

Chapter 5

The Political Economy of Transitioning to a Green Economy in Jamaica

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5.1 Introduction

The United Nations Environment Programme (UNEP)'s comprehensive report on the green economy in 2011 began with the observation that, 'The last two years have seen the idea of a "green economy" float out of its specialist moorings in environmental economics and into the mainstream of policy discourse' (UNEP 2011, 14). The explanation for the emergence of the idea seemed to be both the rejection of the dominant economic paradigm, with its crises and market failures in the opening decade of the new millennium, and the positive possibilities of 'a new economic paradigm – one in which material wealth is not delivered perforce at the expense of growing environmental risks, ecological scarcities and social disparities' (ibid, 14). At Rio+20 in 2012, the concept took centre stage as both a reaffirmation of the commitment to sustainable development and a step forward to build resilience in a world of economic uncertainties and accelerating climate change.

This chapter addresses the 'conceptualisation' and 'implementation' of the green economy in Jamaica, and considers the following factors: technology transfer; private sector engagement; fiscal measures, including subsidies and taxation; research and development; policy reforms; political will and leadership; financing; institutional strengthening and public administration reform; strategic alliances; and governance and legal frameworks. In addition, commentary is provided on efforts to join-up planning decisions across environment, finance, planning, trade and other ministries and departments, and on institutional and human resources and efforts which have been made to strengthen capacities and to identify emerging needs.

5.2 The greening of the economy

5.2.1 Profile of the Jamaican economy

Jamaica is an island and small state¹ of approximately 11,000 square kilometres in the Western Caribbean, with a current population of 2.8 million people, and well over 1 million people in the diaspora (i.e. the UK, the USA and Canada) who would identify themselves as Jamaicans.

The Jamaican economy has historically been oriented towards exports based on natural resources. Between 1700 and World War II, the economy was almost exclusively based on exports of agricultural semi-processed and primary products, mainly sugar and bananas. In the 1950s, the national product grew rapidly at

an average of 8.6 per cent per annum, and became more differentiated with the development of bauxite mining, manufacturing, construction, wholesale and retail trades, tourism and a public sector. The mining of bauxite and its processing into alumina became the leading export industry by the end of the decade. At the end of the 1950s, tourism expanded rapidly as a result of redirecting the flow of American tourists from revolutionary Cuba. Both of these new sectors were again based on natural resources. The bauxite mineral deposits were dug out of the soil in the hills of central Jamaica, and the hotels on the north coast of the island offered holiday-makers sun, sand and sea. Both were high-energy consumers, with the mining sector accounting for almost half of the national consumption of imported petroleum in some years.

While manufacturing was originally intended for export, it ended up supplying the domestic market and, in the 1960s and 1970s, the regional market that was created from the free trade agreement, CARIFTA. Government incentives stimulated investment in capital-intensive, import-dependent production of consumer goods. In the era of cheap energy, little attention was paid to the energy intensity of the production processes, especially because of the rapid growth of the domestic market for both basic consumption goods and luxury items for high-income households.

The construction sector too was based on the cement manufactured from limestone and other materials excavated from quarries and rivers. In this sense, it was based on natural resources that were transformed into cement using energy-intensive processes. Again, the viability of this industry assumed cheap energy supplies. Demand for middle-class housing, hotels and physical infrastructure drove the rapid expansion of the construction sector in the 1950s and 1960s. The supply of housing and hotels was also dependent on imported building materials and construction equipment. The buildings were increasingly designed to meet the preference for electricity-driven appliances.

In recent years, the per capita energy consumption in Jamaica seems to have peaked and has begun to decline, as seen in Table 5.1.

By the end of the 1960s, the growth rate of the economy had slowed, and since then averaged less than 1 per cent per year up to 2010. Gross Domestic Product (GDP) per capita has remained fairly constant in these years, with a population growth rate also just below 1 per cent per annum. In 2011, the United Nations Development Programme (UNDP) estimated Jamaica's Gross National Income (GNI) per capita

Table 5.1 Energy consumption per capita

Year	Energy consumption per capita (BOE ^a)
2004	9.2
2005	10.56
2006	11.2
2007	10.3
2008	9.8

Note: ^a Barrels of oil equivalent

Source: Energy Economics and Planning Unit, Ministry of Energy and Mining 2009.

tobe \$6,487 in USD Purchasing Power Parity (PPP) (2005). Also in 2011, Jamaica's Human Development Index (HDI) was 0.727, marginally below the average for Latin America and the Caribbean of 0.731, and placing it 79th among 187 countries.

Today the economy is primarily a service economy, with 75 per cent of the GDP contributed by service industries and with the main foreign exchange earner being tourism. Both sugar and bananas have lost preferential access to their traditional European Union (EU) markets in the age of liberalisation of the global economy. In addition, with the frequency of hurricane damage increasing in recent years, it was decided to abandon the exports of bananas completely. The bauxite/alumina industry all but shut down in 2008, when international demand plummeted in the global crisis that was precipitated by the financial crisis of that year. The current owners of the mines and processing facilities have demanded access to cheaper energy as the price for restarting the industry. This is one of the major drivers for the urgent transformation of the energy supply that has become a high priority for the Jamaican government.

