

# THE GREEN ECONOMY INVESTMENT Strategy for Jamaica





# **GREEN Economy** **INVESTMENT**

Strategy for Jamaica



# TABLE OF CONTENTS

List of Tables.....	I
List of Figures.....	I
Acronyms.....	II
Foreword.....	III
Acknowledgements.....	IV
Executive Summary.....	V-VI
<b>I. Background.....</b>	<b>1</b>
1.1 The Investment Climate in Jamaica.....	1
1.1 (a) Macroeconomic Policies.....	1
1.1 (b) The National Investment Policy.....	1
1.1 (c) Competition Policy.....	3
1.1 (d) The Foreign Trade Policy.....	4
1.1 (e) Financial Sector Development.....	4
1.1 (f) Labour Force.....	5
1.1 (g) Infrastructure.....	6
1.1 (h) Telecommunications.....	7
1.1(i) National Security.....	7
1.1 (j) Energy Sector.....	8
1.1 (k) Green Procurement.....	8
12 Legislative Framework.....	9
13 Perspectives of Selected Public and Private Sector Leaders.....	11-13
14 International Perspectives.....	13
1.4 (a) United States of America.....	13
1.4 (b) World Bank.....	14
15 Synthesis.....	15
<b>2. The Green Investments - Definitions.....</b>	<b>16</b>
21 International Perspectives.....	16
21 (a) Organization for Economic Cooperation and Development.....	16
21 (b) Deutsche Bank.....	16
21 (c) United Nations Environmental Programme.....	18
21 (d) International Monetary Fund.....	18
22 Some Global Best Practices.....	18
22 (a) Rwanda.....	18
22 (b) Indonesia.....	19
22 (c) Costa Rica.....	19
22 (d) Caribbean.....	20
23 Green Investment – Toward a Definition.....	20

<b>3. Green Investments – Experience and Prospects.....</b>	<b>21</b>
31 Greening the Economy .....	21
32 International and Regional Context.....	23
33 National Investment Policy and the Green Economy Investment Strategy .....	25
34 Green Investments – Some Jamaican Examples. ....	27
<b>4. The Green Economy Investment Strategy.....</b>	<b>32</b>
41 Timeframe.....	32
42 Goal .....	32
43 Strategic Objectives. ....	32
44 Strategic Directions.....	33
45 Risks to Green Investment. ....	37
4.5(a) Mobilizing Resources for Green Investments.....	38
4.6 Green Economy Investment Strategy.....	40
<b>5. Projects. ....</b>	<b>41</b>
51 Agriculture .....	43
52 Construction.....	43
53 Energy .....	44
54 Tourism.....	44
55 Water .....	44
<b>6. Action Plan. ....</b>	<b>45</b>
<b>7. Implementation, Monitoring and Evaluation.....</b>	<b>53</b>
References.....	59
Appendix .....	71
Definitions of Green Investment Given by the Interviewees.....	71

List of Tables

Table 1: National Investment Policy - Guiding Principles, Policy Issues and Policy Goals. ....	2
Table 2: Perspectives of Selected Public and Private Sector Leaders.....	11
Table 3: Examples of Green Investments cited by the Interviewees.....	27
Table 4: Potential Green Investments cited by the Interviewees.....	29
Table 5: Examples of, and Opportunities for Green Investments in Transport and Storage .....	30
Table 6: Examples of Green Investment.....	31
Table 7: Green Investment Opportunities - Ongoing and Imminent.....	41-42
Table 8: Action Plan.....	46-52
Table 9: Monitoring and Evaluation Plan. ....	54-67

List of Figures

Figure 1: Deutsche Bank Climate Change Investment Universe.....	17
---	----

# ACRONYMS

BOJ	Bank of Jamaica	MLGRD	Ministry of Local Government and Rural Development
DBJ	Development Bank of Jamaica	MLSS	Ministry of Labour and Social Security
CBD	Convention on Biological Diversity	MNS	Ministry of National Security
CCRIF	Caribbean Catastrophe Risk Facility	MOFPS	Ministry of Finance and the Public Service
CDEMA	Caribbean Disaster Emergency Management Agency	MOEYI	Ministry of Education, Youth and Information
COP	Conference of the Parties	MOT	Ministry of Tourism
CPI	Corruption Perception Index	MSET	Ministry of Science, Energy and Technology
CREF	Caribbean Renewable Energy Forum	MTM	Ministry of Transport and Mining
EGS	Environmental Goods and Services	MSME	Micro, Small, and Medium-sized Enterprises
EIA	Environmental Impact Assessment	MSME	
EMEP	Energy Management and Efficiency Project	Alliance	Micro, Small and Medium Enterprises Alliance
EP	Equator Principles	MW	Megawatt
ESG	Environmental, Social and Corporate Governance	NBC	National Building Code
FCJ	Factories Corporation of Jamaica	NCC	National Competitiveness Council
FDI	Foreign Direct Investment	NEPA	National Environment and Planning Agency
FI	Financial Inclusion	NFA	National Fisheries Authority
FSC	Financial Services Commission	NGO	Non-Governmental Organization
GAPS	Good Agricultural Practices	NIP	National Investment Policy
GBJ	Green Business Jamaica	NLA	National Land Agency
GEIS	Green Economy Investment Strategy	NOAA	National Oceanic and Atmospheric Administration
GOJ	Government of Jamaica	NSWMA	National Solid Waste Management Authority
HCFC	Hydrochlorofluorocarbon	NWA	National Works Agency
HEART/		NWC	National Water Commission
NSTA Trust	Human Employment and Resource Training/ National Service Training Agency Trust	OECD	Organization for Economic Cooperation and Development
IBM	International Business Machines Corporation	PIMC	Public Investment Management Committee
ICT	Information and Communication Technology	PIMS	Public Investment Management System
IDB	InterAmerican Development Bank	PIOJ	Planning Institute of Jamaica
ILO	International Labour Organization	PIMSEC	Public Investment Management Secretariat
IMF	International Monetary Fund	PPA	Power Purchase Agreement
INSMET	Institute of Meteorology in Cuba	PPC	Public Procurement Committee
JAMPRO	Jamaica Promotions Corporation	PPP	Public-Private Partnership
JBA	Jamaica Bankers Association	PSIP	Public Sector Investment Programme
JCF	Jamaica Constabulary Force	PSO	Private Sector Organization of Jamaica
JEF	Jamaica Employers Federation	REDI	Rural Economic Development Initiative
JIS	Jamaica Information Service	R&D	Research and Development
JMEA	Jamaica Manufacturers and Exporters Association	SBAJ	Small Business Association of Jamaica
JPS	Jamaica Public Service	SDG	Sustainable Development Goal
JSEZA	Jamaica Special Economic Zone Authority	SEZ	Special Economic Zone
JSIF	Jamaica Social Investment Fund	SIDS	Small Island Developing States
JTB	Jamaica Tourist Board	SIPP	Secured Interest in Personal Property
LCR	Low-carbon Climate Resilient	SME	Small and Medium Enterprise
LNG	Liquid Natural Gas	STATIN	Statistical Institute of Jamaica
M&E	Monitoring and Evaluation	UNEP	United Nations Environment Programme
MOAF	Ministry of Agriculture and Fisheries	UNESCO	United Nations Educational, Scientific and Cultural Organization
MEGJC	Ministry of Economic Growth and Job Creation	UNFCCC	United Nations Framework Convention on Climate Change
MFAFT	Ministry of Foreign Affairs and Foreign Trade	USA	United States of America
MICAF	Ministry of Industry, Commerce, Agriculture and Fisheries	UWI	University of the West Indies
MIIC	Ministry of Industry, Investment and Commerce	WB	World Bank
MIND	Management Institute for National Development	WRA	Water Resources Authority

## FOREWORD



The concept of a green economy is rooted in the history of the sustainable development movement. The importance of preserving our finite natural resources for future generations resonates globally, and indeed with the Government and people of Jamaica. It is clear that the traditional approach to economic development could potentially undermine desired outcomes and presents a number of risks including ecological degradation and inequality.

The Government of Jamaica's pursuit of a green economy is part of a strategic approach to sustainable development as outlined in our Vision 2030 Jamaica – National Development Plan. Green policy objectives promote inclusivity, decent work, acknowledge ecological scarcity and foster a participatory approach to the decision-making process.

This Green Economy Investment Strategy supports increased domestic and foreign investment, underscored by processes that *reduce the carbon footprint of the economy, enhance sustainable use of natural resources, facilitate adaptation to climate change and promote greater economic inclusiveness.*

This Green Economy Investment Strategy offers a roadmap beyond 2030, complementing the directives put forth by the Government's policy experts on investment. It couples international best practices and commitments made by Jamaica as a party to various regional and international environmental conventions while integrating the key elements of our unique local context.

Implementation of the activities recommended within presents a real opportunity to transform the economy in the interest of all Jamaicans. Making the right decisions for our people and the environment, ultimately contributes to shaping wealth creation and environmental appreciation globally.

The Strategy complements and supports the implementation of key national policies and strategies, including the National Investment Policy, the Climate Change Policy Framework, the National Energy Policy, as well as the country's long-term low-carbon and climate-resilient strategy.

It is my hope that this Strategy will facilitate transformative change within key economic sectors by mainstreaming environmental considerations into national and local development planning and will assist in informing investment decisions by the relevant public sector agencies as well as the private sector.

Most Honourable Andrew Holness, ON, PC, MP  
Prime Minister and Ministry of Economic  
Growth and Job Creation



## ACKNOWLEDGEMENTS

The Green Economy Investment Strategy (GEIS) is one of the main deliverables of the Government of Jamaica/United Nations Environment Programme International Environmental Technology Centre (UNEP IETC) Plastic Waste Minimization Project (PWMP).

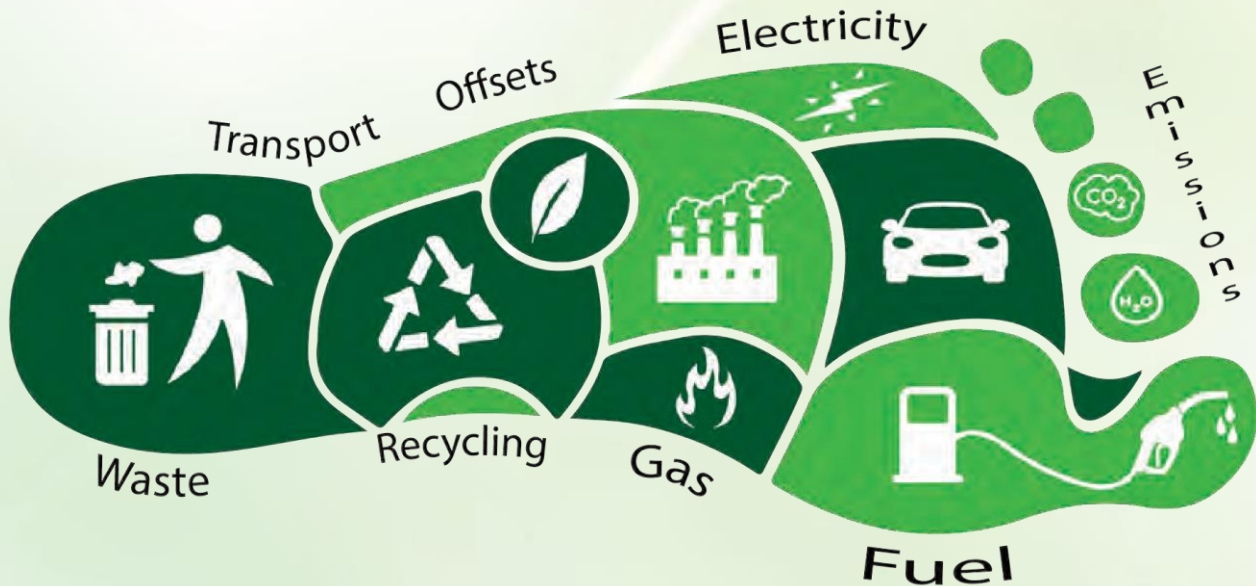
Implementation of the PWMP was spearheaded by the National Environment and Planning Agency (NEPA), with oversight provided by the Project Steering Committee (PSC) led by the Ministry of Economic Growth and Job Creation, (MEGJC) under the chairmanship of Ms. Gillian Guthrie, Chief Technical Director, Policy Planning and Evaluation.

The Government of Jamaica (GoJ) would like to express its sincere appreciation to the Government of Japan and the UNEP for their generous financial support in the preparation of the GEIS.

Additionally, the GoJ wishes to acknowledge, with appreciation, the work of the multi-stakeholder Technical Working Group, which included the Ministry of Industry, Investment and Commerce, the Jamaica Promotions Corporation, the National Environment and Planning Agency and the Jamaica Manufacturers and Exporters Association, as well as that of consultant, Dr. Michael Witter, in the preparation of this document.

The GEIS builds on the work undertaken in 2014 with the development of a Green Economy Scoping Study for Jamaica. This scoping study was also completed with the support of the UNEP.

This Strategy seeks to, *inter alia*, support the low-carbon and climate-resilient transformation of the Jamaican economy. It is anticipated that the GEIS will be a companion document to the National Investment Policy and will inform investment decisions within the country.



## EXECUTIVE SUMMARY

The Green Economy Investment Strategy (GEIS) builds on the prior “Green Economy – Scoping Study for Jamaica” (2014) by developing a brief outline of investment possibilities in that study. Since 2014, the policy space of the Jamaican Government has been renewed and expanded with revisions of old policies and articulation of new ones. Most relevant for the GEIS is the National Investment Policy (NIP) for which the GEIS is necessarily a complement. The policy context for both the NIP and the GEIS is the overarching framework of Vision 2030, Jamaica’s long-term development plan.

Whereas the green economy is a state in the future, this study engages with, “greening” the economy, which is the process of transforming the current Jamaican economy into a green economy. Accordingly, the 3 basic concepts for the GEIS are defined as:

1. Greening refers to activities and processes that reduce the carbon footprint of the economy, enhance the sustainability of the use of natural resources, facilitate adaptation to climate change, and promote greater economic inclusiveness or any subset of these.
2. Green investment is defined as capital expenditure that drives the activities and processes of greening as defined in 1 above.
3. A green investment project is *one where some officially stipulated minimum<sup>1</sup>* share of the expenditure supports greening activities and processes.

In addition to the NIP, the GEIS identifies synergies with the existing policy framework and particularly:

1. Macroeconomic Policy, including tax, monetary, and debt Policies
2. Competition Policy
3. Foreign Trade Policy
4. Natural resources Policy, particularly energy, land and water Policies

The GEIS will require the development of labour, land and financial resources for implementation. In line with the NIP, it proposes both private and public-private partnerships as modes of implementation. With its focus on inclusiveness, the GEIS interprets private investors to encompass Micro, Small and Medium-sized Enterprises (MSMEs) and small farmers as well.

Apart from mainstreaming greening in public policy, the GEIS highlights the role of the Government in incentivizing private investment, supporting public investment, especially in physical infrastructure, facilitating the development of telecommunications, ensuring national security, stimulating demand for green goods and services with public procurement, and generally promoting the greening of the economy.

The Goal, Objectives and Strategic Directions of the GEIS are set out below.

### Goal

Shift the investment process to support a greater percentage of investment flows to the greening of the economy.

### Objectives

1. *Integration of environmental considerations into investment decisions:* Investment decisions should take account of environmental risks as well as financial and other risks.
2. *Reduction in Jamaica’s carbon footprint:* This requires investment in energy conservation and energy efficiency initiatives within the public and private sectors, as well as in renewable energy sources such as solar, wind, hydropower, biomass, and energy-from-waste. Opportunities for lower carbon liquefied natural gas to support the energy transition will serve to boost the flexibility of the sector by giving rise to cogeneration plants.

<sup>1</sup> This minimum will have to be prescribed, probably after wide consultations with the investor community, by relevant MDAs, such as the Ministry of Industry, Investment and Commerce or the Ministry of Finance and Public Service.

3. *Economic sustainability and climate change resilience:* Increase the share of investment projects that reuse and recycle natural resources and build capacity to absorb and rebound from shocks due to more intense natural hazards like windstorms and floods, in the value of a total national investment.
4. *Adaptation to climate change:* Increasing the resilience of critical natural assets and ecosystems are necessary to cope with higher temperatures and shifts in the traditional patterns of precipitation.
5. *Promotion of economic inclusiveness:* Investment projects that provide employment directly and generate opportunities for MSMEs and small farmers will help to reduce income inequalities.

### Strategic Directions

1. Ensure macroeconomic and social stability
2. Continue and accelerate reforms to further the ease of doing business
3. Raise the priority level of greening in all aspects of public policy
4. Coordinate policy development around greening the economy and the implementation of relevant projects
5. Promote greening within the productive and household sectors
6. Provide incentives for green investments
7. Incorporate greening into public investment
8. Foster green financing schemes
9. Transform the energy sector toward a more modern, efficient, diversified, low-carbon renewable resource base and environmentally sustainable sector, driven by private sector investments
10. Develop relevant social programmes to sustain social stability
11. Foster research in the various aspects of the green economy



# 1. BACKGROUND

## 1.1 The Investment Climate in Jamaica

There is a growing consensus that Jamaica's investment climate has been improving over the decade up to 2020<sup>2</sup>. The key indicators of the improvement have been the macroeconomic stability<sup>3</sup> and the reforms intended to make it easier to do business in Jamaica. Macroeconomic stability is reflected in the declining government debt and interest rates, and the improvement in the fiscal and external balances. Bureaucratic reforms have made it easier to do business; the credit market is more liquid, access to credit has been widened, and the legal protection of investors has been strengthened. The National Investment Policy of Jamaica (NIP) notes that over the last 10 years there have been reforms of "...more than 50 business processes and approving legislation for simplifying government processes that affect private companies' investment cycles".<sup>4</sup> From the perspective of the investment climate, the NIP is the centrepiece of the framework of policies facilitating investment.

### 1.1 (a) Macroeconomic Policies

In the context of successive agreements with the International Monetary Fund (IMF), the Government of Jamaica (GOJ) has targeted debt reduction, the elimination of the fiscal deficit, and a low rate of inflation to establish and maintain macroeconomic stability. These goals have been supported by structural changes in public expenditure, and reforms to the tax structure and system to generate the revenues to service the national debt and reduce the budget deficit. Simultaneously, the Government has reduced its borrowing and allowed the Bank of Jamaica to focus primarily on maintaining low inflation targets and good order in the foreign exchange markets. These policies have reduced the national debt from 144% in 2012 to 94% of Gross Domestic Product (GDP) in 2019. An impact of COVID-19 on public finance is that the debt rose to 101% of GDP in 2020.

Similarly, the Budget balance moved from a deficit in 2015/16 and 2016/17 to a surplus in the years 2017/18-2019/20. Another impact of COVID-19 was to push the Budget back into deficit in 2020/21.

The inflation rate declined from 6.9% in 2012 to 3.9% in 2019, averaging 3.6% per annum since 2015. The average annual exchange rate with the United States dollar moved from \$100.89 in 2013 to \$143.37 in 2020, at an average annual rate of change of about 6.1%.

These conditions have been associated with an average annual growth rate of GDP of 1.2% since 2015.<sup>5</sup> The impact of COVID-19 has required adjustments to public expenditure, and Government tax revenues have weakened along with the economy as a whole. However, the Government remains committed to the policy measures and management tools that have achieved macroeconomic stability.

### 1.1 (b) The National Investment Policy

The National Investment Policy (NIP) was approved by Cabinet in July 2022. It took as its strategic context, Vision 2030, Jamaica's long-term development plan. The central theme is to facilitate private investment and forge public-private partnerships for building economic infrastructure. The strategic intent of the NIP is to mobilize private investment to support the sustainable development of the economy. **Table 1** below summarizes the Policy's guiding principles, issues identified and goals.

The Policy recognized the imperative of a coordinated approach to implementation by the Government's Ministries, Departments and Agencies (MDAs).

<sup>2</sup> As with all economies, 2020 was an exceptional year of the pandemic, COVID-19, induced economic contraction.

<sup>3</sup> The COVID-19 Economic Recovery Task Force Report defined macroeconomic stability to be "simultaneous attainment of (i) sustainability of public debt and Government finances (ii) sustainability of external accounts (iii) low, stable and predictable inflation and (iv) financial sector stability is maintained.", p.56

<sup>4</sup> National Investment Policy of Jamaica – Green Paper, July 2020, p. 22

<sup>5</sup> <https://www.imf.org/en/Countries/JAM>

**Table 1:** National Investment Policy - Guiding Principles, Policy Issues and Policy Goals

Guiding Principles	
<ol style="list-style-type: none"> <li>1. <i>Business Efficiency</i>, especially for processes of the public sector that facilitate investment.</li> <li>2. <i>Public Sector Cohesiveness</i>, by coordination of the work of the Ministries, Departments and Agencies to facilitate the investment processes.</li> <li>3. <i>Global Competitiveness</i>, by adherence to international best practices.</li> <li>4. <i>Transparency</i>, of investment processes is essential to an ethically driven investment environment.</li> <li>5. <i>Sustainability</i>, so that economic growth strategies and development goals will meet the needs of the present population without compromising the ability of future populations to do so.</li> </ol>	
Policy Issues	Goals
1. Coordinated National Approach to Sustainable Investment Planning	To strengthen mechanisms for a coordinated strategic investment planning framework that informs investment strategies, supports inclusive sustainable economic development and is aligned to national development mechanisms.
2. Business Process and Environment Reform	To provide a streamlined customer-centric investor experience across Government that offers strategic guidelines to identify, facilitate and realize greater investments in the country through the deliberate efforts of government entities established to facilitate business.
3. Investment Promotion and Marketing	Through application of current and cutting-edge strategies and technologies, position Jamaica as the investment destination of choice in the Caribbean Region for international companies and investors.
4. Treatment and Protection of Investors	To encourage innovation and investment by domestic and foreign firms through stronger frameworks for effective enforcement and guaranteeing protection of investor rights in Jamaica.
5. Intellectual Property	To strengthen the policy framework for safeguarding Intellectual Property in keeping with international standards.
6. Access to land and other Government of Jamaica (GOJ) Assets	To improve the framework for sustainable, productive and equitable development, use and management of the country's land resources and other GOJ assets.
7. Labour and Immigration	To spur investments and respond to the needs of investors through Immigration and Labour service delivery.
8. Incentivizing Investments	Maximize long-term benefits of private investments, where the benefits exceed the costs, and the costs of achieving given goals are kept to their lowest feasible levels.
9. Supply Chain and Logistics	To strengthen Jamaica's economic position and broaden investment growth opportunities through the Global Logistics Hub Initiative.
10. International Trade	To strengthen mechanisms for trading across borders that will support national economic growth.
11. Aftercare, Retention and Re-investment	To engage with, and facilitate, established investors in a bid to retain and expand their investment interest in Jamaica through proactive facilitation and advocacy responsiveness.

