focusing on policies and processes for sustainable development.

Wonderful Khonje is a Research Officer in the Economic Affairs Division of the Commonwealth Secretariat in London. Previously, Wonderful worked as an Advisor to the Scottish Government's International Development Fund through the Scotland Malawi Advisory Group.

Index

- 20th Waigani Seminar, PNG University 18
- Aarhus Convention 34
- ACP/APC *see* African-Caribbean-Pacific group
- action plans 44–5
- Acts of Parliament 93–5
see also individual acts
- adaptation criteria, MDGs 249–50
- affordability of indicators 229
- African-Caribbean-Pacific (ACP/APC) group 209, 258–9
- African states 36, 65–6, 209, 258–9
see also individual states
- African Union (AU) 66
- Agenda 21 11, 28, 226
EIAs 205, 208
financial support 107, 120–1
- agriculture–tourism links 264–5
- aid effectiveness 52
- AIDS/HIV 180, 183, 193, 243, 259–61
- AIMS *see* Atlantic, Indian Ocean, Mediterranean and South China Sea regions
- air pollution 151, 245
- Alliance of Small Island States (AOSIS) 71
- Alphonse Foundation, Seychelles 217
- Annan, Kofi 158, 180
- AOSIS (Alliance of Small Island States) 71
- APC/ACP *see* African-Caribbean-Pacific group
- ASEAN (Association of Southeast Asian Nations) 70
- Asian Development Bank 209
- Association of Southeast Asian Nations (ASEAN) 70
- Atlantic, Indian Ocean, Mediterranean and South China Sea (AIMS) regions 174–5, 177–8, 182, 237–54
- atmospheric systems 90
- AU (African Union) 66
- Australian donor partnerships 45
- awareness lack, HPM 145
- The Bahamas 25
- Barbados 94, 100, 257, 262–8
- Barbados Programme of Action (BPoA) v, 11, 257
EIAs 205, 208
implementation 75
participation statement 28
SD indicators 227
SIDSnet 71
- 'base budget' approach 159
- baseline data, MDGs 247
- BCA *see* benefit-cost analysis
- behavioural responses 137, 165
- Belize 213
- benchmarking 239–46, 256–60
- benefit-cost analysis (BCA) 149–50, 152
- benefit-cost ratio 137, 150
- benefit of journeys, TCM 143
- biases, CVMs 146, 148
- bidding games 145, 147
- biodiversity 85–6, 95, 258
- bio-safety 85–6
- BNIs *see* budget neutral instruments
- Bolivia 33–4
- BPoA *see* Barbados Programme of Action
- brainstorming activities 73–4
- broad-based participation 29–30
- Brundtland Commission/Report 2, 107
see also Agenda 21
- budget neutral instruments (BNIs) 163, 166–7
- budgetary instruments 162, 163–9
- budgeting 3, 48, 51–2, 56, 157–73
see also financial...
- CAC (command-and-control strategies) 162
- CACC *see* Central Agencies Coordination Committee
- CAP *see* consultation and participation
- capacity development 78–9, 184–5, 214–15
- capacity lack indicators 230
- capital investment projects 164
- capturing rents 123, 124–5
- Caribbean Community (CARICOM) 65, 67, 101, 255, 258, 267

