



DRAFT

NATIONAL CARBON EMISSIONS TRADING POLICY



*Enabling efficiency, investment growth and sustainable
development benefits from Carbon Emission Trading*

August 2009

TABLE OF CONTENTS

<u>TFOREWORD</u>	<u>ii</u>
<u>EXECUTIVE SUMMARY.....</u>	<u>iii</u>
<u>SECTION 1: INTRODUCTION.....</u>	<u>1</u>
1.1 Vision Statement	1
1.2 Rationale and Purpose of Emission Trading Policy	i
1.3 BACKGROUND	2
1.3.1 The United Nations Framework Convention on Climate Change & the Kyoto Protocol	2
1.3.2 Post Kyoto 2012.....	2
1.3.3 Emission Trading Regimes	3
1.3.4 Benefits for Participating in Carbon Emission Trading.....	5
<u>SECTION 2: THE CONTEXT FOR CARBON TRADING IN JAMAICA</u>	<u>7</u>
2.1 Economic Framework for Investment	7
2.2 Institutional Framework.....	7
2.3 Existing Legislative Framework.....	8
<u>SECTION 3: PRIORITY AREAS FOR PROJECT DEVELOPMENT</u>	<u>9</u>
3.1 Renewable Energy.....	9
3.2 Forestry	9
3.3 Energy Efficiency	10
3.4 Waste Management	11
<u>SECTION 4: POLICY ISSUES AND EMERGING TRENDS RELATED TO CARBON TRADING</u>	<u>12</u>
4.1 Sustainable Development and Equity	12
4.2 Reducing Emissions from Deforestation and Forest Degradation (REDD).....	13
4.3 Carbon Neutrality	13
4.6 Barriers for Effective Participation	15
<u>SECTION 5: POLICY GOALS, OBJECTIVES AND STRATEGIES.....</u>	<u>17</u>
<u>SECTION 6: MONITORING AND EVALUATION.....</u>	<u>24</u>
<u>APPENDICES</u>	<u>25</u>
<u>GLOSSARY</u>	<u>26</u>
APPLICATION PROCEDURE	31
JAMAICA’A SUSTAINABLE DEVELOPMENT CRITERIA	33
Existing Legislation	36

FOREWORD

The United Nations Framework Convention on Climate Change and its Kyoto Protocol addresses one of the most serious threats facing humanity today, climate change. There is scientific evidence pointing towards the correlation between increased greenhouse gas emissions caused by human activity mainly by developed countries, and a measurable warming of the earth's lower atmosphere. We are beginning to understand and experience the possible catastrophic implications of changes in the global climate system, particularly for small island developing states (SIDS) like Jamaica.

Actions to address climate change are however common to all but with differentiated responsibility. By participating in the Kyoto Protocol and the Clean Development Mechanism, in particular, Jamaica will assist developed countries in realizing a portion of their quantified emission reductions targets and at the same time the country will move towards achieving its national sustainable development goals.

Small Island States have been placing a great deal of emphasis on adaptation initiatives as a means of coping with climate change. However mitigation efforts such as energy efficiency and renewable energy projects in solar, wind, hydropower, and bio-fuels etc., represent an avenue for Jamaica to reduce its dependence on imported fossil fuel. Projections have been made in the Energy Policy for the use of renewable energy sources to meet our energy needs. The Forest Management and Conservation Plan also set out targets for reforestation and afforestation programmes that remove carbon dioxide from the atmosphere. The carbon market represents one such opportunity to achieve these objectives.

We are therefore pleased to present Jamaica's Carbon Emissions Trading Policy, which sets out a comprehensive framework for Jamaica's participation in the carbon market. It presents Government's positions, defines investment priorities, establishes the institutional and legal framework and facilitates structures necessary for the effective management of the regime involving the participation of all sectors in a manner that is mutually beneficial to all.

With the success of Jamaica's first CDM Project, the Wigton Wind farm, an initiative between the Petroleum Corporation of Jamaica and the Government of The Netherlands, the overarching objective is to position Jamaica to capitalize further on other opportunities for partnerships with other developed countries, private organizations, as well as relevant regional or international institutions. This will generate social, economic and environmental benefits for the country through investment in initiatives that will foster our sustainable development goals.