**Source:** National Investment Policy of Jamaica

The NIP lists the draft Policy on Strategic Environmental Assessment among the 16 national policies impacting investment. The fifth of its 5 “Guiding Principles of the NIP” is sustainability, which acknowledges that the social and environmental pillars of the policy will “meet the needs of the present population without compromising the ability of the future population to do so.”<sup>6</sup> Further, the first of its 11 policy issues is

“Coordinated National Approach to sustainable Investment Planning”. This “... will support a holistic planning approach that should account for all aspects of the investment value chain including, but not limited to, targeted investment opportunities, access to key resources including land and other physical assets, treating with (in a sustainable manner) the human, social and environmental requirement that

<sup>6</sup> *ibid.*, p.32

support the growth of a green economy.”<sup>7</sup> The Green Economy Investment Strategy will augment the goal of the NIP to stimulate economic growth and provide employment while extending the NIP to address the environmental costs and benefits.

### 1.1 (c) Competition Policy

Jamaica’s development strategy calls for facilitating markets, and the encouragement of competition for efficiency. Competition is regulated by the Fair Competition Act, 1993 (FCA) which is administered by the Fair Trading Commission that was established by the Act. “The objectives of the Act are to:

- Encourage competition in the conduct of trade and business in Jamaica;
- Ensure that all legitimate business enterprises have an equal opportunity to participate in the Jamaican economy;
- Provide consumers with better products and services, a wide range of choices at the best possible prices.”<sup>8</sup>

The Act addresses the anti-competitive behaviour among firms as well as consumer protection from unfair practices. The establishment of suppliers of green goods and services can benefit from the Act’s prohibition of non-competitive behaviour that can restrict entry into a market, as well as from an exception to the Act that permits the “substantial lessening of competition”<sup>9</sup> under certain circumstances. Those circumstances are an “agreement or category of agreements” that: “(a) Contributes to—

- (i) the improvement of production or distribution of goods and services;
- or
- (ii) the promotion of technical or economic progress, while allowing consumers a fair share of the resulting benefit.”<sup>10</sup>

Subject to legal correction, many green investments could qualify under the “circumstances’.

It should be noted that Section 29 of the FCA permits the Commission to grant an authorization if it is satisfied that an agreement or practice that may be affected or prohibited under the Act is likely to promote the public benefit.



<sup>7</sup> *ibid*, p.34

<sup>8</sup> Fair Trading Commission, Legislation, <https://jftc.gov.jm/enforcement/legislation/>

<sup>9</sup> Fair Competition Act, Part III, Section 17 (1), p.10

<sup>10</sup> *Ibid*, Part III, Section 17 (4) (a), p.11

The Global Competitiveness Index (GCI) of 2019 ranked Jamaica 80<sup>th</sup> of 141 countries<sup>11</sup>, on the basis of 12 “pillars” of competitiveness. The lowest ranking was for security, 131 out of 141 countries, and homicides, in particular, at 140. There were very low rankings as well for E-participation (123), electricity supply quality (122), debt dynamics (114) and GDP in Public- Private Partnership (PPP) billions. On the other hand, Jamaica ranked high in Freedom of the Press (8), Government long-term vision (35), quality of vocational training (36), workers’ rights (31), ease of hiring foreign labour (32), ratio of wage and salaried female workers to male workers % (13), and time to start a business (7).

#### 1.1 (d) The Foreign Trade Policy

Jamaica’s Foreign Trade Policy, “pays close attention” to 11 sets of issues, including “Incorporating environment and climate change issues in trade and investment”,<sup>12</sup> which is an essential dimension to greening the economy. There is concern that “the Green Economy approach to development, agreed to at the 2012 United Nations Conference on Sustainable Development”,<sup>13</sup> could result in “barriers to trade being imposed on developing countries because of the lack of capacity to produce goods in keeping with the standards set”.<sup>14</sup> This has been a concern of developing countries since the concept was first articulated.

On the other hand, the Foreign Trade Policy set itself the objective of mitigating “the impact of climate change on foreign trade activities and [taking] advantage of green economy opportunities”.<sup>15</sup> The Policy addresses cross-cutting issues that relate to trade in goods and services, as well as trade-related areas and closely examines, *inter alia*, ‘incorporating environment and climate change issues in trade and investment’.<sup>11</sup>

The Policy also commits to ensuring that the growth of foreign trade supports the national commitment to sustainable development. From the perspective of greening the economy, the Policy allows for increasing the content of inputs for green investments and production and the export of green goods and services in the content of exports.

#### 1.1 (e) Financial Sector Development

There is a developing international consensus that financial inclusion is important for economic development. For example, evidence presented in the World Bank’s 2014 Global Financial Development Report found that financial inclusion (FI) - ‘typically defined as the proportion of individuals and firms that use financial services’<sup>16</sup> — is important for development and poverty reduction, and that the poor stand to benefit considerably from the use of basic payments, savings, and insurance services.’

The policy also commits to ensuring that the **growth of foreign trade** supports the **national** commitment to **sustainable development**.

<sup>11</sup> World Economic Forum, Global Competitiveness Report 2019, p.302.

[http://www3.weforum.org/docs/WEF\\_TheGlobalCompetitivenessReport2019.pdf](http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf)

<sup>12</sup> Ministry of Foreign Affairs and Foreign Trade, National Foreign Trade Policy: Positioning Jamaica to Increase Foreign Trade, October 2017, p.5-6

<sup>13</sup> Ibid, p.46

<sup>14</sup> Ibid, Footnote 29, p.46

<sup>15</sup> Ibid, p75

<sup>16</sup> Financial services can include any form of transaction, payment, savings, credit, and insurance

Similarly, for firms, particularly small and newly established enterprises, access to financial services is associated with stronger innovation, job creation, and growth performance.”<sup>17</sup>

In 2015, the Inter-American Development Bank (IDB) noted how low Jamaica was ranked in financial debt in the region<sup>18</sup> using the indicator, the ratio of credit to GDP. For example, Jamaica’s credit to GDP ratio was 29.9% in 2015 well below 11 CARICOM countries ranging from St. Lucia (89.6%) to Suriname (35.4%). The low ratio for access to finance reflects the difficulties of mobilizing domestic financial resources for investment in Jamaica, particularly finance for green investment.

In a study proposing a financial development index, Jamaica was ranked 94<sup>th</sup><sup>19</sup> of 183 countries, below 8 other CARICOM countries. The same study ranked Jamaica 117<sup>th</sup><sup>20</sup> of 183 in terms of financial institutions' access which was proxied by the number of bank branches and ATMs per 100,000 people.

A study of Financial Development and Inclusion in the Caribbean in 2018, pointed out the relatively high percentage of Jamaican households (78%)<sup>21</sup> with an account in a formal financial institution, contrasted with the relatively low percentage of households (11%) that accessed credit from formal financial institutions, lower than the average of 13% for Latin America and the Caribbean (LAC). Further, 30% of Jamaican households accessed informal credit which was relatively high for the LAC, a region with a high rate of informal credit. The authors noted that the financial development index rose from 1995 to 2013 but has since been declining.<sup>22</sup>

#### 1.1 (f) Labour Force

Green investments, and the activities they generate, will require new skill sets, as has been the case in many other countries. According to the International Labour Organization (ILO), “Today, skills gaps are already recognized as a major bottleneck in a number of sectors, such as renewable energy, energy and resource efficiency, renovation of buildings, construction, environmental services, manufacturing.”<sup>23</sup>



<sup>17</sup> Henry Mooney, Jamaica: Financial Development, Access, and Inclusion: Constraints and Options, DB, November 2018, p. 3, [https://publications.iadb.org/publications/english/document/Jamaica\\_Financial\\_Development\\_Access\\_and\\_Inclusion\\_Constraints\\_and\\_Options.pdf](https://publications.iadb.org/publications/english/document/Jamaica_Financial_Development_Access_and_Inclusion_Constraints_and_Options.pdf)

<sup>18</sup> Ibid, Table 1, p.13

<sup>19</sup> Katsiaryna Sviryzdenka, Introducing a New Broad-based Index of Financial Development, IMF Working Paper, WP/16/5, 2016, p.33, <https://www.imf.org/external/pubs/ft/wp/2016/wp1605.pdf>

<sup>20</sup> Ibid, p.37

<sup>21</sup> Chuan Li and Joyce Wong, Financial Development and Inclusion in the Caribbean IMF Working Paper. March 2018, <https://www.imf.org/en/Publications/WP/Issues/2018/03/13/Financial-Development-and-Inclusion-in-the-Caribbean-45689>, p.15

<sup>22</sup> Ibid, p.16, See Figure 12

<sup>23</sup> ILO, Skills for Green Jobs, [https://www.ilo.org/skills/projects/WCMS\\_115959/lang--en/index.htm](https://www.ilo.org/skills/projects/WCMS_115959/lang--en/index.htm)



The formal school system and Human Employment and Resource Training/National Service Training Agency Trust (HEART/NSTA Trust) have an obvious role to play in developing the labour force for the transition to a green economy. Jamaica ranked 36 out of 141 countries by the World Economic Forum's (WEF) GCI in quality of vocational training. There is a view that the Ministry of Labour and Social Security (MLSS) should be upgraded to play a major role in economic development policy since all economic activities pivot around a productive labour force with the requisite skills. The labour requirements for greening the economy are yet another reason for adding policymaking to the regulatory role of the MLSS.

Note that the youth unemployment rate has consistently been almost twice as high as the national unemployment rate for many years and was 20.2% in 2019 (16.8% for males and 24.5% for females). It should be noted that in 2022, both the national and youth unemployment rates declined, that is, 6.0% and 15.5%, respectively.<sup>24</sup> This represents a reservoir of labour for green investment projects.

#### 1.1 (g) Infrastructure

Jamaica was ranked 65<sup>th</sup> out of 141 countries in transport infrastructure on the GCI for 2019. Infrastructural development has dominated Jamaica's public investment

programme for the past decade. Highway construction, road and bridge rehabilitation and maintenance, fibre optic cabling, water and sewage, and airport development have been the main components of public investment in infrastructure. The Government has also promoted and partnered with private investors for the development of renewable energy resources, particularly wind and solar.

While cross-island road and coastal road trips have been dramatically shortened by better roads, urban congestion continues to be a challenge for public transport policy, and one of the constraints on productivity. Jamaica shares the problem of managing the influx of private motor vehicles that have outcompeted buses for mass transit with their speed.

Demand for the greening of transportation is growing and will likely accelerate with the increasing supply of electric-powered vehicles and electric recharging stations. The Minister of Science, Energy and Technology, the Hon. Daryl Vaz in his presentation at the Caribbean Renewable Energy Forum (CREF)<sup>24</sup> held in October 2020, '...hinted that Jamaica has set a goal that 10% of transportation should be powered by electric vehicles

**“ Demand for the greening of transportation is growing and will likely accelerate with the increasing supply of electric-powered vehicles.”**

<sup>24</sup>CARICOM Business Newsletter Vol. 5 No. 29

by 2030. In other words, one of every 10 vehicles on the road would be electric.”<sup>25</sup> This is in line with one of the principles of the National Energy Policy: “It will advance new, environmentally friendly technologies to increase energy supplies, particularly in the transport sector, and encourage cleaner, more efficient energy production, conversion and use.” To further promote the transition to electric mobility in Jamaica, in July 2022, several pieces of legislation were amended, namely the Custom Duty Tariff (Revision Amendment) Order, 2022; the Road Traffic (License Duties) Order, 2022; and the Road Traffic (License Duties) Resolution which resulted in a reduction of the import duties on electric vehicles of 3 years old or less from 30% to 10%. Additionally, in February 2022, Jamaica developed a Strategic Framework for Electric Mobility (e-mobility)<sup>26</sup> to assist in guiding the introduction of electric vehicles in the country. The Framework specifies, *inter alia*, e-mobility penetration targets:

- a) 12% of privately-owned fleet by 2030,
- b) 16% share of public transport operator fleets by 2030,
- c) 3 MTCO<sub>2</sub>e/q by 2030 of total direct emissions from the transportation sector.

A multi-stakeholder Electric Vehicle Council was also established to oversee the implementation of the Strategic Framework.

#### 1.1 (h) Telecommunications

One of the responses of public policy to the COVID-19 pandemic has been the commitment to accelerate the development of the digital economy. The Government continues to expand the fibre

network nationally and in this regard, Cabinet approved the granting of a licence to a third telecommunications service provider in 2021 to operate locally. One of the objectives of the digitization strategy is to build “a uniformed and robust national broadband infrastructure that enables the economy to make a dramatic shift in its competitiveness.”<sup>27</sup> Jamaica ranked 93<sup>rd</sup> out of 141 countries on Information and Communication Technology (ICT) adoption on the GCI.

In a review article on the impact of digitization on the green economy,<sup>28</sup> the central point made was that digitization enhances the use of information which facilitates the more efficient use of natural resources, and hence supports sustainable development.

In the case of Jamaica, this means specifically improving the efficiency of energy generation, distribution, and consumption; more efficient use of natural resources such as wind, solar, and water; the management of the impact of climate change; and greater inclusiveness. Universal access to the Internet will facilitate Micro, Small and Medium-sized Enterprises (MSMEs) to identify and use appropriately scaled technologies. This is the first step in investment strategies by MSMEs.

#### 1.1 (i) National Security

For many years, the crime rate in Jamaica has been cited as an obstacle to growth because it discourages investments, drives up security costs to producers, and limits the working hours for workers. The GCI in 2019 ranked Jamaica 131 out of 141 countries for crime and 140 for homicides in particular.



<sup>25</sup> JPS, Electric Vehicles in Jamaica – an economical option, <https://www.jpsco.com/electric-vehicles-in-jamaica-an-economical-option/>

<sup>26</sup> Inter-American Development Bank: Strategic Framework for Electric Mobility (Technical Corporation Number JA T1172-Sustaibale Transport and Renewable Energy-Powered Mobility)

<sup>27</sup> COVID-19 Economic Recovery Task Force “Rebuild Jamaica” - Final Report June 30, 2020, P.76

<sup>28</sup> Carmen Nadia Ciocoiu, Integrating Digital Economy And Green Economy: Opportunities For Sustainable Development, Theoretical and Empirical Researches in Urban Management 6(1): 33-43, February 2011,

National crime strategies now recognize that the underlying social factors for violent criminal activity have to be addressed for the long-term management of crime. Lack of employment and social exclusion are often cited as 2 of the main social factors. Green investments that provide employment and promote inclusiveness will contribute to efforts to improve the socio-economic conditions of at-risk youth.

Transparency International's Corruption Perception Index (CPI) ranks countries from 0 (highly corrupt) to 100 (cleanest) on how corrupt their public sector is perceived to be. Jamaica's rank increased from 2017 (68) to 2019 (74) out of 180 countries and slipped back to 69 in 2020. Perceptions of corruption have also been advanced over the years as discouraging investment in general. Over the past 10 years, various measures have been put in place to address corrupt practices, most notably the Integrity Commission set up by an Act of Parliament in 2017.

#### 1.1 (j) Energy Sector

Jamaica's energy sector attracted over US\$929 million in clean energy investments over the period from 2015 to 2021, and the country is viewed as a leader in the Caribbean for environmentally friendly energy sector developments. Renewable energy capacity increased from 42 megawatts (MW) in 2008 (when the first competitive procurement of renewable energy was launched) to 188 MW in 2020.

The utility-scale renewables portfolio includes approximately 29 MW of installed hydropower, 57 MW of solar photovoltaic plants and 102 MW of wind farms supplying energy to the Grid. The reliability of supply from the wind and solar systems is supported by Jamaica Public Service Company Limited's 24.5 MW flywheel and lithium-ion hybrid battery energy storage systems solutions, a first in the Caribbean region.

Liquefied Natural Gas (LNG) was introduced in 2016, to support the energy transition from heavy fuel oils to a low-carbon alternative. Currently, 402 MW of electricity is generated from LNG, with 307.5 MW representing plant modernization and

expansion projects, while the remainder relates to the retrofit of existing capacity.

Additionally, several private-sector manufacturing plants are being fuelled by LNG as the sector renews its core operation and production processes to compete in the global market.

The Ministry of Science, Energy and Technology (MSET) has conducted studies on renewable energy projects and energy efficiency investment opportunities for public buildings and renewable energy projects. Over US\$25 million has been invested in studies and retrofits over the period 2011 to 2017.

It should be noted that Jamaica has a relatively small carbon footprint as the economy is not heavily based on manufacturing, so overall energy choices should not reduce international competitiveness.

#### 1.1(k) Green Procurement

The Public Sector Procurement Policy is explicit in its support for aspects of greening the economy: "The Government will promote environmentally responsible procurement". In this regard, all goods and services to be supplied to the government must comply with environmental regulations and standards. These relate to pollution control and prevention, waste management, recycling and water and energy conservation. This requirement will be reflected as a special condition of contracts. Therefore, procuring entities should consider, *inter alia*, the life-cycle cost and performance over time as contained in the Government of Jamaica Environmental Guide to Green Procurement.<sup>29,30</sup>

"Green Procurement is purchasing goods and services that pose minimal or no threat to the natural environment or to health and purchasing goods from environmentally responsible sources."<sup>31</sup>

These ideas date back to 2010 and are still posted on the website of the Ministry of Finance and the Public Service (MOFPS) in 2022. Notice the commitment to a clearly defined notion of green procurement, but no targets for the percentage of procurements that should be green. The greening of the economy will be advanced by minimum targets for green procurements and redoubled efforts to implement this policy.

<sup>29</sup> Government of Jamaica, Public Sector Procurement Policy, Ministry of Finance and the Public Service, November 2010, p.10

<sup>30</sup> The Policy statement in 2010 referred to the Environmental Guide to Green Procurement that had been prepared under the Environment Action Programme (ENACT).

<sup>31</sup> 28 Ibid, p.22

## 1.2 Legislative Framework

The NIP identified the laws impacting investment to be those “pertaining to the creation of a business, as well as regulations on labour, taxes and incentives.”<sup>32</sup> The Companies Act, 2004 covers the registration and regulation of all companies operating in Jamaica. One of the principal business reforms carried out in recent years has focused on speeding up the process of registration. In 2019, the Companies Office of Jamaica launched an electronic business registration form. Further, the reorganization of the Companies Office is a goal of an ongoing major public sector project. This is one of the principal components of the Strategy to improve the ease of doing business, and in this way, improve the investment climate.

In addition to a comprehensive set of labour laws governing the rights of workers to organize,<sup>33</sup> regulations governing the conditions of work<sup>34</sup>, the termination of employment<sup>35</sup>, and special protection for female workers<sup>36</sup>, there is a dispute resolution mechanism institutionalized in the Industrial Disputes Tribunal<sup>37</sup> with a complementary Labour Relations Code. In the proposed Occupational Safety and Health Act, the definition of the worker has been widened. This law and its new definition will be aligned to the ILO’s Decent Work Agenda, which in turn, is aligned to Sustainable Development Goal (SDG)<sup>13</sup>. Jamaica is committed to implementing the Decent Work Agenda and achieving SDG<sup>13</sup>, along with the other SDGs. This will contribute to enhancing the inclusiveness of the economy, which is one dimension of the greening process for the Jamaican economy.

The Jamaican tax system has long been in transition toward a greater role for sales taxes, which shifts the burden of payment from firms. More recently, the tax authorities have been focusing on ease of payments and closing loopholes. Companies have found it easier to service their tax obligations and other statutory deductions as a result of the bundling of several deductions into one payment, and access to online payment systems. These reforms will benefit both investors in green and non-green investment projects by reducing the cost of doing business. On the other hand, policymakers must be alert to the impact of shifting the balance of taxation on purchasing power, and hence the demand for the supply of green and other products and services.

---

<sup>32</sup> NIP, p.23

[http://files.chinagoabroad.com/Public/uploads/content/files/201612/Incentives\\_in\\_Jamaica\\_Omnibus\\_Legislation.pdf](http://files.chinagoabroad.com/Public/uploads/content/files/201612/Incentives_in_Jamaica_Omnibus_Legislation.pdf)

<sup>33</sup> Trade Union Act, 1919

<sup>34</sup> Holiday with Pay Act, 1974, Minimum Wage Act, 1938,

<sup>35</sup> Employment (Termination and Redundancy Payment) Act, 1974

<sup>36</sup> Maternity Leave Act, 1979

<sup>37</sup> Labour Relations & Industrial Disputes Act (LRIDA), 1975 Labour Relations Code

Finally, there was a major change in the incentive legislation with the bundling of prior incentive legislation<sup>38</sup> into the Omnibus Incentives Act in 2014. The new incentive structure is no longer sector-specific and is aimed at encouraging efficiency, productivity, and hence competitiveness, by way of reducing the burden of import costs and corporate tax.

The Omnibus Incentives Regime offers incentives under 4 Acts:

The **Fiscal Incentives (Miscellaneous Provisions) Act, 2013** offers offsets to corporate income tax for small and medium-sized businesses by way of an employment tax credit and a capital allowance on industrial buildings. This Act supports the inclusiveness aspect of greening by way of encouraging small and medium entrepreneurs, especially with respect to the employment they provide. Under the **Income Tax Relief (Large-Scale Projects and Pioneer Industries) Act, 2014**, green enterprises will qualify readily as pioneer industries. A **Customs Tariff (Revision) (Amendment) (No.4) Resolution, 2013** targets manufacturing and creative industries with the provision of duty-free importation of capital equipment and raw material. Manufacturing of green products and/or manufacturing firms using green technologies should fit the requirements for these incentives. Even more likely to qualify are the creative industries. Finally, there is the **Stamp Duty Act, 1937** which targets manufacturing.

Outside of the Omnibus Incentives Regime, there are 3 other pieces of incentive legislation which can facilitate the greening of the economy, namely: The Special Economic Zones (SEZ) Act, 2012 which primarily governs manufacturing firms specializing in exports and facilitates their importation of inputs and equipment by both prioritizing their treatment by Customs and granting tax relief by way of incentives. Companies producing green goods – e.g., organic foods – could benefit from location in an SEZ. The Urban Renewal (Tax Relief) Act, 1995 provides incentives to firms that undertake development within the designated Special Development Areas. Investments in green buildings stand to benefit from these incentives.

The third piece of incentive legislation outside of the Omnibus Act is the Bauxite and Alumina Industries (Encouragement) Act, 1950 which relieves the industry of a wide range of taxes. Arguably, the incentives provided to this industry have been a significant factor in its growth and development. Greening this industry will be a major challenge. Consideration should be given to applying some of these incentives with green investments, especially in related or ancillary industries. 2 main bases for incentives are the provision of employment and enhanced productivity. A third basis should be the contribution of the investment to the greening of the economy. That contribution would refer to some minimum threshold of any of the 4 aspects of the definition of greening – low-carbon, efficient management of natural resources, mitigation of and adaptation to climate change, and inclusiveness.

---

<sup>38</sup> Fiscal Incentives (Miscellaneous Provisions) Act 2013, Income Tax Relief (Large Scale Projects and Pioneer Industries) Act, 2013, The Customs Tariff (Revision) Amendment Resolution 2013, Stamp Duty (Amendments of Schedule) Order 2013. See JAMPRO for incentives at:

### 1.3 Perspective of Selected Public and Private Sector Leaders

The perceptions of the investment climate by business leaders and leading government officials interviewed for this project range from fairly to moderately attractive. This view is reflected in the responses of the selected public and private sector leaders interviewed that are presented in **Table 2** below and the perceptions of the State Department of the United States of America (USA), the World Bank, Forbes Magazine, and International Business Machines Corporation’s (IBM) Global Location Trends are also summarized below.

