Chapter 4

Strengthening Environmental Management in the Context of Resilience Building in Commonwealth Small States

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4.1 Introduction

Building resilience is an important element of small states' efforts to withstand inherent and policy-induced vulnerabilities and fully embrace and benefit from globalisation. Research suggests that the key requirements for resilience are macro-economic stability, market efficiency, good governance, good environmental governance, and equitable and inclusive social development.

This chapter explores how to strengthen environmental management in the context of resilience building in small states. The natural environment can often be an important source of vulnerability to natural hazards, such as earthquakes, floods and volcanoes, and anthropogenic hazards, such as the adverse impacts of climate change, including, inter alia, rising sea-levels, health hazards and increased frequency of extreme events which could deliver adverse shocks to an economy. In addition, the globalisation process leading to the commercialisation of environmental resources is an added complication for environmental management. Pressure on the environment arises mostly from excessive global focus on competitiveness for economic gain, which often leads to disregarding the value of and the hazards resulting from any damage to ecosystems, including irreversible damage. The hazards give rise to socio-economic and environmental risks that need to be properly managed. Management of such risks and the effective integration of sustainability principles into the development process, as well as globalisation, are conducive to resilience building. Hence, it is important to effectively manage environmental and natural resources to mitigate damage from environmental shocks and natural disasters.

The overall objective is to focus on environmental management in building resilience in small states, including small island developing states (SIDS). This chapter therefore examines effective environmental management in relation to building the resilience of small states, with a view to developing a framework that would allow for profiling countries, identifying gaps and proposing appropriate policy responses to any identified gaps. The ultimate goal would be enhancing states' capacity to sustainably absorb disturbances, which negatively affect the quality of life of their citizens.

More specifically, this chapter examines the key building blocks for effective management of environmental resources and services, outlining key elements of best practice in support of resilience building; briefly assesses the quality of environmental

governance in Commonwealth small states; proposes elements of a composite index to capture the quality and effectiveness of environmental management; and identifies priority areas for policy intervention, including a discussion of best-fit practices.

The challenge of strengthening environmental management in the context of resilience building in small states is complex, given the multifaceted nature of the issues involved in the effective management of environmental resources and services, and so a number of methodological approaches have been considered. These include the Environment Vulnerability Index developed by South Pacific Applied Geosciences Commission (SOPAC 2004); the classification framework proposed for the analysis of trade in environmental services in the CARICOM Single Market and Economy (CSME) zone (Griffith 2009); the framework for managing environmental vulnerability in SIDS by Ursula Kaly et al. (2010); and the approach adopted by the ISLANDS project, which is predicated on three building blocks, namely the application of the ecosystem approach, multi-stakeholder processes, and the learning-by-doing approach (Deenapanray and Bassi 2014).

The resulting framework from the analysis is an extension of the classification scheme/framework proposed for the analysis of trade in environmental services in the CARICOM Single Market and Economy zone. The framework was extended to include a more comprehensive treatment of governance, developed from various models of governance.

In the review of the quality of environmental governance in Commonwealth small states (CSS), a number of approaches were employed which identified the components of the environmental governance systems which exist in CSS. This is referred to as the 'Environmental Governance Milieu'. Assessment criteria for evaluating the distinguishing characteristics of environmental governance in CSS were developed to guide the analysis. This exercise included the determination of international environmental legal instruments to which CSS are party and reviewing the national environmental governance framework in each of the CSS.

To facilitate this analysis, information has been compiled from a number of sources including, inter alia, national reports which the CSS have prepared for the various UN processes such as the Third International Conference on SIDS; national reports on their fulfilment of the various multilateral environment agreements (MEAs) to which they are party; and ongoing non-UN processes (as in the Caribbean CSS states that are members of the Caribbean community, where work is being undertaken in support of the development of the Caribbean community environmental protection and natural resources policy framework).

The components of an index to capture the quality and effectiveness of environmental management were developed based on the key building blocks for effective management of environmental resources and services. This would need to be further refined through a process of empirical investigation. In the interim, the classification used for the identification of the key building blocks for environmental management is used as the basis for developing a list of areas of environmental vulnerability (e.g. water quality, beach erosion, solid and liquid waste management, air pollution,

deforestation, soil erosion) and a weighting given to each. The weights would, however, depend on ecological impact, and from this some measurement or estimate of economic impact. Another approach to define weights would be to employ expert knowledge based on an inclusive multi-stakeholder process (Cooke and Kothari 2001). This is especially useful in circumstances where ecological impacts may not be readily quantified.

In terms of the identification of priority areas for policy intervention, a number of policies emerge from the framework as critical for building resilience, but the process of selecting policy priorities must be guided by country level assessments of peculiar vulnerabilities and weaknesses. While this is a planned next step of the process, preliminary findings can be garnered from the existing body of work on environmental management in small states. This is done and the results are summarised in the final section of the chapter.

4.2 Key building blocks for effective environmental management

4.2.1 Terminology

It is useful to begin with a brief overview of the terms used in this chapter.

First, it is necessary to understand what is meant by 'environmental resources and services'. Environmental resources comprise the bio-physical environment, both living (biotic) and non-living (abiotic). These resources provide important benefits, which are characterised as environmental or ecosystem services.

Since human beings are key 'actors' in altering environmental resources, managing the interactions and impacts of human actions on these resources and the implications thereof is a key aspect of effective management. The choices made with respect to the use of environmental resources are therefore critical in helping to determine the ability of these resources to respond to stresses which might impact upon them.

The ability of environmental resources to respond to stress is characterised as their resilience. Resilience is used in this chapter as:

- the ability of a system (which may be internal or external and could be economic, social or environmental) to *respond to stress(es) by withstanding or maintaining* itself in the face of the stress(es);
- *absorbing the stress(es) and still existing,* thus demonstrating the ability to recover quickly from the stress(es).

It may therefore be argued that 'resilience building' is influenced by the choices and/or decisions made in the management of that system, as well as creating an enabling environment for these decisions to be implemented effectively and efficiently for resilience building to take place. The factors influencing choices can be classified into five groups:

- technical, including the methods and approaches to utilisation of the resources in question;

- policy, including measures through a wide range of policy instruments;
- legal and institutional frameworks, including the development, application and administration of appropriate laws and appropriate institutional mechanisms;
- behavioural dimension, includes the historical influence, culture; traditions including traditional knowledge and technology use and application, and
- cross-border action, including measures in a subregional/regional context as a combined response by a number of countries.

The decisions on policy involve a cycle that is made up of five iterative steps: (1) agenda setting; (2) policy formulation; (3) decision-making; (4) policy implementation; and (5) policy evaluation. As discussed by Deenapanray and Bassi (2014), context-specific indicators can be selected to carry out the monitoring and evaluation of integrated policies.

The legal frameworks encompass laws at the national, regional and international levels. In the case of international law this includes interventions designed at the international level, often referred to as MEAs. These are key components of environmental governance.

Environmental governance is multifaceted – it occurs at various levels, involves many processes and is encapsulated across elements of the building blocks mentioned.

4.2.2 Identifying the key building blocks

A number of classification schemes specifically designed for SIDS were reviewed, including the Environment Vulnerability Index developed by SOPAC (2004), the classification framework proposed for the analysis of trade in environmental services in the CSME zone (Griffith 2009) and the vulnerabilities affecting the main environmental categories in SIDS, identified in the Mauritius Strategy for the further implementation of the Barbados Programme of Action (MS/BPOA) (Kaly et al. 2010).

The SOPAC Environmental Vulnerability Index (EnVI), developed in 1999 through a consultative and collaboration process, including countries, institutions and experts across the globe, uses 50 smart indicators for estimating the vulnerability of the environment of a country to future shocks (SOPAC 2004). One ambiguity with the SOPAC EnVI is that it confounds 'vulnerability' and 'resilience', which are related but not commensurate concepts. 'Resilience' as defined in this report is induced by policies and supported by an enabling environment. The classification scheme for environmental services in the CSME zone, on the other hand, builds upon various classifications, in particular the W/120 CPC, the OECD/EuroStat, and EC classifications used for the identification of trade in environmental services, but adapted to the Caribbean situation (Griffith 2009).

It was concluded that the framework proposed for the analysis of trade in environmental services in the CSME zone provides a good basis for the identification of the key building blocks. These key blocks would help ensure effective management of environmental resources and services.

In addition to being used as a framework for classifying trade in services in the CSME zone, it has also been employed for addressing the diagnostic and analytical review of environmental governance systems for a number of member states of the Caribbean community, including Antigua and Barbuda, Barbados, Haiti, St Vincent and the Grenadines, Montserrat and Suriname.

This framework has a number of benefits, including provision of a structure for analysing the various elements of the environmental governance systems. The framework could be used throughout the CSS, as a basis for the rationalisation of the numerous initiatives being undertaken by member states in the field of environment at the national, regional and international levels and in multiple forums. In this regard, it easily accommodates the vulnerabilities affecting the main MS/BPOA environmental categories in SIDS as highlighted by Kaly et al. (2010). It is also sufficiently broad in scope to accommodate issues emerging in a post-2015 development agenda/ sustainable development goals (SDGs).

4.2.3 The building blocks

The framework provided by the classification of environmental services in the CSME comprises four main clusters: Pollution Management Group; Information Knowledge/Capacity Enhancement Services; Cleaner Technology and Production Groups; and Resource Management Group (Griffith 2009). These four groups provide the basis for the building blocks of effective management of environmental resources and services.

The basis of human development is the use of natural and environmental resources. A fundamental building block for effective management of environmental resources and services relates to the manner in which these environmental resources are used for human development. Emphasis is therefore placed on resources such as land and forest, and their utilisation; water, and its treatment and distribution; biodiversity, and how it is used, sustainably or otherwise; coastal and marine resources, and their management; and the use of those resources for the production of renewable energy. It also includes the protection and management of natural and cultural heritage, and the tools and instruments (e.g. environmental impact assessments) used to facilitate environmental management and planning.

To facilitate the utilisation of materials extracted from environmental resources, various technologies and production processes are employed to convert them into products for human consumption. The types of technologies used, and the production process employed, form another building block for effective management of environmental resources and services. In this context emphasis is placed on the use of cleaner and resource-efficient technologies and processes, and the production of resource-efficient products.

In the transformation process of the utilisation of environmental resources and services for human development, depending on the way in which this is carried out, positive and negative elements are likely to result. One such by-product, resulting from the use of environmental resources, is pollution. This is manifested in different

ways, including solid and hazardous waste management, the processes involved in recycling materials, wastewater management, air and noise pollution, and remediation and clean-up of soils, surface or groundwater. Hence another important building block for the effective management of environmental resources and services is pollution management. A key strategy which should underpin this building block is the promotion of environmental cost internalisation, being cognisant of the approach that the polluter should, in principle, bear the cost of pollution. Pollution management encompasses a number of specific issues which CSS face in varying degrees.

Another fundamental building block for the effective management of environmental resources is access to quality data and information, and their availability in a timely manner on which to base policy decisions. This is, to a large extent, dependent on the availability of facilities for analytical services, data collection, analysis and assessments, as well as environmental research and development. However, issues relating to access to quality data and information, including the lack of full scientific certainty, should not be used as a reason for postponing cost-effective measures to prevent environmental degradation, i.e. where there are threats of serious or irreversible damage to the environment, as encapsulated in the precautionary principle.

In addition, as observed in Principle 10 of the Rio *Declaration on Environment and Development*, the effective management of environmental resources and services is best handled with the participation of all concerned stakeholders. Fundamental to this, is for stakeholders to have appropriate access to information concerning those resources held by public authorities, as well as the opportunity to participate in decision-making processes and, when breaches occur, to have effective access to judicial and administrative proceedings, including redress and remedy. Closely related is the obligation of the state to facilitate and encourage public awareness and participation by making information widely available.