Office of the Prime Minister/ Minister of Energy and Mining
June 2009

EXECUTIVE SUMMARY

Vision Statement

“A competitive, diversified, efficient and investment-conducive carbon emission trading sector that fosters sustainable development and induces a less carbon intensive and non-renewable energy dependent economy”

Rationale and Purpose of Emission Trading Policy

The purpose of the National Carbon Emission Trading Policy is to enable Jamaica’s participation in the Clean Development Mechanism (CDM) of the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) and other carbon trading regimes, including the global voluntary market. In adherence with Jamaica’s sustainable development objectives, the policy framework will support an enabling business and regulatory environment for driving investment into carbon projects. The establishment of this enabling environment will reduce investor risk and build Jamaica’s competitiveness and host country reputation for the efficient commercialization of high quality and economically feasible carbon trading projects.

Background

The Kyoto Protocol is an international agreement made under the United Nations Framework Convention on Climate Change (UNFCCC), that sets the overall framework for intergovernmental efforts to stabilize the concentrations of greenhouse gases (carbon dioxide and methane in particular) in the atmosphere. Parties to the Convention agreed to take climate change considerations into account in such matters as planning for the development of agriculture, water resources, coastal zone development and protection of resources, as well as the main emitter of greenhouse gases the energy sector and to develop national programmes to minimize the effects of climate change. On April 6, 1995 Jamaica deposited its Instrument of Accession to the UNFCCC and made it accession into force to being a Party. The instrument of accession to the Kyoto Protocol was subsequently deposited on June 28, 1999 and the accession entered into force on 16th February 2005.

The thirteenth session of the Conference of the Parties (COP) to the UNFCCC and the third meeting of Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol held in Bali in 2007 produced the Bali Action Plan or Road Map. This plan defines a course for the adoption of a new instrument by the end of 2009 in Copenhagen, Denmark. The new instrument will include even more ambitious emission reduction and limitation commitments for Annex 1 (Developed Country Parties) to the Kyoto Protocol and is expected to come into force at the end of the first commitment period (31 December 2012). The Bali Road Map also recognizes the need to simplify the Clean Development Mechanisms (CDM), with the aim of streamlining its administrative processes, expanding the distribution of CDM project activities

across the developing world including Africa, the Small Island Developing States and the Least Developed Countries. The Bali Road Map will conclude with the expected adoption of a post-2012 climate change agreement at COP-15 in Copenhagen (December 2009).

Trading Regimes

Countries under the Kyoto Protocol, with commitments to limit or reduce greenhouse gas emissions, must meet their targets primarily through national measures. As supplemental and cost effective means of meeting these targets, the Kyoto Protocol introduced the Clean Development Mechanism (CDM) as a trading regime that would allow Annex 1 Parties to implement project activities to reduce GHG emission (or removal by sinks) in developing countries (non-Annex 1 Parties) that contribute to the sustainable development of these countries. Credits called certified emission reductions (CERs) will be issued based on the emissions reductions achieved which are used by the Annex 1 Parties to contribute to compliance with their quantified emissions reduction targets.

The voluntary market is another trading regime that transact all carbon offset trades that are not required by regulation. Countries which have not ratified the Kyoto Protocol or do not have a target under the Kyoto Protocol, as well as private companies develop projects and seek registration for verifiable emissions reductions (VERs) credits. Usually the VERs are purchased in the expectation that they will used to comply with future obligations under the Protocol, national regulations or could be resold.

Benefits for Participating in Carbon Emission Trading

Emission trading can assist with achieving national economic, social, environmental and sustainable development objectives. These benefits include:

- Helping to shift the economy towards being less carbon intensive and less dependent on non-renewable sources of energy.
- Providing social benefits such as rural development, employment and poverty alleviation.
- Contributing to climate change mitigation through engagement in carbon projects.
- Increasing foreign investment and foreign exchange earnings.
- Supporting afforestation activities, land use change and forestry (LULUCF) projects,
- Enhancing the tourism sector's sustainable branding efforts and actions towards achieving carbon neutral travel destination status.
- Facilitating the renewal and operational improvements of important infrastructure such as power stations, waste management systems, sewage treatment plants, etc.

Context for Carbon Trading in Jamaica

Jamaica is increasingly becoming a lucrative business destination with a plethora of investment opportunities including CDM projects. Jamaica has established a stable legal, institutional and economic framework for private national and foreign investment with the purpose of attracting the financial and technological resources required to develop the country's wealth of natural resources and diverse potentialities.