- Caribbean Community Law 101
- Caribbean Development Bank (CDB) 209
- Caribbean Disaster Emergency Response Agency (CDERA) 259, 265
- Caribbean Free Trade Area (CARIFTA) 65
- Caribbean Sea 102–3
- Caribbean SIDS
 - debt-for-nature swaps 117
 - education policy 194
 - EIA process 207, 210–11, 214–15
 - environmental case law 96–8
 - FDI 113
 - MDG use 241
 - MEAs and 84–90, 91, 99–103
 - MP implementation 98–100
 - NSDCs 36
 - NSDS implementation 257–60, 262–8
 - ODA 109–12
 - regional co-operation 64–5, 75–6, 255–6
 - treaty transformation 93–6, 101–3
 - Youth Visioning 174–5, 177–8, 182
 - see also individual states*
- CARICOM *see* Caribbean Community
- CARICOM Single Market and Economy (CSME) 101, 255
- CARIFTA (Caribbean Free Trade Area) 65
- case law, Caribbean SIDS 96–8
- CDB (Caribbean Development Bank) 209
- CDERA *see* Caribbean Disaster Emergency Response Agency
- CDM (Clean Development Mechanism) 118–19
- CEA *see* cost effectiveness analysis
- CECs (Certificates of Clearance) 97
- Central Agencies Coordination Committee (CACC) 23, 24
- Central Banks 165–6
- Certificates of Clearance (CECs) 97
- CFC *see* chlorofluorocarbons
- charges, RGIs 166
- chemical waste management 89
- child health indicators 241
- chlorofluorocarbons (CFC) 98, 100
- CIMC *see* Consultative Implementation and Monitoring Council
- CITES *see* Convention on International Trade in Endangered Species
- citizen participation 199, 266–7
 - see also* participation
- civil law 93
- civil society 31, 198–9
- Civil Society Organisations (CSOs) 198–9
- Clean Development Mechanism (CDM) 118–19
- climate change 57, 76, 214
- climate systems 90
- coastal erosion mitigation 266
- coastal zone management 12, 230–2, 265–6
- Coastal Zone Management Unit (CZMU) 265
- cohesion policy 190, 202
- COMESA *see* Common Market for Eastern and Southern Africa
- command-and-control (CAC) strategies 162
- common law 92–3, 97–8, 102
- Common Market for Eastern and Southern Africa (COMESA) 66, 67, 70
- Commonwealth and small states 10–11
- communication materials, EIAs 218
- community-level participation 31–3
- compensation mechanisms, EIAs 216–17
- competition problem indicators 231
- computer technology 245–6
- conservation programmes 85, 139
- Constituency Councils, Barbados 267
- consultation and participation (CAP) 16–18
 - see also* participation; public consultation
- Consultative Implementation and Monitoring Council (CIMC) 23, 24
- context/situation analysis 52–3
- contingent valuation methods (CVMs) 133, 136, 145–8
- Convention on International Trade in Endangered Species (CITES) 96–7, 100
- convergent direct questioning 145
- Cook Islands 49–50, 54, 210, 213, 215
- corporate social responsibility 199
- corruption 21
- cost effectiveness analysis (CEA) 149, 152
- costs of living, Caribbean 267–8
- Council of Regional Organisations in the Pacific (CROP) 69, 76–7
- Creole culture, Dominica 184–5
- CROP *see* Council of Regional Organisations in the Pacific
- CSD Partnership Initiatives 80–1
- CSME *see* CARICOM Single Market and Economy
- CSOs (Civil Society Organisations) 198–9
- cultural values 248
- culture protection 90, 184–5
- CVMs *see* contingent valuation methods
- CZMU (Coastal Zone Management Unit) 265
- DAC *see* Development Assistance Committee
- DALY (disability adjusted life years) 151–2
- damage cost technique (DCT) 148
- data shortages 13, 145, 214, 229, 238–47
- DCT (damage cost technique) 148
- debt-for-nature swaps 116–17
- debt relief 116–17, 121–2
- decision-making
 - knowledge management 13
 - NSDCs 35–6
 - Papua New Guinea 21–3
 - participation 33–4
 - support for 227–8

- decision rules, BCA 150
- deliberate and inclusive processes (DIPs) 37–8
- demand curves 133, 135–6
- democratic principles 266–7
- demographics 250
- denominators, MDG indicators 247–8
- Department of National Planning and Monitoring (DNPM), PNG 19, 21–2, 24–5
- deposit refund schemes 166–7
- developed countries
 - MDG indicators 250, 251
 - ODA 108–10, 112
 - opening markets 120
- developers 18, 32
- Development Assistance Committee (DAC) countries 108–10, 113
- development finance 3, 209
 - see also* financial...
- development partnerships 52
- development process
 - definitions 225
 - indicators 187
 - shocks to society 188
 - see also* social development; sustainable development
- development theory 188
- dichotomous-choice method, CVMs 146, 147
- DIPs (deliberate and inclusive processes) 37–8
- direct investment *see* Foreign Direct Investment
- disability adjusted life years (DALY) 151–2
- disabled people, social policy 197
- disadvantaged groups, needs 195–7
- disaster risk management (DRM) 45–6, 259, 265
- Disaster Risk Reduction (DRR) 259
- discussion-focusing indicators 228
- disease control 243–4, 263
 - see also* HIV/AIDS
- distortionary subsidies 141, 164–5
- distributive credits 167
- diversification 258, 261, 268
- diving operations 266
- Doha Ministerial Declaration 84
- domestic laws *see* national laws
- domestic markets 231, 232, 258
- domestic sources of finance 121–6
- Dominica 184–5
- donor partnerships 45
- dose-response approach 136
- DRM *see* disaster risk management
- DRR (Disaster Risk Reduction) 259
- dualist-monist perspectives 91–3
- EAI (Enterprise of the Americas Initiative) 116–17
- East African regions 66
- EBM (ecosystem-based management) 42–6
- ECA (Economic Commission for Africa) 66
- ECLAC studies 76
- ecology, resource economics 130
- Economic Commission for Africa (ECA) 66
- Economic Commission for Latin America and the Caribbean (ECLAC) 76
- economic considerations
 - diversification 268
 - MDGs 247
 - resource economics 130–56
 - SD indicators 231, 234
 - social policy 191–2
 - Youth Visioning 176, 179
 - see also* economic growth strategies
- Economic Exclusive Zones (EEZ) 103
- economic growth strategies 77, 79, 187–8, 193, 259
- Economic Partnership Agreement (EPA) 91, 101, 258
- economic transition, Mauritius 261–2
- economic valuation 132–52
- ecosystem-based management (EBM) 42, 43–6, 54–5
 - see also* NSDS-EBM-MTEF framework-based development
- ecosystem services 137
- ecosystem valuation 205–6
- education 12–13, 44–5, 59, 194, 218, 240
- EEZ (Economic Exclusive Zones) 103
- EFJ (Environmental Foundation of Jamaica) 117
- EIAs *see* environmental impact assessments
- elderly people, social policy 196–7
- EMAs (Environmental Management Agreements) 169
- embedding effects bias 148
- employment opportunities 176, 179, 193–5
- empowerment and poverty 192
- The Endangered Species (Conservation and Regulation of Trade) Act* (Jamaica) 97, 100
- energy access 262, 263–4
- energy issues 12, 57, 122, 256–7, 262–4
- energy security 262, 263–4
- Engels, Frederick 130
- Enterprise of the Americas Initiative (EAI) 116–17
- environmental accounting 150–1
- environmental bonds 167–9
- environmental case law 96–8
- environmental degradation 160–3
- Environmental Foundation of Jamaica (EFJ) 117
- environmental impact assessments (EIAs) 3, 205–24, 267
- environmental limits/thresholds 216
- Environmental Management Agreements (EMAs) 169