Another key building block for the effective management of environmental resources and services is the environmental governance system, which has been put in place at various levels – national, regional and international – to manage environmental resources and services. There is growing consensus that governance – in this case, environmental governance – impacts environmental action and outcomes. Used in this report, the *environmental governance system embodies the legal and institutional frameworks which have been put in place to manage the decision-making processes relating to the use, control and management of environmental resources and services*. This therefore encompasses the processes, rules, practices, norms and institutions related to the management of the environment at various levels, including, inter alia, at the local, community, national, regional and international levels.

4.2.4 Relationship between the building blocks and resilience building technologies

Good environmental management is, in its own right, and in effect, a good resilience-building strategy. Implicit in good environmental management are many of the approaches, concepts and technologies which are considered necessary for resilience building. In this chapter, 'technology' is used in a very broad way to encompass a piece

of equipment, technique, practical knowledge, or skills for performing a particular activity or implanting a particular measure or intervention. In this application, it is common to distinguish between three different elements of technology: the tangible aspects, such as equipment and products (hardware); the know-how, experiences and practices (software) associated with the production and use of the hardware; and the institutional framework, or organisation, involved in the transfer and diffusion of a new piece of equipment or product (orgware) (Boldt et al. 2012).

Table 4.2 provides an indicative overview of some of the approaches, practices and technologies that can be employed to facilitate resilience building in CSS. These are in fact the same tools and approaches that are required for good environmental management. To illustrate the close relationship between the tools employed to facilitate good environmental management and those required for resilience building let us examine briefly the management of coastal and marine resources. Based on Table 4.2, it is suggested that a comprehensive and integrated ecosystem-based management approach be adapted to the management of environmental resources.

In application, this will require recognition of the inter-linkages within and across ecosystems; understanding and addressing cumulative impacts; managing multiple objectives; and embracing change, learning and adapting. It will also require the consideration of appropriate setbacks; depending on the state of the resources, beach restoration, nourishment and stabilisation; beach re-vegetation; reef protection, including the establishment of marine protected areas; monitoring of coastal erosion; breakwaters; and coral reef protection and rehabilitation, including, as may be necessary, the creation of artificial reefs. These are the same technologies that would be used for resilience building.

4.2.5 Conclusion

The process of managing environmental resources and services is complex and multifaceted given the nature of these resources. The building blocks for their effective management are equally complex and cover a broad range of environmental issues. This section has characterised the building blocks for the effective management of environmental resources and services into five broad groups, namely pollution management, information/knowledge capacity enhancement, cleaner technology, resource management, and the environmental management system, which is put in place to manage the use of environmental resources and services. In addition, using the building blocks as a basis, the approaches and concepts that underpin the effective management of environmental resources and services can easily be identified, as well as the technologies that could be employed to build resilience.

4.3 The quality of environmental governance

4.3.1 Introduction

This section provides an overview of the quality of environmental governance in CSS. There is growing consensus that governance is an important dimension

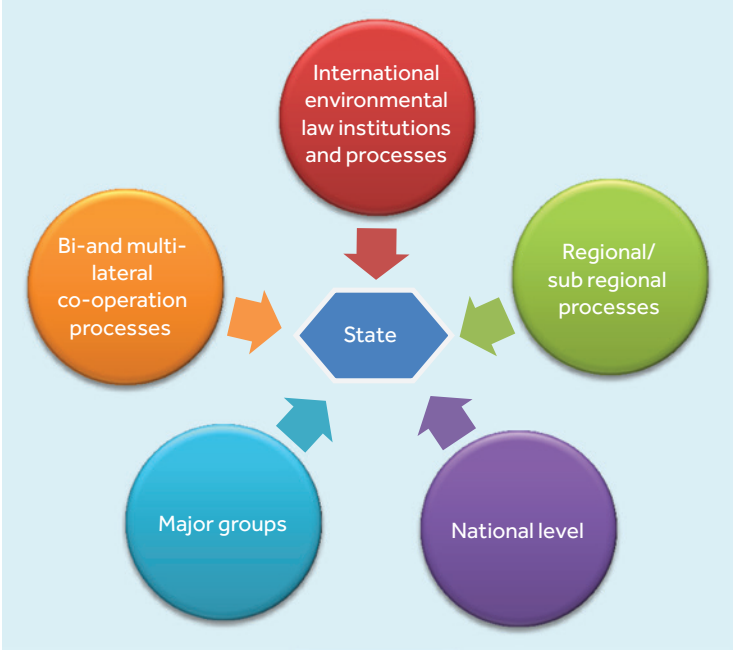
of effective management of environmental resources and services. The process of governance as it relates to the management of environmental resources and services involves many actors and processes operating at different levels (i.e. international, regional and subregional, national). Potentially in any one country there is a wide range of governance mechanisms in operation. Governance is also underpinned by a number of interconnecting principles, including transparency, participation, accountability and integrity, which forms part of the 'accountability chain'.

4.3.2 The Environmental Governance Milieu

Before attempting an assessment of the quality of environmental governance in CSS, it is necessary to identify the environmental governance system to which the chapter refers, as well as its components. This is referred to in this report as the 'Environmental Governance Milieu' and is shown schematically in Figure 4.1.

The Environmental Governance Milieu is characterised by the need for co-operation and co-ordination between its constituent parts and participation of all the actors involved. It is suggested that central to the Environmental Governance Milieu is the role of the state (comprising its constituent parts: electoral process, legislature, executive, judiciary, civil service etc.) as an institution, in its own right. The state as an institution in CSS plays a key role in establishing governance mechanisms for the management of environmental resources and services.

Figure 4.1 The Environmental Governance Milieu



Source: Authors

It is further suggested that the constituent parts of the Environmental Governance Milieu comprise international environmental law, institutions and processes; regional and subregional processes; bi- and multilateral processes; national processes; and major groups (see below):

International environmental law, institutions and processes. These are key elements, which can be characterised as an institution in its own right. These processes are usually undertaken within the context of the United Nations system and are reflected in 'hard law', commonly referred to as MEAs, and 'soft law' in the form of resolutions, action plans and programmes (e.g. the Barbados Programme of Action [BPOA]) which member states adopt and are guided by. These instruments are usually orientated toward addressing global environmental concerns and are used within a multilateral context. The various organs of the state usually play important roles with respect to the operationalisation of these processes.

Included under this theme are the international financial governance mechanisms which have been established to finance global environmental action (i.e. Global Environment Facility [GEF] or the Adaptation Fund [AF] or the forthcoming Green Climate Fund [GCF]). The SIDS international negotiating mechanism for environment and sustainable development – the Alliance of Small Island States (AOSIS) – is also included, as well as the institutional entities (i.e. High Level Political Forum [HLPF], United Nations Environment Assembly of UNEP [UNEA]) with which it interacts.

Regional and subregional processes. As a means of addressing cross-border concerns and to reduce some of the inherent vulnerabilities faced by countries, member states in some circumstances commit to undertake common actions. This can take different forms, including the establishment of integration mechanisms with a defined legal framework (e.g. Caribbean Community Single Market and Economy [CSME]), regional legally binding agreements (e.g. *Convention for the Protection of the Natural Resources and Environment of the South Pacific Region and its Related Protocols, adopted at Noumea in 1986* [the 'SPREP' Convention']), regional programmes (e.g. Indian Ocean Commission [IOC]) and the management of transboundary resources.

Bi- and multilateral processes. States usually co-operate bilaterally, trilaterally and multilaterally in the framework of development co-operation. These processes are exemplified in a variety of ways, including trade agreements (e.g. economic partnership agreements) and technical assistance schemes.

National processes. These include the body of laws at the national level, which have evolved for providing the framework within which decisions are made with respect to the management of environmental resources and services.

Major groups. It is generally accepted that one of the fundamental prerequisites for the management of environmental resources and services is the effective participation of both state and non-state actors in operational activities. Referred to as (non-state) major groups in this chapter, this group comprises a broad range of stakeholders, including industry and business, non-governmental organisations, indigenous

peoples and their communities, scientific and technological community, workers and workers' organisations, and women and children.

It is evident from the foregoing overview of the Environmental Governance Milieu that the interaction between its constituent parts is fundamental to effective environmental governance.

4.3.3 Assessment criteria

Using the framework provided by the interactive governance model, a determination was sought of what can be considered as the quality of environmental governance in CSS. The quality in this context is interpreted as the distinguishing characteristics of environmental governance mechanisms in CSS. In order to assess these distinguishing characteristics, however, a set of criteria were established (see Box 4.1).

Box 4.1 Criteria for assessing distinguishing characteristics of environmental governance mechanisms in Commonwealth small states

International level

- Adherence to international environmental law through the ratification of international and regional environmental agreements.
- In CSS with common law jurisdictions the extent to which the obligations contained in MEAs have been incorporated into national law, thus making them available in law to the nationals of that member state.

Regional level

- Existence of regional legal framework(s) to which member states subscribe.
- Existence of a regional institutional framework which has its basis in law for co-ordinating environmental interventions at the regional level.

National level

- If there is a dedicated institutional mechanism for environmental management.
- The existence of comprehensive legal framework which clearly outlines the legal mandate of the dedicated institutional mechanism.
- The extent to which appropriate access to information concerning the environment that is held by public authorities is provided by law.
- The extent to which the law provides adequate opportunity to participate in decision-making processes relating to environmental matters.
- The extent to which the law provides for effective access to judicial and administrative proceedings, including redress and remedy, with respect to environmental issues.

International level

CSS are party to a plethora of MEAs, which forms part of their environmental governance structure. These MEAs are usually negotiated in a multilateral context and partly in response to concerns about global environmental issues. Table 4.1 provides an overview of the MEAs to which CSS are party. These are presented in clusters after Griffith and Oderson (2009), which 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. against ozone depletion and climate change); sustainable land management; waste and chemical management; and the protection of human health, environment, culture and natural heritage. The level of ratification of MEAs varies from country to country.

A key issue to be considered in assessing the quality of environmental governance in CSS, with respect to MEAs, is the relationship between national law and international law as represented by the MEAs. Since most of the CSS have common law jurisdictions, MEAs form no part of domestic law unless enacted by the legislature. This principle is amply addressed in two Caribbean environmental cases, namely *Natural Resources Conservation Authority v Seafood and Ting International Limited and DYC Fishing Limited*[1] and *Talisman (Trinidad) Petroleum Ltd v The Environmental Management Authority.*[2] (For a more detailed discussion on the relationship between national law and MEAs, see Griffith and Oderson (2009). A critical question in determining the quality of environmental governance in CSS is the extent to which the obligations contained in MEAs are made available, through domestic legislative means, first to enable domestic courts to have the jurisdiction to construe or apply them and, second, for them to have effect upon the rights and duties of citizens in common or statute law, within those countries.

Regional/subregional levels

Equally important in influencing the internal environmental governance dimension of CSS are the regional and subregional processes. These processes usually take a variety of forms, including regional integration with defined legal framework(s), regional binding agreements (regional multilateral environment agreements) and technical assistance programmes, the nature of which varies from CSS region to region. In the case of the Caribbean CSS, the main framework for regional level environmental governance is provided by the *Revised Treaty of Chaguaramas establishing the Caribbean Community including the Caribbean Community Single Market and Economy (CSME)*. (Note that The Bahamas in not a part of the CARICOM Single Market and Economy.) Pursuant to Article 211, the Caribbean Court of Justice has compulsory and exclusive jurisdiction to hear and to determine disputes concerning the interpretation and application of the revised treaty, and therefore must be considered as part of the environmental structure of governance of the member states that are part of the CSME. At the time of writing, the community is preparing its environmental protection and national resource policy framework, which will form an integral part of the CSME.

At the subregional level of the Organization of Eastern Caribbean States (OECS), the Revised Treaty of Basseterre also provides for environmental management in the OECS. The St George's Declaration of Principles for Environmental Sustainability is also codified as part of the body of OECS environmental law. In addition, given the geographical location of both Belize and Guyana, their environmental governance structure extends beyond the Caribbean region. Guyana is party to the Amazon Cooperation Treaty. Belize, on the other hand, is party to the Constitutive Agreement of the Central American Commission for Environment and Development (CCAD).