The importance of the natural resource base to the economy historically

The natural resource-based export sector has caused great damage to the environment. Forests were cleared, and the habitats they supported were destroyed, to establish the sugar industry in the seventeenth to the nineteenth centuries. After emancipation, ex-slaves captured lands in the hills and mountains to get away from the plantations and to establish their own means of survival. Cultivating steep hillsides has accelerated natural soil erosion, all the more when the forest cover is removed to create space for planting. In the twentieth century, banana plantations were established on the plains together with sugar and coffee in commercial plantations in the Blue Mountains. Some of the chemical applications to control weeds and pests on the plantations have run off from rain into the rivers and transferred to the inshore, especially the main harbour in Kingston. In other cases, chemicals have soaked through the soil into underground aquifers. This is particularly true of the acidic waste from the processing of bauxite ore, which is deposited in lakes of red mud. Some of this waste seeps through the porous limestone of the island into the aquifers. The discharge of airborne pollutants into the atmosphere eventually returns as acid rain to damage housing, and can cause respiratory problems for people in the areas where bauxite processing takes place.

What waste from agriculture and mining have done for the terrestrial forests, tourism has done for the marine forests and the reefs, which created and protected the beaches that attracted the visitors in the first instance. There is also an annual loss of millions of tons of topsoil from erosion that ends up causing siltation of the inshore, with severe consequences for the reefs and aquatic life that they support.

It is estimated that about a third of the pollution in Kingston Harbour originates in septic pits for houses built on the Liguanea plains and improper waste disposal in the gullies (National Environment and Planning Agency [NEPA] 1998). A massive landfill at Riverton in Kingston is the official destination for solid waste. Periodic fires generate pollutants in the air, which cause respiratory illnesses in the environs.

It has long been recognised that there has to be high priority on solid-waste management. The first plan for solid-waste management was drafted in 1975, and since then its recommendations have been revised (Ministry of Local Government, Youth and Community Development 2000) and implemented, but slowly. Current thinking is to maximise the energy potential of the solid waste collected, especially in the Kingston Metropolitan Area (KMA).

Not only has the economy been built around environmentally unfriendly activities, but historical social and economic inequalities have persisted throughout the centuries to the present day. As a result, poverty is endemic, generously underestimated at 20 per cent of the population in 2011, with the majority of poor households located in rural communities. It is well known that poor communities generate negative pressure on the environment from 'slash-and-burn' agricultural activities, improper waste disposal for want of facilities, and settlement on fragile lands that are vulnerable to natural hazards.

As in other countries, traditional approaches to economic development tend to see trade-offs between promoting economic activities to generate employment and income, and protecting the environment. In the case of Jamaica, there are the additional challenges of servicing the mounting national debt, which in 2013 stood at over 140 per cent of GDP, and ensuring macroeconomic stability so as to provide a basis for economic growth. As a consequence, governments have made servicing the debt and combatting poverty and related deprivations higher priorities than protecting the environment. Indeed, the description of the economy above sought to highlight the endemic pattern of unfriendliness to the environment and the persistence of poverty.

The case for the green economy should address what UNEP calls the myth that there is an 'inescapable trade-off between environmental sustainability and economic progress' (UNEP 2011, 16) and engage with both the protection of the environment and the pressing problems of servicing the debt and abolishing poverty simultaneously. The challenge is to identify and tap 'the opportunities for investment, growth and jobs' (ibid, 16).

5.2.2 Introduction of the concept of greening in development advocacy and public policy in Jamaica

Several years before the concept of the green economy appeared in official policy documents of the Government of Jamaica (GoJ), the concept of greening aspects of the economy was used by environmental projects and by civil society advocates for sustainable development. The context was the implementation of Agenda 21 from the Earth Summit in Rio de Janeiro, Brazil, in 1992. The GoJ's commitment to sustainable development led to the formulation of policies, the enactment of laws and the promulgation of regulations on waste management, energy, environmental management, tourism and other aspects of the economy that would later be regarded as essential to the definition of the green economy for Jamaica.

Perhaps the most significant of the pioneering environmental projects was the Environmental Action Programme (ENACT) project, 'a joint project of the

Governments of Canada and Jamaica that was funded by the Canadian International Development Agency (CIDA) in 1994 to build capacity of the GoJ, private sector and civil society to identify and address environmental problems in a sustainable manner' (NEPA 2005). In 2005, the project was extended for two years, and one of the principal focal areas was the 'greening of Government and the Private Sector' (ibid). The idea was to use government procurement to nudge the private sector to move towards environmentally-friendly goods and services. Greening was defined as measures that conserve water and energy, reduce solid waste, improve vehicle management and encourage the purchase of environmentally-sensitive products and services (GoJ 2001).

The Coastal Water Improvement Project (CWIP) (1998–2003) was funded by the United States Agency for International Development (USAID) to build capacity in the public and private sectors for the management of coastal resources. Its focus was on community-based environmental management systems for coastal resources. One of the components of this project was the promotion of environmental management systems (EMS), especially market-based ones, in both government and the private sector. CWIP developed a national environmental management systems policy and strategy and submitted a draft to the cabinet in 2001, targeting the greening of GoJ operations and improving environmental performance of the private sector while enhancing economic competitiveness. 'Greening' was defined as 'adoption of measures to conserve the natural environment' (Planning Institute of Jamaica [PIOJ] 2001, chapter 18, 18.1; USAID 2005). In addition, CWIP sought to encourage consumers to purchase energy-efficient products (NEPA 1999, 23). Indeed, it provided a comprehensive list of products that qualified as energy efficient. A demand-management project set up by the local electricity monopoly, the Jamaica Public Service Co. (JPS) was another example of these efforts.