- environmental strategies
 - MDGs 244–5
 - regional co-operation 70
 - SD indicators 232, 234
 - social policy 195
 - statute construction 99–101
 - trade links 84, 91
 - see also* Mauritius Strategy of Implementation; Multilateral Environment Agreements
- environmental taxes 122, 124, 163
- environmental valuation 132–52
- EPA *see* Economic Partnership Agreement
- equity, MDGs 247
 - see also* inequity
- ESCAP ICT initiatives 78
- ethics 225
- European Union (EU)
 - EIA use 209
 - environmental taxes 122, 124
 - SD indicators 226, 232
- evaluation function, indicators 228, 233
- existence values 134, 135, 136, 146
- Expert Group on MDGs, UN 251
- expressed preference methods 145–8
- externalities, market failure 140, 160, 162

- failures *see* market failure; policy failure
- FDI *see* Foreign Direct Investment
- fee-bates 167
- feed-back loops 35–6
- FICs (Forum Island Countries) 56–61
- Fiji 211, 217
- financial policy 191–2
- financial support
 - Barbados 267
 - SD for SIDS 107–29, 157–73
 - targeting 3
 - Youth Visioning 177, 180–1, 183
 - see also* budgeting
- fiscal accountability 51
- Fisheries Act 1993 (Barbados) 265
- fisheries policies 257–8, 265–6
- Foreign Direct Investment (FDI) 113–16, 120–1
- forest rents 124–5
- Forum Island Countries (FICs) 56–61
- framework integration 42–62
- free market mechanism 164–5
- 'free rider' problem 146
- funding *see* financial support

- GEF (Global Environmental Facility) 118
- gender issues 240, 248
 - see also* women
- Global Environmental Facility (GEF) 118
- global groupings 39
- GNI *see* Gross National Income
- GNP calculation 150–1
- gold mining sector 167–9

- goods and services valuation 133
- governance issues 21
- government policies
 - SD finance 158–61
 - social policy 197–8
- grassroots participation 31–3
- Green Fund, Trinidad and Tobago 126
- gross fixed capital formation 113–15, 125–6
- Gross National Income (GNI)
 - OECD countries 108–10
 - SIDS 111
- gross national product (GNP) calculation 150–1
- guiding vision, indicators 228
- Guyana 167–9

- Haiti 100
- HDI *see* Human Development Index
- health considerations
 - MDGs 241, 242–4
 - MEAs 90
 - NSDS implementation 263
 - resource economics 151–2
 - social policy 193–4, 196–7
- Heavily Indebted Poor Countries (HIPC) 116
- hedonic pricing method (HPM) 135, 143–5
- HIPC (Heavily Indebted Poor Countries) 116
- history of regional co-operation 64–71
- HIV/AIDS 180, 183, 193, 243, 259–61
- holistic sustainable development 225, 228–9
- house prices, HPM 143–5
- housing sector 192, 211, 214
- HPM *see* hedonic pricing method
- Human Development Index (HDI) 200, 202, 262–3
- human life valuation 151–2
- hypotheticality bias 146, 148