The countries of the Pacific operate co-operatively within the context of Pacific Islands Forum, a political grouping of 16 independent and self-governing states. Within this framework, a number of regional environmental agreements have been concluded, including:

- Convention on Conservation of Nature in the South Pacific (Apia Convention, 1976);
- South Pacific Nuclear Free Zone Treaty (SPNEZ) 1985, which bans all forms of nuclear testing in the Pacific;
- Convention for the Protection of the Natural Resources and Environment of the South Pacific Region and its Related Protocols, adopted at Noumea in 1986 (the 'SPREP' Convention), which came into force on 22 August 1990; and
- Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Waste and to Control the Transboundary Movement and Management of Hazardous wastes within the South Pacific Region (the Waigani Convention) 1995.

The East African CSS, namely Mauritius and Seychelles, are party to the Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean (Nairobi Convention) and its protocol: the Protocol for the Protection of the Marine and Coastal Environment of the Western Indian Ocean from Land-Based Sources and Activities (LBSA Protocol). The Convention was amended in 2010 but at the time of writing is yet to enter into force.

In the case of the CSS that are members of the European Union, Cyprus and Malta, their internal environmental governance arrangements are significantly influenced by European Community Environmental Law, as the principle of the supremacy of Community law prevails.

National level

The environmental governance structure for the CSS varies from region to region. Based on the information collated in Table 4.4, a number of observations can be made. Generally, it may be concluded that in the case of CSS in the Caribbean, with the exception of Trinidad and Tobago, Guyana and Belize, comprehensive environmental legislation is not the norm. Legislation is still primarily issue specific. In addition, many of the entities which deal specifically with defining and developing

environmental policy at the national level do not have any legal standing in law. There is, however, a trend towards comprehensive environmental legislation, as most of the member states of CARICOM which have do not currently have comprehensive environmental legislation do have drafts, most of which have been drafted between five and fifteen years without being enacted. This contrasts with the situation in most of the other CSS which have enacted comprehensive environmental legislation. In the CSS in the other regions the trend seems to be the enactment of comprehensive environmental legislation.

4.3.4 Conclusion

Governance is an important dimension of good environmental management. As highlighted in Section 4.2, environmental governance is identified as one of the building blocks for the effective management of environmental resources and services. Environmental governance is multifaceted, occurs at various levels and involves many processes, as illustrated by what is referred to as the Environmental Governance Milieu. A set of criteria for assessing the distinguishing characteristics of environmental mechanisms has been formulated and applied to the various levels under consideration.

To aid in the assessment of the quality of environmental governance in CSS, an analysis was undertaken of the environmental governance structure for each CSS. A number of conclusions can be drawn from the analysis, in particular that the pace towards comprehensive environmental legislation in the Caribbean CSS seems to be slower than in the other CSS regions. Additionally in the Caribbean CSS, efforts are under way to give meaning to the notion of a single environmental space as envisioned by the CSME. In this regard, lessons could be drawn from the experiences of the European CSS which are members of the European Union, as their national laws are significantly influenced by European Community Environmental Law.

4.4 Towards a composite index for quality and effectiveness of environmental management

4.4.1 Introduction

Since the convening of the United Nations Conference on Environment and Development (UNCED) in 1992, environmental and sustainability indexes have received increasing attention. The study identifies the elements of a composite index (referred to as the Environmental Management Quality and Effectiveness Composite Index), which captures the quality and effectiveness of proposed environmental management.

4.4.2 Elements of the Environmental Management Quality and Effectiveness Composite Index

Using the framework for identifying the building blocks for effective management of environmental resources and services as a basis, and taking into consideration

the components of Environmental Governance Milieu as outlined in Figure 4.1, a number of elements are proposed to form part of the Environmental Management Quality and Effectiveness Composite Index.

A first step in proposing elements of a composite index to capture the quality and effectiveness of environmental management is the determination of what is being measured. This requires that the 'quality' and 'effectiveness' of environmental management be defined.

For the purpose of this report, the 'quality' of environmental management is interpreted to refer to the characteristics of the environmental management system in operation. In this regard, five characteristics are identified which could be used for determining the quality of environmental management:

- Is there a competent institutional mechanism which has overall responsibility for shaping overall national environmental policy?
- Is the mandate of the competent institutional mechanism clearly defined by law?
- Is appropriate access to information concerning the environment that is held by public authorities provided by law?
- Does the law provide for adequate opportunity to participate in decision-making processes relating to environmental matters?
- Does the law provide for effective access to judicial and administrative proceedings, including grievance, redress and remedy, with respect to environmental issues?

The 'effectiveness' of environmental management, on the other hand, is interpreted as meaning the effect of policy decisions made on/about the environment.

It is proposed that the Environmental Management Quality and Effectiveness Composite Index focus on four broad themes: environmental health, ecosystem management, private sector performance and environmental governance. For each of these four broad themes, a list of environment-related issues is identified as outlined in Table 4.5. For each of the environmental issues identified, a set of indicators is identified. It is important to note, however, that the elements of the Composite Index which are proposed must be tested and validated in CSS. This will require the development of an index for all CSS, with concentration on a national index in the first instance. Once these indicators are tested for their applicability to the situation in CSS, they will be weighted. The individual country's index could be brought together to formulate a CSS index, to build up a global picture.

4.4.3 Data availability: a possible constraint impacting on the development of the Composite Index

One of the main constraints which are likely to be faced in developing the composite index is the availability of quality data. One of the constraints faced

by CSS is the systematic collection, processing and analysis of environmental data. This has been identified by many CSS as a major constraint affecting the management of their environmental resources and service. To overcome this constraint, a partnership initiative is recommended among small states on the systematic collection of environmental data and its integration into the national statistical infrastructure of CSS. The latter mechanism should also be used for decision-making purposes.

4.4.4 Conclusion

A preliminary list is identified of elements, which should form the core of the Environmental Management Quality and Enhancement Composite Index. These provide a good basis on which to build the composite index; however, the process for doing this will need to take place in a systematic manner, building on constituent parts, as outlined in Figure 4.1. Once the indicators are tested and a final set of indicators agreed upon, they will be weighted and applied as the basis for developing the composite index.

4.5 Priority areas for policy intervention: a summary overview

4.5.1 Introduction

This section provides some preliminary insights from a review of the existing literature on the likely key priority areas for policy identification. The priority for policy intervention, however, covers a wide cross-section of areas and draws on some of the priorities as identified by small states themselves. Many of the priority areas have been prescribed for SIDS in the context of international discussions but have applicability to all small states, while some policies are SIDS specific, related to the management of their oceans and coastal areas.

4.5.2 Priority areas for policy intervention

The summary overview of the priority areas for policy intervention is presented in clusters consistent with the analytical framework used for identifying the building blocks framework.

Pollution management group. Under this subtheme, the issue which stands out most is waste management, particularly hazardous and ship-generated waste. In the case of the Caribbean, notwithstanding the coming into force of the special area status[3] of the Wider Caribbean region, including the Gulf of Mexico and the Caribbean Sea, on 1 May 2011, under MARPOL 73/78, many of the Caribbean CSS are yet to have in place adequate port reception facilities.

Information/knowledge capacity enhancement group. A number of key priority areas are identified under this grouping, which encompasses a range of activities, including analytical services, data collection, analysis and assessment, environmental research

and development, and environment education and training. These are summarised as follows:

- The systematic collection and analysis of environmental information and data; its integration in the national statistical infrastructure and its use for decision-making.
- Trade and environment, with a focus on both assessments on those interrelations (i.e. the impact of non-tariff/market access measures), and capacity enhancement for trade negotiations and their operations.
- Investments in formal and non-formal education, including the use, development and sharing of open learning/distance education and technologies in support of environment and sustainable development. The experience of the Commonwealth Secretariat in using open learning and distance education platforms has proven to be an important vehicle in the delivery of short-term intensive training for CSS middle management technical professionals. Benefits from using these technologies include the ability to overcome the geographical constraints inherent by location of CSS across the globe. More specifically, the use of such technologies also facilitates increased contact between CSS professionals, thereby providing a basis for the strengthening of inter- and intra- co-operation and collaboration between CSS.
- The operationalisation of the Technical Assistance Programme for Small States/SIDS, to serve as a vehicle through which resources could be made available to small states/SIDS to compensate for the limited access by small states/SIDS to concessionary resources, and facilitate the enhancement of these countries' human resources potential; a mechanism which allows for small states/SIDS' expertise and experience to be deployed throughout and across small states/SIDS regions as may be necessary, as well as facilitating the pooling of small states/SIDS expertise; and a means of sharing of resources and the utilisation of networks within the various small states/SIDS countries and regions.
- The establishment of a climate technology centre and network, to enhance technology co-operation and transfer.

Cleaner Technology and Production Group. This group focuses on cleaner and resource-efficient technologies, processes and products. Emphasis is placed on enhancing the involvement of the industry and business, and, in particular, small and medium-sized enterprises, in environmental and sustainable development issues. Two main vehicles for achieving this are highlighted: the SIDS-specific platform on sustainable consumption and production within the Ten-Year Framework Programme on SCP, and a private-sector-focused SIDS inter- and intra-regional private sector platform. In the operationalisation of platforms, great emphasis is placed on facilitating the conditions that foster entrepreneurship and innovation, and build the capacity of small and medium-sized enterprises while increasing their competitiveness to compete in third markets. These mechanisms, when established, should go a long way in engaging the private sector in CSS in environmental and sustainable development issues.

Under the ***Resource Management Group,*** a number of priorities are identified across the various resource areas. The expanded use of renewable energy technology is a clear priority, with emphasis on enhancing countries' ability to assess renewable energy technologies and the need for a funding mechanism to facilitate this process. Particular emphasis is placed on the sustainable use of marine biodiversity, including in areas beyond natural jurisdiction, for which a call is made for the negotiation of a specific international legal agreement. There is also an endorsement of the Barbados Declaration on achieving sustainable energy for all in SIDS. In the case of sustainable biodiversity, priority areas include the protection and sustainable utilisation of traditional knowledge and folklore, and access and benefit sharing as it relates to the components of biodiversity.

For SIDS, in the areas of coastal marine, ocean protection and management, a number of key priority areas are highlighted. At the macro-policy level, the concept of the development of the 'blue economy' is highlighted as a specific mechanism for SIDS and coastal countries to address their sustainable development challenges. There is a recognition that the blue economy must address and incorporate research, assessment, valuation and management of the blue capital; more effective international ocean governance; data collection, management and sharing; promotion of blue carbon on the carbon trading agenda; enabling mechanisms, including technology transfer, capacity building and targeted streamlined financing mechanisms; and modes of science-based implementation, including thorough action plans, such as maritime resilience action plans and marine spatial planning.

Priorities relating to fisheries management are also highlighted, including strengthening the infrastructure in support of small-scale fisheries, as well as capacities to participate in commercial fisheries, and the need for stronger instruments which could deter and eventually eliminate illegal, unreported and unregulated fishing. Related to the issue of fisheries management in general and increasing market access, the issue of improvements in infrastructure to assure compliance with international sanitary and phytosanitary measures is identified as a priority area for intervention.

Priority areas for intervention are also identified in other areas, including climate change, from an environment, development and security standpoint; natural hazard risk assessment and management; sustainable land management; and sustainable forest management.

A number of priority areas are also highlighted with respect to environmental governance as it relates to CSS. A critical priority area identified is the need for the *establishment of an institutional mechanism in the CSS/SIDS regions, to enhance inter- and intra-regional collaboration between CSS/SIDS.* This is considered to be one of the fundamental principles underpinning the rationale of the SIDS agenda, but one of the weakest implementation elements.

Without the establishment of such a mechanism in each of the three CSS/SIDS regions on which to saddle implementation of the BPOA, MS/BPOA and the outcomes of the

Third International Conference on SIDS, implementation of these instruments will continue to be less satisfactory than expected. A common thread underpinning the priority areas identified is the enhancement of collaboration and co-operation among these countries – a thread which underscores the need for an effective institutional mechanism within each of the regions to facilitate this. Generally, there is consensus that there is a need to shift from capacity to institution building as an important component of international support to small states/SIDS. Institution building encourages the use of country systems and promotes the retention of knowledge in all its forms, including traditional knowledge, within a country.