Of the main investor countries in Jamaica, only the Netherlands has a programme for purchasing CERs in Jamaica through the Wigton Wind farm project. Other countries such as Belgium and project developers from the United States, India and parts of Latin America, have also shown interest in engaging in projects in Jamaica.

Priority Areas for Project Development

Eligible projects under the CDM fall under the broad categories of: energy efficiency, renewable energy, transportation such as use of alternative fuels, land use, land use change, forestry, and waste-to-energy (biogas, methane etc.). In addition, there are specific CDM project opportunities for Jamaica in the area of wind, solar, bagasse co-generation, afforestation and landfill gas recovery, biofuels, and energy efficiency. In response to a call for proposals in 2005, a draft portfolio of potential CDM projects dealing with renewable, alternative sources of energy, energy efficiency, and forestation was developed.

Policy Issues and Emerging Trends Related to Carbon Trading

Equity and Sustainable Development in Carbon Trading

Despite the success of the global carbon market in terms of volume and value, views have been expressed that carbon-trading under the CDM has not been as helpful to developing countries as expected with only few of the larger developing countries of Asia and Latin America reaping most of the benefits. This is due to the existence of numerous barriers to effective participation in the CDM and carbon trading in general. These challenges include high transaction costs, low level of awareness of CDM opportunities, a low capacity to develop CDM projects and the lack of the establishment of a promotional CDM office.

Reducing Emissions from Deforestation and Forest Degradation (REDD)

As forests are important carbon sinks, abating deforestation through REDD activities is one of the most cost-effective ways to reduce emissions. REDD activities; however, face several technical and policy design challenges, such as leakage, permanence, additionality and baseline determination that have accounted for their exclusion from the Kyoto Protocol. However, the UNFCCC will decide during the Copenhagen meeting set for Dec 2009 whether and how REDD will fit into the international climate mitigation

strategy. If accepted, the inclusion of REDD into the Kyoto Protocol would undoubtedly pose an immense opportunity to help Jamaica curb deforestation.

Carbon Neutrality

In response to the acknowledgement by the international community that tourism is a major contributor to GHG emissions, tourist destinations are beginning to taking action towards “carbon neutrality” by fostering a tourism sector that does not contribute to a net increase in global warming. The framework for achieving this goal of carbon neutrality is, however, still evolving at multiple levels (regional, country, local). Many issues still need to be reconciled that include shared responsibilities amongst source markets and destinations, boundary definition, baseline calculations, and cooperation from all actors in the sector, particularly from the aviation industry. Adherence to the emerging trend of carbon neutrality through carbon project development as well as the procurement and trading of credits, however, is important to the competitiveness of the Jamaican tourism sector. The destination status as carbon neutral would pose as a significant marketing asset to the sector.

Carbon Capture and Storage

Carbon capture and storage (CCS) technology involves capturing carbon dioxide emissions from industrial sources and transporting them by pipeline to sites where they are injected into deep rock formations underground for permanent storage. Although, it is considered one of the main strategies for reducing CO₂ emissions, Jamaica will not give approval for carbon trading projects involving CCS technology. There are current uncertainties surrounding the use of CCS technologies such as the potential for leakage or adverse impact on public safety or the environment as well as the absence of international rules and guidance for the implementation of such projects by the Executive Board of the CDM.

Programmatic CDM

Originally, CDM requirements were that stand alone projects involving a government policy could not qualify as CDM projects and this was providing disincentives for governments in developing countries to develop clean energy CDM projects. In 2005, the scope of the CDM was modified where it was stated that a local/regional/national policy or standard cannot be considered as CDM project but that project activities under a programme of activity can be registered as a CDM activity.

Programmatic CDM has opened up new possibilities for smaller countries like Jamaica to establish or encourage programmes serving a larger number of households and smaller industrial firms offering them improved technology such as cooking stoves, appliances, lighting, motors, and air-conditioners. Assigning a CER value under a CDM Programme of Action could provide an incentive for developing countries to implement climate friendly policies and measures.

Policy Goals, Objectives and Strategies

The Policy Goals, Objectives and Strategies are geared towards ensuring the establishment of the enabling environment for successful project development. The section has also incorporated best practices in carbon trading from the international community that have experienced success in the commercialization of projects.