- IA *see* impact analysis
- IACG (Inter Agency Consultative Group) 80
- ICT (information and communications technology) 78
- ICZM (integrated coastal zone management) 265
- 'ideal case' small states 255, 256–60
- identification problem, HPM 144
- impact analysis (IA) 149
 - see also* environmental impact assessments
- implementation strategies 14, 23–5
- IMR *see* Infant Mortality Rate
- incentive impact, RGIs 166
- Indian Ocean Commission (IOC) 66
- Indian Ocean SIDS 66, 207, 210–14, 217–18
 - see also* individual states
- indicators
 - development process 187

- MDGs 237–54
- social cohesion 202
- social development impacts 200–2
- sustainable development 225–36
- inequity 160–3, 247
- Infant Mortality Rate (IMR) 241–2, 247
- information and communications
 - technology (ICT) 78
- information sharing 182, 228
- information shortages 160
 - see also* data shortages
- institutional capacity 33–9
- institutional context, EIAs 210–15
- institutional co-operation 73, 197
- institutionalisation, environmental bonds
 - 167–9
- integrated coastal zone management (ICZM)
 - 265
- integrated frameworks 42–62
 - GEF 118
 - NSDS 255–60, 265
 - resource economics 130–56
- integrated water resources management (IWRM) 257
- Inter Agency Consultative Group (IACG) 80
- inter-agency co-ordination 23
- interest groups 29
- international agreements 67–71
 - see also* individual agreements
- international benchmarks, MDGs 239–46
- international context, EIAs 207–9
- international development community roles
 - 199–200
- international laws 91–3
- international sources of finance 108–21
- internet fora 175, 177–8
- interpolated data 246
- interviewer bias 146
- IOC (Indian Ocean Commission) 66
- IWRM (integrated water resources management) 257
- Jamaica
 - CITES enforcement 96–7, 100
 - EFJ 117
 - EIA process 210–11, 214–15
 - MP implementation 98–9
 - private finance 125–6
- Johannesburg Declaration on Sustainable Development 28
- Johannesburg Plan of Implementation (JPOI) 226
- John Junior Higgs v Minister of National Security and Other* 92–3, 99–100
- JPOI (Johannesburg Plan of Implementation) 226
- knowledge management 13, 85–6
- Kyoto Protocol 118
- Land Based Oceanic Industry 262
- land management, MEAs 89
- landowners 18
- Latin America 109, 113
- laws
 - EIA process 210–11
 - international 91–3
 - national 3, 84–106
 - see also* legal institutions
- lead agency identification 53
- leadership and participation 31
- legal institutions 197, 210–13
 - see also* laws
- legislation *see* laws
- levies, environmental 122, 124
- liberalisation of trade 84
- licensing systems 100
- life expectancy 151–2, 200, 202, 243–4
- Life and love in islands* theme, Youth Visioning 176, 178–9
- Lighthouse Foundation 177, 180
- literacy 12–13
- lobby groups 29
- local government 29–30
- local–national linkages 35–6
- local needs/priorities, MDGs 249–50
- macro-economic consequences, RGIs 165
- Mahé Programme of Action 28
- mainstreaming
 - concept 1, 2
 - definition 48–9
 - financial support 121–3, 125, 157–73
 - integrated frameworks 42–62
 - strategies 2–3
- malaria 243
- malnourishment indicators 239–40
- Malta 230, 232–4
- management framework integration 42–62
- 'managing for development results' (MfDR)
 - 52
- mangrove ecosystems 43–4
- marginal costs, market failure 139–40
- marginalisation 35
- marine protection/safety 86–9, 102–3
- marine resource management 12, 89, 102–3, 265–6
- market-based incentives (MBIs) 161–2
- market failure 135, 138, 139–52, 160–3
- market mechanisms 120, 133, 164–5
 - see also* domestic markets
- Marx, Karl 130
- maternal mortality ratio (MMR) 242–3
- Matsuura, Koichiro 180
- Mauritius 174–6, 178–80, 208, 258, 260–2
- Mauritius Declaration 12, 180, 208
- Mauritius Strategy of Implementation (MSI/MIS) v, 11–13, 72–9
 - + 5 implementation 79, 80
 - financial support 127
 - MDG indicators 246