A number of priority areas are also highlighted with respect to international environmental governance issues, including:

- the full and equitable integration of CSS/SIDS in the new UN institutional architecture that is emerging following the Rio+20 outcomes, including the High Level Political Forum on Sustainable Development, ECOSOC, the United Nations Environment Programme, Sustainable Development Goals, the Technology Mechanism, the Sustainable Development report and the Sustainable Financing Mechanism;
- strengthening of institutional frameworks of entities comprising the UN system in order to increase effectiveness and efficiency, thereby fulfilling their functions and mandates in providing more coherent support to small states/SIDS, while ensuring appropriate accountability;
- enhancing the voice and participation of CSS/SIDS in norm setting and decision making at the global level, including the G20;
- the urgent need to review the mandates and operational functioning of UN agencies providing support to small states/SIDS; and
- the need for UN entities to build institutionalised support to small states/SIDS into their programmes and undertake activities that are responsive to the needs of small states/SIDS – *as articulated by the small states/SIDS themselves.*

In terms of international financial environmental governance, a number of priority issues are identified, including:

- establishment of innovative financing tools, in particular debt for adaptation swaps, an emerging tool for addressing debts in small states/SIDS and adaptation to climate change and also nature conservation;
- early operationalisation of the Green Climate Fund and urging developed countries to scale up financing to reach US$100 billion by 2020;
- establishment of a dedicated mechanism to provide financing to developing countries, in keeping with the ongoing Rio+20 follow-up processes, in order to develop specific projects on sustainable development; and
- simpler, more flexible and favourable access to financial resources.

This last issue is related to the difficulty encountered by CSS in accessing resources under climate financing. To address the constraints being faced by CSS, in this regard, the Commonwealth Secretariat is considering the establishment of a climate finance skills hub and response mechanism. It is designed to enhance the capacity of SIDS and least-developed countries (LDCs) to access and manage public and private climate finance, and facilitate regional sharing of skills, knowledge and expertise from across the Commonwealth.[4]

4.5.3 Addressing the priorities: the application of the best fit model

Having identified the priority areas of intervention, a critical question is 'what approach(es) will be employed in addressing them?', taking into consideration the differences between the various countries, including the level of development and capacities – human, financial and technological. Very often in environmental management, reference is made to the identification of 'best practices'. This form of programme evaluation involves reviewing policy alternatives that have been implemented to address similar issues in the past and which could be applied to a current problem. An alternative means of approaching environmental management issues is the use of the 'best fit' approach. Fundamental to this approach is to ensure that the strategies which are being pursued are suitable to the context (culture, local processes, technology etc.) in which they are implemented.

In addressing the priorities outlined in the foregoing paragraph, the one-size-fits-all approach might not necessarily be the most effective way to pursue many of the actions. In many instances, care will need to be taken to ensure that initiatives being implemented are tailored to the specific circumstance of the country in question. Moreover, it is important that the policy priorities are reflected in key international processes and the necessary resources made available by the international community for their implementation. The commitment by the international community to the establishment of an inter- and intra-regional institutional mechanism in each of the three SIDS regions will facilitate inter- and intra-regional collaboration and co-operation between this subgroup of CSS. These arrangements can be extended to include other small states.

Notes

1 Judgment in the Jamaica Court of Appeal, Supreme Court Suit CL 1999/D-058 and Suit No. CL 1999/S-134, Motions 16 and 17 of 1999, 1 July 1999.

2 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.

3 Under the various Annexes of MARPOL – Annex I Prevention of pollution by oil; Annex II Control of pollution by noxious liquid substances; Annex IV Prevention of pollution by sewage from ships; and Annex V Prevention of pollution by garbage from ships – certain sea areas are defined as '**special areas**' for which, for technical reasons relating to their oceanographical and ecological condition and to their sea traffic, the adoption of special mandatory methods for the prevention of sea pollution is required. Under the convention, these special areas are provided with a higher level of protection than other areas of the sea.

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Table 4.1 Classification of environmental services in the CSME zone

POLLUTION MANAGEMENT GROUP
Solid/hazardous waste management
Recycled materials
Wastewater management
Air pollution control
Noise and vibration abatement
Remediation and clean-up of soils, surface water or groundwater
INFORMATION KNOWLEDGE/CAPACITY ENHANCEMENT SERVICES GROUP
Analytical services, data collection, analysis and assessment
Environmental research and development
Environmental education, training and information
CLEANER TECHNOLOGY AND PRODUCTION GROUP
Cleaner/resource-efficient technologies and process
Cleaner/resource-efficient products
RESOURCE MANAGEMENT GROUP
Renewable energy
Water resources treatment and distribution
Sustainable biodiversity
Coastal and marine protection and management
Protection and management of natural and cultural heritage
Environmental planning
Natural hazard risk assessment and management
Sustainable land management
Sustainable forestry management
Other environmental services

Source: Griffith (2009)

Table 4.2 Indicative analytical framework for environmental management with technologies for building resilience

	Approach/practice	Technology
RESOURCE MANAGEMENT GROUP		
Environmental and physical planning	Physical planning	• Establishment of setbacks • Limiting development in high-risk areas (e.g. flood plains) • Comprehensive and integrated planning • Environmental impact assessment (EIA)
Ecosystem-based management (EBM)	Integrated coastal zone management	• Beach restoration, nourishment and stabilisation • Beach re-vegetation • Reef protection including the establishment of marine protected areas • Monitoring of coastal erosion • Breakwaters • Dykes, levees and groynes
	Marine protected areas	• Reef protection • Reef rehabilitation • Creation of artificial reefs
	Integrated water and watershed management	• Watershed restoration and management • Afforestation and reforestation • Leakage detection systems • Rainwater harvesting • Water quality control and monitoring • Groundwater recharge of wells
	Sustainable land management	• Protected areas • Soil conservation, land improvement and rehabilitation • Improved cultivation practices • Soil stabilisation and erosion control (e.g. terracing and contour cropping) • Integrated pest management • Improvement in crop varieties (e.g. drought- and pest-resistant crops, new varieties of existing crops)

	Ecosystem-based adaptation	• Scenario exercises • Comprehensive assessments establishing linkages between humans and ecosystems; the status and vulnerability of ecosystems etc. • Sustainable management, conservation and restoration of ecosystems • Measurement of ecosystem health • Biodiversity conservation • Ecosystem management
POLLUTION MANAGEMENT GROUP		
Pollution control	Pollution control	• Water quality control • Groundwater recharge wells • Wastewater treatment
INFORMATION, KNOWLEDGE CAPACITY ENHANCEMENT SERVICES GROUP		
Engineering and design	Protection	• Sea walls, revetments and bulkheads • Establishment of appropriate building codes and standards • Improved technical designs and construction • Increase flood protection • Artificial sand dunes and dune rehabilitation

Early warning and forecasting		• Improved weather forecasting
		• Improved hydro-meteorological networks
		• Early warning systems for
		  • Meteorological phenomena (e.g. extreme events including hurricanes, cyclones, floods caused by rain, droughts)
		  • Geological hazards (e.g. earthquakes, volcanoes, landslides)
		  • Tsunami
		  • Famine

(*continued*)

Table 4.2 (*continued*)

Approach/practice	Technology
	• Flood hazard mapping • Natural disaster response systems • Crop forecasting and modelling • Agriculture and food security management system • Improved data management collection, analysis and dissemination • Remote sensing and geographical information systems (GIS)
ENVIRONMENTAL GOVERNANCE	
Environmental governance	• Establishment of appropriate institutional framework • Establishment of appropriate legal frameworks • Establishment of community participation structures • Knowledge requirements, including access to environmental information and environmental justice • Inclusive participation
Economic mechanisms	• Insurance • Earthquake and hurricane catastrophe insurance coverage

Table 4.3 Indicative overview of multilateral environmental agreements to which Commonwealth small states are a party

MEAs	AB	BAH	BAR	BEL	DOM	GREN	GUY	JAM	SKN	SL	SVG	TT
Wildlife/conservation												
Convention of International Trade in Endangered Species, 1972 (CITES)	A 1997	A 1979	A 1992	A 1986	A 1995	A 1999	A 1977	A 1997	A 1994	A 1982	A 1988	A 1984
Convention on the Conservation of Migratory Species (CMS)	A 2007											
Convention on Wetlands of International Importance especially as Waterfowl Habitats (RAMSAR)	R 2005	R 1997	R 2005	A 1998		A 2012		A 1997		R 2002		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, 1993, to the Cartagena Convention, the Wider Caribbean (RE)	S 1990		A 2002	A 2008				S 1990		A 2000	A 1991	A 1999
Convention on Conservation of Nature in the South Pacific (Apia Convention) (RE: Pacific)												
Biodiversity/bio-safety, traditional knowledge												
International Plant Protection Convention, Rome, 1951	Ad 2006	Ad 1997	Ad 1976	Ad 1987	Ad 2006	Ad 1985	Ad 1970	Ad 1969	Ad 1990	Ad 2002	Ad 2001	Ad 1970
Convention on Biological Diversity, 1992	R 1993	R 1993	R 1993	R 1993	R 1994	R 1994	R 1994	A 1995	R 1993	A 2003	A 1996	R 1996
Cartagena Protocol on Bio-Safety	R 2003	R 2004	A 2002	R 2004	A 2004	R 2004	A 2008	S 2001	A 2001	A 2005	A 2003	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 1990	A 1987		R 1987	A 1999	A 1994	A 1990	A 1986

(*continued*)

Table 4.3 (*continued*)

MEAs	AB	BAH	BAR	BEL	DOM	GREN	GUY	JAM	SKN	SL	SVG	TT
Protocol Concerning Cooperation in Combating Oil Spills in the Wider Caribbean, 1983 (RE)	A 1986		A 1985	A 1999	A 1990	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 2008						A 2008		A 2003
Nairobi Convention, 1985 (Amended Convention Text as adopted in 2010)												
Protocol of 1973 to the International Convention for the Prevention of Pollution from Ships as Amended (MARPOL 1973/78)	A 1988	A ## 1983	A ## 1994	A 1995	A ## 2000		A 1997	A 1991	A 1997	A 2000	A 1983	A 2000
International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC, 1969)	A 1997	A 1976	A 1994	A 1991			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 1998		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 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 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 1977	A 1991	A 2004	A 2004	A 1999	A 2000

Protocol Relating to Intervention on the High Seas in Cases of Pollution by Substances Other than Oil, 1973, as Amended (INTERVENTION 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			DI 1973		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 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 1997	A 2000	A 2004	A 2004		A 2000	
International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 (BUNKERS 2001)	A 2008	A 2008	A 2009	A 2011				A 2003	A 2009		A 2009		
International Convention for the Control and Management of Ship Ballast Water and Sediment, 2004 (BWM 2004)			A 2007						A 2005			A 2012	
Convention for the Protection of Natural Resources and Environment of the South Pacific Region (the Noumea Convention) and its Protocols (RE: Pacific)													
Marine resources													
United Nations Convention on the Law of the Sea, 1982	R 1989	R 1983	R 1993	R 1983	R 1991	R 1991	R 1993	R 1983	R 1993	R 1985	R 1993	R 1986	
Agreement Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Species, 1995		R 1997	R 2000	R 2005						R 1996	R 2010	R 2006	

(*continued*)

Table 4.3 (*continued*)