Policy Goals and Objectives	
<p>Goal 1: A host country reputation in the efficient and successful commercialization of high quality and economically feasible carbon trading projects.</p>	<p>Objective 1: Foster national engagement in the successful commercialization of carbon trading projects for the CDM and voluntary markets.</p> <p>Objective 2: Foster the development of a national community for participating in the carbon trading market through industry awareness and capacity building.</p>
<p>Goal 2: An enabling investment conducive environment with adherence to risk mitigation</p>	<p>Objective 1: Promote investor confidence and participation in carbon projects for both the CDM and voluntary markets through reduced risk and transaction cost.</p> <p>Objective 2: Secure a sustained source of funding to support the provision of DNA related activities and services.</p>
<p>Goal 3: An emission trading sector that is aligned with public interests and welfare.</p>	<p>Objective 1: Ensure the prioritization of public benefit and ownership interests in emission trading practices and outcomes.</p> <p>Objective 2: Ensure the management of public safety and welfare interests in emission trading practices and outcomes.</p>
<p>Goal 4: A diversified emission trading sector with established linkages across the economy.</p>	<p>Objective 1: Promote the development and commercialization of projects in the renewable energy sector.</p> <p>Objective 2: Promote the development and commercialization of forestry-related projects</p> <p>Objective 3: Promote the development of Energy Efficiency projects.</p> <p>Objective 4: Promote the development of Waste Management project.</p> <p>Objective 5: Foster the development of the carbon emission trading sector across a wide cross-section of the economy.</p>
<p>Goal 5: An emission trading sector that is innovative, progressive, dynamic and responsive to change</p>	<p>Objective 1: Foster innovation and the adoption of best practices in emission trading practices.</p>

Monitoring and Evaluation

A continuous programme for monitoring and evaluation, involving relevant stakeholders from public and private sectors, will be implemented. The Ministry responsible for the Environment will use several indicators to assess the effectiveness of the Policy in meeting its objectives and to form the basis for reviewing the policy and recommending any changes to the policy framework.

SECTION 1: INTRODUCTION

1.1 Vision Statement

“A competitive, diversified, efficient and investment-conducive carbon emission trading sector that fosters sustainable development and induces a less carbon intensive and non-renewable energy dependent economy”

This Vision statement is also aligned with Vision 2030 Jamaica – the roadmap towards achieving developed country status by 2030. The National Development Plan addresses critical elements including the development of human resources, international competitiveness, environment sustainability, health, social protection, and national security.

Arising from the development of the Plan was the creation of two task forces to deal with the protection of the environment: (1) the Natural Resources and Environmental Management Task Force and (2) the Hazard Risk Reduction and Climate Change Task Force. The articulation of the goals and objectives of the policy has been informed by the recommendations of these task forces.

1.2 Rationale and Purpose of Emission Trading Policy

The purpose of the National Carbon Emission Trading Policy is to enable Jamaica's participation in the Clean Development Mechanism (CDM) of the Kyoto Protocol to the United Nations Framework Convention on Climate

Change (UNFCCC) and other carbon trading regimes, including the global voluntary market. In adherence with Jamaica's sustainable development objectives, the policy framework will support an enabling business and regulatory environment for driving investment into carbon projects. The establishment of this enabling environment will reduce investor risk and build Jamaica's competitiveness and host country reputation for the efficient commercialization of high quality and economically feasible carbon trading projects.

With the evolution of the global carbon markets, the categories of entities (project developers, aggregators, retailers, brokers) and intermediaries involved in the commercialization of carbon projects and in the trading of emission credits have also grown. This policy framework, therefore, will address the major policy issues and strategies to allow these participants to take advantage of Jamaica's potential in carbon project development. The policy framework is also designed to address the major barriers common to developing countries that challenge their effective participation in emission trading.

Key Features of the Carbon Emissions Trading Policy

- ***Strategic focus on local entities capitalizing on trading opportunities (commercializing, banking, selling and purchasing of emission credits) for both the mandatory and voluntary markets.***
- ***Institutional arrangement of an independent government entity to take responsibility for a focused promotional and capacity building mandate.***
- ***Establishment of revenue sharing between government and private entities to reflect public ownership of resources.***
- ***Pursuit of carbon trading projects under a bundling approach such as Programmatic CDM for engaging in small scale projects.***
- ***Imposition of differential fees or taxes for the endorsement of projects by the DNA.***

1.3 BACKGROUND

1.3.1 The United Nations Framework Convention on Climate Change & the Kyoto Protocol

The Kyoto Protocol is an international agreement made under the United Nations Framework Convention on Climate Change (UNFCCC). The Convention was opened for signatures in May 1992 and entered into force on 21st March 1994. It sets the overall framework for intergovernmental efforts to stabilize the concentrations of greenhouse gases (carbon dioxide and methane in particular) in the atmosphere. This was expected to be at a level in which dangerous man-made interferences towards the climate system would be avoided. Parties to the Convention agreed to take climate change considerations into account in such matters as planning for the development of agriculture, water resources, coastal zone development and protection of resources, as well as the main emitter of greenhouse gases the energy sector and to develop national programmes to minimize the effects of climate change.