**Table 2** below shows the number of public and private sector leaders interviewed who rated the investment climate, the investment policies and the supportive legislative framework according to the degree of attractiveness.

These leaders rated the investment policies that, in part, shape the investment climate as favourable to moderately favourable, and most of them agreed that the legislative framework was supportive of investment. The indicators used to assess the investment climate fell into the following broad categories:

1. **Government:**

- a. Macroeconomic stability
- b. Monetary and fiscal policy directions
- c. The regulatory environment
- d. Stable Government, Rule of Law and Protection of Investors’ Rights – e.g., ability of foreigners to own property, and repatriate profits

- a. Low-interest rate – less than 4% on US\$ loans
- b. Inflation rate
- c. Government setting out the legislative framework to support green energy

2. **Capital:**

- a. Ability to raise capital from financial markets
- b. Availability of special financing products

3. **Business Environment:**

- a. Number/volume of investments being made in Jamaica
- b. The increasing demand for products/services
- c. Ease of doing business
- d. Access to markets

4. **International Assessments:**

- a. Business Environment – World Bank’s Doing Business Criteria
- b. Global Competitiveness rankings
- c. IBM’s Global Location Trends for 2019
- d. Forbes’ ranking of countries by environment for doing business

5. **Labour: Access to quality labour, employment rate**

6. **Social: Crime rate, poverty rate**

7. **Location: Strategic for ports/logistics, near-shore outsourcing and tourism**

**Table 2.** Perspectives of Selected Public and Private Sector Leaders

	Very attractive	Moderately Fairly attractive	Fairly attractive	Unattractive	Unsure
Current investment climate is	1	3	3	1	
		Favourable	Moderately favourable	Unfavourable	Unsure
Investment policies are		3	4		1
	Strongly disagree	Disagree	Agree	Strongly agree	Unsure
Legislative framework is supportive of investment		1	6	1	

While these were perceptions of the economy as a whole, the assessment of the investment climate varied with sectors. In the case of the selected sectors that are the focus of this report, the energy sector, for example, is far more attractive than the water sector for several reasons. Most important is that the legislative framework governing the water sector is not as developed as the energy sector. A common drawback for both is the inability to secure returns from the sale of services, but this is much more the case for the water sector.

Even more frequently cited, as an obstacle to the investment climate is the high crime rate that leads both to higher security costs for enterprises and in some instances may restrict their operating times.

It is also true that the costs of environmental impact are external to enterprises. In recent years they are being recognized, and in some instances acknowledged, but estimating them is still elusive because of the lack of data.<sup>39</sup> Jamaica's principal foreign earnings have historically been derived from agricultural and mineral exports, both of which

rely on land and water, and most recently tourism based primarily on beaches and the marine inshore.

In an interview in January 2020, the President of the Private Sector Organization of Jamaica (PSOJ) said that in the wake of achieving macroeconomic stability, the organization's strategic efforts would target the improvement of the business environment. Its focus would be on "crime, human capital development, ease of doing business, direct investments, corruption and environmental sustainability."<sup>40</sup> There was a special concern for inefficient and bureaucratic public sector processes that impacted business negatively. The NIP had noted that "... over the last 10 years, Jamaica has implemented more than 50 business process reforms and legislation/policy changes ...". The implication of the statement of the President of the PSOJ was that there was more to be done as indicated by the strategic targets for improving the investment climate.

“ The **NIP** had noted that ‘... over the last 10 years, Jamaica has implemented more than **50** business process reforms and legislation/policy changes ... ’ ”

<sup>39</sup> Anthony McKenzie of NEPA advised that policy instruments have been instituted that cost developers as a result of the impact of their developments on the environment. Some of these are Performance bonds, Mitigation banking, Compensation costs for mitigation, and Discharge and emission fees. In addition, payment for ecosystems services and the water fund are initiatives which are currently being explored.

<sup>40</sup> McPherson Thompson, PSOJ has a 6-Prong strategy for 2020, January 10, 2020, <https://www.pressreader.com/jamaica/jamaica-gleaner/20200110/282269552335698>





#### 1.4 (b) World Bank

In a report<sup>43</sup> on a loan to Jamaica, the World Bank (WB) expressed concern about the slow improvement of the investment climate. It was making a case for the relevance of the loan-funded project's support for "three sets of reforms related to (i) contract enforcement, (ii) approval of building permits, and (iii) registration of MSMEs and their participation in the formal sector."<sup>44</sup> It argued that these had been identified as far back as 2010 as "areas of weakness in Jamaica's business climate". The thrust of the report is that the reforms had pushed the economy toward more protection for investors, some reduction in the informal economy, and more competitiveness, and in these senses, improved the investment climate.

This was also reflected in the improved ranking of the Jamaican economy in the World Bank's Doing Business Report<sup>45</sup> for 2019 (rank – 75 of 190 countries), and again in the Report for 2020 (rank – 71 of 190 countries), and in particular, Jamaica's ranking as No. 6 out of 190 countries for starting a business and No. 1 in the Caribbean for the ease of doing business. It should be noted however that in September 2021, the world Bank took the decision to discontinue its Doing Business Report.

Notwithstanding Jamaica's 2020 Doing Business ranking, the National Competitiveness Council, a joint public-private sector body hosted by JAMPRO, was charged with pushing for reforms to continue holding government agencies to their commitments to reduce bureaucracy to facilitate business.<sup>46</sup>

IBM's Global Location Trends for 2019 ranked Jamaica third in the world in terms of the number of jobs per million created by foreign investment. It noted that Jamaica "... has been particularly successful in positioning itself as a location for shared services centres in recent years, which accounts for the majority of the inward investment [it] receives."<sup>47</sup>

Forbes<sup>48</sup> ranked Jamaica 80<sup>th</sup> of 160 countries in December 2018 for doing business, ahead of Trinidad and Tobago, Barbados and Dominican Republic and all other CARICOM countries. The publication was most impressed by the reduction in the ratio of debt to GDP.

**“The thrust of the report is that the reforms had pushed the economy toward more **protection for investors**, some reduction in the **informal economy**, and more competitiveness, and in these senses, improved the **investment climate**.”**

<sup>43</sup> World Bank, Economic Stabilization and Foundations for Growth Development Policy Loan (DPL), Report No. 140619, September 19, 2019

<sup>44</sup> *ibid.*, p.10

<sup>45</sup> By way of caveat, external and internal criticism of the World Bank's Doing Business Report beginning in 2013, and intensified in 2018, led to the World Bank suspending the report in October 2020 pending a review of its methodology and data integrity. See A bad business: Bank divisions on Doing Business revealed, October 2, 2013, <https://www.brettonwoodsproject.org/2013/10/bad-business/>, and David Himbara, The Troubled World Banks 'Doing Business' Report is Even More Dubious in the African Context, October 3, 2020, <https://thegeopolitics.com/the-troubled-world-banks-doing-business-report-is-even-more-dubious-in-the-african-context/#:~:text=Why%20Doing%20Business%20was%20suspended,the%20last%20five%20annual%20reports.&text=the%20multilateral%20lender%20promised%20to,most%20affected%20by%20the%20irregularities>.

<sup>46</sup> Arthur Hall, Cutting Red Tape, The Jamaica Observer, October 26, 2019,

[http://www.jamaicaobserver.com/front-page/cutting-red-tape-gov-t-vows-to-reduce-bureaucracy-to-continue-improving-business-environment\\_178112?profile=1470](http://www.jamaicaobserver.com/front-page/cutting-red-tape-gov-t-vows-to-reduce-bureaucracy-to-continue-improving-business-environment_178112?profile=1470)

<sup>47</sup> IBM, Global Location Trends, - 2019 Annual Report: Trade Regulations and Digital Disruptions Affect the Economic Outlook, p.5, <https://www.ibm.com/downloads/cas/R9VW3VO5>

<sup>48</sup> Forbes, Best Countries for Business, <https://www.forbes.com/best-countries-for-business/list/#tab:overall>

## 1.5 Synthesis

The celebrated British economist, John Maynard Keynes famously used the metaphor “animal spirits”<sup>49</sup> to describe the motivation behind the decision to invest in a capitalist economy. He was referring to the perceptions of investors, and particularly their willingness to take risks in a given environment. In modern times, investors analyse the level and movement of a wide range of indicators in the process of decision-making. The most commonly used ones are the growth of the economy, the level and direction of change of interest rates, the exchange rate, wage rates, and tax rates. In the case of Jamaica, macroeconomic stability is a proxy for low and declining interest rates, declining public debt, stable and predictable exchange rates, and transparency in government policy, especially tax policy. Foreign and local investors differ in the relative importance of each

indicator. Foreign investors are less impacted by local interest rates, and declining exchange rates.

Beyond these common indicators, perceptions of the investment climate in Jamaica are also formed by the electricity/energy costs, the crime rate, and hence security costs, and the stability of the industrial relations climate. In recent years, the persistently high crime rate and the periodic instability of the exchange rate have tended to make investors cautious. On balance, there has been growing optimism particularly due to the declining national debt, and the consequent increase in the availability of credit for private investors, as a result of policy reforms in the successful implementation of 2 consecutive IMF stabilization agreements.

“In this report, **greening** is used to include **economic** processes that use marine resources, and/or protect the marine **environment.**”

<sup>49</sup> Perhaps, he was capturing the practice of classifying markets as bullish, in the sense of aggressive buying and selling, and bearish in the sense of caution on the part of buyers and sellers.

## 2. GREEN INVESTMENTS - DEFINITIONS

Intuitively, green investments refer to capital expenditure on projects that drive, support, or stimulate the greening of an economy. Greening, in turn, is increasingly recognized as processes that *reduce the carbon footprint of the economy, improve the management of natural resources, facilitate adaptation to climate change, and promote greater inclusiveness, or any subset of these*. Defining the concept of a green investment project rigorously is much less straightforward.

In this report, greening is used to include economic processes that use marine resources, and/or protect the marine environment. In this sense, greening embraces the considerations of the “Blue Economy”. As per the Maritime Areas Act 1996, Jamaica declared the status of an archipelagic state, which entitles the country to an Exclusive Economic Zone extending seaward up to 200 nautical miles. This grants Jamaica jurisdiction over the living and non-living marine resources, within this zone.<sup>50</sup> Jamaica’s development is predicated on its management of both its terrestrial and marine resources. As an archipelagic state, Jamaica has sovereignty over the area of the sea that is enclosed as internal waters.

### 2.1 International Perspectives

#### 2.1 (a) Organization for Economic Cooperation and Development

In 2011, a study conducted by the Organization for Economic Cooperation and Development (OECD) concluded that “There is no unique definition among investors of what green investing entails. However, for the purpose of the GEIS, “green” investments refer broadly to low-carbon and climate-resilient investments made in companies, projects and financial instruments that operate primarily in the renewable energy, clean technology, environmental technology or sustainability-related markets as well as those investments that are climate change specific.”<sup>51</sup>

The focus of the OECD was on energy and especially its impact on the environment.

A narrower definition that captures the spirit of the one the previous one was also used to inform another OECD study. Green investments referred to “FDI (Foreign Direct Investment) in environmental goods and services (EGS) sectors, and FDI in environmental-damage mitigation processes, i.e., use of cleaner and/or more energy-efficient technologies.”<sup>52</sup> Neither referred to investments to mitigate or adapt to climate change, nor investments to drive economic processes that were inclusive.

The OECD studies also define green growth as economic growth that reduces pollution and greenhouse gas emissions, minimizes waste and improves efficiency in the use of natural resources.<sup>53</sup> Implicitly, the investments that drive green growth are themselves green, and it is from these investments that the growth is characterized as green with respect to the impact on the environment and the use of natural resources. Here too, there is no mention of adaptation to climate change or promoting economic inclusiveness.

#### 2.1 (b) Deutsche Bank

The Deutsche Bank’s chart<sup>54</sup> of its climate change investment universe is reproduced below.

The emphasis here is clearly on petrocarbon use as energy, which implies the focus is on mitigating climate change rather than adapting to it. This is appropriate for large industrial economies which emit high volumes of carbon dioxide and other greenhouse gases. More relevant for small island developing economies which, like Jamaica, are marginal emitters of carbon dioxide, is adaptation to climate change.

<sup>50</sup> Subject to areas of joint cooperation with Columbia and Cuba.

<sup>51</sup> Della Croce et. al. 2011

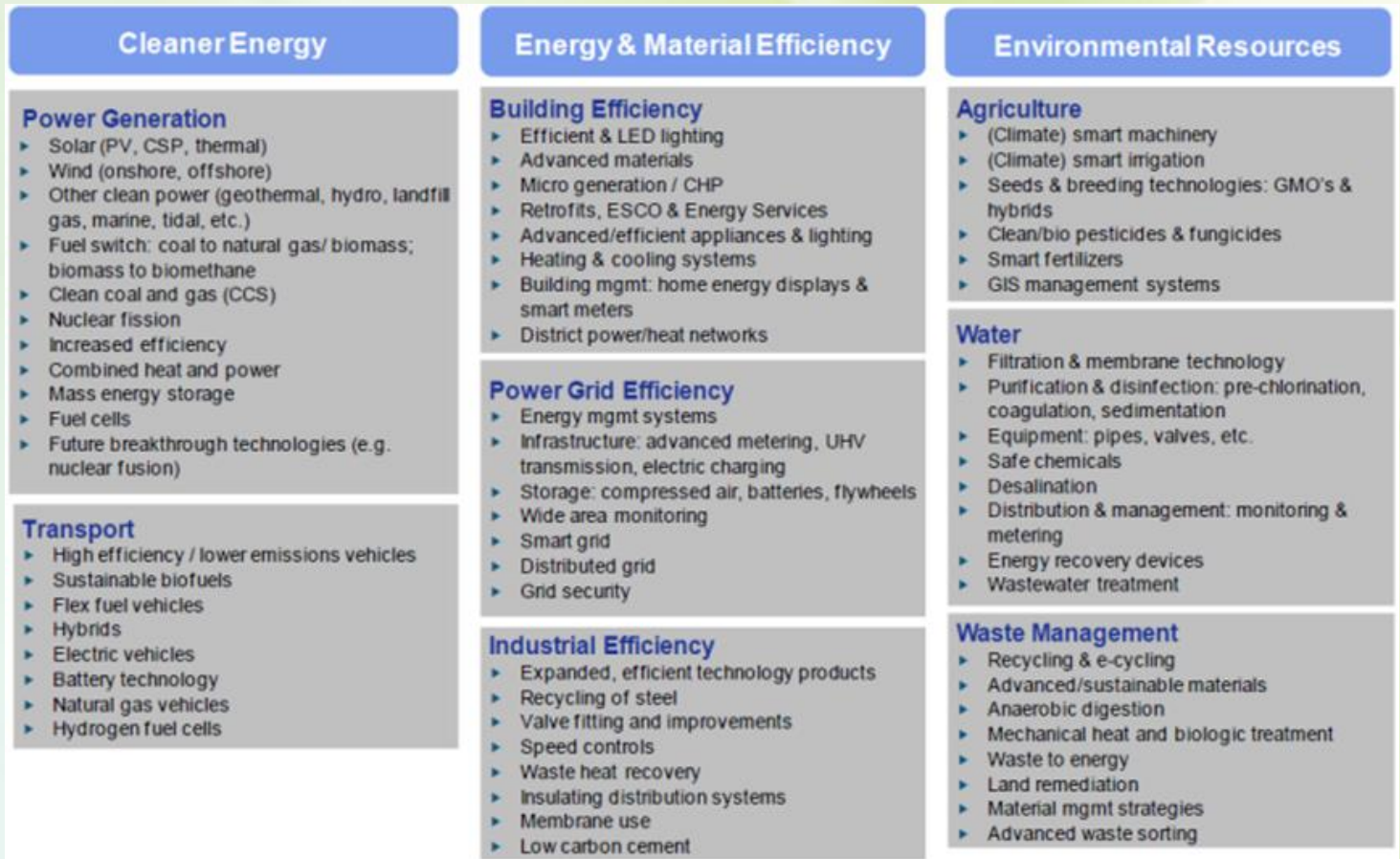
<sup>52</sup> Golub, S., Kauffmann, C., Yeres, Ph. (2011), “Defining and Measuring Green FDI: An Exploratory Review of Existing Work and Evidence”, OECD Working Papers on International Investment, No.

2011/2, OECD Investment Division, cited Defining and Measuring Green Investments: Implications for Institutional Investors’ Asset Allocations, OECD Working Papers on Finance, Insurance and private Pensions, no. 24, August 2012, p.10

<sup>53</sup> [https://www.oecd-ilibrary.org/environment/green-finance-and-investment\\_24090344](https://www.oecd-ilibrary.org/environment/green-finance-and-investment_24090344)

<sup>54</sup> Inderst, G et al, 2012, p.21

Figure 1: Deutsche Bank Climate Change Investment Universe



### 2.1 (c) United Nations Environment Programme

A United Nations Environment Program (UNEP) study<sup>55</sup> of the special challenges and opportunities faced by Small Island Developing States (SIDS) never uses the term “green investment” but it refers to investments that support the greening of the SIDS economies in several suggestive ways. Some examples are:

- Investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services (p.7)
- Investments in green industries (p.7)
- Investments that incorporate broader environmental and social criteria (p.7)
- Investment in ‘green’ technologies such as efficient fishing methods, energy-efficient refrigeration technologies and improved waste management in fish handling and processing (p.10)
- Investment in greening tourism (p.12)
- Investment in renewable energy and energy efficiency (p.17)
- Investment in renewable technologies and energy conservation (p.19)
- Investments in greening the waste sector (p.21)
- Investment in sustainable tourism (p.25)

### 2.1 (d) International Monetary Fund

An International Monetary Fund (IMF) Working Paper<sup>56</sup> referred to green investment as “the investment necessary to reduce greenhouse gas and air pollutant emissions, without significantly reducing the production and consumption of non-energy goods.”<sup>57</sup> It covered both public and private investment. It listed three main components of green investment: (i) Low-emission energy supply (including renewable energy, biofuels and nuclear); (ii) energy efficiency (in energy supply and energy-consuming sectors); and (iii) carbon capture and sequestration (including deforestation and agriculture). Note the extreme focus on energy and the absence of specific mention of inclusiveness.

In late 2020, the IMF proposed “a green investment stimulus—investments in clean public transportation, smart electricity grids to incorporate renewables into power generation, and retrofitting buildings to make them more energy efficient.”<sup>58</sup> The IMF argued that green investments will spur economic growth, increase employment and increase productivity in low-carbon sectors. This was particularly relevant to the early years of recovery from the COVID-19-induced economic crisis.

These examples indicate that green investments drive the greening process which is primarily associated with low-carbon economies that use resources efficiently. Here too, there is little emphasis on inclusiveness.

## 22 Some Global Best Practices

### 22 (a) Rwanda

In 2011, Rwanda drafted its green growth strategy, focusing on climate change and low-carbon development.<sup>59</sup>

Its strategic objectives were:

- i. To achieve energy security and a low-carbon energy supply that supports the development of green Industries and services.
- ii. To achieve sustainable land use and water resource management that results in food security, appropriate urban development and preservation of biodiversity and ecosystem services.
- iii. To achieve social protection, improved health and disaster risk reduction that reduces vulnerability to climate change.

Interestingly, objective ii goes beyond energy and natural resource management to address urban development, and specifically to build cities for pedestrians in Africa’s most densely populated country incorporating social inclusiveness.

<sup>55</sup> UNEP, SIDS Focused Green Economy: An Analysis of Challenges and Opportunities, 2012, [https://www.greengrowthknowledge.org/sites/default/files/downloads/resource/SIDS-focused\\_GE\\_An\\_Analysis\\_of\\_Challenges\\_and\\_Opportunities\\_UNEP.pdf](https://www.greengrowthknowledge.org/sites/default/files/downloads/resource/SIDS-focused_GE_An_Analysis_of_Challenges_and_Opportunities_UNEP.pdf)

<sup>56</sup> OECD Working Papers on Finance, Insurance and Private Pensions, no. 24, August 2012, p.11

citing Eyraud, L., Wane, A., Zhang, Ch., Clements, B. (2011), Who’s Going Green and Why? Trends and Determinants of Green Investment. IMF Working Paper WP/11/296

<sup>57</sup> Eyraud, L., et al (2011), p.5

<sup>58</sup> IMF Blog, Finding the Right Policy Mix to Safeguard our Climate, October 7, 2020, <https://blogs.imf.org/2020/10/07/finding-the-right-policy-mix-to-safeguard-our-climate/>

<sup>59</sup> Government of Rwanda, Green Growth and Climate Resilience National Strategy for Climate Change and Low Carbon Development

To finance the plan, the government set up the “Environment and Climate Change Fund – FONERWA – as a cross-sectoral financing mechanism to achieve development objectives of environmentally sustainable, climate resilient and green economic growth... FONERWA is the vehicle in Rwanda through which environment and climate change finance are channelled, programmed, disbursed and monitored.”<sup>60</sup> The strategy was to use FONERWA to leverage private investment for low-carbon initiatives.<sup>61</sup> It identified establishing feed-in tariffs and long-term power purchase agreements (PPAs)<sup>62</sup> as a principal incentive for private investments in energy, with a view to tapping into the ... Clean Development Mechanism and voluntary carbon markets [for funding] - for hydroelectric dams, geothermal power plants, efficient cookstoves and organic waste management ...”<sup>63</sup>.

## 22 (b) Indonesia

After 25 years of one of the highest rates of growth in the world, Indonesia decided in 2015, that “What is required is a new vision and a new approach to economic growth that values both human and natural capital. This new approach is green growth.”<sup>64</sup> It argued that “leaders must take action across the full range of policy, planning, and investment decision making ... to seek poverty reduction, social inclusion, environmental sustainability, and economic growth ... as the way forward to long-term prosperity ...”<sup>65</sup> The government prepared a “roadmap” in which it outlined green investments in target sectors – energy and manufacturing – as well as processes relevant to Indonesia, such as “connectivity” of the islands of the archipelago and renewable natural resources.

Indonesia also adopted the strategy of using public expenditure to leverage private green investments by way of offering incentives, especially for firms operating in its Green Special Economic Zones and developing a prioritized portfolio of green opportunities to steer private investments.

Note also, the explicit mention of poverty reduction and social inclusion.

<sup>60</sup> <http://www.fonerwa.org/backend/about>

<sup>62</sup> *ibid*, p.64

<sup>64</sup> Government of Indonesia, National Green Growth Roadmap for Indonesia: A synthesis for Policymakers, 2015, p.1, <http://ggi.org/wp-content/uploads/2016/06/Annex-1a-Example-of-Green-Growth-Strategy.pdf>

<sup>65</sup> *ibid*, p.2

## 22 (c) Costa Rica

Costa Rica has been celebrated internationally for its commitment to sustainable development. In 2009, the government pledged to be carbon neutral by 2021, one of the most aggressive targets of greening. Although this target was not met, Costa Rica has made significant strides and has pledged to achieve a zero net emissions economy by 2050.

Environmental protection is in line with the country’s constitution since the 1970s. Its commitment to sustainable development is based on protecting biodiversity, production of ecological services, and the development of a knowledge economy. It has eschewed extractive industries.

Its strategy for greening focuses on producing electricity from renewable sources, sustainable tourism, and electric vehicles for transport. However, its goal for renewable resources entails reducing its dependence on hydropower because of the enhanced vulnerability on water stresses with climate change.