MEAs	AB	BAH	BAR	BEL	DOM	GREN	GUY	JAM	SKN	SL	SVG	TT
South Pacific Tuna Treaty (SPTT) (RE, Pacific)												
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 1998		A 2001	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	A 2010		S 1998	A 2005	A 2005		A 2007	A 2002	A 2012	S 1999		A 2009
Sustainable land management												
United Nations Convention to Combat Desertification	R 1997	A 2000	A 1997	A 1998	A 1997	A 1997	A 1997	A 1997	A 1997	A 1997	R 1998	A 2000
Atmospheric/climate systems												
Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985	A 1992	A 1993	A 1992	A 1997	A 1993	A 1993	A 1993	A 1993	A 1992	A 1993	A 1996	A 1989
Montreal Protocol on Substances that Deplete the Ozone Layer, 1989*	A 1992	A 1993	A 1992	A 1998	A 1993	A 1993	A 1993	A 1993	A 1992	A 1993	A 1996	A 1989
United Nations Frame-work Convention on Climate Change, 1992	R 1993	R 1994	R 1994	R 1994	R 1993	R 1994	R 1994	R 1995	R 1993	R 1993	R 1996	R 1994
Kyoto Protocol	R 1998	A 1999	A 2000	R 2003	A 2005	A 2002	A 2003	A 1999	A 2008	R 2003	R 2004	R 1999
Protection of human health and the environment												
Stockholm Convention on Persistent Organic Pollutants (POPs), 2001	R 2003	R 2005	A 2004	R 2010	A 2003		A 2007	R 2007	A 2004	A 2002	A 2005	A 2002
Waigani Convention, 1995 (RE,. Pacific)												
Culture and natural heritage												
Convention for the Protection of World Culture and Natural Heritage, 1972	Ac 1983	R 2014	Ac 2002	R 1990	R 1995	Ac 1998	Ac 1977	Ac 1983	Ac 1986	R 1991	R 2003	R 2005

Table 4.3 (*continued*)

MEAs	FIJI	KAI	NAU	PNG	SAM	SI	TON	TUV	VAN
Wildlife/conservation									
Convention of International Trade in Endangered Species, 1972 (CITES)	A 1977			A 1975	A 2004	A 2007			A 1989
Convention on the Conservation of Migratory Species (CMS)	A 2013				A 2005				
Convention on Wetlands of International Importance especially as Waterfowl Habitats (RAMSAR)	R 2006	A 2013		R 1993	A 2005				
International Convention for the Regulation of Whaling 1948 and 1959									
Protocol Concerning Specially Protected Areas and Wildlife, 1993, to the Cartagena Convention, the Wider Caribbean (RE)									
Convention on Conservation of Nature in the South Pacific (Apia Convention) (RE: Pacific)									
Biodiversity/bio-safety, traditional knowledge									
International Plant Protection Convention, Rome, 1951	Ad 2005								
Convention on Biological Diversity, 1992	R 1993	A 1994	R 1993	R 1993	R 1994	R 1995	A 1998	R 1993	R 1993
Cartagena Protocol on Bio-Safety	R 2001	R 2004	A 2001	A 2005	R 2002		A 2003		
International Labour Organisation No. 169 Concerning Indigenous and Tribal Peoples in Independent Countries (ILO)									
Marine protection and safety									
Convention on the Protection and Development of the Marine Environment in the Wider Caribbean, 1983 (Cartagena Convention) (RE)									

(*continued*)

Table 4.3 (*continued*)

MEAs	FIJI	KAI	NAU	PNG	SAM	SI	TON	TUV	VAN
Protocol Concerning Cooperation in Combating Oil Spills in the Wider Caribbean, 1983 (RE)									
Protocol Concerning Pollution for Land Based Sources and Activities in the Wider Caribbean, 1983 (LBS Protocol) (RE)									
Nairobi Convention, 1985 (Amended Convention Text as adopted in 2010)									
Protocol of 1973 to the International Convention for the Prevention of Pollution from Ships as Amended (MARPOL 1973/78)				A 1993	A 2002	A 1996		A ## 1989	A 1995
International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC, 1969)	A 1972			A 1980					
Protocol of 1992 to Amend the International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC PROT, 1992)	A 1999	A 2007		A 2001		A 2004	A 1999	A 2004	A 1999
Convention Relating to Civil Liability in the Field of Marine Carriage of Nuclear Material, 1971 (NUCLEAR, 1971)									
International Convention for the Establishment of an International Fund for the Compensation of Oil Pollution, 1971 (FUND, 1971)									
Protocol of 1992 and 2003 to the International Convention for the Establishment of an International Fund for the Compensation of Oil Pollution, 1971	A 1999 -------	A 2007 -------		A 2001 ------			A 1999 -------	A 2004 -------	A 1999 -------
International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 (INTERVENTION, 1969)	A 1972			A 1980			A 1996		A 1992
Protocol Relating to Intervention on the High Seas in Cases of Pollution by Substances Other than Oil, 1973, as Amended (INTERVENTION PROT 1973)							A 1996		A 1992

Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, as Amended (LC 1972)			S 1979	DI 1980		S 1978		DI 1995	DI 1992
1996 Protocol to the International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (LC PROT 1996)							A 2003		A 1999
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		A 2003		
International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC Convention, 1990)					A 2004		A 1996		A 1999
International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 (BUNKERS 2001)		A 2009			A 2004		A 2003	A 2009	A 2008
International Convention for the Control and Management of Ship Ballast Water and Sediment, 2004 (BWM 2004)		A 2007					A 2014	A 2005	
Convention for the Protection of Natural Resources and Environment of the South Pacific Region (the Noumea Convention) and its Protocols (RE: Pacific)	R 1998			S 1976	R 1990				
Marine resources									
United Nations Convention on the Law of the Sea, 1982	R 1982	A 2003	R 1996	R 1997	R 1995	R 1997	A 1995	R 2002	R 1999
Agreement Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Species, 1995	R 1996	R 2005	R 1997	R 1999	R 1996	R 1997	R 1996	R 2009	
South Pacific Tuna Treaty (SPTT) (RE, Pacific)	P	P	P	P	P	P	P	P	P
Chemicals/waste management									
Basel Convention on the Control of Transboundary Movement of Hazardous Waste and their Disposal		A 2000	A 2001	A 1995	A 2002		A 2010		
Rotterdam Convention on the Prior Consent Procedures for Certain Hazardous Chemicals and Pesticides in International Trade					A 2002		A 2010		

(*continued*)

Table 4.3 (*continued*)

MEAs	FIJI	KAI	NAU	PNG	SAM	SI	TON	TUV	VAN
Sustainable land management									
United Nations Convention to Combat Desertification	A 1998	A 1998	A 1998	A 2000	A 1998	A 1999	A 1998	A 1998	A 1998
Atmospheric/climate systems									
Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985	A 1989	A 1993	A 2001	A 1992	A 1992	A 1993	A 1998	A 1993	A 1994
Montreal Protocol on Substances that Deplete the Ozone, Layer, 1989*	A 1989	A 1993	A 2001	A 1992	A 1992	A 1993	A 1998	A 1993	A 1994
United Nations Frame-work Convention on Climate Change, 1992	R 1993	R 1995	R 1993	R 1993	R 1994	R 1994	R 1998	R 1993	R 1993
Kyoto Protocol	R 1998	A 2000	A 2001	R 2002	R 2004	R 2003	R 2008	R 1998	A 2001
Protection of human health and the environment									
Stockholm Convention on Persistent Organic Pollutants (POPs), 2001	R 2001	R 2004		R 2003	R 2002	A 2004	R 2009	A 2004	R 2005
Waigani Convention, 1995 (RE,. Pacific)	R	R	S	R	R	R	R	A	R
Culture and natural heritage									
Convention for the Protection of World Culture and Natural Heritage, 1972	R 1990	Ac 2000		Ac 1997	Ac 2001	A 2001	Ac 2004	A	R 2002

Table 4.3 (*continued*)

MEAs	MUR	SEY	MALD	BRU	BOT	LES	SWA	NAB	CYP	MAL
Wildlife/conservation										
Convention of International Trade in Endangered Species, 1972 (CITES)	R 1975	A 1977	A 2012	A 1990	A 1997				R 1974	A 1982
Convention on the Conservation of Migratory Species (CMS)	A 2004	A 2005							A 2001	
Convention on Wetlands of International Importance especially as Waterfowl Habitats (RAMSAR)	A 2001	A 2005				A 2004			A 2001	A 1989
International Convention for the Regulation of Whaling 1948 and 1959										
Protocol Concerning Specially Protected Areas and Wildlife, 1993 to the Cartagena Convention, the Wider Caribbean (RE)										
Convention on Conservation of Nature in the South Pacific (Apia Convention) (RE: Pacific)										
Biodiversity/bio-safety, traditional knowledge										
International Plant Protection Convention, Rome, 1951				Ad 2006	Ad 2009			Ad 2007		Ad 1975
Convention on Biological Diversity, 1992	R 1992	R 1992	R 1992	A 2008	A 2008	Rt 1995	Rt 1995	R 1997	R 1996	R 2000
Cartagena Protocol on Bio-Safety	A 2002	R 2004	A 2002		R 2002	A 2001	A 2006	R 2005	A 2003	A 2007
International Labour Organisation No. 169 Concerning Indigenous and Tribal Peoples in Independent Countries (ILO)										
Marine protection and safety										
Convention on the Protection and Development of the Marine Environment in the Wider Caribbean, 1983 (Cartagena Convention) (RE)										

(*continued*)

Table 4.3 (*continued*)

MEAs	MUR	SEY	MALD	BRU	BOT	LES	SWA	NAB	CYP	MAL
Protocol Concerning Cooperation in Combating Oil Spills in the Wider Caribbean, 1983 (RE)										
Protocol Concerning Pollution for Land Based Sources and Activities in the Wider Caribbean, 1983 (LBS Protocol) (RE)										
Nairobi Convention, 1985 (Amended Convention Text as adopted in 2010)	S 2010	S 2010								
Protocol of 1973 to the International Convention for the Prevention of Pollution from Ships as Amended (MARPOL 1973/78)	A ## 1990	A ## 205						A ## 2002	A ## 1989	A ## 1991
International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC, 1969)	A 1995		A 1981						A 1995	A 1991
Protocol of 1992 to Amend the International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC PROT, 1992)	A 1999	A 1999	A 2005					A 2002	A 1997	A 2000
Convention Relating to Civil Liability in the Field of Marine Carriage of Nuclear Material, 1971 (NUCLEAR, 1971)										
International Convention for the Establishment of an International Fund for the Compensation of Oil Pollution, 1971 (FUND,1971)										
Protocol of 1992 and 2003 to the International Convention for the Establishment of an International Fund for the Compensation of Oil Pollution, 1971	A 1999 -------	A 1999 -------	A 2005 ------					A 2002 -------	A 1997 -------	A 2000 -------
International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 (INTERVENTION, 1969)	A 2002							A 2004		
Protocol Relating to Intervention on the High Seas in Cases of Pollution by Substances Other than Oil, 1973, as Amended (INTERVENTION PROT 1973)	A 2003							A 2004		

Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, as Amended (LC 1972)		DI 1984						DI 1989	DI 1990	
1996 Protocol to the International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (LC PROT 1996)										
International Convention on Liability and Compensation from Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS Convention, 1996)									A 2005	
International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC Convention, 1990)	A 1999	A 1999						A 2007		A 2003
International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 (BUNKERS 2001)									A 2005	A 2008
International Convention for the Control and Management of Ship Ballast Water and Sediment, 2004 (BWM 2004)			R 2005							
Convention for the Protection of Natural Resources and Environment of the South Pacific Region (the Noumea Convention) and its Protocols (RE: Pacific)										
Marine resources										
United Nations Convention on the Law of the Sea, 1982	R 1996	R 1991	R 2000	S 1982	R 1990	R 2007	R 2012	R 1983	R 1988	R 1993
Agreement Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Species, 1995	R 1997	R 1998	R 1998					R 1998	R 2002	R 2001
South Pacific Tuna Treaty (SPTT) (RE, Pacific)										
Chemicals/waste management										
Basel Convention on the Control of Transboundary Movement of Hazardous Waste and their Disposal	A 1992	A 1993	A 1992	A 2012	A 1998	A 2000		A 1995	R 1992	A 2000

(*continued*)

Table 4.3 (*continued*)

MEAs	MUR	SEY	MALD	BRU	BOT	LES	SWA	NAB	CYP	MAL
Rotterdam Convention on the Prior Consent Procedures for Certain Hazardous Chemicals and Pesticides in International Trade	A 2005	S 1998	A 2006		A 2008	A 2008	A 2012	R 2005	R 2004	
Sustainable land management										
United Nations Convention to Combat Desertification	R 1996	R 1997	A 2002	A 2002	R 1996	R 1995	R 1996	R 1997	A 2000	R 1998
Atmospheric/climate systems										
Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985	A 1992	A 1993	A 1988	A 1990	A 1991	A 1994	A 1992	A 1993	A 1992	A 1988
Montreal Protocol on Substances that Deplete the Ozone Layer, 1989*	A 1992	A 1993	A 1989	A 1993	A 1991	A 1994	A 1992	A 1993	A 1992	A 1989
United Nations Frame-work Convention on Climate Change, 1992	R 1992	R 1992	R 1992	R 2007	R 1994	R 1995	R 1996	R 1995	R 1997	R 1994
Kyoto Protocol	A 2001	R 2002	R 1998	A 2009	A 2003	A 2003		A 2003	A 1999	R 2001
Protection of human health and the environment										
Stockholm Convention on Persistent Organic Pollutants (POPs), 2001	R 2004	A 2008	A 2006	S 2002	A 2002			A 2005	A 2005	S 2001
Waigani Convention, 1995 (RE,. Pacific)										
Culture and natural heritage										
Convention for the Protection of World Culture and Natural Heritage, 1972	R 1995	Ac 1990	Ac 1986	Ac 2011	Ac 1998	Ac 2003	R 2005	Ac 2000	Ac 1975	Ac 1978

Sources: Completed by CaribInvest (West Indies) Limited, March 2014.