- participation statement 27
- progress report 12–13
- regional co-operation 64, 70, 72–9
- SD indicators 227
- MBIs (market-based incentives) 161–2
- MDGs *see* Millennium Development Goals
- MEAs *see* Multilateral Environment Agreements
- Mediterranean Commission for Sustainable Development 226, 230
- medium term development strategies (MTDS) 19, 22, 23–5
- medium-term expenditure framework (MTEF) 42, 51, 56
 - see also* NSDS-EBM-MTEF framework-based development
- Mercado Comum do Sul (MERCOSUR) 70
- merit goods 164
- MfDR ('managing for development results') 52
- microfinance 116
- migrant remittances 125
- Millennium Development Goals (MDGs) 57
 - methodological issues 246–8
 - national/sectoral budgets 157–9
 - NSDS implementation 260, 263
 - performance/use issues 237–54
 - recommendations 251–2
 - results interpretation 246–8
 - social policy 199, 200–1
- mining industry 18, 167–9
- MIS/MSI *see* Mauritius Strategy of Implementation
- mitigation
 - behavioural responses 137
 - coastal erosion 266
 - EIA process 216–17
- MMR (maternal mortality ratio) 242–3
- Model Framework Harmonised Clustering Legislation 95
- modelled data, UN use 246
- monetary valuation 133, 135, 150–1
- Money in my pocket* theme, Youth Visioning 176, 179
- monist perspective 91–3
- monitoring systems 3, 228, 233
- Montreal Protocol (MP) 96, 98–100, 118
- mortality rates 241–3, 247
- MP *see* Montreal Protocol
- MSI/MIS *see* Mauritius Strategy of Implementation
- MTDS *see* medium term development strategies
- MTEF *see* medium-term expenditure framework
- multicollinearity of HPM 144
- Multilateral Environment Agreements (MEAs) 84–91, 94–103, 118, 209
- multilateral financial institutions 118–20
- multi-purpose trips, TCM 142
- multi-stakeholders 37, 53
- My island home* theme, Youth Visioning 176, 179
- NAFTA (North American Free Trade Agreement) 70
- national budget process 51–2, 157–73
 - see also* budgeting
- national capacity for MSI 78
- National Conservation and Environmental Protection Act* 1987 (St Kitts and Nevis) 94–5, 96
- national development plans 53–4, 56–8
- national laws 3, 84–106
- national parliaments, women in 240, 248
- national plan level 48, 49–50
- National Sustainable Development Councils (NSDCs) 35–6
- national sustainable development strategies (NSDS) 13–14, 42, 255–72
 - action plans 44–5, 60
 - constraints 20–1
 - consultation 16–18
 - Cook Islands 49–50, 54
 - definitions 47
 - FICs self-assessment 58
 - frameworks for action 60
 - key components 47, 48
 - linkages 56
 - Papua New Guinea 16–25
 - participation 16–18
 - planning processes 45–6
 - regional initiatives 60, 69–70, 81
 - requirements 47
 - risks 20–1
 - sectoral initiatives 55, 56, 61–2
 - Tuvalu 53–4
 - see also* NSDS-EBM-MTEF framework-based development
- natural heritage protection 90, 102
- natural resource rents 124–5
 - see also* resource economics
- Natural Resources Conservation Authority v Seafood and Ting International Limited and DYC Fishing Limited* 94, 96–7, 100
- Nauru 58
- negative externalities, market failure 140
- negotiation, MSI 72–3
- NEPAD (New Economic Partnership for Africa's Development) 66
- networks, regional 73–4
- New Economic Partnership for Africa's Development (NEPAD) 66
- New Zealand partnerships 45
- non-commitment bias 148
- non-demand curves 135, 136, 148–9
- non-pecuniary costs 160
- non-response bias 146
- non-use values 134
- North African region 66
- North American Free Trade Agreement (NAFTA) 70