In 2012, it already had a range of incentives to attract green investment, such as a mixture of funding, loans, tax relief for the acquisition of cleaner technologies, training for MSMEs, organic farming by MSMEs, and co-financing and tax exemptions for companies investing in increasing energy efficiency. However, there was no formal framework of policies for green investment.

Like Jamaica, the majority of the firms are MSMEs (95% in Costa Rica). Granoff et al., observed that “there appear to be no economy-wide interventions to promote green investment or innovation as part of Costa Rica’s private sector development initiatives”.<sup>66</sup> The paper noted that Costa Rica was lagging in terms of the business climate for green investment and innovation. However, the Ministry was in the process of preparing an industrial policy with the support of the country’s Chamber of Industries. It was expected that the industrial policy would address access to credit and finance for MSMEs, as well as fiscal incentives.

<sup>61</sup> *ibid*, p.vi

<sup>63</sup> *ibid*, p.vi

<sup>66</sup> Ilmi Granoff et al, Bridging Costa Rica’s Green Growth Gap, p.39

## 2.2 (d) Caribbean

### Barbados

Goal 4 of the 6 goals of Barbados' National Strategic Plan<sup>67</sup> is building a green economy, with a focus on protecting the environment, strengthening physical infrastructure and the “substantial use of renewable energy.”<sup>68</sup> “Green Barbados, a target goal of the 2007 – 2025 National Strategic Plan, seeks to transform the country into the cleanest, most environmentally advanced country in the world.”<sup>69</sup> However, the plan concentrates its discussion of investments under goal 5, Sustainable Growth, without specific reference to green investments.

### Dominica

Dominica, in the wake of the destruction by Hurricane Maria in 2017, prepared its National Resilience Development Strategy 2020 to become the first climate-resilient country in the world. The plan has a comprehensive vision that embraces the environment and socioeconomic development as an integrated whole, but no explicit investment strategy was articulated.

## 23 Green Investment – Toward a Definition

The consultations conducted in preparation for the GEIS with selected Jamaican business and public sector leaders indicate that green investments are interpreted in the narrower sense of projects having to do with renewable energy – and hence, the lowering of the carbon footprint – and minimizing the impact of economic activity on the environment. The GEIS will seek to broaden the concept to embrace projects that optimize the management of natural resources, especially land and water, and investment in economic activities that are inclusive. This standardized definition is reflected in the GOJ Chart of Accounts in section IV below, the examples of green investments reveal the narrow interpretation cited above. Definitions of green investments put forward by the interviewees are listed in the Appendix.

*Green investment is defined as capital expenditure that drives economic activities and processes that promote at least one of the aspects of greening – reducing the carbon footprint of the economy, enhancing the sustainability of the use of natural resources, facilitating adaptation to climate change, and promoting greater economic inclusiveness – without harming or hindering any of the other aspects of greening the economy. Whereas a green investment project is one where some officially stipulated minimum<sup>70</sup> share of the expenditure supports greening activities and processes.*

Very often greening of the economy refers to how some processes are carried out – say using energy from renewable sources instead of petrocarbons or using efficient management of the natural resources used. Other greening processes refer to the production of so-called “green” goods and services that enhance the environment, such as the conservation of forests or fisheries, or that are adaptations to climate change, such as sea defences. In Jamaica’s interpretation of greening, inclusiveness means that MSMEs are able to avail themselves of opportunities to supply goods and services to an investment project, and workers are able to get direct and indirect employment.

Green investments, therefore, are some of the principal drivers for sustainable development, in the literal sense of protecting the environment for future generations by ensuring that today’s economic processes use natural resources efficiently, and therefore use as little as necessary, so as to provide for the well-being of future generations.

It is important to note that reducing the intensity of carbon-based energy through more efficient use in production and consumption contributes to mitigating climate change as well.

<sup>67</sup> The National Strategic Plan of Barbados, 2006-2025, <https://www.greengrowthknowledge.org/sites/default/files/downloads/policy-database/BARBADOS%20National%20Strategic%20Plan%20282006-2025%29.pdf>

<sup>68</sup> *ibid*, p.35

<sup>69</sup> <https://www.totallybarbados.com/articles/investors-guide/barbados-renewable-energy-investments/#.X0ry5tNKg1J>

<sup>70</sup> This minimum will have to be prescribed, probably after wide consultations with the investor community, by the relevant MDA, such as the MIIC or the MOFPS.

## 3. GREEN INVESTMENTS – EXPERIENCE AND PROSPECTS

### 3.1 Greening the Economy

The importance of the GEIS derives from the commitment to building a green economy. This was set out as a central strategy in Vision 2030 to achieve the objective of making Jamaica “the place of choice to live, work, raise families and do business”. “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”.<sup>71</sup>

#### Energy

The National Energy Policy (2009-2030) encourages the prioritisation of renewable energy sources to achieve 20% of the energy share and 30% of the electricity share by 2030. In 2020, Jamaica’s renewable energy share of the overall energy mix was 11%, while the renewable share of the electricity sector’s energy generation was 13%.

The integration of LNG as a fuel for thermal plants has reduced the usage of higher carbon dioxide emitting heavy fuel oil. The daily consumption of petroleum has reduced from about 94,000 barrels per day in 2008 to 50,510 barrels per day in 2020, a forty-six percent (46%) reduction over 12 years.

- In 2020, MSET completed its Integrated Resource Plan (IRP). The IRP is a 20-year plan that maps Jamaica’s electricity generation investment landscape. Cabinet approved the Plan in February 2020. The intent of the Government is for the Generation Procurement Entity (GPE) to manage and administer the process for the procurement of new generation capacity utilizing competitive bidding. The Generation Procurement Entity (GPE) is preparing the rules and protocols for the addition of 513.5 MW of electricity generation capacity for the national grid. This procurement shall include the replacement of: 171.5 MW of existing generation capacity, and

- Renewable technologies such as:
  - 246.0 MW-268 MW of Solar/Wind Power,
  - 36.0 MW of Hydro-electric Power,
  - 18.0 MW-40 MW of energy from Waste electric power
  - 20 MW of Biomass electric power.

#### Agriculture

Aspects of greening have been included in the plans for several sectors. While there was no explicit mention of greening in the Vision 2030 sector plan for Agriculture, the plan targets sustainable development and the sustainable management of land and aquatic resources.<sup>72</sup> Further, sustainable agriculture is an essential component of GOJ’s sustainable rural development policy.<sup>73</sup>

Goal 6 of Vision 2030’s agriculture sector plan is an environmentally sustainable sector with 3 associated outcomes:

1. High Application of Environmental Standards and Good Agricultural Practices (GAPS)
2. Organic Farming as a Major Mode of Production
3. Strengthened Risk and Hazard Mitigation for the Sector<sup>74</sup>

<sup>71</sup> Vision 2030, p.199

<sup>72</sup> Vision 2030, Agriculture Sector Plan, p.20

<sup>73</sup> *ibid*, p.30

<sup>74</sup> *ibid*, p.48



## Construction

The new National Building Code - Jamaica (NBC) and the Building Act, 2018 established best practices to improve the efficiency of built works. Sustainability issues are specifically addressed in the Code.

These include: Energy Efficiency,<sup>75</sup> Material Selection,<sup>76</sup> Water Use Efficiency,<sup>77</sup> and Waste Disposal.<sup>78,79</sup> The National Housing Trust (NHT) now offers homeowners loans to install solar panels. With construction being so integral to economic growth, enhancing the rate of green investments in this sector should be a national priority.

## Tourism

A Master Plan for Sustainable Tourism was drafted in 2002, and one of its main objectives was environmental sustainability.<sup>80</sup> The Vision 2030 Tourism Sector Plan recognized the growing market demand for green tourism.<sup>81</sup> Certainly, the sector has prioritized efficient use of energy and water, originally driven by cost containment measures.

## Water

The new policy on water<sup>82</sup> updated the previous policy with the adoption of Integrated Water Resources Management and the commitment to “ensure adaptation and resilience to climate change and climate variability.” The guiding principles<sup>83</sup> of the policy speak directly to the sustainable management of water resources, and to equity within and across generations. These are:

1. Sustainability and Intergenerational Equity
2. Efficiency
3. Integrated Water Resources Management
4. Universal Access
5. Responsiveness to Gender and Vulnerable Groups

Integrated Water Resource Management refers to the holistic management of water, land and related resources. Two of its 12 policy measures are energy efficiency and rainwater harvesting. All these dimensions of the new National Water Sector Policy align the water sector with all aspects of the greening of the economy.

<sup>75</sup> The code stipulates use of International Energy Conservation Code (IECC)

<sup>76</sup> Use of Insulation, Selection of Non-hazardous materials

<sup>77</sup> International Plumbing Code

<sup>78</sup> International Private Sewage Disposal Code

<sup>79</sup> M. Witter et al, Green Economy – Scoping Study for Jamaica, 2014, p.34

<sup>80</sup> *ibid*, p.21

<sup>81</sup> Tourism Sector Plan, 2009-2030, p.25

<sup>82</sup> National Water Sector Policy and Implementation Plan, 2019, Ministry paper, no. 35/19

<sup>83</sup> Government of Jamaica, National Water Sector Policy and Implementation Plan 2019, p.2,[https://megjc.gov.jm/docs/policies/national\\_water\\_sector\\_policy\\_2019.pdf](https://megjc.gov.jm/docs/policies/national_water_sector_policy_2019.pdf)

### 3.2 International and Regional Context

Beyond commitments documented in the national development plan, and several sector plans and policy documents, the Government of Jamaica has committed the country under international and regional agreements. The most important international agreements that Jamaica has signed that facilitate and encourage green investments are:

1. *The Economic Partnership Agreement* with the European Union, which was signed by CARIFORUM<sup>84</sup> countries in 2008. This agreement restated the commitment of the parties to sustainable development in many places. It made special reference to sustainable tourism, to sustainable management of the resources for agriculture and fisheries, and to energy efficiency and the transition to renewable sources of energy. One chapter is dedicated to issues of the environment, in which, “The parties reaffirm that the principles of sustainable management of natural resources and the environment are to be applied and integrated at every level of their partnership, as part of their overriding commitment to sustainable development.”
2. *The Paris Agreement*, which was adopted at the Conference of the Parties (COP) 21 of the United Nations Framework Convention on Climate Change (UNFCCC) that sought to mobilize global support to keep the increase in the global temperature below 2 degrees Celsius above pre-industrial levels for the 21<sup>st</sup> century.
3. *The 2030 Agenda for Sustainable Development* which commits countries to implement strategies, policies and plans to achieve Sustainable Development Goals.
4. *The Convention on Biological Diversity (CBD)*, which Jamaica ratified in 1995, and the now completed National Strategy and Action Plan on Biological Diversity in Jamaica 2016-2021. The CBD is an international legal instrument for “the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.”<sup>85</sup> The CBD aims to protect the natural environment and to encourage/facilitate equitable access to all. As such, the objectives of greening the economy are aligned with the CBD.
5. *The Montreal Protocol on Substances that Deplete the Ozone Layer*, which Jamaica ratified in 1993, and since then, the country has achieved its commitments well ahead of schedule.<sup>86</sup> Jamaica phased out the use of CFCs<sup>87</sup> as early as 2006 through a series of projects in which the relevant business interests cooperated with the Government and is currently in the process/planning stages of phasing out HCFCs. This was one of Jamaica’s contributions to the global effort to address the depletion of the ozone layer.
6. *The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*, to which Jamaica has been a party since 2003. The Convention regulate the transboundary movement of hazardous wastes and other waste and ensure that they are managed in an environmentally sound manner. The protection of the environment that is central to greening the economy supports Jamaica’s commitment to the Basel Convention.

<sup>84</sup> <https://whc.unesco.org/en/convention/>

<sup>85</sup> CARIFORUM countries are CARICOM plus the Dominican Republic

<sup>86</sup> <https://www.un.org/en/observances/biological-diversity-day/convention#:~:text=The%20Convention%20on%20Biological%20Diversity,be,en%20ratified%20by%20196%20nations.>

<sup>87</sup> Jamaica Ahead Of Target On Eliminating Ozone Layer Depleting Substances, *The Gleaner*, September 12, 2019, <http://jamaica-gleaner.com/article/news/20190912/jamaica-ahead-target-eliminating-ozone-layer-depleting-substances#:~:text=The%20Montreal%20Protocol%2C%20which%20was,ahead%20of%20the%20protocol's%20schedule.>

7. *The Stockholm Convention on Persistent Organic Pollutants*, which Jamaica ratified in 2007. This Convention takes account of the Programme of Action for the Sustainable Development of SIDS, adopted in Barbados in 1994, and commits Parties to limit the production and use and ensure the environmentally sound disposal of a list of banned chemicals so as to protect the environment and human health.
8. *The Minamata Convention on Mercury* was ratified by Jamaica in 2017. This convention also seeks to protect the environment and human health from improper disposal of Mercury and compounds of mercury.
9. *The United Nations Educational, Scientific and Cultural Organization's (UNESCO) Convention on World Cultural and Natural Heritage*, which “recognizes the way in which *people interact with nature*, and the fundamental need to preserve the balance between the two”<sup>88</sup> Greening of the economy is also consistent with Jamaica’s commitment to this Convention, especially with regard to the protection of the environment and the inclusiveness of the economy and society.

---

<sup>88</sup> Hydrochlorofluorocarbon (HCFC) were used for refrigeration until it was discovered that they contributed to depletion of the ozone layer of the Earth’s atmosphere

Similarly, other relevant agreements that Jamaica has signed and/or ratified that facilitate and encourage green investments are the:

1. *Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean*; and the
2. *Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region 1983, and the Protocol Concerning Pollution from Land-Based Sources and Activities adopted in 1999 and entered into force in 2010.*

It is the commitment to greening the economy that logically requires commitment to stimulating and mobilizing green investments to drive the transformation of the economy.

### 3.3 The National Investment Policy and the Green Economy Investment Strategy

The National Investment Policy of Jamaica<sup>89</sup> summarizes the policy framework and the institutional means for implementing the policies, and proposes... a coordinated planning framework... that will support the “growth of a Green economy.”<sup>90</sup> In 2020, it was reported<sup>91</sup> that Jamaica was now an active participant in the Coalition of Finance Ministers for Climate Action, on the heels of the announcement of a “tougher” climate plan in its revised Nationally Determined Contribution to the gas emissions under the UNFCCC. One implication of this was the closer coordination between the MOFPS and the Ministry of Economic Growth and Job Creation (MEGJC) which has responsibility for the environment.<sup>92</sup> It is argued that the GEIS requires the integration of investment and environmental policy, and this closer coordination augurs well for that integration.

The first policy issue in the NIP is a “Coordinated National Approach to Sustainable Investment Planning”. The associated goal is “*To strengthen mechanisms*

*for a coordinated strategic investment planning framework that informs investment strategies, support inclusive sustainable economic development and is aligned to national development mechanisms.*”<sup>93</sup> Inclusive sustainable development captures the meaning of the greening of the economy for Jamaica. Accordingly, the NIP accommodates strategies for green investment, and the GEIS, in particular, will require and benefit from coordinated strategic investment planning.

The policy goal<sup>94</sup> for policy issue #6, “Access to Land and other GOJ Assets”, essentially speaks to land policy to support the greening of agriculture. The emphasis is on divestment of public lands, but with no additional regulations to guide the use of the land. The GEIS can complement and extend this goal with guidelines to optimize the management of land resources, particularly with respect to climate change and land use.

Policy issue #2 is “Business Process and Environment Reforms”. The goal for this policy issue is “To provide a streamlined customer-centric investor experience across Government that offers strategic guidelines to identify, facilitate and realize greater investments in the country through the deliberate efforts of government entities established to facilitate business”. This will be particularly important to green investments that will require as much facilitation as the Government can afford to offset the disadvantages in a capital market, and more generally an economy, that favours low-risk, high returns, and short-run investment projects. One of the main reforms is to reduce the time taken and the cost of the development application process through a one-stop shop in the form of a National Business Portal.

Policy issue #8 is “Incentivizing investments”, with the associated goal, “Maximize long-term benefits of private investments, where the benefits exceed the costs, and the cost of achieving given goals are

<sup>89</sup> The NIP is currently at the stage of a green paper, and not yet adopted officially.

<sup>90</sup> NIP, p.34

<sup>91</sup> Jamaica leads the way towards sustainable, green COVID-19 recovery

Wednesday, Jamaica Observer, August 05, 2020, [http://www.jamaicaobserver.com/latestnews/Jamaica\\_leads\\_the\\_way\\_towards\\_sustainable\\_green\\_COVID-19\\_recovery](http://www.jamaicaobserver.com/latestnews/Jamaica_leads_the_way_towards_sustainable_green_COVID-19_recovery)

<sup>92</sup> Responsibility for the environment has since been passed to the new Ministry of Economic Growth and Job Creation

<sup>93</sup> MICAFA, National Investment Policy of Jamaica: Green paper, July 2020, Table 1, p.7

<sup>94</sup> *ibid*, p7: “To improve the framework for sustainable, productive and equitable development, use and management of the country’s land resources and other GOJ assets.”

kept to their lowest feasible level.” This speaks directly to a principal characteristic of green investments, namely their long-term horizon. One of the recommendations for this policy goal is: “Explore other incentive mechanisms such as those that support sustainable development priorities including minimizing carbon footprints and other regimes.”<sup>95</sup> The focus here is on the narrower energy and environmental aspects of the greening of the economy.

These 4 of the 11 policy issues addressed by the NIP accommodate specific attention to green investments. The GEIS will fit seamlessly into the framework of the NIP, and potentially could migrate to the central thrust of the NIP. The GEIS should be inserted into the NIP, as well as become a central component of a strategy to green the Jamaican economy.<sup>96</sup> The NIP, in turn, should be inserted in Vision 2030. In addition, alignment with the GEIS should be a criterion for selecting projects for the Public Sector Investment Programme (PSIP).

The GEIS will also complement the National Policy on Environmental Management Systems (EMS) which seeks to “guide implementation, certification, monitoring and evaluation of EMS in all sectors of the economy.” Ideally, the National

Policy on EMS will be integrated within the overall management systems of firms and other relevant organizations, in much the same way that the GEIS should be integrated within the policymaking and implementation processes of the Government. Further, the policy will be a tool to guide investors on the risks that their projects present to the environment, and in that sense, is an enabler for the GEIS.

A pilot programme for the Green Business Jamaica (GBJ) Programme was launched in 2017, the same year as the National Policy on EMS, to expose participants who volunteered to “learn about and implement best practices in the area of environmental stewardship in an effort to sustain our natural resources and help towards reducing operational costs”<sup>97</sup>. It complements the EMS in the sense that it encourages businesses to implement environmentally friendly practices from which they and Jamaica will benefit, and for which they are rewarded with the “GBJ Ecolabel”. This can be displayed to indicate that they are doing their part to protect the environment and lower their carbon footprint. The Programme seeks to help businesses to reduce their costs while being environmentally responsible.

“It is argued that the **GEIS** requires the integration of **investment** and environmental policy, and this closer coordination augurs well for that **integration**.”

<sup>95</sup> Ibid, p.8

<sup>96</sup> Government of Jamaica, National Policy on Environmental Management Systems (EMS): in pursuit of a Green Economy, 2017, p. 10, <https://japarliament.gov.jm/attachments/article/1927/2018%20Green%20Paper%20-%20-%20National%20Policy%20on%20Environmental%20Management%20Systems.pdf>

<sup>97</sup> Informative Brief on Green Business Jamaica Pilot Programme

### 34 Green Investments– Some Jamaican Examples

**Table 3** below collates the examples of past investments perceived by the interviewees to be examples of green investments.

It is clear that energy projects dominated the set of projects perceived to be green. Note that there is only one example of a green investment in construction and no examples of green investments in tourism were cited, but there are many examples of buildings being designed for greater energy

efficiency. Digicel put forward its head office downtown Kingston as a green building, but Jamaica is yet to establish standards against which that claim can be measured. Several new communities are using energy- efficiency features as part of their marketing. Similarly, the UWI's Centre for sustainable development designed a building that is supposed to be a net-zero energy consumer. Many hotels have instituted alternative energy solutions for cost savings as well as in response to the increasing sensitivity of tourists to environmentally friendly facilities.

**Table 3:** Examples of Green Investments cited by the Interviewees

Example	Housing						
	Agriculture	Construction	Energy	Tourism	Water	Infrastructure	Other
Palisadoes Shoreline Protection Project						x	
Essex Valley Agricultural Development Project/ Essex Valley Irrigation Infrastructure Development Programme	x				x	x	
New Fortress Energy LNG Terminal			x				
Development of a third city		x				x	
Establishment of a waste transfer station							x-waste
Renewable Energy			x				
Climate Smart Agriculture	x						
Waste Management/Recycling							x-waste
Public Sector Energy Efficiency and Conservation Project			x				
JPS Solar Energy Plant			x				
JPS Natural Gas Plant			x				
Reforestation projects in the different mountain ranges					x		
Wind Energy			x				
LNG power plants			x				
Hydro power			x		x		
Yallahs/Hope Watershed Management Programme					x		
Disaster Vulnerability Reduction Programme							x-Disaster Reduction
Southern Plain Agricultural Development Project (irrigation) – Net Zero Energy Building	x		x			x	
Eight Rivers/Paradise Park Solar Farm (Westmoreland)			x				
Wigton Wind farm			x				
Blue Mountain Renewables			x				
<b>Total</b>	<b>3</b>	<b>1</b>	<b>12</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>Waste-2 Disaster Reduction -1</b>

Nor were there explicit examples cited for the tourism sector, but initiatives for energy and water efficiency have long been commonplace in that sector. International visitor demand has forced the sector to prioritize environmental concerns in both the facilities and the services provided.

Similarly, examples of what the interviewees perceived as potential green investments shown below in **Table 4** were overwhelmingly energy projects, again, with no examples of green investments in construction or tourism. Interestingly, 4 potential green financial investments were reported, as well as waste and infrastructure projects. Equally, surprising is that there was no mention of the green bond that the Jamaican Government intends to introduce. In June 2022, the Jamaica Stock Exchange launched a Green Climate Fund-financed project entitled ‘*Facilitating and Enabling Environment for a Caribbean Green Bond Listing on the Jamaica Stock Exchange*’. This Project aims to, *inter alia*, explore the debt capital market as a source of financing for climate resilience and low-carbon development in Jamaica.

A green bond<sup>98</sup> is a fixed-income instrument that raises capital primarily to be used on environmentally friendly and adaptation to climate change projects, such as renewable energy (solar, wind, hydro), clean air, clean water, climate

ecosystem, etc. Green bonds can take different forms, such as asset-backed bonds (for example, backed by residential solar leases and green mortgages), project bonds (ring-fenced to specific underlying green assets such as solar farms), and use of proceeds bonds or asset-backed bonds (revenue stream from issuers are collateral for the debt such as the fee on electricity bills for a utility using clean energy, etc.).

It is a form of financial instrument specifically designed to raise money for climate change-related and environmental projects. As such, it fits perfectly in the GEIS, as it would generate capital for a range of green investments (e.g., renewable energy, energy efficiency, sustainable water and wastewater management, clean transportation, climate change adaptation, green buildings, environmentally sustainable management of living natural resources and land use).