Another important project was the Environmental Audits for Sustainable Development (EAST) project (1997). It proposed:

- the greening of the curriculum of the Runaway Bay HEART Hotel and Training Institute;²
- encouraging environmental monitoring systems for energy and water use, wastewater, solid-waste generation and use of chemicals; and
- encouraging hotels to seek certification under the Green Globe Programme.³

The Jamaica National Environmental Action Plan (JANEAP) 1999–2002 (NEPA 1999) reported that six hotels had received Green Globe certification for their sound environmental management practices (ibid, 20). By 2001, the annual Economic and Social Survey of Jamaica (ESSJ) reported that ten hotels had earned the certification.

Also noteworthy was the initiation in 2002 of the pilot phase of the Blue Flag Voluntary Certification Programme, which sought to encourage 'sustainable coastal zone management among tourist attractions' (PIOJ 2002, 18.2).

In 2000, ENACT prepared a Local Sustainable Development Planning Framework to integrate local sustainable development planning into national plans. The following

year, ENACT's *Handbook on Environmental Management Systems* (2001) for the training of public sector workers began with a discussion on the greening of business that noted that:

- manufacturing processes have become greener, more efficient, less energy-intensive, using and producing fewer environmentally-unfriendly chemicals and materials;
- products are being more scrutinised, e.g. no CFCs etc.; and
- waste is growing as an issue, with controls on what can be disposed of becoming tighter, and the actual cost of disposal growing dramatically as landfills become fewer.

The handbook promoted 'green consumerism' as the movement for buyers to 'seek out environmentally sound products', and provided a long list of different types of products that qualify. It explained 'green procurement' with examples of commonly procured chemicals that have potential health and/or environmental risks. It explained that the greening of government projects essentially sought to enhance the government's environmental stewardship, and to incorporate environmental considerations in public policy-making and strategic planning in the private sector (ENACT 2001a). One of the products of this project was the Strategic Environmental Assessment (SEA) that was prepared for the cabinet to guide the 'integration of environmental issues into the formulation of policies, plans and programmes' (ENACT and Cabinet Office 2001, 6).

The Master Plan for Sustainable Tourism Development (MPSTD) 2005 recognised the importance of the environment to tourism and, in turn, the impact of tourism activities on the environment. It highlighted the importance of energy and water conservation and waste management, all of which later became points of emphasis for the green economy (Commonwealth Secretariat 2005).

In 2008, the Ministry of Tourism hosted a seminar under the theme, 'Climate Change and the Bottom-line....a strategic Business Outlook for Jamaica's Tourism Sector'. Presentations focused on the challenges of a carbon-neutral industry, and pointed in the direction of the greening of the industry (Orrain 2008).

This brief review of the most important environmental projects of the immediate post-Rio (1992) years and the strategic thinking on the tourist industry has summarised the introduction of the concept of greening with regard to government procurement, consumer demand, energy, waste management, water and tourism.

Conceptualisation of the green economy in Jamaica

The concept of the green economy first appeared in public policy in 'Vision 2030', Jamaica's current long-term development plan, published in 2009. The concept is referred to in several places as a major objective of the plan, but with little elaboration of what a green economy will mean for Jamaica.

A survey of policy leaders in finance, development and environment-related portfolios of the Cabinet of the GoJ, and of leading business persons concluded that

they were not very familiar with the concept, and accordingly there was no consensus on what a green economy in Jamaica would look like.⁴ Two consultations on the green economy, which were convened to prepare for the June 2012 United Nations Conference on Sustainable Development (Rio+20), supported the survey results on the level of knowledge of leaders in the public and private sectors and the absence of a national consensus on the green economy. When agriculture stakeholders were consulted, there was a general sense that the green economy concept was related to sustainable development in its attention to holistic development, environmentally-friendly economic processes of production and consumption, and socioeconomic equity (Rhiney 2012). At the same time, there was a widely shared scepticism that the term was just a new name for sustainable development, which was the current (2012) buzzword in the international community. Participants in this consultation agreed that there was no official government position on what the green economy was, though there were elements within the leadership that seemed to have a position on the green economy.

In a second consultation drawn from a wider cross-section of stakeholders, it was agreed that Jamaica needed to develop its own definition of the green economy⁵ that was relevant to national circumstances, and which should take account of the definitions being used internationally that have been inspired by the United Nations Environment Programme's (UNEP) definition, and regionally by the dialogue initiated and conducted on the green economy by the Caribbean Natural Resources Institute (CANARI 2011).

Both consultations and the complementary elite interviews agreed that there is as yet no clear, generally accepted definition of what a green economy means for Jamaica. Some of the versions that have been offered in the consultations to prepare for Rio+20 were:

- 'an economy that is environmentally-friendly, sensitive to the need to conserve natural resources, minimises pollution and emissions that damage the environment in the production process, and produces products and services, the existence and consumption of which do not harm the environment' (Rhiney 2012, citing Martin Khor);
- the UNEP definition: 'an economy that results in improved human well-being and social equity, while reducing environmental risks and ecological scarcities';
- the CANARI definition (CANARI 2012) that sees the green economy as an approach to development and as an economy that 'is pro-poor and generates decent jobs and working conditions that offer opportunities for self-advancement for local people'.