- NRCA management authority 96–7
- NSDCs (National Sustainable Development Councils) 35–6
- NSDS *see* national sustainable development strategies
- NSDS-EBM-MTEF framework-based development 48–56
- Ocean Thermal Energy Conversion (OTEC) 262
- ODA *see* Official Development Assistance
- ODS *see* Ozone Depleting Substances
- OECD countries *see* Organisation for Economic Co-operation and Development
- OECS *see* Organisation of Eastern Caribbean States
- Official Development Assistance (ODA) 108–12, 120–1
- oil industry, Barbados 268
- open-access resources *see* public goods
- opportunity cost approach 137–8, 164–5
- opportunity lack, poverty 192
- optimal pollution 163
- option values 134, 135, 146
- Organisation of Eastern Caribbean States (OECS) 65, 95
- Organisation for Economic Co-operation and Development (OECD)
 - EIA use 208–9
 - environmental tax revenue 124
 - ODA 108–10
- OTEC (Ocean Thermal Energy Conversion) 262
- outcomes, definition 47
- outreach materials, EIAs 218
- overestimation problem, HPM 145
- Ozone Depleting Substances (ODS) 98, 100
- Pacific Islands
 - EIAs 207, 209, 215, 217
 - FDI 113
 - MDG use 241
 - national development plans 56–8
 - NSDS implementation 257–9
 - regional co-operation 67–9, 76–9, 255
 - Youth Visioning 174–5, 177–8, 183
 - see also individual islands*
- Pacific Islands Forum (PIF) 67, 68, 76–7
- Pacific Plan, PIF 76–7
- Pacific SIDS Matrix 77
- Papua New Guinea (PNG) 16–25, 217
- parliamentary seats, women 240, 248
- participation 2, 27–39
 - Barbados 266–7
 - NSDS 16–18
 - SD indicators 230
 - social policy 188, 190–1, 197–9
- participatory learning/appraisal 37
- participatory planning/conflict management 37
- partnerships 44–5, 52
 - CSD Initiatives 80–1
 - EPA 91, 101, 258
 - MDGs 245–6
 - public-private 120–1
- pecuniary costs 160
- PEIs (public expenditure instruments) 163–5
- PEM (preventative expenditure method) 148–9
- per capita receipts
 - FDI 114–15
 - multilateral finance 118–19
 - ODA 110, 112
- performance measurement, MDGs 237–54
- personal computers 245–6
- physically-challenged people, social policy 197
- PIF *see* Pacific Islands Forum
- Pigouvian tax 162–3
- planning processes 3, 45–6, 210–11, 267
 - see also* social planning
- PNG *see* Papua New Guinea
- policy failure 138, 139–52, 160–1
- policy planning–budgeting integration 3
- policy processes
 - EIA implementation 213–14
 - MDG indicators 249–50
 - participation 30–1, 35
 - sustainability 255
- policy relevance, SD indicators 227, 229–32
- political institutions 197, 240, 248
- political stability 21
- polluter-pays principle 122, 162, 217
- pollution reduction 151, 162–3, 245
- population pressures 250
- port development 32–3
- portfolio investments 113–16
- poverty
 - alleviation 192–3
 - PEIs and 164
 - reduction 239–40
 - subsidies 122
 - waste management and 126
- PRD (Programme for Recovery and Development), PNG 19
- Precautionary principle, EIAs 216
- prerogative powers, treaties 92–3
- Presbisch school 69
- pressure, state or response (PSR) framework 227
- preventative expenditure method (PEM) 148–9
- price adjustments 133, 139
- pricing problem, environment 160–3
- primary legislation 93–4
- primary stakeholders 53
- priority evaluation, CVMs 145
- private financial flows 113–16, 120–1, 125–7

- private sector
 - Jamaica 99
 - social policy role 199
- privatisation of public assets 124
- procedural issues, EIAs 213–14
- production aspects, social policy 189
- Programme of Action for the Sustainable Development of SIDS 91
- Programme for Recovery and Development (PRD), PNG 19
- progress assessment 237–8, 256–7
- progress monitoring 3
- property rights 161, 162
- protected areas 125, 244
- protectionist aspects, social policy 189
- PSR (pressure, state or response) framework 227
- public assets
 - allocating 127
 - privatisation 124
- public consultation 16–18, 213, 233
 - see also* participation
- public expenditure instruments (PEIs) 163–5
- public goods 160–1, 192
- public hearings 33
- public-private partnerships 120–1
- Public Service policies 197

- quality adjusted life years (QALY) 151–2

- rational choice theory 162
- RCM (Regional Co-ordinating Mechanism), Caribbean 75
- RCT/RCM *see* replacement cost technique/method
- recreational amenity valuation 143
- redistributive aspect, social policy 189
- redundancy problem, indicators 229
- regional co-operation 3, 39, 64–83, 255–6, 258–9
 - action plans 60
 - historical features 64–71
 - strategic development 73
- regional context, EIAs 207–9
- Regional Co-ordinating Mechanism (RCM), Caribbean 75
- Regional Trade Agreements (RTAs) 67–70
- Regulations
 - CAC strategies 162
 - EIA process 210–11
 - fisheries 265–6
 - treaty obligations 95–6
- relevance criteria
 - MDGs 248
 - SD indicators 227, 228–32
- remittances, migrants 125
- renewable energy 57, 263–4
- rent capturing 123, 124–5
- replacement cost technique/method (RCT/RCM) 136–7, 148

- reproduction aspect, social policy 190
- research for MSI 72
- Resilience Building Facility 120, 127
- resource allocation 48
- resource economics 130–56
- revealed cost methods/preferences 141–5
- revenue generating instruments (RGIs) 163, 165–6
- revenue impact of RGIs 166
- review process 24–5
- RGIs *see* revenue generating instruments
- Rio Declaration on Environment and Development 107, 124, 207–8
- Rio Earth Summit *see* Agenda 21
- risks
 - disaster management 45–6, 259, 265
 - NSDS 20–1
- root cause analysis 54, 55
- route bias 146
- RTAs (Regional Trade Agreements) 67–70