**“International visitor demand has forced the sector to prioritize environmental concerns in both the facilities and the services provided.”**

<sup>98</sup> Definition, courtesy of Jason Morris, Sygnus Group

**Table 4:** Potential Green Investments cited by the Interviewees

Example	Agriculture	Construction	Energy	Tourism	Water	Other
Green mortgages/home loans/auto loans– mortgages/ loans that meet a certain “green criterion” such as solar financing etc. with special rates; special rates for environmentally friendly vehicles						Finance
Private equity investments in wind, solar and biofuels through alternative investment programs						Finance
Clean energy investment index/green funds index – investable index that focuses on clean energy						Finance
Forestry restoration_	x					
Watershed Protection					x	
Transportation e.g., electric motor vehicles						Transport
Wigton Wind Farm Phase IV			x			
Waste to Energy Plant			x			Waste
Ocean Thermal Power Plant			x			
Waste to Energy Projects (e.g., NSWMA)						Waste
Plastic bottle recycling or repurposing (for exports)						Waste
Hydroelectricity plants			x			
DBJ Portfolio of renewable energy and energy efficiency loans			x			
Schools solar energy			x			
Offshore wind power facility			x			
Smart Infrastructure						Infrastructure
Southern Coastal Highway Project						Infrastructure
Rural Economic Development Initiative (REDI 2)	x					
Southern Plains Agricultural Development Programme	x					
Caribbean Green Bond						Finance
Electric vehicles			x			
Rainwater harvesting					x	
Renewable Energy opportunities in keeping with the Integrated Resource Plan			x			
Bamboo Projects – farming, manufacturing, etc.	x					
<b>Total</b>	4	0	9	0	2	Finance – 4 Infrastructure – 2 Waste -3 Transport - 1



Consultations<sup>99</sup> with experts in the construction sector suggested prefabricated building systems and the use of alternative building materials as potential green investments.

The survey of selected public and private sector leaders sought examples of investments in the transport and storage sectors that had been made in the past and potential ones for the future. The responses in **Table 5** are essentially construction projects for energy and water-saving features of structures.

Similarly, the use of previous surface material is probably more accurately classified as an example of potential green construction.

The GEIS outlines opportunities for investments in mitigating and adapting to climate change as green investments, though these were not cited as examples of green investments by any of the interviewees. **Table 6** below reports examples of actual and

potential investments in mitigating and adapting to climate change.

Here, again, the emphasis is on energy projects alone. Energy is a critical cost to producers and consumers and constitutes the largest single item in the annual import bill for the country. Energy is also perhaps the most commonly cited opportunity for greening because of the direct impact of carbon-based energy on the environment, as well as the global importance of the energy industries. In addition, the focus on energy derives from the mitigation concerns of the developed countries, which are the big emitters of carbon dioxide.

The GEIS will have to build a wider consciousness among the investor community about what constitutes a green project, with more focus on adaptation to climate change, the management of natural resources and enhancing economic inclusiveness.

**Table 5:** Examples of, and Opportunities for Green Investments in Transport and Storage

Examples of green investment in transport and storage
<p><i>Photovoltaics</i> for new /existing buildings e.g., Ocho Rios Fishing Village.</p> <p><i>Water conservation</i> measures such as rainwater collection systems and grey water reuse for irrigation of facilities e.g., Portmore Business Process Outsourcing (BPO) complex (i.e., use of green &amp; grey infrastructure).</p> <p>Modern warehousing solutions (with energy-efficient features) e.g., Kingston Logistics Park will reduce transportation costs by consolidating operations in near-port areas.</p>
Potential green investment opportunities in the transport and storage subsectors
<p>Increased use of windows, skylights, solar tubes or other strategies to increase the use of <i>natural light</i> within warehouses and offices.</p> <p>Pervious surface material such as gravel parking lots and grasscrete installation to reduce heat stress &amp; surface runoff e.g., as seen at Ocho Rios cruise terminal &amp; Portmore BPO.</p> <p><i>LNG</i> use – potential for cruise ship bunkering</p>

<sup>99</sup> Brian Bernal, Port Authority of Jamaica

**Table 6: Examples of Green Investments**

Energy Policies and Recent Project Completions, 2016 to 2020	MW	GWh/Year	Estimated CO2 Savings ('000 Tonnes/Year)	Recent Clean Energy Investments (US \$ '000)
<b>Modernized and Expanded Infrastructure</b>				
JPS/SJPC 190 MW Project	190.0	1,270	323	\$330
JPS Bogue 117.5 MW Project	117.5	785	200	\$22
NFE/SPHC 94 MW Project	94.0	472	120	\$300
<b>Renewable Energy Developments</b>				
Wigton Windfarm 62.7 MW project, with recent 24 MW expansion	62.7	169	129	\$45
Blue Mountain Renewables LLC 36.6 MW Wind Energy Project	36.6	97	66	\$90
WRB 20 MW Solar Project	20.0	44	35	\$60
Eight Rivers Energy Company 37 MW Solar Project	37.0	80	65	\$60
24.5 MW Hybrid energy flywheel and Lithium-Ion Battery Storage Project	24.5	-	-	\$22
<b>Total</b>	<b>582.3 MW</b>	<b>2,917 GWh/Year</b>	<b>938 tonnes/Year</b>	<b>US\$929</b>
<b>Other Mitigation projects in the past 10 years</b>				
Grand Palladium Resort solar PV plant: US\$3.4 million				
BMR Wind Farm: US\$90 million – 34MW				
WRB Content Solar farm: US\$62 – 20MW				
<b>Mitigation projects - opportunities</b>				
Biogas facilities for farmers				
Tyre incineration for cement production and other identified activities				
Biodiesel blend as fuel in transport sector				

## 4. THE GREEN ECONOMY INVESTMENT STRATEGY

### 4.1 Timeframe

Recall the definition of a green investment that will inform the GEIS was:

*Green investments are capital expenditures that drive economic processes that promote at least one of the aspects of greening – reducing the carbon footprint of the economy, enhancing the sustainability of the use of natural resources, facilitating adaptation to climate change, and promoting greater economic inclusiveness – without harming or hindering any of the other aspects of greening the economy.*

A green investment project is an investment project in which some officially stipulated expenditure supports one of the four aspects of greening identified in the preceding sentence.

The GEIS should extend at least as far as Vision 2030, if it is to become a central theme of the national development plan. At present, it will be limited to 2030, but presumably, Vision 2030 itself will be reviewed and probably both Vision 2030 and the GEIS will be extended to 2050.

### 4.2 Goal

The GEIS will seek to shift the national investment process toward a great percentage of investment flows that support the greening of the economy.

### 4.3 Strategic Objectives

The strategic objectives of the GEIS have been consolidated into the following 5 broad objectives:

1. Integrate environmental considerations into investment decisions.
  - a. Enhance productivity by creating incentives for greater efficiency in the use of natural resources, allocating resources to the highest value use, reducing waste and energy consumption, and unlocking opportunities for innovation and value creation. Beyond efficient use of natural resources, investors should be encouraged to programme as much waste from each cycle of the production process as inputs into the next production cycle. This is the essence of the circular economy.
2. Reduce Jamaica's carbon footprint.
  - a. Reduce greenhouse gas emissions.
  - b. Reduce reliance on fossil fuels.
  - c. Promote the development of renewable energy resources.
3. Ensure economic sustainability and climate-change resilience.
  - a. Build environmental, economic and social resilience.
  - b. Align the strategy for greening with the United Nations Sustainable Development Goals.
4. Adapt to climate change.
  - a. Encourage investments in sea defences and relocation of facilities further from the shore.
  - b. Partner with large and small farmers in land development to manage both drought and flood conditions arising from extremes in precipitation.
  - c. Promote research in climate-resilient varieties and species of animals and plants that sustain the national food supply.
5. Encourage investment in projects that have a low negative environmental impact.
  - c. Encourage firms to adopt Environmental, Social and Governance (ESG) criteria<sup>100</sup> for assessing investment projects and making themselves eligible for investors seeking firms that adopt ESG. The EMS policy is already a first step in this direction.
  - d. Encourage financial institutions to adopt the Equator Principles<sup>101</sup> (EP) risk management framework for assessing investment projects that they finance. The 3 foreign-based commercial banks have already committed to EP<sup>102</sup> in their home countries, and therefore should be ready to adopt them in Jamaica.
  - e. Ensure that projects have minimum green components.
  - f. Include greening as a criterion for projects in the assessment by the Public Investment Management Committee (PIMC) for inclusion in the PSIP.
  - g. Protect the natural resources of the country, while fostering a competitive and sustainable economy.

<sup>100</sup> See James Chen, Environmental, Social and Governance (ESG) Criteria, March 5, 2021, <https://www.investopedia.com/terms/e/environmental-social-and-governance-esg-criteria.asp>

<sup>101</sup> See Review of the Equator Principles on the Equator Principles website, <https://equator-principles.com/ep4/>

<sup>102</sup> These banks committed to EP as far back as 2003. See Equator Principles, <https://equator-principles.com/members-reporting/>

5. Promote economic inclusiveness
  - a. Incentivize and support MSMEs.
  - b. Employment creation in compliance with the commitment<sup>103</sup> to the ILO's Decent Work Agenda, and to Sustainable Development Goal (SDG) 8.

Beyond these objectives, the GEIS could also serve the purposes of:

- i. Boosting investor confidence through greater predictability in how the Government of Jamaica deals with major environmental issues.
- ii. Opening up new markets by stimulating demand for green goods, services and technologies.
- iii. Raising awareness of the importance of 'greening' the economy.

By way of synthesis, the Green Economy Investment Strategy seeks to mobilize investments for the greening of the Jamaican economy to drive the process of transforming the current economy into a green economy. That process will seek to substitute renewable sources of energy for petrocarbons; optimize the management of natural resources, particularly land and water; promote adaptations to climate change and enhance the inclusiveness of the economy. Green investments are those capital expenditure projects that drive the processes of greening.

#### 4.4 Strategic Directions

The processes to achieve the objectives of the GEIS are outlined below.

1. *Ensure macroeconomic and social stability*, which are fundamental necessities to all forms of investment.

The processes to ensure macroeconomic and social stability should be mutually reinforcing. Some macroeconomic policies can increase social inequality, and thereby undermine the economic conditions for social stability. Conversely, public expenditure to redress social needs can pressure public finances, one of the main pillars of macroeconomic stability. The challenge is to find the appropriate balance so that macroeconomic and social stability can together contribute to maintaining a welcoming investment climate. Efforts to increase the efficiency and effectiveness of public expenditure will enhance the Government's capabilities of finding such a balance, since it will allow for reallocation of some resources committed to non-debt expenditure.

2. *Continue and accelerate reforms to enhance the ease of doing business.*

The Government of Jamaica has committed to reducing the bureaucracy that businesses have to navigate at great cost and enhancing the efficiency of regulatory processes. Toward this end, several far-reaching projects have been implemented. However, there is more to be done, and the pace of implementation should be accelerated.

3. *Raise the priority level of greening in all aspects of public policy.*

As far as possible, public investments should contribute directly to at least one aspect of greening, without hampering the pursuit of any other aspect of greening. A target for the percentage of green investments in the capital budget of each year of the public sector investment programme will help to guide public expenditure toward greening the economy. Similarly, a minimum share of the annual public procurements allocated to green goods and services will help to stimulate demand.

Beyond public expenditure, the regulatory practices of the MDAs can send important signals to encourage greening. For example, efficient energy consumption in government buildings, procurement of goods and services and vehicles can make a significant contribution to reducing the carbon footprint. Similarly, all public policies should mainstream climate change adaptation. Each MDA's budget should show what percentage of the MDA's expenditure of money and human effort contributes to greening the economy.

4. *Coordinate policymaking and implementation.*

Establish the appropriate institutional framework that facilitates improved cooperation, especially among public entities responsible for investment and the environment. In addition to inter-ministerial committees, Cabinet sub-committees, memoranda of understanding among ministries, and other modes of cooperation among ministries, joint programming of ministerial activities will advance the level and modes of cooperation among MDAs. The annual budget of MDAs should consist of the component reserved for the Ministry's portfolio functions proper and the other component would consist of joint activities with other MDAs. For such joint activities, the permanent secretary of one of the cooperating ministries should be assigned the task by the Office of the Prime Minister of driving the programme of cooperation. This will be especially important for cross-cutting issues such as greening the economy.

<sup>103</sup> Government Committed to Decent Work Agenda – PM Holness, June 12, 2019, News from the OPM, <https://opm.gov.jm/news/government-committed-to-decent-work-agenda-pm-holness/>

5. *Promote greening.*

- a. Promote the adoption of sustainable consumption and production practices by the private sector.
- b. Provide support to enterprises — in particular MSMEs — in areas such as resource-efficiency, eco-innovation, certification, access to finance, networking, and other areas of capacity building. In building the capacity of MSMEs, specific industry actors should be identified and targeted using a customized approach for maximum impact.
- c. Promote the opportunities and the benefits/returns of green investments.
- d. Execute promotional campaigns through relevant entities such as JAMPRO, the National Environment and Planning Agency (NEPA), the Jamaica Tourist Board (JTB), the Ministry of Industry, Investment and Commerce (MIIC), the Ministry of Agriculture and Fisheries (MOAF), the Ministry of Tourism (MOT) and the Jamaica Information Service (JIS).
- e. Promote environmental accounting practices which incorporate the cost of externalities such as pollution into companies' accounts and financial statements.
- f. Implement robotics and artificial intelligence for some processes would aid in improving advances of new technologies relevant to the Jamaican economy.
- g. Forge bilateral and multilateral partnerships to promote technical assistance and technology transfer, which will aid in green economic growth.

6. *Provide incentives for green investments.*

- a. Promote greening to businesses, including those which have been benefitting from incentives and guarantees for non-green investments. Such beneficiaries should be encouraged to shift the public support they are already receiving to green investment projects. For example, credits for employment and duty concessions should be applied to new green projects. Incentives to the tourism sector can support investments in sea defences as well as energy saving.

- b. Reform the structure of incentives to support the promotion of green investments, by privileging green investment projects. Also, incentives should be structured to improve competitiveness and be attractive to investors.
- c. Develop effective policy tools, such as permits, to guide economic actors to incorporate environmental factors in their decision-making process.
- d. Utilize the Omnibus Incentive Regime for the manufacturing sector once the established criteria of substantial transformation from raw materials to final product is satisfied to access duty concessions (20% initial allowance on capital expenditure)
- e. Promote the development of renewable energy resources (wind, hydropower, bioenergy, ocean energy and solar), by providing incentives for projects, equipment, and technologies.

7. *Incorporate greening in public investment.*

- a. Encourage packaging of green projects for Public- Private Partnership (PPP), and orient PPP policies to favour green investments.
- b. Establish a criterion in the Public Investment Management System (PIMS) review process that requires a green component in projects submitted for inclusion in the PSIP.

8. *Foster green financing schemes.*

- a. Position the Development Bank of Jamaica as the public sector institution to raise and channel international finance for greening.
- b. Establish financial mechanisms to support the growth of green investment activities, e.g., Bilateral and multilateral partnerships should be negotiated to incorporate investor responsibilities for Green Investment Funds, Green Stock Exchange, and Green Bonds. Target infrastructure that has minimal negative environmental impacts.

#### 9. Transform the energy sector.

- a. Prioritize the transitioning and transformation of the energy sector away from fossil fuels to lower, carbon-emitting LNG and renewable energy sources. Additionally, there is a need to transition the transport sector from the current use of internal combustion engines (ICE) to cleaner hybrids and electric vehicles.
- b. Facilitate investments in distributed renewable energy, through the Net Billing Programme, which allows self-generators to sell excess electricity to the JPS at a rate defined by the Office of Utilities Regulation. The Net Billing Programme applies to renewable energy systems of up to 10 kW for residential customers, and 100 kW for commercial customers. As of December 2021, the Programme has over 910 licenced self-generators, with a total capacity of 22 MW.
- c. Forge and maintain bipartisan consensus on energy policy.
- d. A cost-benefit analysis should be conducted in determining the use of energy sources for different sectors, taking into consideration environmental externalities and the distorting effects of local and international subsidies.

#### 10. Develop relevant social programmes.

- a. Pursue greater social investment initiatives/projects to enable social security by way of improved job opportunities, living conditions and the general quality of life for ordinary citizens.
- b. Incorporate the training and capacity building in green technology in the formal education and training architecture.

- c. Expand the Ministry of Agriculture and Fisheries' initiative that aims to enhance community-based climate resilience among fishing, and fish farming communities.

*11. Foster research in the various aspects of greening.* Establish a research and technological development strategy/plan in cooperation with the relevant local tertiary educational institutions and cultivate cooperative relations with international institutions on research issues of relevance to Jamaica's efforts at greening. For example, cooperation among the Climate Studies Group at The University of the West Indies (UWI) at Mona, the Institute of Meteorology in Cuba (INSMET), the National Oceanic and Atmospheric Administration (NOAA) in the United States of America, and the Caribbean Disaster Emergency Management Agency (CDEMA) in Barbados has already proven to be of great benefit to capacity building in climate change adaptation. Graduate research programmes in tertiary Institutions should be strongly encouraged to work on research projects that support the 4 aspects of greening.

By way of synthesis, these ideas suggest that the Government of Jamaica should promote green investments and facilitate their implementation in a broad partnership with foreign and local investors. This is consistent with the general approach set out in the NIP. The essential challenge will be to reduce the risks and reduce the costs of capital of doing business while raising the rate of return on green investments. Investing in risky ventures with costly capital for long-term returns is a departure from a tradition of low-risk investments that earn high returns in the short run. Public policy will have to be shifted deliberately in support of green investments, and investors encouraged to pursue a broader set of objectives than high short-term returns.

The suggestions for the GEIS resonate with the following framework put forward in one of the studies on green investment undertaken by the OECD:

- (1) Goal setting and aligning policies across and within levels of Government. This includes a clear, long-term vision and targets for infrastructure and climate change; policy alignment and multilevel governance, including stakeholder engagement.
- (2) Reforming policies to enable investment and strengthen market incentives for a Low-carbon Climate Resilient (LCR) infrastructure. This includes sound investment policies to create open and competitive markets, market-based and regulatory policies to “put a price on carbon”, remove harmful subsidies and correct market failures.
- (3) Establishing specific financial policies, regulations, tools and instruments that provide transitional support for new green technologies; including financial reforms to support long-term investment and insurance markets; innovative financial mechanisms to reduce risk or increase market liquidity; transitional direct support for LCR investment, including training programmes for workers.
- (4) Harnessing resources and building capacity. This includes R&D for green technology; human and institutional capacity building to support LCR innovation; adapting existing technology; monitoring and enforcement; and climate risk and vulnerability assessment.
- (5) Promoting green business and consumer behaviour. This includes information policies; corporate reporting and consumer awareness programmes; and public outreach.<sup>104</sup>

All of these are relevant to Jamaica’s GEIS, though the emphases will differ. For example, Jamaica’s NIP lists “public sector cohesiveness” as one of its guiding principles.<sup>105</sup> It goes on to detail a “coordinated national approach to sustainable investment planning” around the main policy issues and their goals that the NIP identifies. Both of these are similar in thrust to items (1) and (2) in the OECD framework.

This OECD framework is clearly articulated around the mitigation of climate change. As a small

economy, Jamaica emits marginal quantities of greenhouse gases into the atmosphere compared to the large, developed countries, but is disproportionately impacted negatively by climate change. Accordingly, public policy should address both mitigation and adaptation while prioritizing adaptation. This will demand public investment, and where appropriate, such as in the tourism sector, public-private partnerships to mobilize the necessary resources. This approach should go beyond large projects to networks of mini projects, again where appropriate, such as land management. There are several areas of investment in production, marketing, storage, and processing that are amenable to partnerships between the State and large and small farmers.

In Jamaica, one of the fundamental challenges to the GEIS is access to capital. The current Growth Inducement Strategy adopted 6 “guiding principles” of which the first was, “Unleash entrepreneurial dynamism by unlocking latent wealth tied up in idle assets”. The GEIS should complement the NIP and aim to mobilize the investment resources of the many small and medium entrepreneurs as well, while encouraging shifts away from traditional investment outlets that promise short-run, low-risk returns.

Targeted research and development projects that are within the capabilities of Jamaican scientists both here and in the diaspora, such as heat-resistant varieties of plants and animals, should be prioritized. Recall that T.P. Lecky developed the Jamaica Hope, a breed of cattle adapted to Jamaican environmental conditions, almost 70 years ago. Surely, the advances in the scientific capabilities in Jamaica and the global pool of accessible knowledge can enable a relevant R&D programme under the umbrella of adaptation to climate change.

The OECD framework calls for building capacity in human beings as well through education. The long-standing demand for a relevant education is increasingly urgent in the face of the imperatives of both international competitiveness and adaptation to climate change. Green investments require non-traditional skills as well as repurposed traditional skills.

Most relevant for Jamaica is for the GEIS to promote economic inclusiveness. Facilitating micro, small and medium-sized entrepreneurs as well as training a workforce with the required skills will position the GEIS to extend the NIP in this dimension. New employment opportunities should

<sup>104</sup> Jan Corfee-Morlot, Virginie Marchal, Céline Kauffmann, Christopher Kennedy, Fiona Stewart, Christopher Kaminker, Geraldine Ang, *Toward a Green Investment Policy Framework: the Case for Low-Carbon climate-resilient infrastructure*, OECD Environment Working Papers No. 48, November 2012, p.

<sup>105</sup> NIP, p.32

offer decent working conditions in the broad sense outlined by the ILO.

#### 4.5 Risks<sup>106</sup> to Green Investment

The World Economic Forum outlined 5 broad categories of risks that have to be managed to lure private capital into green investments.

*Political risks*, such as a change in government resulting in policy changes that impact the viability of green investments negatively. Jamaica's political history has seen much more political stability than instability, and there is increasing consensus for bipartisan commitments to policies for central development issues such as education and health. The Energy Policy and the Climate Change Policy Framework fit naturally into this consensus. There is also bipartisan support for the SDGs which speak to sustainable management of natural resources and reducing inequality. Indeed, there is virtual national consensus on achieving the 4 aspects of a green economy.

*Macroeconomic risks* have declined to very low levels in recent years. Investors see many indicators of macroeconomic stability, such as the low-interest rate, the marginal fiscal deficit, the steady progress in reducing the national debt, and ample international reserves. Again, many years of IMF stabilization and World Bank structural adjustment loans have shaped the bipartisan consensus on macroeconomic policy. This has facilitated both the reality and the perception of low macroeconomic risks. This bipartisan consensus will be especially important in the economic recovery from the crisis precipitated by COVID-19 in early 2020. It will, of course, come under the strains of maintaining macroeconomic stability in the face of the need for relief from all sections of society.

*Policy risks* arising from sudden changes in public policy are quite low in Jamaica because of the informal consensus between the two major political parties on public policy. Like the macroeconomic risks, these have declined over the last 2 decades in Jamaica. Restraints on public expenditure do come under pressure in the context of elections, but the profligacy of the past has been avoided in recent elections. A major area of risk is the management of the market for foreign exchange. The market has largely been

orderly in recent years, but periodically speculative bursts put pressure on exchange rates. In these times, there are calls from important interest groups for changes in foreign exchange policy.