5.3 Strategies for a green economy

Vision 2030 posited national outcome 12 to be 'Internationally Competitive Industry Structures', and proposed the green economy as one of several strategies to achieve it (PIOJ 2009a, xvii). The plan saw eco-efficiency as the integration of environmental

and economic approaches, in order to enhance international competitiveness, and move the economy closer to a green economy. 'By basing new jobs and industries on sustainable use of natural resources and unique environmental assets (for example, by developing renewable energy sources, promoting organic agriculture or exploring the genetic potential of our endemic species), Vision 2030 Jamaica will help to build a green economy' (ibid, 199). In addition, 'the rules for government, business, investors, and consumers will have to be rewritten to ensure that environmental considerations become integral factors in economic decision-making' (ibid, 235).

There are several places in the main body of the plan and in the energy sector plan (PIOJ 2009a, 12, 25, 56) where the commitment to investing in the creation of a green economy is repeated. Outcome 7.1 of the energy sector plan is the same as the 'national outcome' of the national development plan, namely 'Internationally competitive industries and firms that apply eco-efficiency and contribute to the creation of a green economy'.

The tourism sector plan also makes several references (PIOJ 2009c, 24, 25, 31, 36, 42) to the activities and attractions of the industry going green and the advantages of green certification for hotels (e.g. Green Globe certification), but does not go as far as to advocate a green economy.

The main document and the sector plans of Vision 2030 do not go beyond commitments to transition to a green economy. For the statement on 'new rules' for government, business, investors and consumers cited above, there was no clear definition of what the green economy will mean for Jamaica.

At Rio+20, Jamaican Prime Minister Portia Simpson-Miller added her 'support for the initiatives toward a green economy' while raising the question as to 'whether the green economy will bring the poor into the centre of economic growth and development and improve the lives of our citizens'.⁶ She cautioned against the potential for the green economy to introduce environmental 'benchmarks and standards that can impose new conditionalities and barriers to trade'.⁷ Her primary concern was the possible negative impact on employment and rural communities for small, vulnerable, lower and middle-income countries like Jamaica. These concerns appear in many international discussions (UNCTAD 2010, 34; CANARI and UWI 2011, 3, citing Ling and Iyer 2010) on the green economy.

In the interviews and consultations to prepare the GoJ for Rio+20 and for this study, a common theme was the concern that the green economy does not present a trade-off between the campaign against poverty and protection of the environment. It is well known that many poor communities that have been established on steep hillsides, on the banks of rivers and gullies, on the coasts and other kinds of marginal lands impact negatively on the environment through their economic activities and their waste disposal. At another level, Jamaica's export industries have traditionally been the main drivers of the economy, and at the same time are some of the most environmentally unfriendly. Disrupting these communities and industries for environmental reasons will have direct negative economic repercussions in the form of lost employment and incomes, together with the multiplier effect on other industries.

Of the three dimensions of sustainable development, more attention has been paid to building the economic base and addressing social inequities than protecting the environment since Jamaica's Independence in 1962. A common theme in the consultations was that the green economy in Jamaica should extend the efforts to achieve sustainable development. One respondent articulated it as follows: '[The] specific form that it must take for Jamaica must use the three pillars of sustainable development to redress the historic social inequities, build the economic base to generate the employment and incomes to support the standard of living described in Vision 2030, and enhance the resilience of the economy and the society to shocks from the global economy and natural hazards'.⁸

The Comprehensive Sustainability Assessment Policy tool (CSAP) for incorporating sustainable development into the policy-making process, which has been adopted by the cabinet of the GoJ, requires that poverty and other possible social impacts be explicitly considered at the very outset.

The CSAP outlines a set of questions that covers all aspects of sustainable development (economic, social and sociocultural, environmental, and governance) against which policies, programmes and projects are measured. The process is set out in a tabular form which allows for the various areas/factors under consideration to be worked out methodically and a score for each section generated in order to use empirical evidence to weigh the benefit of the proposed policy.⁹

All policy proposals must go through the CSAP process on the way to review by the cabinet.

Another view that emerged from the consultations was that economic policy had to focus not only on inclusive economic growth, but to build resilience in the economy that will enable it to cope with external shocks from the international economy and natural hazards. With attempts to mainstream climate change in public policy now underway, there is more urgency to enhance attention to the environmental dimension of sustainable development. In this view, the green economy as a strategy will advance efforts to pursue sustainable development.

The challenge is now to redouble the efforts at building the economic base, consolidating and extending the gains in addressing social inequity, and enhancing the efforts to protect the environment. The National Development Plan committed the GoJ to sector-specific strategies to underpin the overall goal of achieving a green economy.

5.3.1 Energy sector

The vision for the energy sector is to create: 'A modern, efficient, diversified and environmentally sustainable energy sector providing affordable and accessible energy supplies with long-term energy security and supported by informed public behaviour on energy issues and an appropriate policy, regulatory and institutional framework' (PIOJ 2009a, 12). The immediate emphasis is on diversifying sources of energy supply with an emphasis on renewable sources. This is quite urgent, because petroleum accounts for about a third of the import bill and the high cost of petroleum

is discouraging re-investment in the country's primary export industry, the bauxite/alumina industry.