- SADC *see* Southern African Development Community
- safe water goal, MDGs 244–5
- St George's Declaration of Principles for Environmental Sustainability 28, 34
- St Kitts and Nevis 94–5, 96
- St Lucia 215
- Samoa 214
- scoping process, EIAs 211, 213
- screening process, EIAs 210–11, 213
- SD *see* sustainable development
- SEA *see* Strategic Environment Assessment
- sea-level rises 76, 230–1
- secondary legislation 93–4
- secondary stakeholders 53
- sector-based approach
 - NSDS 55–6, 61–2, 262
 - ODA receipts 112
 - progress assessment 256–7
- sector plan level 48, 51, 54–6
 - budgeting 52
 - linkages 58–61
 - NSDS 55, 56, 61–2
 - prioritisation 55
- sectoral budgets 157–73
- security and poverty 192
- services
 - delivery of 121
 - ecosystem services 137
 - social policy 197
 - valuation 133
- Seychelles 210–13, 214, 217–18
- shadow prices 133, 139–40
- The Shipping (Oil Pollution) Act* 1994 (Barbados) 94
- shocks to society 188
- SIAs (Social Impact Assessments) 216
- SIDS *see* small island developing states
- SIDSnet (Small Island Developing States Network) 71

- simplicity of indicators 228
- situation analysis 52–3
- slums 244
- small island developing states (SIDS)
 - EIA review 205–24
 - environmental case law 96–8
 - financial support 107–29, 157–73
 - Mauritius Strategy 11–13
 - MDG performance/use 237–54
 - MEAs and 84–91, 94–103
 - NSDS overview 255–72
 - regional co-operation 64–83
 - resource economics 130–56
 - SD indicators 227, 230–2
 - social development 187–204
 - socio-economic variables 130–1
 - transformation perspective 93–6
 - vulnerabilities v, 1, 72, 80–1, 187, 259
 - youth perspectives 174–86
- Small Island Developing States Network (SIDSnet) 71
- Small Islands Voice Initiative 175, 177–8
- Small States: Meeting Challenges in the Global Economy* (Commonwealth Secretariat/World Bank) 10–11
- small states
 - 'ideal case' 255, 256–60
 - participation 38–9
 - vulnerabilities 10–11
 - see also* small island developing states
- social benefit-cost analysis *see* benefit-cost analysis
- social cohesion 190, 202
- social context, participation 37
- social development 187–204, 259–60
- Social Impact Assessments (SIAs) 216
- social inequity, market failure 160–3
- social issues awareness, youth 181
- social planning 187–8
- social policy 259–60
 - content 191–5
 - designing 190–1
 - goals 189–91
 - impact monitoring/evaluating 200–2
 - implementing 197–200
 - role of 188
 - SD indicators 232
- socialisation of youth 196
- socially responsible investment (SRI) 116
- socio-economic variables 130–1, 192–3
- solar water heating 264
- Solomon Islands 181
- solution analysis 54–5
- South Pacific Commission (SPC) 67
- South Pacific Regional Environment Programme (SPREP) 67, 215
- South-South regional co-operation 69–71, 73–4
- Southern African Development Community (SADC) 66, 68, 70
- SPC (South Pacific Commission) 67
- Splashmins Fun Park case study 143
- SPREP *see* South Pacific Regional Environment Programme
- SRI (socially responsible investment) 116
- stakeholders
 - analysis 37, 53
 - concept 29
 - EIAs 214
 - engaging 99, 102, 165, 174–86, 214
 - identification of 53
 - MEAs 99, 102
 - participatory processes 34–7
 - RGLs 165
 - youth perspectives 174–86
- standards, SD indicators 228
- starting point bias 146
- state participatory processes 31
- stated preference methods 136
- statute construction 99–101
- statutory instruments 94
- strategic concepts 2
- strategic development, regional 73
- strategic directions, Malta 233–4
- Strategic Environment Assessment (SEA) 206, 216
- strategic planning, PNG 21, 25
- sub-regional co-operation
 - Africa 66
 - Caribbean 65, 75
 - Pacific 77
- subsidies 120, 122–3, 141, 164–5
- substitute sites, TCM 143
- sugar industry 268
- supply curves 133
- sustainable capacity development 12–13
- sustainable development (SD)
 - definitions 2, 64, 107, 157
 - EIA review 205–24
 - financial support for 107–29, 157–73
 - indicators 225–36
 - integrating principles 130–56
 - NSDS in SIDS 255–60
 - youth perspectives 174–86
- Sustainable Development Indicators 225–36
- sustainable land management 89
- synergy, NSDS 262
- TAC (Technical Advisory Committee) 75
- TakingITGlobal website 177
- Talisman (Trinidad) Petroleum Ltd. v The Environmental Management Authority* 97
- target definitions, MDGs 247
- target relevance, MDGs 248
- target-setting, indicators 228
- task force identification 53
- taxation 120, 122, 124, 162–3, 165–6
- TB (tuberculosis) 243–4
- TCM (Travel Cost Method) 141–3
- Te Kageega II education policy 59
- team building, MSI 73