*Technology and operational-related risks* that emerge from technological change. As an importer of technology, with no significant indigenous authentic technological capacity, that risk is outside of the control of the local authorities and affects traditional as well as green investments. Managing these risks requires constant monitoring of the implementation of existing technology, and the advances of new technologies relevant to the Jamaican economy. The research establishment in the tertiary institutions can collaborate with the Government to manage these risks.

An area of rapid change that is yet to get adequate attention is artificial intelligence. Robotization of production processes, 3-D printing and information and communication technologies are eliminating low-tech jobs. In Jamaica, banking and distribution are examples of the rapid technological changes that have displaced clerical staff.

In addition to these risks, the World Economic Forum lists "*Capacity risks*" as those that pertain to institutions and governments being "unable to ensure funding is disbursed to projects and utilized." Government processes for project implementation and the monitoring of the implementation are being strengthened as an essential element of public sector reform projects. The implementation of a public investment management system is underway, with the promise to allow more agile decision-making with respect to public investment projects.

There is yet a 6<sup>th</sup> risk based on the historical and cultural patterns of post-Independence Jamaica. *It is the tyranny of the immediate*, the desire for immediate results which generates a preference for short-term over long-term actions. It arises in part from the social and economic deficits that the majority of the population faces daily, and in part from the tradition of short-run returns to investment in the production of exports for protected markets and in the distribution of consumer goods. In times of crises precipitated by natural disasters or global recessions, short-run solutions are more attractive for a speedy recovery. These habits make it difficult for Jamaican investors to undertake high-

<sup>106</sup> Classification of risks adapted from World Economic Forum, The Green Investment Report The ways and means to unlock private finance for green growth

A Report of the Green Growth Action Alliance, 2015

[http://www3.weforum.org/docs/WEF\\_GreenInvestment\\_Report\\_2013.pdf](http://www3.weforum.org/docs/WEF_GreenInvestment_Report_2013.pdf)



risk investments in projects that promise modest returns over a longer period when there are opportunities in traditional investment areas. The pressure to provide jobs and earn hard currency to meet immediate needs skews public and private investment to traditional areas that bring quick returns. The GEIS will have to manage this risk as well.

The challenge for public policy is to collaborate with the private sector to mitigate all the risks of all investments, including green investments, and traditionally, public policy has cooperated with investors to ensure profitability.

A more committed investor community to those aspects of greening the economy that are most closely aligned with their own sectoral interests could shift expectations to tolerate greater risk and lower net returns. For example, investors in the tourism and agricultural sectors are directly impacted by climate change. Manufacturers have for years been clamouring for lower energy costs. The demand for housing that optimizes natural lighting and cooling will rise with global warming and the cost of energy. It is arguable that crime rates will be lower in a more inclusive economy, suggesting that there are positive social and economic returns from mobilizing small investors as well as training the workforce with the relevant skills for the greening of the economy. These sectoral interests are all naturally aligned to the greening strategies of the public sector.

Also, increased support is required from multilateral development agencies such as the World Bank and IDB to access appropriate risk transfer mechanisms to support climate change adaptation at the national and community levels.

#### 4.5 (a) Mobilizing Resources for Green Investment

##### *Capital*

One of the strategies of the PIOJ's Growth Inducement Strategy is to mobilize domestic capital resources. "At its core, the strategy recognizes a basic fact, i.e., that there exists a sizeable pool of latently available and potentially productive assets — financial assets, physical capital, buildings, labour, and land — that currently lie fallow, dormant, and/or underutilized and/or wasted."<sup>107</sup> This challenge has been highlighted in a recent interview with the President of the PSOJ with respect to the

economic recovery from COVID-19.<sup>108</sup>

The GEIS will have to steer local and international finance into green investments. Some countries have used public financial institutions to leverage private investment through partnerships. The DBJ has already succeeded in forging PPPs for infrastructure projects. The banking system is currently very liquid in the wake of the Government's reduced borrowing. A World Bank project, the Foundations of Competitiveness and Growth Project approved in 2014, has shown how bank credit can be leveraged for loans to MSMEs, traditionally regarded by the banks as not creditworthy.

In 2018, 28% of WB financing had climate finance co-benefits.<sup>109</sup> For Latin America and the Caribbean, it was 47% of WB financing, and for Jamaica in particular, it was 3.7% in a project to finance competitiveness,<sup>110</sup> which included access to finance for MSMEs. The term "climate financing" in the case of Jamaica seems to have been used loosely since the project was actually delayed by the inability of many potential MSMEs to meet the environmental safeguard requirements of the loans. Nor were the loans used necessarily addressing any of the 4 criteria – climate change, management of natural resources, low carbon and inclusiveness – for greening. However, the idea of conditioning credit to encourage green investing has precedent.

In the future, international development partners like the World Bank and the IDB may well be sources of international finance for green investment projects, along with dedicated international funds such as the Adaptation Fund and Green Climate Fund (GCF), which Jamaica has already tapped. The Government of Jamaica has already accessed some of these funds for public investment with respect to sea defences as an adaptation to climate change. However, it needs to go beyond that by designating the Development Bank of Jamaica (DBJ) and the EXIM Bank as the national institutions for mobilizing international green finance and forging a collaborative thrust to attract and direct green finance to private enterprises. It should be noted that the DBJ is currently pursuing accreditation to the GCF.

Additionally, there is an urgent need to improve the capacities of vulnerable countries such as Jamaica – institutional, human and financial – to facilitate enhanced access to global climate finance windows such as the GCF and Adaptation Fund.

The global insurance industry has been identified as an important component of global finance for sustainable development, and specifically the greening of economies.

<sup>107</sup> G. Hutchinson and D. Harris (eds), A Growth Inducement Strategy for Jamaica in the Short and Medium Run, PIOJ, p.37, <https://www.pioj.gov.jm/product/a-growth-inducement-strategy-for-jamaica-in-the-short-and-medium-term/>

<sup>108</sup> Interview with Keith Duncan, Real Business, Power 106, February 10, 2021

<sup>109</sup> See <http://pubdocs.worldbank.org/en/744511553696049991/World-Bank-2018-CFData.pdf>

<sup>110</sup> The project is the Foundations for Competitiveness and Growth Project, which has a Line of Credit for MSMEs as a component. It appears that the WB classified it under the heading of climate finance because it required borrowers to meet basic environmental safeguards.

It is the source of long-term financing and is particularly suited to manage the risks of green investments which generally have high up-front costs and long payback periods. In the context of the Sendai Framework for Disaster Risk Management which coincides with the period of implementation of the SDGs, 2015-2030, insurance was identified as essential to risk management.

UNEP's 4 Principles of Sustainable Insurance<sup>111</sup> speak to "embedding" environmental, social and governance issues in insurance decision-making. An important sub-theme of sustainable insurance is "impact underwriting", "namely actions and processes that shift non-sustainable behaviour and processes in a more sustainable direction. An impact-oriented alignment of just a fraction of the insurance industry's capital flows would be a substantial catalyst for achieving the global sustainability goals."<sup>112</sup>

Jamaican and regional insurance companies command a significant share of national savings. The more aligned these companies are to the trend for sustainable insurance globally, the more likely they will be the source of some local financing for green investments, while their foreign counterparts, especially those with which the local firms are affiliated, are potential sources of foreign finance.

The regional Caribbean Catastrophe Risk Facility (CCRIF) exemplifies possible regional schemes. There CCRIF has extended its parametric coverage to privately owned electric utilities and fisheries. There is a growing consensus that the CCRIF needs to be expanded to provide greater coverage for natural disasters. The new products for electricity utilities and fisheries suggest possibilities for similar schemes to manage the risks of major green investments in areas such as the development of alternative energy sources and adaptation to climate change.

### Land

Land as a natural resource is inseparable from the minerals deposited in the soil and the rocks and from the water that it catches from the rain, stores in its aquifers, and feeds the rivers. Land is the source of domestic food production, food exports, and for the production of raw materials for manufacturing. The

land also provides services such as a base for shelter, and spaces for recreation. "Therefore, land use in agriculture, energy and forestry should be one of the cornerstones of the green economy for sustainable development, food security and poverty eradication."<sup>113</sup>

A new land policy is in preparation and presumably, will chart a path for land reform beyond the divestment of public land. This is an age-old challenge for development policy that has to enfranchise the majority of the population, especially the landless farmers and those on marginal land. At the same time, the GOJ has to make a strategic decision on the allocation of land to buildings and roads versus land for agriculture, according to the relevant potential and appropriateness of each social need.

The extremes of drought and floods appear to have been exacerbated by climate change. Much of Jamaica's domestic food production is on hillsides because historically land on the plains was monopolized by plantation agriculture for export. Climate change is aggravating the problems of fires during drought and soil erosion during flooding. Land titling will encourage farmers with greater security to cooperate with efforts to adapt to climate change using appropriate cultivation methods, cropping patterns, smart irrigation, terracing, and other capital works on the land. This is an important area for partnerships between Government and both large and small investors in agriculture. Land policy that accelerates land reform in all its dimensions will facilitate adaptations to climate change and enhance economic inclusiveness, in addition to contributing to social stability in rural communities.

### Labour

Greening will require a labour force with the requisite knowledge and skills, whether as contracted employees or micro, small and medium-sized entrepreneurs. Hence, education and training policy will have to be broadened appropriately, in much the same way that the education and training institutions are adjusting their programmes to facilitate information technology and other digital skills. Jamaica ranked high in the quality of vocational training (36<sup>th</sup> out of 141 countries) by the Global Competitiveness Index of 2019.

<sup>111</sup> UNEP FI Principles of Sustainable Insurance, <https://www.unepfi.org/psi/the-principles/>

<sup>112</sup> Impact underwriting: Sustainable insurance as an opportunity for society and business 30 July 2020, [https://www.eulerhermes.com/en\\_global/news-insights/economic-insights/Impact-underwriting-sustainable-insurance-as-an-opportunity-for-society-and-business.html](https://www.eulerhermes.com/en_global/news-insights/economic-insights/Impact-underwriting-sustainable-insurance-as-an-opportunity-for-society-and-business.html)

<sup>113</sup> Land and Soil in the context of a Green Economy for sustainable development, Food Security and Poverty Eradication: Submission of the UNCCD Secretariat to the Preparatory Process for the Rio+20 Conference, November 2011,

[http://cawater-info.net/bk/water\\_land\\_resources\\_use/english/english\\_ver/pdf/rio6-eng.pdf](http://cawater-info.net/bk/water_land_resources_use/english/english_ver/pdf/rio6-eng.pdf)

However, the premier training institution HEART/NSTA Trust is grappling with the high drop-out rate from its training programmes.

Equipping the labour force with skills to support the greening of the economy should begin with relevant curricula in the formal school system. This will be the medium to long-term complement to the short-run efforts to train young adults who are not enrolled in academic programmes. The current strategy for economic recovery from the COVID-19-induced recession posits a major role for digitization. The education system should be mandated to broaden their programmes beyond digitization to include the relevant skills for the green jobs of the future.

### Consumers

Apart from being workers and entrepreneurs, people are also consumers. Greening, in pursuit of the SDGs, requires sustainable consumption, and hence the need for consumer education as well as academic and technical education and training. Consumer demand will be a critical force in driving green investments. Consumers, like producers, have an important role to play in waste disposal both to protect the environment and to generate feedstock for waste-to-energy projects now being designed.

## 46 Green Economy Investment Strategy

By way of summary, *green investment is defined as capital expenditure that drives economic processes that promote at least one of the aspects of greening - reducing the carbon footprint of the economy, enhancing the sustainability of the use of natural resources, facilitating adaptation to climate change, and promoting greater economic inclusiveness – without harming or hindering any of the other aspects of greening the economy.*

*A green investment project is one where some officially stipulated minimum<sup>114</sup> share of the expenditure is oriented to one of the 4 aspects of greening.*

The proposed GEIS consists of:

Timeframe: 2020 – 2030

### Goal

Shift the investment process to support greater investment flows for the greening of the economy.

### Objectives:

1. *Integration of environmental considerations into investment decisions:* Investment decisions should take account of environmental risks as well as financial and other risks.
2. *Reduction in Jamaica's carbon footprint:* This requires more efficient use of energy and investment in renewable energy sources such as solar, wind and hydropower
3. *Economic sustainability and climate change resilience:* Investment projects that reuse and recycle natural resources and build capacity to absorb and rebound from shocks due to more intense natural hazards like windstorms and floods should account for a greater share of total investment.
4. *Adaptation to climate change:* Investments in sea defences, land preparations to manage too much and too little water for agriculture, and new varieties of plants and animals are necessary to cope with higher temperatures.
5. *Promotion of economic Inclusiveness:* Investment projects that provide employment directly and generate opportunities for MSMEs will help to reduce income inequalities.

### Strategic Directions

1. Ensure macroeconomic and social stability.
2. Continue and accelerate reforms to further the ease of doing business.
3. Raise the priority level of greening in all aspects of public policy.
4. Coordinate policymaking around greening the economy and the implementation of relevant projects.
5. Promote greening to the productive and household sectors.
6. Provide incentives for green investments.
7. Incorporate greening in public investment.
8. Foster green financing schemes.
9. Transform the energy sector to a low-carbon renewable resource base.
10. Develop relevant social programmes to sustain social stability.
11. Foster research in the various aspects of greening.

Most of these project ideas and proposals address the challenge of enhancing energy efficiency and reducing the carbon footprint by substituting energy from renewable sources.

<sup>114</sup> This minimum will have to be prescribed, probably after wide consultations with the investor community, by the relevant MDA, such as the MIIC or the MOFPS.

## 5. PROJECTS

Table 7 presents some green investment opportunities<sup>115</sup>

**Table 7:** Green Investment Opportunities - Ongoing and Imminent

	Project	Project Objective	Greening Objective	Investment Source
Agriculture	Rainwater harvesting	Supply water for irrigation and domestic use	Energy efficiency, improve the management of water resources, inclusiveness	
Agriculture	Smart irrigation	Supply water for irrigation	Energy and water efficiency, inclusiveness	
Agriculture	Flood control	Prevent soil erosion	Improve the management of land, adaptation to climate change, inclusiveness Public,	
Agriculture	Forest and watershed restoration	Water supply	Improve the management of water resources	
Agriculture	Construct processing and storage facilities for agricultural surpluses produced for the tourist sector	Increase the relative share of domestically produced food consumed by tourists	Inclusiveness	
Construction	Construct new buildings to meet green standards	Energy efficiency	Reduce the carbon footprint and adapt to higher temperatures as a result of global warming/climate change	Private
Construction	Retrofit public sector buildings for energy efficiency	Energy efficiency	Reduce the carbon footprint	Public
Energy	Build wind and solar energy plants	246 -268 MW of power	Reduce the carbon footprint and develop renewable energy resources	Private
Energy	Build LNG facilities	120 MW of power		Private
Energy	Build hydro, waste-to-energy or biomass energy supplies	74 -96 MW of power		Private
Energy	Build replacements for end-of-life thermal plants	171.5 MW of generating capacity	Reduce the carbon footprint of existing plants	Private
Energy	Solar Energy and Energy Efficiency in Schools	Reduce the energy cost within the public education system	Energy efficiency, conservation and low carbon technology	PPP <sup>1</sup>
Tourism	Construct new buildings to meet green standards	Energy and water efficiency	Reduce the carbon footprint and improve the management of water resources	Private

<sup>115</sup> Under the Policy and Institutional Framework for the Implementation of the Public-Private Partnership (PPP Policy), the Public-Private Partnership is defined as a long-term contract between a government entity or private party for the provision and/or development of a public asset or service, in which the private party assumes the significant risk and management responsibility throughout the life of the contract, and remuneration of the private party is linked to performance and/or demand or use of the asset or service.

	Project	Project Objective	Greening Objective	Investment Source
Tourism	Substitute renewable energy sources for lighting, cooling and cleaning, and wind and human-powered recreational marine craft for petrol powered craft	Reduce petroleum-based energy intensity of lighting, cooling, maintenance and recreational activities	Reduce the carbon footprint	Private
Tourism	Construct sea defences and other coastal zone infrastructure	Protect buildings and other built facilities from sea-level rise	Adaptation to climate change	
Waste	Waste – to - Energy Initiative	To reduce the volume of waste disposed of at the island disposal sites and convert high calorific waste to energy	Resource recovery	PPP
Water	Substitute renewable energy power for petroleum-based power to move water	Reduce the petroleum-based energy intensity of moving water	Reduce the carbon footprint	
Water	Promote sustainable consumption of water	Reduce per capita waste of water	Reduce the carbon footprint and improve the management of water resources	Public
Water	Extend water supply to the 7%-10% of underserved households	Supply water to households meets demand as well as an element of public health	Inclusiveness	Public
Water	Extend sewage services to the under-served households	Supply sewage services to households meet demand as well as an element of public health	Inclusiveness	Public
Water	Expand the recycling of grey water	Supply irrigation and other non-human	Improve the management consumption needs of water resources	Public

## 5.1 Agriculture

The agriculture projects extend the work of pilot projects and in the case of flood control, too often the project is implemented with limited scope. The irrigation projects are essential for the expansion of agriculture. There are ongoing works at the Ministry of Agriculture and Fisheries (MOAF) on improving irrigation systems, access to water, and preserving water quality.

In Jamaica, supplying water is energy intensive. Accordingly, energy efficiency both in the supply of water and agro-industrial processing are high priorities.

With the sharp swings between drought and flooding being aggravated by climate change, it is imperative to expand flood control works with priority to flood-prone areas. This is a principal adaptation to climate change that is relevant to the land, and hence agricultural production and livelihoods.

The MOAF has a Food Tree Crop Planting programme, which will be implemented over the period 2020-2025. This initiative will benefit the environment. In addition, policies addressing efficiencies in the agricultural sector relating to the storage and transportation of agricultural products and management of waste are currently being developed and these too will have strong greening impacts.

Jamaica has had some success with fish sanctuaries managed jointly with Non-governmental Organizations (NGOs) and with business interests in the hotel industry. Together with aquaculture, these initiatives ease the pressure off the naturally occurring fish stocks while they recover from over-fishing. Green technologies such as innovative aquaculture production systems and environmentally friendly feeds can be utilized, with the attendant job creation.

The PPP modality is targeted as the principal investment source to build partnerships with both large and small farmers. In the case of the latter, those partnerships will depend critically on the land titling aspect of the land reform process.

## 5.2 Construction

Vision 2030 called for “A dynamic and internationally competitive construction sector that fosters sustainable development and economic growth,”<sup>116</sup> which means, in particular, “environmentally sustainable”. The goal, development of the (construction) sector in an environmentally sustainable manner, is associated with the outcomes:

1. Enhanced waste reduction and disposal.
2. Compliance with international and domestic environmental standards.
3. Sourcing and use of materials in an environmentally friendly manner.
4. Increased mitigation and adaptation to hazards and climate change.

The goal focuses specifically on waste and climate change, but curiously omits mention of energy efficiency. Energy conservation and efficiency are mentioned as issues for the plan to address,<sup>117</sup> as well as an element of the strategic approach to the sector, to “reduce the carbon footprint of the construction sector through energy efficiency and other measures.”<sup>118</sup>

‘Green’ buildings are characterised by energy and water efficiency, reduction of waste and pollution, the use of renewable energy sources and sustainable building materials.<sup>119</sup> In a presentation of the revised Building Code of 2019, the 2 environmental benefits of the new code that were highlighted were improved energy efficiency of buildings and improved disposal of wastes.<sup>120</sup>

The project ideas and proposals above do not specifically address adaptation to natural hazards, particularly hurricanes and earthquakes, but these are covered by the new building code.

<sup>116</sup> Vision 2030 – Construction Sector Plan, p.22

<sup>117</sup> *ibid.*, p.18

<sup>118</sup> *ibid.*, p.24

<sup>119</sup> Caribbean Community Climate Change Centre (cross-posted with Environmental Solutions Limited), “4 Ways to Green our Cities”, <https://www.caribbeanclimate.bz/4-ways-to-green-our-cities/>

<sup>120</sup> J. Noel Gordon, The New National Building Code of Jamaica, 2019(?). Mr Gordon was the Director of Engineering of the Bureau of Standards of Jamaica

### 5.3 Energy

The GPE is preparing the rules and protocols for the addition of new electricity generation capacity for the national grid. There are opportunities for utility-scale and distributed generation projects to interconnect with JPS.

The opportunities are outlined in the Electricity Act, 2015, which is currently being reviewed by the Joint Select Committee of Parliament to identify improvements for greater competitive advantage

There will be opportunities for Engineering, Procurement and Construction (EPC) companies in preparing these upgrades, which will undoubtedly result in the expansion of the transmission and distribution network.

JPS is the sole transmission and distribution licensee with the rights to conduct works on the grid. Grid stability and energy storage are other areas of potential emerging opportunities, given the commitment to reliability and resilience in the energy sector.

### 5.2 Tourism

The investors in hotels have, for many years, pursued efficiency in energy and water consumption, driven by the high costs of lighting, cooling, washing, and general cleaning. The investors in hotels have been particularly sensitive and responsive to increasing international consumer demand for green facilities and services. Reducing their carbon footprint contributes to mitigating climate change, however marginally. Built near the beaches, the owners of these hotels have vested interests in protecting their facilities from the increasing climate-related risks of intense storm activity and sea-level rise. Ultimately, the policy for siting new hotels will probably force construction to step back from the coast. Protecting existing stock will require retrofitting

buildings to withstand strong winds and sea defences. The most probable modality for financing these infrastructural projects will be the PPP.

### 5.3 Water

Because of the hilly terrain of Jamaica, the distribution of potable water is highly energy intensive. Efficient use of water is also linked to the efficient use of the energy to transport the water. This project supports strategies to substitute renewable sources of energy for the current petro-carbon-based supply, to extend water and sewage services to unserved households, and to expand the recycling of grey water. Accordingly, the projects will reduce the carbon footprint of water supplies, meet unsatisfied needs for water and sewage disposal, and contribute to the management of water resources by recycling. Water utilities companies are notably challenged to collect revenue. In the era of pandemics, it is even more urgent to factor in the satisfaction of social needs, such as public health, in the returns on water projects. Accordingly, public funding is the most appropriate, with possible public-private partnerships, to diversify the energy supply, utilize world-class water-use practices in construction and develop the infrastructure for transporting water.

## 6. ACTION PLAN

The Action Plan of the GEIS has set out for each of the 5 strategic objectives, what outcomes are required, the actions recommended, the outputs expected, the proposed implementing MDAs, the appropriate indicators to monitor the results of the actions, and the sources of data for the indicators.

The GEIS is aligned in multiple ways with the official recovery plan from the economic crisis induced by COVID-19. Both require a stable macroeconomy and improvement of the business climate. The GOJ has the option to include criteria for green investments among the “pre-designed weighted” criteria for designated priority investments. Both the GEIS and the COVID Recovery Task Force Report recommend:

- Social programmes – safety net, education, health - that facilitate greater inclusiveness
- Skills training and protections for labour that also facilitate greater inclusiveness
- Comprehensive land divestment
- Financial sector reforms that are in part aimed at greater inclusiveness, especially with regard to access of MSMEs to credit, and entertain the possibilities of investment “vehicles” to finance green investments

- PPPs for water and waste management
- Exploring the potential for PPPs for “prioritized infrastructure projects”, such as projects that support adaptation to climate change
- Investment in irrigation, including SMART irrigation, and the necessary credit, storage and distribution services to support agriculture and agro-industry

With more focused attention on the greening of the economy, the recovery strategies recommended could accommodate initiating other developments that will require longer periods than that envisioned by the COVID-19 Recovery Task Force Report. For example, there could have been a stronger endorsement of shifting to renewable energy, the encouragement of green standards in building construction and the endorsement of recycling activities in manufacturing. Nevertheless, there are many synergies between the GEIS and the COVID-19 Recovery Task Force Report that afford opportunities for the implementation of the GEIS Action Plan.