Sources by clusters:

***** 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).

Including exceptions

Legend: Caribbean small states: AB = Antigua and Barbuda; BAH = The Bahamas; BAR = Barbados; BEL = Belize; DOM = Dominica; GREN = Grenada; GUY = Guyana, JAM = Jamaica; SKN = St Kitts and Nevis, SL = St Lucia; SVG = St Vincent and the Grenadines; TT = Trinidad and Tobago; **Pacific small states (that are also SIDS):** FIJI = Republic of Fiji; KAI = Kiribati; NAU = Nauru; PNG = Papua New Guinea; SAM = Samoa; SI = Solomon Islands; TON = Tonga; TUV = Tuvalu; VAN = Vanuatu; **African small states (that are also SIDS)**: MUR = Mauritius; SEY = Seychelles; **Asian small states**: BRU = Brunei Darussalam; MALD = Maldives; **African small states (that are not SIDS)**: BOT = Botswana; LES = Lesotho; NAB = Namibia; SWA = Swaziland; **European small states**: CYP = Cyprus; MAL = Malta

A = Accession – 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

Ac = Acceptance: 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

Ad = Adherence

R = 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.

S = Signature; **DI** = Date of deposit of instrument; **EF/Su** = Date of Entry into Force or Succession; **P** = Party

RE = Regional MEA

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

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

Marine protection and safety: UNEP, available at: 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 16 May 2014, 006 IMO, available at: www.imo.org

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

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

Sustainable land management: UNCCD Secretariat, available at: www.unccd.int

Atmospheric/climate systems: UNEP Ozone Secretariat, available at: http://ozone.unep.org/Ratification_status/and UNFCC Secretariat at www.unfcc.org

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

Culture and natural heritage: UNESCO World Heritage, available at: www.unesco.org (accessed 15 February 2014).

Table 4.4 Overview of the national governance structure for environmental management in Commonwealth small states

Country	Institutional framework for environmental management and planning	Legislative framework	Multilateral environmental agreement to which country is a party/other regional instruments
Africa			
Botswana	The Ministry of Environment, Wildlife and Tourism (MEWT), established in September 2002, is the main institutional mechanism in Botswana with responsibility for environmental management and planning. It comprises a number of departments, including the Departments of Wildlife and National Parks, Departments of Environmental Affairs (DEA), Waste Management and Pollution Control (DMPC) and National Museum and Monuments (NMM), as well as the Forest Conservation Botswana (FCB), established in 2008 as a company to administer the Tropical Forest Conservation Fund.		Is party to the Southern African Development Community (SADC) Treaty, the founding document for the establishment of SADC. One of the co-operation areas highlighted in the treaty is natural resources and the environment.
Lesotho	The National Environment Secretariat (NES) (Department of Environment), which was established in April 1994, is currently under the Ministry of Tourism, Environment and Culture and is the lead agency for environmental management and planning in Lesotho.	The *Environment Act 2008* establishes the Department of Environment. The Act provides for sustainable management of Lesotho's environment and all its natural resources.	Is party to the Southern African Development Community (SADC) Treaty, the founding document for the establishment of SADC. One of the co-operation areas highlighted in the treaty is natural resources and the environment.

Namibia	Ministry of Environment and Tourism is the main institutional mechanism for environmental management and planning in Namibia. The ministry comprises six Directorates which are responsible for fulfilling the ministry's objectives: • Directorate of Administration, Finance and Human Resource • Directorate of Environmental Affairs • Directorate of Regional Services and Parks Management • Directorate of Natural Resources Management • Directorate of Tourism and Gaming • Directorate of Planning and Technical Services.		Is party to the Southern African Development Community (SADC) Treaty, the founding document for the establishment of SADC. One of the co-operation areas highlighted in the treaty is natural resources and the environment.
Swaziland	The Swaziland Environment Authority (SEA), established through an Act of Parliament in November 1992, is the main body dealing with environmental issues in Swaziland. The SEA's responsibilities include co-ordination of environmental issues and developing environmental policies, monitoring environmental quality and setting environmental standards, as well as to implement enforcing mechanisms to ensure that environmental consideration is taken into account in the authorisation and management of development.	The Environmental Management Act No. 5 of 2002 repeals the Swaziland Environment Act 1992, and transforms the Swaziland Environment Authority created by it into a corporate body. Among its powers is its authority to halt developments that have not been adequately subjected to environmental impact analysis.	Is party to the Southern African Development Community (SADC) Treaty, the founding document for the establishment of SADC. One of the co-operation areas highlighted in the treaty is natural resources and the environment.

(*continued*)

Table 4.4 (*continued*)

Country	Institutional framework for environmental management and planning	Legislative framework	Multilateral environmental agreement to which country is a party/other regional instruments
Caribbean			
Antigua and Barbuda	The Environmental Division (ED) of the Ministry of Agriculture, Lands, Housing and the Environment, established by a Decision of Cabinet in 1997, is the main functional mechanism for the co-ordination of environmental management and planning in Antigua and Barbuda. The ED has no legal mandate in the laws of Antigua and Barbuda to enforce environmental compliance.	No comprehensive environmental legislation exists in Antigua and Barbuda. There is general consensus that the legislation needs upgrading, with a view to addressing environmental and natural resources management issues in a more holistic and integrated manner. The Draft Environmental Protection and Management Act consolidates a legal regime for sustainable environmental protection and management in Antigua and Barbuda.	Is a signatory to the St George's Declaration of Principles for Environmental Sustainability (SGD), which is structured around 21 Principles. Is a signatory to the Revised Treaty of Chaguaramas establishing the Caribbean Community, including the CARICOM Single Market and Economy and hence will be part of the Community Environmental Protection and Natural Resources Management Framework.
The Bahamas	The main institutional mechanism for environmental management in The Bahamas is the Bahamas Environment, Science and Technology (BEST) Commission, located under the Office of the Prime Minister. The primary role of the BEST Commission is to advise the Bahamas Government on environmental matters, including on environmental impacts of proposed development projects and environmental policy and management.		

Barbados	Ministry of Environment and Drainage is the main institutional framework for environmental management in Barbados.	Generally the legislative framework in Barbados has evolved in a piecemeal fashion in response to specific issues. This has resulted in the environment-related legislation being dispersed over several statutes. Much of the current environmental legislation exhibits a number of procedural weaknesses including fragmentation, overlapping jurisdiction and institutional weaknesses. There is therefore a need for a comprehensive overhaul of the environment-related legislation in Barbados.	Is a signatory to the Revised Treaty of Chaguaramas establishing the Caribbean Community, including the CARICOM Single Market and Economy and hence will be part of the Community Environmental Protection and Natural Resources Management Framework. A major gap in the national legislation with respect to MEAs is that many of them to which the country is party have not been transformed in to national legislation. Hence the rights and obligations therein have no force in domestic legislation if they are not transformed into national law.
Belize	The Department of the Environment (DOE) of the Ministry of Forestry, Fisheries and Sustainable Development, established in September 1989, is the main institutional mechanism in Belize responsible for environmental management and planning. In addition the DOE is responsible for the enforcement of several Regulations made under the Environmental Protection Act. These include the Environmental Impact Assessment Regulations (SI 107 of 1995), the Environmental	The Environmental Protection Act (EPA) 1992 conferred broad statutory powers on the DOE concerning a wide range of environmental issues.	Is a signatory to the Revised Treaty of Chaguaramas establishing the Caribbean Community, including the CARICOM Single Market and Economy and hence will be part of the Community Environmental Protection and Natural Resources Management Framework. Belize is also party to the Constitutive Agreement of the Central American Commission for Environment and Development (CCAD).

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Table 4.4 (*continued*)

Country	Institutional framework for environmental management and planning	Legislative framework	Multilateral environmental agreement to which country is a party/other regional instruments
	Protection (Effluent Limitations) Regulations (SI 94 of 1995) and the Pollution Regulations (SI 56 of 1996). The statutory bodies which fall under the ministry are the Coastal Zone Management Authority and the Protected Areas Conservation Trust (PACT).		
Dominica	The Environmental Coordinating Unit (ECU) of the Ministry of Environment, Natural Resources, Physical Planning and Fisheries is the main institutional mechanism with responsibility for environmental management in Dominica. The ECU has no legal mandate in the laws of Dominica to enforce environmental compliance.	There is general consensus that the environmental and natural resources laws of Dominica require updating and in some instances the enactment of new legislation.	Is a signatory to the St George's Declaration of Principles for Environmental Sustainability (SGD), which is structured around 21 Principles. Is a signatory to the Revised Treaty of Chaguaramas establishing the Caribbean Community, including the CARICOM Single Market and Economy and hence will be part of the Community Environmental Protection and Natural Resources Management Framework. A major gap in Dominica's national legislation is that many of the MEAs to which the country is party have not been incorporated into national legislation; hence the rights and obligations therein have no force in domestic legislation if they are not transformed into national law.

Grenada	The Environmental Unit of the Ministry of Agriculture, Lands, Forestry, Fisheries and Environment is the main institutional mechanism for environmental management of Grenada.	No comprehensive legislation exists. Legislation is addressed in a piecemeal manner responding to specific issues.	Is a signatory to the St George's Declaration of Principles for Environmental Sustainability (SGD), which is structured around 21 Principles. Is a signatory to the Revised Treaty of Chaguaramas establishing the Caribbean Community, including the CARICOM Single Market and Economy and hence will be part of the Community Environmental Protection and Natural Resources Management Framework.
Guyana	The Environmental Protection Agency, established on June 5, 1996, pursuant to Environmental Protection Act (No. 11, 1996), is the main institutional mechanism for environmental management in Guyana. The Act mandates the Agency to oversee the effective management, conservation, protection and improvement of the environment, as well as to take the necessary measures to ensure the prevention and control of pollution, and assessment of the impact of economic development. Other agencies which are located in the Ministry of Natural Resources and Environment are Guyana Forestry Commission, Guyana Wildlife, National Parks Commission, Guyana Lands and Survey Department, Guyana Geology and Mines Commission and Guyana Gold Board.	Environmental Protection Act (No. 11, 1996), pursuant to Part II 4 (1), sets out the functions of the EPA. These can be classified broadly as being regulatory, co-ordinating and promoting public participation in environmental protection.	Is a signatory to the Revised Treaty of Chaguaramas establishing the Caribbean Community, including the CARICOM Single Market and Economy and hence will be part of the Community Environmental Protection and Natural Resources Management Framework. Is a signatory to the *Amazon Cooperation Treaty Organization* (ACTO), which has as its overarching goal the promotion of sustainable development of the Amazon Basin.