- Technical Advisory Committee (TAC) 75
 telecommunications partnerships 245
 TEOC (Tourism Emergency Operations Centre) 265
 TEV (total economic value) 134–5
 time costs, TCM 142
 time factors, indicators 229
 Tobago 32–3, 97, 126
 Tobin tax 120
 Toco, Trinidad and Tobago 32–3
 total economic value (TEV) 134–5
 total net flow of resources 109–10
 tourism 125–6, 230–2, 259, 264–5
 Tourism Emergency Operations Centre (TEOC) 265
 Town and Country Planning, Barbados 267
 trade agreements 67–70, 84, 91
 trade-off games 145
 Trade-Related Aspects of Intellectual Property Rights (TRIPs) 84, 91
 traditional knowledge 85–6
 transboundary context, EIAs 207
 transformation perspective 91–2, 93–6, 101–3
 transparency, indicators 228
 Travel Cost Method (TCM) 141–3
 treaty obligations 84–106
 Trinidad and Tobago 32–3, 97, 126
 TRIPs *see* Trade-Related Aspects of Intellectual Property Rights
 Tropical Forest Act 1998 (USA) 116–17
 tuberculosis (TB) 243–4
 Tuvalu 44, 45, 53–4, 59
- UAS (Union of African States) 65–6
 UN *see* United Nations
 UNCED principles 107–8, 127
 uncertainty management 216
 UN-CSD (United Nations Commission on Sustainable Development) 226
 under-pricing 160–1
 UNDESA (United Nations Department for Economic and Social Affairs) 13–14
 UNDP (United Nations Development Programme) 262
 UNESCO Youth Visioning 174–85
 Union of African States (UAS) 65–6
 United Nations (UN)
 Expert Group on MDGs 251
 interpolated/modelled data use 246
 regional co-operation strategies 71, 80
 SD indicators 226–7
 see also Millennium Development Goals
 United Nations Commission on Sustainable Development (UN-CSD) 226
 United Nations Conference on Environment and Development (UNCED) 107–8, 127
 United Nations Convention on the Law of the Sea 209
- United Nations Department for Economic and Social Affairs (UNDESA) 13–14
 United Nations Development Programme (UNDP) 262
 United Nations Educational, Scientific and Cultural Organisation (UNESCO) 174–85
 United States of America (USA) Tropical Forest Act 116–17
 Uruguay Round 69
 USA Tropical Forest Act 116–17
 use values 134–5, 146
 user pays system 211
- valuation
 ecosystems 205–6
 environment 132–52
 human life 151–2
 Vanuatu 45–6
 victim pays policies 163
Vulnerability: Small States in the Global Society (Commonwealth Consultative Group) 10
 vulnerable groups, needs 195–7
- Waigani Seminar, University of PNG 18
 waste management 89, 126
 water access, MDGs 244–5
 water consumption 122, 192, 257
 water heating technology 264
 water pollution 151
 WCED (World Commission on Environment and Development) 157
 websites, Youth Visioning 175, 177–8, 182
 West African region 66
 wildlife conservation 85
 willingness to accept compensation 133
 willingness to pay (WTP)
 CVM 133, 145, 146–7
 HPM 143–4
 RCT 137
 TEV 134–5
- women
 parliamentary seats held 240, 248
 social development 195
- working groups, MSI 73
 World Bank 10–11, 209
 World Commission on Environment and Development (WCED) 157
 World Trade Organization (WTO) 84
 WTP *see* willingness to pay
- youth development 196
 youth perspectives 174–86, 260
 Youth Visioning for Island Living, UNESCO 174–85

Tools for Mainstreaming Sustainable Development in Small States

Tools for Mainstreaming Sustainable Development in Small States provides a thorough grounding in bringing sustainable development to the forefront of policy-making.

By taking a cross-departmental approach to national planning, more human and financial resources would be available for policy implementation. This is of particular relevance to small states, as they have limited access to resources and are by nature inherently vulnerable.

The book is divided into four parts. Part one explores how small states can move from the Mauritius Strategy of Implementation (MSI) to devising practical national strategies; part two addresses the need for legislative change; part three tackles the social and environmental aspects of progress with MSI; and finally, part four examines methods for monitoring progress.

Contributors to the chapters range from international academics to economists, providing both a theoretical and practical approach. Through case study examples from small states, this book offers invaluable insights into the complexities of implementing sustainable development.



COMMONWEALTH SECRETARIAT

ISBN 978-1-84929052-4



9 781849 290524