Further, the resulting high cost of electricity generated from imported petroleum is discouraging investment in other sectors of the economy, and makes existing production uncompetitive. Lower energy costs will facilitate the expansion of small businesses and microenterprises in particular, and reduce the utility costs of households. Increased employment and reduced household costs will benefit poor households, and are therefore consistent with the government's anti-poverty strategy. Protection of the environment from greenhouse gas emissions is aligned to the economic imperative of international competitiveness, and to a lesser extent the alleviation of poverty.

Environmental considerations that have been reinforced by the recognition of the need for mitigation of, and adaptation to, climate change support the drive for the diversification of energy sources, but they are second in importance to the search for cheaper energy. Early indications are that the emergent strategic perspective of the GoJ is to use a mix of sources and that coal is likely to be cheaper than liquefied natural gas (LNG) in the face of rising global demand for LNG. The precise mix is still to be determined from long-run cost estimates and environmental considerations.

Some indicators for the 'greening' of the sector are:

- the energy intensity of the economy as measured by barrels of energy per US\$ million of GDP at the national and sectoral levels;
- household energy consumption and/or energy consumption per capita;
- percentage of the national energy supply that comes from renewables and waste; and
- the efficiency of energy conversion into electricity.

5.3.2 Transport sector

Vision 2030 commits to sustainable transport explicitly which:

involves moving people, goods and information in ways that reduce the impact on the environment, the economy, and society, and may include: using more energy-efficient transport modes; improving transport choices; using cleaner fuels and technologies; using information and communications technologies and enlightened urban and regional planning to reduce or replace physical travel; and developing sustainable transport policies (PIOJ 2009b: 12)

Land transport accounts for 20 per cent of petroleum consumption, and is therefore a critical element for energy plans and policies as well. Efficient, safe and reliable public transport is an imperative for the green economy, since it is more energy efficient than mass transit via private motor car. The challenge for the authorities is to establish special lanes for buses, to encourage car-pooling, to designate urban areas for bicycles and pedestrian traffic, and to restore the railway for urban-rural movement of people and goods.

With regard to marine transport, sustainability requires addressing the ‘environmental impacts of marine transport, including ship-borne waste, dumping, oil and exhaust pollution, potential introduction of aquatic invasive species through ship ballast water, and impact on coastal ecosystems from port facilities and shipping activities’ (ibid, 19).

Some indicators for the ‘greening’ of the transport sector are:

- the gasoline consumption per passenger mile in public transport;
- the average rated kilometre per gallon of private passenger vehicles;
- the share of biofuels in total fuel consumption by the land transport sector; and
- indicators of the management of waste discharged by marine vessels, such as frequency, type of waste, location, cost of clean-up, and fines levied and collected.

5.3.3 Tourism sector

Tourism is by far the largest earner of foreign exchange at approximately US\$2 billion per annum from about two million stop-over visitors and one million cruise ship passengers. There are around 30,000 hotel and villa rooms and many attractions, generally located on the coast.

The vision statement for tourism in the sector plan is: ‘An inclusive, world-class, distinctly Jamaican Tourism Sector that is a major contributor to socioeconomic and cultural development, with a well-educated, highly skilled and motivated workforce at all levels within a safe, secure and sustainably managed environment’ (PIOJ 2009c: 48). Tourism was the first sector that adopted greening as a strategy, ultimately for marketing. As noted above, the sector has adopted strategies to obtain Green Globe certification and other environmentally relevant recognition.

Some indicators for the ‘greening’ of the industry are:

- the number of rooms, and the percentage of total accommodation capacity, in Green Globe certified hotels;
- electricity consumption per room;
- water consumption per room;
- waste management through recycling and disposal schemes; and
- indicators of green procurement, such as percentage of total value of procurement in compliance with guidelines, by ministry and agency, and by type of goods.

5.4 Transformation to a green economy

5.4.1 Constraints to the transformation process

Some of the principal constraints on the process of transformation to a green economy are listed below:

- *Historical dependency on the exploitation of natural resources in environmentally unfriendly ways.* It is difficult to foresee how the struggling mining and

agricultural export industries can be re-engineered in even the medium term to reverse their environmentally unfriendly practices. Even the tourism industry will have challenges that will require significant investments to reduce energy consumption and desist from activities that bring pressure on coastal resources, waste disposal being perhaps the most significant. For all sectors, public policy will have to consider shifting the incentive structure that remains after the current round of tax reforms to encourage investment in green technologies.

- *Petroleum dependency.* With 90 per cent of energy supplies based on petroleum, and all of it imported, the diversification of energy sources with an emphasis on renewables is imperative but difficult. The government is expected to decide on switching to a mix of alternative sources that include LNG, coal and renewables.
- *Socioeconomic inequalities.* The rich are potentially powerful enough to resist changes to their energy-intensive consumption patterns, though as 'green' becomes more fashionable this potential is less likely to be actualised. The poor, on the other hand, are so preoccupied with survival issues that long-term considerations for the environment are difficult for them to address. This is another reason why poverty eradication, or at least alleviation, must be essential to a green economy strategy for Jamaica. The middle class is small, and also clinging to its standard of living. Costly adjustments to its standard of living will be instinctively resisted, unless there is a successful education programme on the long-term benefits of a green economy.
- *Government preoccupation with short-run survival issues, particularly repayment of the national debt.* The transformation process is necessarily long term. With governments elected for five years, there is an inherent tendency to postpone addressing long-term development issues that is all the more difficult in the context of a highly partisan political tradition that resists consensus over development strategies.
- *Slow mainstreaming of environmental and climate change policy.* Progress in mainstreaming the environmental dimension of sustainable development strategies has been slow. Such policies address cross-cutting issues, and in the Westminster system of sectoral portfolio ministerial responsibilities, such issues tend to fall between ministerial responsibilities.