(*continued*)

Table 4.4 (*continued*)

Country	Institutional framework for environmental management and planning	Legislative framework	Multilateral environmental agreement to which country is a party/other regional instruments
Jamaica	The National Environment and Planning Agency (NEPA), established in April 2001, is the main institutional mechanism dealing with environmental management in Jamaica. It resulted from the amalgamation of three entities: the Natural Resources and Conservation Authority (NRCA), the Town and Country Planning Authority (TCPA) and the Land Development and Utilisation Commission (LDUC). It is part of the Ministry of Water, Land, Environment and Climate Change, which was created on 6 January 2012.	NEPA operates as an Executive Agency under the Executive Agency Act 2002.	Is a signatory to the Revised Treaty of Chaguaramas establishing the Caribbean Community, including the CARICOM Single Market and Economy and hence will be part of the Community Environmental Protection and Natural Resources Management Framework.
St Kitts and Nevis	The Department of Physical Planning and Environment of the Ministry of Sustainable Development is the main institutional mechanism in St Kitts and Nevis responsible for environmental management and planning. More specifically it is charged with the responsibility for promoting the rational use of lands and at the same time taking steps to ensure the protection and management of the environment in a sustainable way.		Is a signatory to the St George's Declaration of Principles for Environmental Sustainability (SGD), which is structured around 21 Principles. Is a signatory to the Revised Treaty of Chaguaramas Establishing the Caribbean Community, including the CARICOM Single Market and Economy and hence will be part of the Community Environmental Protection and Natural Resources Management Framework.

St Lucia	The Ministry of Sustainable Development and Technology is the main institutional entity with responsibility for environmental management in St Lucia.	No comprehensive legislation exists. Legislation is addressed in a piecemeal manner responding to specific issues. Draft Environmental Management Act, based on the OECS Model Environmental Management 2007 Act (OECS/ESDU 2007), makes provision for the creation of a Department of the Environment.	Is a signatory to the St George's Declaration of Principles for Environmental Sustainability (SGD), which is structured around 21 Principles. Is a signatory to the Revised Treaty of Chaguaramas establishing the Caribbean Community, including the CARICOM Single Market and Economy and hence will be part of the Community Environmental Protection and Natural Resources Management Framework.
St Vincent and the Grenadines	Environmental Management Department of the Ministry of Health and the Environment is the main institutional mechanism for environmental management in St Vincent and the Grenadines. Created in January 2009. The institutional framework for environmental management within is weak.	The current legislation is fragmented and dispersed over several statutes, charging different and unco-ordinated government bodies, departments and entities with environmental administration. A Draft Environmental Management Act 2009 exists. Based on the draft Act, the Government of St Vincent and the Grenadines has adopted a governance model in the form of a Department of the Environment, for addressing the environmental challenges confronting the country.	Is a signatory to the St George's Declaration of Principles for Environmental Sustainability (SGD), which is structured around 21 Principles. Is a signatory to the Revised Treaty of Chaguaramas establishing the Caribbean Community, including the CARICOM Single Market and Economy and hence will be part of the Community Environmental Protection and Natural Resources Management Framework. A major gap in St Vincent and the Grenadines national legislation is that many of the MEAs to which the country is party have not been incorporated into national legislation; hence the rights and obligations therein have no force in domestic legislation if they are not transformed into national law.

(*continued*)

Table 4.4 (*continued*)

Country	Institutional framework for environmental management and planning	Legislative framework	Multilateral environmental agreement to which country is a party/other regional instruments
Trinidad and Tobago	The Ministry of Housing, Lands and Marine Affairs has overall responsibility for environmental management and planning in Trinidad. Its Environmental Policy and Planning Division (EPPD) has the main responsibility for guiding and formulating environmental policy, as well as monitoring and evaluating the implementation and effectiveness of environmental policy; design and implementation of environmental programmes and projects pursuant to national policy objectives; pollution control; and hazardous waste and substance management. The ministry's environmental mandate is also implemented through a number of agencies, including the Chaguaramas Development Authority (CDA), the Community-based Environmental Protection and Enhancement Programme Company Limited (CEPEP) and the Environmental Management Authority (EMA). The EMA plays a very important role in environmental management and planning in Trinidad and Tobago. Its mandate is to write and enforce laws and regulations for	The Environmental Management Act (EM Act), Chapter 35:05 of 2000, which repealed Environmental Management Act No. 3 of 1995, which established the Environmental Management Authority (EMA), provides the main legislative framework for environmental management and planning in Trinidad and Tobago	Is a signatory to the Revised Treaty of Chaguaramas establishing the Caribbean Community, including the CARICOM Single Market and Economy and hence will be part of the Community Environmental Protection and Natural Resources Management Framework.

	environmental management, to educate the public about the nation's environmental issues and to control and prevent pollution, as well as conserve natural resources. The MEA is complemented by a tribunal, known as the Environmental Commission, a superior court of record that hears appeals on decisions taken by the Authority. The Government of Trinidad and Tobago also has a Ministry of Planning and Sustainable Development. One of the ministry's strategic obligations is the co-ordination of the National Framework for Sustainable Development.	
Indian Ocean		
Maldives	The Environmental Protection Agency (EPA, Ministry of Environment) is the main institutional mechanism with responsibility for environmental management and planning in Maldives.	The Constitution of the Republic of Maldives 2008 contains a number of provisions regarding natural resources and environment (i.e. Articles 22, 23, 67, 232). The Environmental Protection and Preservation Act of Maldives, 1993, sets the basic principles and rules of environmental protection in Maldives.
Mauritius	Ministry of Environment and Sustainable Development	Environment Protection Act 2002, as amended in 2008, provides the legal framework for environmental management and planning in Mauritius.

(*continued*)

Table 4.4 (*continued*)

Country	Institutional framework for environmental management and planning	Legislative framework	Multilateral environmental agreement to which country is a party/other regional instruments
Seychelles	The Department of Environment of the Ministry of Environment and Energy is the main institutional mechanism for environmental management and planning in Seychelles.	The Constitution at Article 38 stipulates the right of every person to live in and enjoy a clean, healthy and ecologically balanced environment, and Article 40 makes it a duty of every citizen to protect, preserve and improve the environment. Environmental Protection Act 1994 provides the legal framework for environmental management and planning in Seychelles.	
South-east Asia			
Brunei Darussalam	Department of Environment, Parks and Recreation is the main institutional mechanism for environmental planning and management in Brunei Darussalam.		
Pacific			
Fiji Islands	The Department of the Environment of the Ministry of Local Government, Urban Development, and Housing and Environment is the main institutional mechanism for environmental management in Fiji.	Environment Management Act 2005 and its associated regulations provide the legal framework for national environmental co-ordination and planning, as well as establish powers to	Environment Management Act 2005 contains provision necessary for the implementation of Fiji's obligations under a number of MEAs such as the Convention on Biological Diversity and the Convention on the

		control environmentally harmful activities. A draft *Sustainable Development Bill* was completed in November 1996 which, when enacted, will establish a sustainable development legal framework, one of the first countries in the world to do so.	Protection of Natural Resources and the Environment of the South Pacific ('Noumea Convention').
Kiribati	The Environment and Conservation Division (ECD), Ministry of Environment, Lands and Agricultural Development, is the main institutional mechanism for environmental management in Kiribati. Its mandate is to safeguard the natural environment upon which life depends and to protect human health.	The ECD's activities are empowered by the Environment Act 1999 (with 2007 amendments), which provides for the protection, improvement and conservation of the Kiribati environment.	The Environment (Amendment) Act 2007 contains provisions necessary for the implementation of MEAs such as the Convention for the Protection of the World Cultural and Natural Heritage, and the Convention on Biological Diversity.
Nauru	The Ministry for Commerce, Industry and Environment has responsibility for environmental management in Nauru.	Nauru is embarking on a legislation consolidation project with a view to developing a co-ordinated system for the management of legal information.	
Samoa	Ministry of Natural Resources and the Environment is the main institutional entity responsible for the management of the environment in Samoa.	The key piece of legislation, among others, which provides for the management of the environment and conservation in Samoa, is the Lands, Survey and Environment Act 1989.	

(*continued*)

Table 4.4 (*continued*)

Country	Institutional framework for environmental management and planning	Legislative framework	Multilateral environmental agreement to which country is a party/other regional instruments
Solomon Islands	Ministry of Environment, Climate Change, Disaster Management and Meteorology is the main institutional entity responsible for the management of the environment in Solomon Islands.		
Tonga	The Ministry of Environment and Climate Change is the main institutional entity responsible for the management of the environment in Tonga.	The Ministry of Environment and Climate Change is established pursuant to the Environment Management Act 2010. The Act provides for the protection and proper management of the environment and the promotion of sustainable development.	
Tuvalu	Ministry of Natural Resources, Energy and Environment is the main institutional entity responsible for the management of the environment in Tuvalu.		
Vanuatu	The Department of Environment and Conservation of the Ministry of Land and Natural Resources is the main institutional mechanism for environmental management. Established in 1986, it has the objective of formulating and implementing environmental policies to ensure ecologically sustainable development in Vanuatu.	The Environmental Management and Conservation Act No. 12 of 2002 makes provisions for the functioning of the Department of Environment.	

Papua New Guinea	Established in 1985, the Department of Environment and Conservation (DEC) is the key institutional mechanism for environmental management in PNG.	The Environment Act 2000 is the primary legislation in PNG which regulates matters relating to the environment. The Act was amended in 2010 by the Environment (Amendment) Act 2010 to allow retrospective certification and authorisation of activities which may otherwise have been deemed illegal under the Act.	
Mediterranean			
Cyprus	The main institutional mechanism with responsibility for environmental management and planning in Cyprus is the Department of the Environment of the Ministry of Agriculture, Natural Resources and Environment.	Environmental laws are influenced significantly by European Community Environmental Law.	Cyprus is a member of the European Union and it is subject to the environmental laws of the EU. Accordingly, over 250 European legislative acts have been harmonised into national laws, thus considerably strengthening the foundation for environmental management and policy in the country.

(*continued*)

Table 4.4 (*continued*)

Country	Institutional framework for environmental management and planning	Legislative framework	Multilateral environmental agreement to which country is a party/other regional instruments
Malta	The main institutional entity for environmental management in Malta is the Ministry for Sustainable Development, the Environment and Climate Change.	The Sustainable Development Act 2012 has the objective of mainstreaming sustainable development across the workings of government, to raise awareness of sustainable development issues and practices across society and to promote the adoption thereof, as well as to set up a Guardian of Future Generations.	Malta is a member of the European Union and it is subject to the environmental laws of the EU.

Sources: A number of sources were consulted in compiling the information contained in this table. These are listed by individual countries as follows:
Antigua and Barbuda: CaribInvest (West Indies) Ltd, Diagnostic and Analytical Review of Environmental Governance Systems in Antigua and Barbuda, the Caribbean Community Secretariat (CARICOM), December 2012.
Belize: Department of the Environment, available at: www.doe.gov.bz (accessed 15 February 2014).
Dominica: CaribInvest (West Indies) Ltd, Diagnostic and Analytical Review of Environmental Governance Systems in Dominica, the Caribbean Community Secretariat (CARICOM), January 2011.
Guyana: Ministry of Natural Resources and the Environment, available at www.nre.gov.gy/index.htm (accessed 15 February 2014).
Namibia: www.met.gov.na (accessed 15 February 2014).
Vanuatu: Ministry of Lands and Natural Resources, available at: www.mol.gov.vu/environment-home.php (accessed 15 February 2014).
St Vincent and the Grenadines: CaribInvest (West Indies) Ltd, Diagnostic and Analytical Review of Environmental Governance Systems in St Vincent and the Grenadines, the Caribbean Community Secretariat (CARICOM), March 2012.
Kiribati: Ministry of Environment, Lands and Agricultural Development, available at: www.environment.gov.ki/index.php/about-us (accessed 15 February 2014).
Papua New Guinea: Norton Rose Fulbright, PNG Legal Briefing: Amendments to Environment Act 2000, February 2012, available at: www.nortonrosefulbright.com/knowledge/publications/62782/png-legal-briefing-amendments-to-environment-act-2000#section3 (accessed 15 February 2014).
Botswana: MEAs, available at: www.mewt.gov.bw/uploads/files/compedium_of_meas.pdf (accessed 15 February 2014).
Trinidad and Tobago: Ministry of Housing and Marine Affairs, available at: www.mphe.gov.tt/about-mhe/environment.html; Environmental Management Authority, available at: www.ema.co.tt/new/index.php/about-us/history; Ministry of Planning and Sustainable Development, available at: www.planning.gov.tt/about/about-us (accessed 15 February 2014).