Table 8: Action Plan

Outcome	Output	Actions	Timeline for Implementation	Implementing MDA
Capacity Building				
Enhanced capacity of MDAs with responsibility for implementing the GEIS	Cadre of public sector officers in the MDAs tasked with responsibility for implementing the GEIS and monitoring the implementation with the relevant skills and commitment to greening the economy	Staff training, technological development, re-prioritization of management objectives in favour of GEIS activities	2023-2025	MOFPS
Strategic Objective 1: Integration of environmental considerations into investment decisions				
Outcome 1.1: Increase green investments	Output 1.1.1: Macroeconomic stability	<ol style="list-style-type: none"> <li>1. Maintain low-interest rates, transparent exchange rate policy</li> <li>2. Confidence-building in the investor community</li> <li>3. Reduce national debt</li> <li>4. Contain a fiscal deficit below 5% and transform the deficit into a surplus within 3 years. The assumption is that the implementation of the GEIS will begin when the economy is recovering from the COVID-19 induced recession</li> </ol>	2023-2024	MOFS BOJ
	Output 1.1.2: Social Stability	Expand social programmes, such as skill training, community development programmes especially for unattached youth, squatter settlement upgrading, PATH support for eligible beneficiaries, and community security with the support of smart policing	2023-2024	MLSS HEART/NST A JSIF MNS MEGJC MOAF
	Output 1.1.3: Ease of doing business	Accelerate the business reform process by implementing the current public sector reform projects, including the reforms of the Companies Office and the Tax Administration, and other elements of the Business Environment Reform Agenda (BERA)	2023-2024	MIC JAMPRO/N CC MOFPS
	Output 1.1.4: Improved incentives for green investments	Reform the incentive structure to privilege green investments	2023-2024	MIC MOFPS

Outcome	Output	Actions	Timeline for Implementation	Implementing MDA
	Output 1.1.5: DBJ configured and mandated to source and channel green finance	Tap into international public and private sources of green finance for on-lending to fund private and public green investments	2023-2024	DBJ MOFPS
	Output 1.1.6: Definition of green project with operational criteria	Design of relevant criteria for selection of green investments	2023-2024	MIIC MOFPS
Outcome 1.2: Public and Private investment projects consider and refer explicitly to any verifiable impacts they will have on the natural environment	Output 1.2.1: Targeted public education encouraging explicit estimates of the impact of investment projects on the environment	Utilize all media to target the investor community with messages to sensitize them to the impact of their decisions on the natural environment, and to encourage green investments	2023-2026	MIIC NEPA JAMPRO JIS
	Output 1.2.2: Investors adopt Environmental, Social and Corporate Governance (ESG) principles that will govern their investment decision-making and make them eligible for investments seeking ESG firms	<ol style="list-style-type: none"> <li>1. Initiate and sustain consultations on ESG with the Private Sector Organization of Jamaica (PSOJ) and other business organizations not affiliated with the PSOJ</li> <li>2. Conduct promotional seminars with major firms, especially those whose activities directly impact the natural environment</li> <li>3. Explore the potential of including ESG principles in the registration of companies</li> </ol>	2023-2026	MIIC Companies Office of Jamaica MFAFT

**Table 8:** Action Plan *cont'd*

Outcome	Output	Actions	Timeline for Implementation	Implementing MDA
	Output 1.2.3: Jamaican financial institutions adopt the Equator Principles (EP) as their framework for assessing social and environmental risks when financing investment projects	<ol style="list-style-type: none"> <li>1. Conduct consultations with financial institutions with a view to getting them to adopt EP</li> <li>2. Explore the potential of including the requirement for EPs in registration under the Financial Institutions Act</li> <li>3. Initiate the development of a policy to work in conjunction with the EPs relating to protecting the interest of clients with other components (non-green, yet feasible ideas) incorporated in their green business plans</li> </ol>	2023-2026	BOJ FSC MOFPS
	Output 1.2.4: Memorandum of understanding between MIIC and financial institutions to attach environmental conditions appropriate to the capacities of borrowers to loan funding	Negotiate a memorandum of understanding with the financial institutions that includes a range of environmental conditions relevant to the capacities of borrowers	2023-2026	MIIC BOJ Financial institutions
	Output 1.2.5: Strengthen the environmental permit programme	Review the permit programme and improve the efficiency of the application and award processes	2023-2026	NEPA
	Output 1.2.6: Strengthen the requirements for Environmental Impact Assessments, (EIA) and the quality of the assessments	Ensure that Jamaica's EIA standards are comparable with international best practices subject to the data constraints prevailing	2023-2026	MEGJC
	Output 1.2.7: Increased share of green investments in the PSIP	<ol style="list-style-type: none"> <li>1. Raise the priority level of greening in all aspects of public policy</li> <li>2. Include a criterion that assesses the greening impact of a project in the PIMS process, and establish a minimum green content for the PSIP</li> </ol>	2023-2024	(Public Investment Management Secretariat) PIMSEC

Outcome	Output	Actions	Timeline for Implementation	Implementing MDA
Strategic Objective 2: Reduction in Jamaica's carbon footprint				
Outcome 2.1: Increased share of renewable energy in total energy consumption	Output 2.1.1: Prioritize the implementation of the recommendations/strategies of the National Energy Policy and the Integrated Resource Plan to reduce the dependence on fossil fuels	Implement the National Energy Policy	2023-2030	MSET JPS
	Output 2.1.2: Increased percentage of electric vehicles in the transportation stock	Implement the Strategic Framework on Electric Mobility. Develop and implement the Transport Policy to promote, <i>inter alia</i> , transition of the island transportation fleet to e-mobility. Provide incentives, including duty concessions, to increase the percentage of electric vehicles.	2023-2026	MSET MTM MoFPs JPS
Outcome 2.2: Increased energy efficiency in production and consumption	Output 2.2.1: Increased efficiency of energy use in public buildings	Expand efforts to retrofit government buildings for energy efficiency through (Energy Management and Efficiency Project) EMEP and similar projects	2023-2028	MSET UDC MLGRD JPS
	Output 2.2.2: Increased compliance with the new building code	Monitor and enforce compliance with the new building code	2023-2028	MLGRD UDC
	Output 2.2.3: Incentives for increased efficiency of energy use by private commercial buildings	Include incentives for retrofitting hotels, factories and office buildings in the revised incentives programme	2023-2028	MOFPS MOT
	Output 2.2.4: Establish efficiency standards for energy use by commercial buildings	Revise the building code to include energy efficiency standards	2023-2026	Bureau of Standards MSET
	Output 2.2.5: Increased efficiency for energy use by private commercial buildings	Enforce compliance with standards and with incentive conditions where relevant	2024-2030	MLGRD

Table 8: Action Plan *cont'd*

Outcome	Output	Actions	Timeline for Implementation	Implementing MDA
Strategic Objective 3: Ensure economic Sustainability and Climate Change Resilience				
Outcome 3.1: More efficient management of natural resources	Output 3.1.1: Land reform	1. Implement the new Land Policy 2. Promote investment in land and water management for flood control	2023-2030	MEGJC MOAF
	Output 3.1.2: Natural resource pricing	Establish a structure of fees for the commercial use of publicly owned natural resources such as land, water, beaches, rivers, waste disposal sites, and other natural resources	2023-2026	MOFPS NEPA UDC MLGRD MOAF MEGJC
	Output 3.1.3: Sustainable Management of water resources	1. Implement the National Water Policy 2. Increase PPP investment in water supplies	2023-2030	DBJ MEGJC NWC WRA MOAF
	Output 3.1.4: Sustainable Management of the Forests	1. Implement the National Forest Management and Conservation Plan 2. Actively explore and promote PPP investment in forest conservation and forest products	2023-2030	MEGJC MOAF DBJ
	Output 3.1.5: Sustainable Management of Fisheries	Implement the National Fisheries Policy	2023-2030	MOAF National Fisheries Authority
	Output 3.1.6: Sustainable Management of Land Resources	Finalize and Implement the National Spatial Plan	2023-2030	MEGJC
Outcome 3.2: Climate Change resilience	Output 3.2.1: Reduced vulnerability to climate change	Public investment in research for climate-resilient plants and animals	2023-2030	MEGJC DBJ
	Output 3.2.2: Enhanced capacity to recover from wind storms and excess precipitation	1. Public information 2. Relocate and/or improve vulnerable settlements 3. Promote business continuity plans	2023-2030	MIIC MLGRD MEGJC
Strategic Objective 4: Adaptation to Climate Change				
Outcome 4.1: Coastal zone protection	Output 4.1.1: Strengthened Sea defences	Finalize and implement the updated Climate Change Policy Framework and Emissions Policy Framework	2023-2030	MEGJC
	Output 4.1.2: Protection and regeneration of mangroves	Actively explore and promote PPP investment in mangrove restoration by GOJ and hotel owners	2023-2030	NEPA Forestry Department DBJ

Outcome	Output	Actions	Timeline for Implementation	Implementing MDA
Outcome 4.2: Management of hillside erosion	Output 4.2.1: Terraces, drainage infrastructure and other land works to manage water run-off	Promote PPP investment in land development	2023-2030	MOAF DBJ
	Output 4.2.2: Reforestation, tree crops and agroforestry programs	1. Encourage tree planting programmes 2. Establish orchards and encourage agroforestry	2023-2030	MEGJC Forestry Department MOAF
Output 4.3: Adjustment to higher temperatures	Output 4.3.1: Green Building code for housing	Formulate and adopt a green building code for housing	2023-2039	MLGRD
	Output 4.3.2: Maximize natural cooling of buildings	Incentives for investment in housing compliant with the green building code for houses	2023-2030	NHT MOFPS MEGJC

**Table 8:** Action Plan *cont'd*

Outcome	Output	Actions	Timeline for Implementation	Implementing MDA
Strategic Objective 5: Promotion of Economic Inclusiveness				
Outcome 5.1: Employment generation	Output 5.1.1: Increased supply of workers with the relevant skills to support green investment projects/markets	<ol style="list-style-type: none"> <li>Public and private investment in training of workers with the requisite skills</li> <li>Capacity building of the MDAs with responsibility for implementing the GEIS</li> </ol>	2023-2030	MOFPS MLSS MOEYI HEART/NSTA
	Output 5.1.2: Increase green jobs	Implement green investment projects that create jobs	2023-2030	MEGJC MLSS JAMPRO
	Output 5.1.3: Reduced income inequality	Encourage employers to raise the average wage to reflect increased productivity	2023-2030	MLSS
Outcome 5.2: Growth of small business	Output 5.2.1: Growth of green investment by SMEs	<ol style="list-style-type: none"> <li>Implement green investment projects by SMEs</li> <li>Implement incentives such as reduced importation fees and tax waivers, among others</li> </ol>	2023-2030	MIC MOFPS JMEA JBA SBAJ MSME Alliance
	Output 5.2.2: Employment by SMEs	Implement incentives to encourage the creation of SME green jobs	2023-2030	JAMPRO MOFPS
	Output 5.2.3: Share of public procurement	Reserve a minimum share of purchases associated with green investments for tender by SMEs	2023-2030	MLSS MOFPS

## 7. IMPLEMENTATION, MONITORING AND EVALUATION

Central to the successful implementation of the GEIS will be building appropriate capacity in the 34 MDAs identified in the Action Plan for the GEIS and forging relationships for cooperation among them. It will be necessary to customize training programmes according to their current capabilities and the tasks assigned to them in the Action Plan for the implementation of the GEIS. Conceptually, capacity-building activities can be seen as “soft” infrastructure to support the implementation of the GEIS.

There is an ongoing programme of public sector reform which can be adapted to a targeted capacity-building sub-programme to support the implementation of the GEIS and the monitoring and evaluation of the implementation. In addition to building capacity in the MDAs, such a programme could forge synergies across MDAs to support the coordination essential to greening the economy.

Monitoring and evaluation depend on the production of data and the access to data by the 14 MDAs tasked with the responsibility. Capacity building of MDAs to produce the relevant data should also be a high priority. Equally, important is access to data. Two of the objectives of a data-sharing policy for the MDAs that is being developed are to “provide a consensus-based and sustainable approach for the sharing of data ... and to address the issue of pricing in order to prevent prohibitive costs that can impact on timely decision-making.”<sup>121</sup> Implementing the GEIS will challenge the MDAs to define and collect new types of data, reinterpret existing data sets and pool their resources for efficiency and effectiveness so as to minimize costs while maximizing the impact of expenditure on data collection and analysis for monitoring and evaluation.

<sup>121</sup> Audrey Thomas, Data Sharing in the Public Sector: Advancing the Modernization Agenda, Cabinet Office, [https://nlj.gov.jm/wp-content/uploads/2016/11/Government.Data\\_Sharing.Policy.pdf](https://nlj.gov.jm/wp-content/uploads/2016/11/Government.Data_Sharing.Policy.pdf)



**Table 9: Monitoring and Evaluation Plan**

Outcome	Output	Actions	Indicator	Source of Data	Method of Data Collection	Frequency of Data Collection	Responsible MDA for M&E
<b>Capacity Building</b>							
Enhanced capacity of MDAs with responsibility for implementing the GEIS	Cadre of public sector officers in the MDAs tasked with responsibility for implementing the GEIS and monitoring the implementation with the relevant skills and commitment to greening the economy	Staff training, technological development, reprioritization of management objectives in favour of GEIS activities	<ol style="list-style-type: none"> <li>Number of persons trained in relevant programmes</li> <li>Expenditure on information and communication technology per staff member</li> </ol>	Human Resources (HR) Department in each MDA MIND Budget	<ol style="list-style-type: none"> <li>Request data on training from HR Department</li> <li>Request data on staff trained in relevant programmes at MIND</li> <li>Review the budget of the MDA</li> </ol>	<ol style="list-style-type: none"> <li>Annual</li> <li>Bi-annual</li> <li>Annual</li> </ol>	MOFPS MIND
<b>Strategic Objective 1: Integration of environmental considerations into investment decisions</b>							
Outcome 1.1: Increase green investments	Output 1.1.1: Macroeconomic stability	<ol style="list-style-type: none"> <li>Maintain low-interest rates, transparent exchange rate policy</li> <li>Confidence-building in the investor community</li> <li>Reduce national debt</li> <li>Contain a fiscal deficit below 5% and transform the deficit into surplus within 3 years. The assumption is that the implementation of the GEIS will begin when the economy is recovering from the COVID-19-induced recession</li> </ol>	<ol style="list-style-type: none"> <li>Low interest and inflation rates</li> <li>Predictable exchange rate</li> <li>Declining national debt</li> </ol>	BOJ STATIN MOFPS	Obtain relevant reports from data sources	Quarterly	PIOJ MEGJC

**Table 9:** Monitoring and Evaluation Plan *cont'd*

Outcome	Output	Actions	Indicator	Source of Data	Method of Data Collection	Frequency of Data Collection	Responsible MDA for M&E
	Output 1.1.2: Social Stability	Expand social programmes, such as skill training, community development programmes especially for unattached youth, squatter settlement upgrading, PATH support for eligible beneficiaries, and community security with the support of smart policing	<ol style="list-style-type: none"> <li>1. Increased spending on social programmes for unattached youth</li> <li>2. Declining and low rate of unemployment</li> <li>3. Declining and low rate of industrial disputes</li> <li>4. Declining and low crime rate</li> </ol>	MOFPS STATIN MLSS JCF	Obtain relevant reports from data sources	Annually	PIOJ MEGJC
	Output 1.1.3: Ease of business	Accelerate the business reform process by implementing the current public sector reform projects, including the reforms of the Companies Office and the Tax Administration, and other elements of the Business Environment Reform Agenda (BERA)	Index of ease of business in World Development Report	World Development Report	WB	Annually	MEGJC

**Table 9:** Monitoring and Evaluation Plan *cont'd*

Outcome	Output	Actions	Indicator	Source of Data	Method of Data Collection	Frequency of Data Collection	Responsible MDA for M&E
	Output 1.1.4: Improved incentives for green investments	Reform the incentive structure to privilege green investments accessible to local and foreign investors	Revised incentives programme	MIIC MOFPS	MOFPS	Once in year 2 of the implementation of the GEIS	MEGJC
	Output 1.1.5: DBJ configured and mandated to source and channel green finance	Tap into international public and private sources of green finance for on-lending to fund private and public green investments	Volume and value of green loans	DBJ	Obtain report from DBJ	Annually	MEGJC
	Output 1.1.6: Definition of green project with operational criteria	Design of relevant criteria for selection of green investments	Officially designated criteria	MIIC	Obtain report from MIIC	Once in year 2 of the implementation of the GEIS	MEGJCM OFPS MIIC
Outcome 1.2: Public and Private investment projects consider and refer explicitly to any verifiable impacts they will have on the natural environment	Output 1.2.1: Targeted public education encouraging explicit estimates of the impact of investment projects on the environment	Utilize all media to target the investor community with messages to sensitize them to the impact of their decisions on the natural environment, and to encourage green investments	Number of hours of public education messages on green investment by type of media per quarter	Media houses JIS	JIS survey of media houses	Semi-annually	JIS

**Table 9:** Monitoring and Evaluation Plan *cont'd*

Outcome	Output	Actions	Indicator	Source of Data	Method of Data Collection	Frequency of Data Collection	Responsible MDA for M&E
	Output 1.2.2: Investors adopt Environmental, Social and Corporate Governance (ESG) principles that will govern their investment decision-making and make them eligible for investments seeking ESG firms	<ol style="list-style-type: none"> <li>1. Initiate and sustain consultations on ESG with the Private Sector Organization of Jamaica (PSOJ) and other business organizations not affiliated with the PSOJ</li> <li>2. Conduct promotional seminars with major firms, especially those whose activities directly impact the natural environment</li> <li>3. Explore the potential of including ESG principles in the registration of companies</li> </ol>	<ol style="list-style-type: none"> <li>1. Number of consultations on ESGs</li> <li>2. Number of seminars with major firms</li> <li>3. Possible ways of including ESG principles in the registration of companies</li> </ol>	MIIC JAMPRO Companies Office of Jamaica	Obtain reports from MIIC	Semi-Annually	JAMPRO JSEZA
	Output 1.2.3: Jamaican financial institutions adopt the Equator Principles (EP) as their framework for assessing social and environmental risks when financing investment projects	<ol style="list-style-type: none"> <li>1. Conduct consultations with financial institutions with a view to getting them to adopt EP</li> <li>2. Explore the potential of including the requirement for EPs in registration under the Financial Institutions Act</li> </ol>	<ol style="list-style-type: none"> <li>1. Number of consultations</li> <li>2. Possibilities of including EP as a requirement for registration under the Financial Institutions Act</li> </ol>	MOFPS BOJ	Obtain report from MOFPS	Semi-Annually	PIOJ

**Table 9:** Monitoring and Evaluation Plan *cont'd*

Outcome	Output	Actions	Indicator	Source of Data	Method of Data Collection	Frequency of Data Collection	Responsible MDA for M&E
	Output 1.2.4: Memorandum of understanding between MIIC and financial institutions to attach environmental conditions appropriate to the capacities of borrowers to loan funding	Negotiate a memorandum of understanding with the financial institutions that includes a range of environmental conditions relevant to the capacities of borrowers	1. % of financial institutions that are signatories to the Memorandum 2. Annual audit of failure to meet loan-specific environmental conditions agreed to by borrowers analogous to report on bad debt ratio	MIIC Financial institutions	Obtain report from MIIC	Annually	MEGJC
	Output 1.2.5: Strengthen the environmental permit programme	Review the permit programme and improve the efficiency of the application and award processes	Number of permits issued quarterly	NEPA	Obtain report from NEPA	Quarterly	MEGJC

Outcome	Output	Actions	Indicator	Source of Data	Method of Data Collection	Frequency of Data Collection	Responsible MDA for M&E
	Output 1.2.6: Strengthen the requirements for Environmental Impact Assessments, and the quality of the assessments	Ensure that Jamaica's EIA standards are comparable with international best practices subject to the data constraints prevailing	Number of EIAs conducted annually	NEPA	Obtain report from NEPA	Semi-annually	MEGJC
	Output 1.2.7: Increased share of green investments in the PSIP	<ol style="list-style-type: none"> <li>1. Raise the priority level of greening in all aspects of public policy</li> <li>2. Include a criterion that assesses the greening impact of a project in the PIMS process, and establish a minimum green content for the PSIP</li> </ol>	Percentage of projects in the PSIP that qualify as green investments. That is, the percentage of expenditure in these projects supporting the strategic objectives of the GEIS exceeds some minimum defined by MEGJC	PIMSEC	Obtain reports from PIMSEC	Annually	MEGJC

Table 9: Monitoring and Evaluation Plan *cont'd*

Outcome	Output	Actions	Indicator	Source of Data	Method of Data Collection	Frequency of Data Collection	Responsible MDA for M&E
Strategic Objective 2: Reduction in Jamaica's carbon footprint							
Outcome 2.1: Increased share of renewable energy in total energy consumption	Output 2.1.1: Prioritize the implementation of the recommendations/strategies of the National Energy Policy and the Integrated Resource Plan to reduce the dependence on fossil fuels	Implement the National Energy Policy	Percentage of renewable energy share of energy consumed, and % of renewable energy share of electricity consumed	MSET JPS	Obtain reports from MSET	Annually	MEGJC MSET
	Output 2.1.2:  Increased percentage of electric vehicles in the transportation stock the transportation Stock	Prepare a plan for the transition to electric and other types of non-gasoline powered vehicles as are appropriate	Percentage of vehicles powered by electricity	MTM  MSET Motor vehicle dealers	Obtain reports from  MTM	Annually	MEGJC  MTM

Outcome	Output	Actions	Indicator	Source of Data	Method of Data Collection	Frequency of Data Collection	Responsible MDA for M&E
Outcome 2.2: Increased energy efficiency in production and consumption	Output 2.2.1: Increased efficiency of energy use in public buildings	Expand efforts to retrofit government buildings for energy efficiency through EMEP and similar projects	Public sector kWh saving in electricity consumption per year	MSET JPS	Obtain reports from MSET	Annually	MEGJC MLGRD UDC  MLGRD UDC
	Output 2.2.2: Increased compliance with the new building code	Monitor and enforce compliance with the new building code	1. % of non-compliant new buildings per year 2. Number of square meters of commercial building space retrofitted each year	MLGRD Municipal Corporations	Obtain reports from MLGRD	Annually	MEGJCM LGRD UDC