5.4.2 Drivers for the transformation process

Some of the external and internal drivers of the transformation process are identified and discussed briefly below. The external drivers continue to be dominant, but the internal drivers in the form of advocacy have been growing in importance.

- *International pressures/stimuli.* Policy action by the Jamaican government on many environmental policies and on sustainable development as a whole has been stimulated by international agreements to which Jamaica acceded. Whereas

environmental conditions have been included in some bilateral agreements, such as the Economic Partnership Agreement and an agreement with the Canadian government (CIDA), there is as yet no stipulation of commitment to the green economy in any international loan and/or aid agreement.¹⁰ The current international consensus that is building around the green economy will be an important driver for corresponding policy in Jamaica.

- *Cultural preferences for natural foods in sections of the population.* The culture of Rastafari¹¹ has had a profound influence on dietary preferences for organically grown fresh foods in both rural and urban Jamaica since the 1970s. Some of these preferences coincide with the practices of the Seventh Day Adventists, which is one of Jamaica's fastest growing Christian denominations.
- *Advocacy by environmental NGOs (ENGOS).* Jamaica has a small but active group of ENGOS that are advocates for the green economy. Some of their voices have acquired national recognition and respect, and can no longer be ignored by policy-makers.
- *Advocacy for sustainable development.* Since the Earth Summit in 1992, there have been several civil society organisations¹² that have kept the pressure on the Government of Jamaica to honour its commitments to sustainable development in general, and to the various multilateral environmental agreements. In addition, there are government bodies charged with furthering various aspects of sustainable development, such as the Sustainable Development Unit of the Planning Institute of Jamaica, the National Environment and Planning Agency, and in recent years the assignment of the environment as an explicit ministerial portfolio. The most recent extension has been to add 'climate change' to the portfolio of the ministry¹³ with responsibility for the environment.
- *Anti-poverty programmes.* In the early 1990s, the government implemented a National Poverty Eradication Programme that sought to bring coherence to a disparate set of projects to fight against poverty. One legacy of that programme was the establishment of the Programme of Advancement through Health and Education (PATH), a conditional cash transfer programme that now constitutes the core of the social safety net.
- *Advocacy for adaptation to climate change.* Advocacy has been initiated by scientists and their students in the Climate Studies Group of the Department of Physics at the University of the West Indies (UWI), individual scholars in the Faculty of Social Sciences, the Centre for Sustainable Development at UWI, as well as by various ENGOS. Some of the research and the outreach based on this work have been funded by the Caribbean Community Climate Change Centre (CCCCC) and the Environmental Foundation of Jamaica (EFJ).
- *Official commitments to transform the economy into a green economy.* The repeated commitments in Vision 2030 are highlighted above. There is a national consensus that includes the two main political parties, but goes beyond them, around this long-term plan.

5.4.3 Policies and actions to implement the commitment to transform the economy

Responsibility to implement the policies to transform the Jamaican economy into a green economy has been assigned to the following organs of government and private sector bodies:

- Ministry of Industry and Commerce;
- National Environment and Planning Agency (NEPA);
- Jamaica Bureau of Standards;
- Jamaica Institute of Environmental Professionals; and
- private sector companies.

Below is listed an annotated sample of policies that will facilitate, or are consistent with, the transformation to a green economy:

- Green procurement policy: this is a set of guidelines for purchasing environmentally-sensitive products 'and services, [that] make good economic and environmental sense' (GoJ 2001). The guidelines recognise the importance of government procurement to sustainable development and provide examples of products and services that meet the standards of the policy, and the criteria that procurement officers must use in their decision-making.
- Training of government staff in Strategic Environmental Assessment (SEA) and Natural Resource Valuation, which are integral to Environmental Impact Assessments.
- Energy policy targeting 20 per cent of national energy supply to come from renewable resources by 2030. Renewables now account for about 10 per cent of the energy supply. These are primarily wind, solar, hydro, biofuels and co-generation.
- Development of air quality control regulations.
- Revision and update of the building code in 2009 to include green buildings and climate change considerations.
- Establishment of a planting programme on private lands in forestry.
- National water policy that includes the application of the 'polluter pays' principle to the management of water resources.
- Projects to boost sustainable agriculture, protect and conserve biodiversity and to engage more renewable energy sources.
- Public consultations have become integral to the policy-making process.
- Design and implementation of a tool, the Comprehensive Sustainability Assessment Policy tool (CSAP), for incorporating sustainable development into the policy-making process.