Table 4.5 Elements for the development of the Environmental Management Quality and Effectiveness Composite Index

Thematic areas	Environmental issue	Possible indicator(s)
E Environmental health	Solid/hazardous waste management	• Percentage of country having regular solid waste collection • Availability of sanitary landfill as the main method of solid waste disposal • Availability of special facility for hazardous waste disposal • Incineration of ship-generated waste at port of entry • Percentage of waste removed from the waste stream through recycling and other means
	Wastewater management	• Percentage of country served by wastewater facility • Specific regulations in place for the treatment of wastewater at the household level • Adequacy of disposal method for the disposal of wastewater collected from households which are not connected to a wastewater facility
	Emissions	Absolute and/or per capita emissions of: • Greenhouse gases (GHGs) • Ozone-depleting substances • Volatile organic compounds
E Ecosystem management	Renewable energy	• Percentage of renewable energy in the primary energy consumption • Percentage of energy supplied through the grid generated from renewable energy sources • Market penetration of renewable energy sources • Ecosystem and natural capital accounting by integrating the System of Economic and Environmental Accounting (SEEA)
	Water resources treatment and distribution	• Percentage of main water sources legally protected • Percentage of households having access to treated piped water • Percentage of treated water loss from the system • Availability of standard procedures for monitoring the quality of water resources on a routine basis

(*continued*)

Table 4.5 (*continued*)

Thematic areas	Environmental issue	Possible indicator(s)
	Coastal and marine protection and management	• Maritime boundaries delimited • Coastal Zone Management Authority legally mandated to be involved in the decision-making process with respect to all developments in the designated coastal zone • Systematic and routine coastal water quality and assessment programme in operation • Systematic and routine coastal erosion monitoring and assessment programme in operation
	Sustainable biodiversity	• Percentage of national territory legally protected • Percentage of ocean under national jurisdiction legally protected • Legal provisions contained in national law for access to genetic resources (including traditional knowledge and folklore) and the equitable and fair distribution from the benefits derived from its use
	Sustainable land management	• Percentage of arable land used for purpose other than agriculture over the past 10 years
	Climate	• National coverage of hydro-meteorological network • Weather forecasting coverage
	Forests	• Percentage of country under forest cover
	Natural hazard risk assessment and management	• Early warning system for [meteorological phenomena] [geological hazards] [drought] [tsunami] in operation • National system of disaster shelters established, operational and listed • Hazard response protocols for the different types of hazards in operation and known to key actors and the general public • Percentage of population having catastrophic insurance coverage • Crop forecasting and modelling system operational and providing data for decision-making

P Private sector performance	Private sector performance	• Percentage of targeted private sector enterprises ISO 14000 compliant and/or actively participating in a voluntary sustainability scheme • Percentage of targeted private sector enterprises reporting regularly on sustainability issues
En Environmental governance	International environmental governance National environmental governance	• Ratification of international and regional environmental agreements • Incorporation of MEA into national law, making the obligations contained therein available in law to the nationals of that member state • Dedicated institutional mechanism for environmental management supported by a comprehensive legal framework which clearly outlines its legal mandate • Extent to which appropriate access to information concerning the environment that is held by public authorities is provided by law • Extent to which the law provides adequate opportunity to participate in decision-making processes relating to environmental matters • Extent to which the law provides for effective access to judicial and administrative proceedings, including redress and remedy, with respect to environmental issues

Table 4.6 Indicative priority areas for policy intervention

Building blocks for the management of environmental resources and services	Indicative priority areas for policy intervention
Pollution management group	
Solid/hazardous waste management	• Establishment of technical co-operation programmes to enable the creation and the strengthening of regional mechanisms for the management of hazardous waste as well as ship-generated waste. Sustained financing for national waste management programmes as well as increased investment and co-operation in developing integrated waste management and technologies.
Recycled materials Wastewater management Air pollution control Noise and vibration abatement Remediation and clean-up of soils, surface water or groundwater	
Information knowledge/capacity enhancement services group	
Analytical services, data collection, analysis and assessment	• Assessment of the impact of non-tariff measures (NTMs) and non-tariff barriers (NTBs) on SIDS. • Establishment of a small states (including SIDS) environmental, sustainable statistics and information programme, with emphasis on upgrading national statistical systems and mainstreaming sustainable development data collection and analysis.
Environmental research and development	• Enhancement of regional and small states co-operation for research and technological development. • Investments in small states to facilitate the development of science, technology and innovation for sustainable development, with specific emphasis on research and development. • Development of marine scientific and technological capacity. • Marine scientific research in the sea bed area beyond national jurisdiction, with a view to understanding the benefits to be accrued from prospecting, exploration and future exploitation of these resources. • Promotion of inter-regional IDS-SIDS co-operation for research and technological development.

Environmental education, training and information	• Establishment of a small states/SIDS Technical Assistance Programme to support capacity building and the transfer of environmentally sound technologies. • Support investments in formal and non-formal education, including the use, development and sharing of open learning/distance education in knowledge and technologies in support of SIDS sustainable development. • Establish a technology mechanism in the form of a climate technology centre and network to enhance technology co-operation and transfer to developing countries. • Capacity building for negotiating trade and partnership agreements and navigating the complex requirements for accessing certain funds. • Investment in education, training and skills development for all, as well as improving access to formal and non-formal education, including entrepreneurial skills. • A systemic approach to strengthening statistical systems and the incorporation of environmental data as a key data set. • Strengthening national statistical and information systems, including data collection and management, and analytical capabilities for decision-making, and monitoring and evaluation systems for sustainable development. • Promotion of South and triangular co-operation which provides additional opportunities for strengthening capacity and sharing knowledge.
Cleaner technology and production group	
Cleaner/resource efficient technologies and process	• Establishment of a small states/SIDS-specific platform on sustainable consumption and production.
Cleaner/resource-efficient products	• Establishment of a private-sector-focused small states/SIDS inter- and intra-regional trade information and facilitation platform, as well as facilitating the conditions that foster entrepreneurship and innovation, building capacity and increased competitiveness of micro, small and medium enterprises (MSMEs). • Establishment of a dedicated technology transfer facilitation mechanism to provide environmentally sound and appropriate technologies to developing countries.

(*continued*)

Table 4.6 (*continued*)

Building blocks for the management of environmental resources and services	Indicative priority areas for policy intervention
	• Establishment of a dedicated technology transfer facilitation mechanism to provide, inter alia, environmentally sound and appropriate technologies.
Resource management group Renewable energy	• Access to affordable, clean energy as well as the continued diversification of energy sources, enhanced technology sharing and promotion of renewable energies. • Provision of special funding in the assessment and identification of renewable energy technologies, including technical assistance and capacity building. • Endorsement of the Barbados Declaration on Achieving Sustainable Energy for All in Small Island Developing States.
Water resources treatment and distribution	• Adoption and implementation of Integrated Water Resources Management (IWRM).
Sustainable biodiversity	• Development of a specific legal regime for the conservation and sustainable use of marine biodiversity of areas beyond national jurisdiction.
Coastal and marine protection and management	• 'Blue economy' as a distinct tool that offers specific mechanisms for coastal countries to address their sustainable development challenges. Blue economy must address and incorporate research, assessment, valuation and management of the blue capital; more effective international ocean governance; data collection, management and sharing; promotion of blue carbon on the carbon trading agenda; enabling mechanisms, including technology transfer, capacity building and targeted streamlined financing mechanisms; and modes of science-based implementation, including through action plans such as maritime resilience action plans and marine spatial planning. • Establishment of a dedicated regional oceanographic centre. • Implementation of measures to increase SIDS participation in sustainable commercial fisheries and provide equitable, realistic and rewarding opportunities for products from fleets and processing plants. • Stronger regional instruments or programmes on controlling land-based sources of pollution.

	• Enhancement and implementation of a regime for monitoring, control and surveillance of fishing vessels to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing. • Promotion and implementation of regional initiatives for sustainable conservation and management of coastal and marine resources.
Protection and management of natural and cultural heritage	• Integration of culture into sustainable development strategies, in particular indigenous bio-cultural heritage which recognises the deep connections between people, culture, knowledge and the natural environment.
Environmental planning	• Greater political engagement and commitment to address the adaptation needs.
Natural hazard risk assessment and management	• Elaboration of strategies for disaster risk reduction (DRR) to enhance their capacity to address disasters. • Strengthening of regional and national efforts in disaster risk reduction, management and coordination, including creating or strengthening insurance mechanisms. • Further strengthening and expanded geographic coverage of oil spill contingency plans, including increased investment and co-operation in developing integrated. • Establishment and strengthening of catastrophic risk insurance facilities.
Sustainable land management	• Improved land management with respect to agriculture, watersheds, urban expansion and other detrimental impacts, as a means of reducing land-based pollution.
Sustainable forestry management	• Promotion of sustainable management of forests as well as efforts to achieve reforestation, restoration and afforestation.
Climate change	• Global action to reduce greenhouse gas emissions to keep the global average temperature well below 1.5° Celsius above pre-industrial levels. • Operationalisation of loss and damage framework. • Innovative financing tools, in particular debt for adaptation swaps, an emerging tool for addressing debts in small states/SIDS and adaptation to climate change and also nature conservation.
Environmental governance issues [national]	• Strengthening of national governance mechanisms to promote long-term planning, with sustainable development mainstreamed into national development. • Shifting from capacity to institution building as an important component of international support. Institution building encourages the use of country systems and promotes the retention of knowledge in all its forms, including traditional knowledge, within a country.
Environmental governance issues [regional and inter- and intra-regional]	• Building of institutional mechanisms within the small states/SIDS regions, with the help of the international community, to facilitate inter- and intra-regional co-operation and collaboration among CSS/SIDS and the three SIDS regions.

(*continued*)

Table 4.6 (*continued*)

Building blocks for the management of environmental resources and services	Indicative priority areas for policy intervention
Environmental governance-issues [international and regional levels]	• The full and equitable integration of small states/SIDS in the new UN institutional architecture that is emerging following the Rio+20 outcomes, including the High Level Political Forum on Sustainable Development, ECOSOC, the United Nations Environment Programme, Sustainable Development Goals, the Technology Mechanism, the Sustainable Development report and the Sustainable Financing Mechanism. • Strengthening of institutional frameworks of entities comprising the UN system, in order to increase effectiveness and efficiency in fulfilment of their functions and mandates in providing more coherent support to SIDS, while ensuring appropriate accountability. • Enhancing the voice and participation of small states/SIDS in norm-setting and decision-making at the global level, including the G20. • Urgent review of the mandates and operational functioning of UN agencies providing support to SIDS in particular • UN entities to build institutionalised support to small states/SIDS into their programmes and undertake activities that are responsive to the needs of small states/SIDS – *as articulated by small states/SIDS.*
Environmental governance [financial]	• Innovative financing tools, in particular debt for adaptation swaps, an emerging tool for addressing debts in small states/SIDS and, adaptation to climate change and also nature conservation. • Provision of financing to relevant regional financing mechanisms, including the capitalization of the Caribbean sustainability fund. • Establishment of a dedicated mechanism to provide financing to developing countries, in keeping with the ongoing Rio+20 follow-up processes, in order to develop specific projects on sustainable development. • Early operationalisation of the Green Climate Fund and urging of developed countries to scale up finance to reach US$100 billion by 2020.