**Table 9:** Monitoring and Evaluation Plan *cont'd*

Outcome	Output	Actions	Indicator	Source of Data	Method of Data Collection	Frequency of Data Collection	Responsible MDA for M&E
	Output 2.2.3: Incentives for increased efficiency of energy use by private commercial buildings	Include incentives for retrofitting hotels, factories, and office buildings in the revised incentives programme	Revised incentives programme	MOFPS	Obtain report from MOFPS	Once in year 2 of the implementation of the GEIS	MEGJCM LGRD UDC
	Output 2.2.4: Establish efficiency standards for energy use by commercial buildings	Revise the building code to include energy efficiency standards	Revised building code	Bureau of Standards MSET Municipal Corporations	Obtain report from Bureau of Standards	Once in year 2 of the implementation of the GEIS	MEGJCM LGRD UDC
	Output 2.2.5: Increased efficiency for energy use by private commercial buildings	Enforce compliance with standards and with incentive conditions where relevant	Number of buildings non-compliant per annum	MLGRD Municipal Corporations	Obtain report from MLGRD	Annually	MEGJCM LGRD UDC
<b>Strategic Objective 3: Ensure economic sustainability and climate change resilience</b>							
Outcome 3.1: More efficient management of natural resources	Output 3.1.1: Land reform	1. Implement the new Land Policy 2. Promote investment in land management for flood control	Number of parcels and hectareage of public lands divested per year	NLA MOAF	Obtain report from MOAF	Annually	MEGJC
	Output 3.1.2: Natural resource pricing	Establish a schedule of fees for commercial use of publicly owned natural resources such as beaches, rivers, waste disposal sites, and other natural resources	Schedule of fees	MOFPS	Obtain report from MOFPS	Once in year 2 of the implementation of the GEIS	MEGJC

**Table 9:** Monitoring and Evaluation Plan *cont'd*

Outcome	Output	Actions	Indicator	Source of Data	Method of Data Collection	Frequency of Data Collection	Responsible MDA for M&E
	Output 3.1.3: Sustainable Management of water resources	<ol style="list-style-type: none"> <li>1. Implement the National Water Policy</li> <li>2. Promote PPP investment in water supplies</li> </ol>	<ol style="list-style-type: none"> <li>1. % of households with clean water supplies</li> <li>2. Revenue per litre of water supplied</li> <li>3. Energy cost per litre of water supplied</li> </ol>	NWC WRA	Obtain reports from NWC and WRA	Annually	MEGJC
	Output 3.1.4: Sustainable Management of the Forests	<ol style="list-style-type: none"> <li>1. Implement the National Forest Management and Conservation Plan</li> <li>2. Promote PPP investment in forest conservation and forest products</li> </ol>	Hectarage of forest cover, undisturbed and restored	Forestry Department	Obtain report from Forestry Department	Annually	MEGJC
	Output 3.1.5: Sustainable Management of Fisheries	Implement the National Fisheries Policy	<ol style="list-style-type: none"> <li>1. Indices of harvesting</li> <li>2. Indicators of conditions of the fishing grounds</li> <li>3. Hectarage of fish sanctuaries</li> </ol>	National Fisheries Authority (NFA)	Obtain report from Fisheries Division	Annually	NFA
	Output 3.1.6: Sustainable Management of Land Resources	Implement the National Spatial Plan	Indicator to be defined with respect to the National Spatial Plan	MEGJC	Obtain report from MEGJC	Annually	MEGJC

<b>Outcome</b>	<b>Output</b>	<b>Actions</b>	<b>Indicator</b>	<b>Source of Data</b>	<b>Method of Data Collection</b>	<b>Frequency of Data Collection</b>	<b>Responsible MDA for M&amp;E</b>
Outcome 3.2: Climate Change Resilience	Output 3.2.1: Reduced vulnerability to climate change	<ol style="list-style-type: none"> <li>1. Public investment in research for climate-resilient plants and animals</li> <li>2. PPP investment in adaptation to climate change</li> </ol>	<ol style="list-style-type: none"> <li>1. Number and value of research projects</li> <li>2. Number and value of adaptation projects</li> </ol>	MEGJC	Compile a list of the research and adaptation projects with their values. Survey the project managers/directors for activities and achievements	Annually	MEGJC

**Table 9:** Monitoring and Evaluation Plan *cont'd*

Outcome	Output	Actions	Indicator	Source of Data	Method of Data Collection	Frequency of Data Collection	Responsible MDA for M&E
	Output 3.2.2: Enhanced capacity to recover from windstorms and excess precipitation	1. Public information 2. Relocate and/or improve vulnerable settlements 3. Promote business continuity plans	1. Number of hours of public education on media 2. % of the population living in vulnerable conditions 3. % of businesses with business recovery plans	JIS PIOJ STATIN	Obtain reports from JIS, PIOJ, STATIN	Semi-annually for public education, and annually for the others	MEGJC
<b>Strategic Objective 4: Adaptation to Climate Change</b>							
Outcome 4.1: Coastal zone protection	Output 4.1.1: Strengthened Sea defences	Implement Framework	Number and value of projects for sea defences	MEGJC NEPA NWA	Obtain reports from NEPA, NWA	Annually	MEGJC
	Output 4.1.2: Protection and regeneration of mangroves	Promote PPP investment in mangrove restoration by GOJ and hotel owners	Hectarage of mangroves protected and restored	NEPA Forestry Department DBJ	Obtain reports from NEPA, Forestry Department, DBJ	Annually	MEGJC DBJ
Outcome 4.2: Management of hillside erosion	Output 4.2.1: Terraces, drainage infrastructure and other land works to manage water run-off	Promote PPP investment in sustainable land development	1. Number of PPP investment projects in sustainable land development 2. Hectarage per annum equipped with proper drainage	MOAF DBJ	Obtain reports from MOAF and DBJ	Annually	MOAF DBJ

Table 9: Monitoring and Evaluation Plan *cont'd*

Outcome	Output	Actions	Indicator	Source of Data	Method of Data Collection	Frequency of Data Collection	Responsible MDA for M&E
	Output 4.2.2: Reforestation	Encourage tree planting programmes	Number of trees planted per annum	Forestry Department	Obtain report from the Forestry Department	Annually	MEGJC
Output 4.3: Adjustment to higher temperatures	Output 4.3.1: Green building code for housing	Formulate and adopt a green building code for housing	Review of standards for green buildings internationally, and adapt them to a suitable code for Jamaica's climate	Bureau of Standards	Obtain report from the Bureau of Standards	Once in year 2 of the implementation of the GEIS	MEGJCM LGRD
	Output 4.3.2: Maximize natural cooling of buildings	Incentives for investment in housing compliant with the green building code for houses	Include incentives for investment in green housing in the revised incentive programme	NHT MOFPS	Obtain report from the MOFPS	Once in year 2 of the implementation of the GEIS	MEGJC MLGRD
<b>Strategic Objective 5: Promotion of Economic Inclusiveness</b>							
Outcome 5.1: Employment generation	Output 5.1.1: Increased supply of workers with the relevant skills to support green investment projects	Public and private investment in training of workers with the requisite skills	Number of trained personnel in key sectors available to support green investment projects	MLSS MOEYI HEART/ NSTA	Obtain reports from the MLSS, MOEYI, HEART/NSTA	Annually	MEGJC
	Output 5.1.2: Increase green jobs	Implement green investment projects that create jobs	Number of green jobs created	STATIN MLSS	Obtain reports from STATIN, MLSS	Annually	MEGJC

**Table 9:** Monitoring and Evaluation Plan *cont'd*

Outcome	Output	Actions	Indicator	Source of Data	Method of Data Collection	Frequency of Data Collection	Responsible MDA for M&E
	Output 5.1.3: Reduced income inequality	Encourage employers to raise the average wage to reflect increased productivity	Ratio of average manager's salary to average worker's salary in selected private and public enterprises	MLSS JEF STATIN	Obtain report from MLSS	Annually	MEGJC
Outcome 5. 2: Growth of small business	Output 5.2.1: Growth of green investment by SMEs	Implement incentives to encourage green investment projects by SMEs	Number and value of green investments by SMEs per annum	MIIC DBJ	Obtain reports from MIIC, DBJ	Annually	MIIC MOFPS
	Output 5.2.2: Employment by SMEs	Implement incentives to encourage the creation of SME green jobs	Number of employees in green jobs	STATIN MLSS	Obtain reports from STATIN, MLSS	Annually	MIIC MOFPS
	Output 5.2.3: Share of public procurement	Reserve a minimum share of purchases associated with green investments for tender by SMEs	Number and value of public contracts obtained by SMEs	PPC MOFPS	Obtain reports from PPC, MOFPS	Annually	MOFPS

## References

1. Caribbean Community Climate Change Centre (cross posted with Environmental Solutions Limited), “4WaystoGreenourCities”, <https://www.caribbeanclimate.bz/4-ways-to-green-our-cities/>
2. Ciocoiu, Carmen Nadia, Integrating Digital Economy And Green Economy: Opportunities For Sustainable Development, Theoretical and Empirical Researches in Urban Management 6(1):33-43, February 2011, [https://www.researchgate.net/publication/227346561\\_Integrating\\_Digital\\_Economy\\_And\\_Green\\_Economy\\_Opportunities\\_For\\_Sustainable\\_Development](https://www.researchgate.net/publication/227346561_Integrating_Digital_Economy_And_Green_Economy_Opportunities_For_Sustainable_Development)
3. Corfee-Morlot, Jan, Virginie Marchal, Céline Kauffmann, Christopher Kennedy, Fiona Stewart, Christopher Kaminker, Geraldine Ang, Toward a Green Investment Policy Framework: the Case for Low-Carbon climate-resilient infrastructure, OECD Environment Working Papers No. 48, November 2012
4. Della Croce, R., C. Kaminker and F. Stewart (2011). “The Role of Pension Funds in Financing Green Growth Initiatives”, OECD Publishing, Paris.
5. Eyraud, L., Wane, A., Zhang, Ch., Clements, B. (2011), Who’s Going Green and Why? Trends and Determinants of Green Investment. IMF Working Paper WP/11/296
6. Golub, S. S., C. Kauffmann and P. Yeres (2011), “Defining and Measuring Green FDI: An Exploratory Review of Existing Work and Evidence”, OECD Working Papers on International Investment, 2011/02, OECD Publishing. <http://dx.doi.org/10.1787/5kg58j1cvcvk-en>
7. Gordon, J. Noel, The New National Building Code of Jamaica, 2019(?). Mr Gordon was the Director of Engineering of the Bureau of Standards of Jamaica
8. Government of Barbados, The National Strategic Plan of Barbados, 2006-2025, <https://www.greengrowthknowledge.org/sites/default/files/downloads/policydatabase/BARBADOS%29%20National%20Strategic%20Plan%20%282006-2025%29.pdf>
9. Government of Indonesia, National Green Growth Roadmap for Indonesia: A synthesis for Policymakers, 2015, <http://gggi.org/wp-content/uploads/2016/06/Annex-1a-Example-of-Green-Growth-Strategy.pdf>
10. Government of Jamaica, The Fair Competition Act, <http://jftc.gov.jm/wp-content/uploads/2017/08/Fair-Competition-Act.pdf>
11. Government of Jamaica, National Policy on Environmental Management Systems (EMS): in pursuit of a Green Economy, 2017, p., <https://japarliament.gov.jm/attachments/article/1927/2018%20Green%20Paper%20%20-%20National%20Policy%20on%20Environmental%20Management%20Systems.pdf>
12. Government of Jamaica, National Water Sector Policy and Implementation Plan 2019, p.2, [https://megjc.gov.jm/docs/policies/national\\_water\\_sector\\_policy\\_2019.pdf](https://megjc.gov.jm/docs/policies/national_water_sector_policy_2019.pdf)
13. Government of Jamaica, Public Sector Procurement Policy, Ministry of Finance and the Public Service, November 2010, <https://mof.gov.jm/procurement/public-sector-procurement-policy.html>
14. Government of Rwanda, Green Growth and Climate Resilience National Strategy for Climate Change and Low Carbon Development, <https://cdkn.org/wp-content/uploads/2010/12/Rwanda-Green-Growth-Strategy-FINAL1.pdf>
15. Granoff, Ilmi, Monica Araya, Philipp Ulbrich, Sam Pickard and Caroline Haywood, Bridging Costa Rica’s green growth gap - How to support further transformation toward a green economy in Costa Rica, November 2015, <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9997.pdf>
16. Hutchinson G., and D. Harris (eds), A Growth Inducement Strategy for Jamaica in the Short and Medium Run, PIOJ, p.37, <https://www.pioj.gov.jm/product/a-growth-inducement-strategy-for-jamaica-in-the-short-and-medium-term/>

17. IBM, Global Location Trends, - 2019 Annual Report: Trade Regulations and Digital Disruptions Affect the Economic Outlook, p.5, <https://www.ibm.com/downloads/cas/R9VW3VO5>
18. ILO, Skills for Green Jobs, [https://www.ilo.org/skills/projects/WCMS\\_115959/lang--en/index.htm](https://www.ilo.org/skills/projects/WCMS_115959/lang--en/index.htm)
19. Inderst, G., Kaminker, Ch., Stewart, F. (2012), “Defining and Measuring Green Investments: Implications for Institutional Investors Asset Allocations”, OECD Working Papers on Finance, Insurance and Private Pensions, No.24, OECD Publishing, [https://www.oecd.org/finance/WP\\_24\\_Defining\\_and\\_Measuring\\_Green\\_Investments.pdf](https://www.oecd.org/finance/WP_24_Defining_and_Measuring_Green_Investments.pdf)
20. Li, Chuan, and Joyce Wong, Financial Development and Inclusion in the Caribbean, IMF Working Paper, March 2018, <https://www.imf.org/en/Publications/WP/Issues/2018/03/13/Financial-Development-and-Inclusion-in-the-Caribbean-45689>, p.15
21. Ministry of Economic Growth and Job Creation, National Water sector policy and implementation plan, 2019, Ministry paper, no. 35/19, <https://japarliament.gov.jm/attachments/article/2143/2019%20Ministry%20Paper%2035.pdf>
22. Ministry of Finance and the Public Service, COVID-19 Economic Recovery Task Force “Rebuild Jamaica” - Final Report June 30, 2020
23. Ministry of Foreign Affairs and Foreign Trade, National Foreign Trade Policy: Positioning Jamaica to Increase Foreign Trade, October 2017, [https://mfaft.gov.jm/jm/wp-content/uploads/2019/03/National-Foreign-Trade-Policy\\_2017-APPROVED-webversion\\_14Jan20193333.pdf](https://mfaft.gov.jm/jm/wp-content/uploads/2019/03/National-Foreign-Trade-Policy_2017-APPROVED-webversion_14Jan20193333.pdf)
24. Ministry of Industry, Commerce, Agriculture and Fisheries, National Investment Policy of Jamaica– Green paper, July 2020
25. Mooney, Henry, Jamaica: Financial Development, Access, and Inclusion: Constraints and Options, IDB, November 2018, [https://publications.iadb.org/publications/english/document/Jamaica\\_Financial\\_Development\\_Access\\_and\\_Inclusion\\_Constraints\\_and\\_Options.pdf](https://publications.iadb.org/publications/english/document/Jamaica_Financial_Development_Access_and_Inclusion_Constraints_and_Options.pdf)
26. OECD, Investment Policy Reviews: Costa Rica, 2013, Chapter 5: Costa Rica’s Framework for Green Investment, [https://read.oecd-ilibrary.org/finance-and-investment/oecd-investment-policy-reviews-costa-rica-2013/costa-rica-s-policy-framework-for-green-investment\\_9789264203952-9-en#page4](https://read.oecd-ilibrary.org/finance-and-investment/oecd-investment-policy-reviews-costa-rica-2013/costa-rica-s-policy-framework-for-green-investment_9789264203952-9-en#page4)
27. PIOJ, Vision 2030-Jamaica National Development Plan, 2009
28. PIOJ, Vision 2030-Jamaica: Agriculture Sector Plan
29. PIOJ, Vision 2030-Jamaica: Construction Sector Plan
30. PIOJ, Vision 2030-Jamaica: Energy Sector Plan
31. PIOJ, Vision 2030-Jamaica: Tourism Sector Plan
32. PIOJ, Vision 2030-Jamaica: Water Sector Plan
33. Land and Soil in the context of a Green Economy for sustainable development, Food Security and Poverty Eradication: Submission of the UNCCD Secretariat to the Preparatory Process for the Rio+20 Conference, November 2011, [http://cawater-info.net/bk/water\\_land\\_resources\\_use/english/english\\_ver/pdf/rio6-eng.pdf](http://cawater-info.net/bk/water_land_resources_use/english/english_ver/pdf/rio6-eng.pdf)
34. Sviryzdenka, Katsiaryna, Introducing a New Broad-based Index of Financial Development, IMF Working Paper, WP/16/5, 2016, p.33, <https://www.imf.org/external/pubs/ft/wp/2016/wp1605.pdf>
35. UNEP, SIDS Focused Green Economy: An Analysis of Challenges and Opportunities, 2012, [https://www.greengrowthknowledge.org/sites/default/files/downloads/resource/SIDS-focused\\_GE\\_An\\_Analysis\\_of\\_Challenges\\_and\\_Opportunities\\_UNEP.pdf](https://www.greengrowthknowledge.org/sites/default/files/downloads/resource/SIDS-focused_GE_An_Analysis_of_Challenges_and_Opportunities_UNEP.pdf)



36. US Department of State, 2019 Investment Climate Statements: Jamaica,  
[https://www.state.gov/reports/2019-investment-climate-statements/jamaica\\_trashed/](https://www.state.gov/reports/2019-investment-climate-statements/jamaica_trashed/)
37. Witter, Michael, Brian Bernal, Elizabeth Emanuel, Kevon Rhiney, Marjorie Segree, Wesley Vanriel,  
Green Economy – Scoping Study for Jamaica, Prepared for the Ministry of Water, Land, the Environment  
and Climate Change, and UNEP, December 19, 2014
38. World Bank, Economic Stabilization and Foundations for Growth Development Policy Loan  
(DPL), Report No. 140619, September 19, 2019
39. World Economic Forum, The Green Investment Report The ways and means to unlock private  
finance for green growth A Report of the Green Growth Action Alliance, 2015  
[http://www3.weforum.org/docs/WEF\\_GreenInvestment\\_Report\\_2013.pdf](http://www3.weforum.org/docs/WEF_GreenInvestment_Report_2013.pdf)
40. World Economic Forum, Global Competitiveness Report 2019,  
[http://www3.weforum.org/docs/WEF\\_TheGlobalCompetitivenessReport2019.pdf](http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf)

## Appendix

### Definitions of Green Investment Given by the Interviewees

1. Investing capital in a way that has a positive impact on the environment/creates a more sustainable world, such as renewable energy (financing wind and solar investments), cleaner energy (financing cleaner emission transportation such as electric buses, electric cars), lower pollutants (investing in lower carbon footprint technologies, plastic alternatives, recycling plant, etc).
2. Investment in developmental activities (usually multi-million) which seek to meet specific social or economic goals/objectives while fostering environmental protection (particularly natural assets) and/or reducing GHG emissions.
3. In our context, green investment is defined as any investment activity or product in which a company or project is engaged that results in improved environmental sustainability or conservation of natural resources. These include investment in renewable energy; technologies and practices to conserve water and energy and reduce water; and reduce greenhouse gas emissions and associated climate change.
4. Capital/Funds/finances allotted to projects and programmes that implement clean technologies which reduce emission and promote low-carbon development and builds the resilience of the economy, environment, and society.
5. An investment which has positive economic or social impacts on the natural environment. These often need to have the specific objective of creating a positive impact on the environment.
6. One that contributes to the achievement of the United Nations Sustainable Development Goals.
7. Capital investment that includes activities that seek to minimize/eliminate any deleterious effects of the investment on the environment; which intentionally enhance climate change mitigation and/or adaptation and build climate resilience; as well as promote sustainable management of the environment.
8. Investment that promotes or enhances the environment/promotes environmental sustainability.
9. Investment that has i) a low environmental impact; (ii) sustainability element in the design; and (iii) positive impact on the environment.
10. Investments which incorporate economic activities which use natural resources without significant environmental risks while promoting social well-being. Such activities should reduce the use of non-renewable resources and improve operational efficiency as well as capacity-building of the population.

### Incentives

Interviewees were asked to identify the obstacles to green investments in Jamaica. The responses have been synthesized in the following list:

1. *Lack of local capacity:* Jamaica lacks technical expertise to guide green investment activities, and the national grid does not have sufficient capacity to accommodate the energy generated by green technology.
2. *Government policy gaps:* There is an inadequate legislative framework to encourage and support green investments. There is no commitment to long-term planning goals that promote green investment. Government bureaucracy is discouraging. While there are State subsidies for fossil fuels, there are no special allowances/ provisions available for green investment activities.
3. *Lack of resources:* The formal banking/financing institutions do not provide financing for projects readily, and when it does, the capital is expensive. There is a lack of interest from local financiers, and insufficient investor appetite. Capital costs are relatively high.
4. *Uncertainty:* Uncertainty is higher for green than for traditional investments. The cost of energy is variable, and frequent depreciation of the currency causes uncertainty. The return on green investments is not known and difficult to forecast.
5. *The return on investment* is low.
6. *Employability/trainability* of the labour force is not known.
7. *Competitiveness*
8. *Industry structure* and supply chains

These obstacles apply as well, but to lesser degrees to traditional investments, especially low-risk, high-return short-term projects. **Table 2** sets out perspectives of the public and private sector leaders on the current investment climate.

The incentives proposed in the consultations with the selected leaders of the public and private sectors are listed in groups below.

1. Government:

a. Planning and Regulation:

- i. Clear legal and regulatory framework governing formation of Private Equity and Venture Capital companies (taxation of carried interest, etc.).
- ii. Appropriate easily accessible and transparent planning framework.
- iii. Enabling policy framework – legislation, institutions, and market-based instruments.
- iv. Legislations and regulations mandating the gradual evolution to clean/green technology (e.g., increased facilitation to green investors).
- v. Streamlining of bureaucracy to get approval/ one-stop shop.

vi. Procurement regulations in support of green economic activities.

vii. Public procurement rules should favour green investments.

b. Taxes and Subsidies with sunset provisions:

- i. Tax credits for green initiatives at the corporate and household levels.
- ii. Waivers
- iii. Exemption of duties and taxes on energy efficiency and renewable energy equipment.
- iv. Subsidies
- v. Removal and/or reduction of tariff on green technologies.
- vi. Reduced duties on environmentally friendly imports.
- vii. Increased capital allowances on environmentally friendly plant and machinery.

viii. Link the tax regime to energy consumption thereby discouraging the importation of inefficient

ix. Remove subsidies from non-green economic activities where feasible.

2. Capital Market:

a. Increased asset allocation for pension funds (main pool of long-term capital) to invest in alternative investments.

b. Reduced cost for green investment (e.g., preferential interest rates).

c. Lower cost of capital/lower interest rates.

3. Returns on Green Investments:

a. Additional earnings based on emission gases saved, as in carbon credits.

b. Increase the price offered for power to the national grid under the net billing regulation.

4. Technical assistance in designing green investment projects

Many of the proposed incentives mirror the perceived obstacles to green investments. Essentially, they seek to reduce the costs and the uncertainty of green investments and increase the returns. The Government is deemed to have the major role in making green investments more attractive to private investors.

Ministry of Economic Growth and Job  
Creation ©