- Poverty eradication policies: apart from macroeconomic strategies to promote economic growth, and social safety net programmes based on the PATH programme, Jamaica's governments have funded special employment programmes, the current one being the Jamaica Emergency Employment Programme. In addition, governments have partnered with private sector and civil society organisations to support small and microenterprises with training and concessionary financing.
- Revision of land management policies (the Land Administration and Management Programme).
- Revision of trade policy to incorporate issues such as disaster risk reduction and climate change adaptation.
- Preparation of short-, medium- and long-term national and local development plans using integrated planning methodologies designed for sustainable development. The annual budget is Jamaica's short-term plan. There is also a rolling three-year Medium Term Social and Economic Policy Framework, and an annually revised three-year macroeconomic plan, which frames the annual budget. In theory, all of these should be aligned with one another within the long-term plan, Vision 2030. In addition, there are ongoing initiatives to prepare parish plans under the Local Sustainable Development Plans, which also ought to be aligned to the national plans. There remains much to be done to ensure optimal coherence among the plans. The pressures around the annual budget and its associated medium-term macroeconomic plan have tended to override the requirements of the other plans.

5.4.4 Priorities in a strategy for implementation

It bears repeating that the environmental dimension of sustainable development has been the last of the three dimensions to be prioritised in the public policy agenda. For several decades, Jamaica's governments have focused on stimulating economic growth, and hoped that some of the benefits would accrue to the poor. Yet the economy has only been able to achieve an average growth rate of less than 1 per cent per annum for the past 40 years, and the decline in poverty during the 1990s and early 2000s is generally attributed to the decline in the rate of inflation and the growth of remittances.

Since the mid-1970s, governments have eschewed income redistribution policies to redress historic inequalities. These inequalities were exacerbated by the structural adjustment programmes of the 1980s, the liberalisation of the economy in the 1990s, and the rapid growth of financial services after the liberalisation of financial markets in 1991. On the advice of the international financial institutions, governments have opted to offer targeted assistance to poor households rather than generalised subsidies on basic goods (e.g. staple foods) and services (e.g. water and electricity). Towards this end, the government has tracked the incidence and prevalence of poverty, and conducted poverty mapping to be able to identify the vulnerable households. This information has been used to identify households to receive benefits of the conditional cash transfer programme, PATH.

The GoJ recognises the need for an appropriate balance between command and market instruments for stimulating environmentally-friendly behaviour. It is noted above that already in 2001 there were proposals for environmental management systems that sought to utilise fully market incentives, especially because of the process of rapid liberalisation of the Jamaican economy that began in the 1980s and accelerated in the 1990s. Essentially these are price signals that favour allocation of investments in green technologies (e.g. solar water heating, windpower), and discourage petroleum-intensive consumption (e.g. 'gas-guzzling' vehicles). The government has been developing taxes and subsidies to shift relative prices especially to favour the use of renewable energy sources. There will still be the need for laws and regulations to complement market instruments in areas where competitive markets are not sufficiently developed, such as electricity and water.

Recycling campaigns will build awareness among households, which account for a large share of the waste. Several privately-operated recycling processes, such as deposits for glass bottles, collection of PET¹⁴ bottles and the collection of scrap metal, are well established. As in many countries, there is informal recycling by way of people prospecting for reusable materials in garbage containers and landfills. So far little progress has been made with the separation of recyclates from the rest of household and commercial garbage.

An important modality for implementation is public-private sector partnerships. Two important partnerships have been forged to manage the Montego Bay Marine Park with an NGO of the same name, and the Blue and John Crow Mountains with the Jamaica Conservation Development Trust. The government has explored co-management arrangements for protected areas with other NGOs. The Forestry Department is partnering with several local forest management committees to manage forest reserves.

The Business Council on the Environment was launched in 2001, but is currently dormant. However, the umbrella organisation for the business community, the Private Sector Organization of Jamaica, participates actively in national consultations and other fora on sustainable development and matters of relevance to the transformation to a green economy. The most recent example is the national consultation organised by the Government of Jamaica to prepare for Rio+20, in which attention was focused on the green economy, especially with respect to energy and agriculture.

The priority sectors in the transformation to the green economy are energy and tourism, both of which are being driven by the economic imperatives of reducing the country's spending of foreign exchange on the one hand, and increasing its earnings of foreign exchange on the other. The priority assigned to the energy sector implicitly includes the bauxite and alumina industry, which is the largest consumer of energy, and the transport sector, particularly ground transport, which consumes about 20 per cent¹⁵ of the national energy supply. It also impacts the water sector since the topography of Jamaica requires that water be pumped uphill to many communities. As a result, the National Water Commission, which is the main supplier of water for domestic and commercial use, is one of the largest consumers of electricity.

There is increasing attention to organic agriculture because of the potential niche export market for organically grown food products, and because of the advocacy of a farmer-led NGO, the Jamaica Organic Agriculture Movement.

5.5 Conclusions

The Jamaican economy has been in transition from a natural resource-based production system to one led by sectors of the service industries that now contribute about 75 per cent of GDP. Tourism is the leading foreign exchange earner, and its competitiveness depends on how rapidly, extensively and deeply it can 'green' its activities. The service orientation will facilitate the transformation to a green economy in so far as there will be fewer practices, such as chemical applications, that are unfriendly to the natural environment; the energy intensity of production will decline; and information and communications technologies will be more easily applied to production.

Progress toward the green economy is still in the early stages, built on ad hoc commitments to the greening of some tourism services, government procurement, some agricultural practices, and to the development of renewable energy supplies. There is now an official commitment in the long-term plan, Vision 2030, to move towards a green economy, though it still is not the dominant thrust of the plan. Most important, investment in activities that use green technologies, such as wind and solar energy equipment and non-petroleum fuelled transport, is still marginal.

The GoJ sees reducing the cost of energy as the single most important economic challenge. It is critical to reducing the national import bill and enhancing the international competitiveness of the economy's export industries. This is probably a common problem shared by small developing countries that are dependent on imported petroleum. Indeed, it is arguable that even those that are endowed with petroleum would be wise to diversify their sources of energy, because their endowments of this non-renewable resource are limited and they have to share the responsibility of reducing the discharge of greenhouse gases into the atmosphere.

In an analogous fashion, the production of food, as energy for people, will benefit from the application of green technologies to the production of affordable and nutritious food products, especially with the potentially negative impact of climate change on productivity threatening traditional food supplies. Supplying organically grown food to the tourist industry will be yet another way of greening that industry.

The application of green technologies to existing industries and to the establishment of new green industries will offer opportunities for profitable investment. For Jamaica, the greening of the energy sector and the food production system will build resilience to shocks from the international energy and food markets. The government's programmes to encourage investment to drive economic growth, generate employment opportunities and increase incomes need only a shift in focus to facilitate more investment in green industries using green technologies. The shift in the relative burden of taxation and the relative benefits of subsidies will be crucial

to redirecting investment flows. The risk aversion of the traditional business classes is another obstacle to be overcome.

The strategy for the green economy will entail more respect for the natural protective systems of the island, its economy and society, such as reefs and wetlands, fewer harmful practices, such as toxic and non-biodegradable waste disposal in the atmosphere and the water bodies, and a reorientation of settlement practices for a more harmonious relationship with the natural environment and the changing climate. In this way, the vulnerability of the economy to natural hazards and extreme weather events can be reduced.

The green economy promises to be more resilient to external shocks from the international energy and food markets, and from natural hazards and extreme weather events. As such it suggests itself in particular to SIDS under the Mauritius Strategy for the further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States.

As in other spheres of development, there is an often cited ‘implementation gap’ that refers to the failure of government agencies to implement plans and enforce policies and regulations, for which the government is often criticised, especially by advocates for sustainable development. Laws are passed and regulations are promulgated in various spheres, but enforcement is often lax and too often apparently non-existent. Committed and steadfast leadership in both the public and the private sectors will undoubtedly advance the transformation process. However, there are concrete and tangible objective constraints given by Jamaica’s history that circumscribe what can be achieved in the short run. The Jamaican economy is still dependent on natural resource-based export industries, and on imported energy, and inescapably committed to servicing a debt of around 140 per cent of GDP.

Jamaica as a small state will have to tap into resources for funding and technical assistance from regional co-operation schemes, as well as the extensive diaspora that stretches across three major developed countries, the USA, the UK and Canada. However, the economy will need much more in the way of investment, technologies, technical know-how and market access from the developed countries that have made repeated promises to earmark resource transfers to support the transformation process in developing countries.

Notes

- 1 Actually, the country of Jamaica consists of about 69 islands, but only the main island is settled and inhabited on a regular basis.
- 2 See: USAID, Jamaica: Environmental Audits for Sustainable Development (EAST) Project, http://pdf.usaid.gov/pdf_docs/PDACH399.pdf (accessed 18 February 2014).
- 3 ‘Green Globe is the global travel and tourism industries’ certification program for sustainable tourism. Green Globe Members save energy and water resources, reduce operational costs, positively contribute to local communities and their environment and meet the high expectations of green leisure and business travelers’. See: <http://greenglobe.com> (accessed 18 February 2014).
- 4 The survey was reported in the response to a questionnaire, ‘The Green Economy in the context of Sustainable Development and Poverty Eradication’, which was sent to countries by the UNCSO as part of the preparation for Rio+20.

- 5 This was the conclusion of the Commonwealth Secretariat 2012: 7.
- 6 Statement by the Most Honourable Portia Simpson Miller, Prime Minister of Jamaica to the United Nations Conference on Sustainable Development, 21 June 2012, Rio de Janeiro, Brazil.
- 7 This caution was echoed in paragraph 58 (h) of the Outcome document of Rio+20, *The Future We Want* (United Nations, 2012).
- 8 Spokesperson for the Minister of Science, Technology, Energy and Mining.
- 9 The Comprehensive Sustainability Assessment Tool (CSAP), available at: www.cabinet.gov.jm/current_initiatives/comprehensive_sustainability_assessment_tool_csap (accessed 18 February 2014).
- 10 Conversation with a senior government official in the Sustainable Development Unit of the PIOJ.
- 11 The Rastafari can be thought of as a cultural movement that has been strongly influenced by an Afro-centric interpretation of Judeo-Christian theological and quasi-religious beliefs and practices.
- 12 These include, for example, the Association of Development Agencies, PANOS, Jamaica Conservation Development Trust, Jamaicans United for Sustainable Development, Friedrich Ebert Stiftung and Kingston Restoration Company.
- 13 The ministry is formally called the Ministry of Water, Land, Environment and Climate Change.
- 14 PET is the acronym for polyethylene terephthalate.
- 15 It was estimated that ground transport consumed 21 per cent of the total energy supply in 2006.

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