The Kyoto Protocol came into force February 16th 2005. Signatories to the Protocol agreed to the reduction of carbon dioxide and five other greenhouse gases by Annex 1 (Developed country Parties) in total by at least 5% of 1990 levels during the period 2008-2012. The main consideration to the parties are: the largest share of historical and current global emissions of greenhouse gases has originated in developed countries; per capita emissions in developing countries were still relatively low, and the share of global emissions originating in developing countries must be allowed to grow to meet their social and development needs.

On April 6, 1995, Jamaica deposited its Instrument of Accession to the UNFCCC and made it accession into force to being a Party. The instrument of accession to the Kyoto Protocol was subsequently deposited on June 28, 1999 and the accession entered into force on 16th February 2005.

1.3.2 Post Kyoto 2012

Discussions surrounding the second commitment period began in Bali in December 2007, at the thirteenth session of the Conference of the Parties (COP) to the UNFCCC and the third meeting of Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol. One of the main outcomes of the Conference was the Bali Action Plan or Road Map which defines a course for the adoption of a new instrument by the end of 2009 in Copenhagen, Denmark. The new instrument will include even more ambitious emission reduction and limitation commitments for Annex 1 (Developed Country Parties) to the Kyoto Protocol and is expected to come into force at the end of the first commitment period (31 December 2012). It will also include commitments for developing countries that are major emitters of greenhouse gases as well as new provisions for addressing adaptation and the transfer of clean technologies as well as the means for financing their implementation.

Small countries with low levels of emissions like Jamaica are expected to not have any mandatory commitments.

Although some developing countries, particularly China and India, are recording high levels of emissions, the per capita emissions in developed countries are still much higher than those of the developing world. Poorer countries have a lower capacity than developed countries to mitigate and adapt to climate change, even though they are more vulnerable to the impacts. Therefore, developed countries are increasingly required to take the lead in committing to mitigate their own emissions and to invest in and support technology transfer, other mitigation activities and assist with the building of resilience in developing countries to climate change.

The Bali Road Map does not outline new targets for the post-2012 period but it recognizes the need to severely slash global emissions of greenhouse gases, in particular carbon dioxide, methane and nitrous oxide. For this, some countries are proposing sectoral approaches to greenhouse gas emission reduction (such as setting sector specific targets through technology agreements or benchmarks for example), and many others support the provision of incentives for countries to reduce emissions that would otherwise result from deforestation and forest degradation.

The Bali Road Map also recognizes the need to simplify the Clean Development Mechanism (CDM), with the aim of streamlining its administrative processes, expanding the distribution of CDM project activities across the developing world including Africa, the Small Island Developing States and the Least Developed Countries. It also proposes to include a larger range of activities that could qualify as CDM project activities, such as the capture of carbon dioxide and store it into geological formations (CCS). In addition, it is seeking to enhance funding for the 'Adaptation Fund' that is currently financed by a two per cent levy on CDM projects, by extending the levy to Joint Implementation projects. The Adaptation Fund was established to assist developing countries that are particularly vulnerable to the adverse effects of climate change.

The Bali Road Map is expected to conclude with the adoption of a post-2012 climate change agreement at COP-15 in Copenhagen (December 2009).

1.3.3 Emission Trading Regimes

Regulated Markets

Countries under the Kyoto Protocol, with commitments to limit or reduce greenhouse gas emissions, must meet their targets primarily through national measures. As supplemental and cost effective means of meeting these targets, the Kyoto Protocol introduced three market-based mechanisms referred to as the Clean Development Mechanism (CDM), Joint Implementation (JI) and International Emissions Trading (ETS).

The Clean Development Mechanism allows Annex 1 Parties to implement project activities to reduce GHG emission (or removal by sinks) in developing countries (non-Annex 1 Parties) that contribute to the sustainable development of these countries. Credits called certified emission reductions (CERs) will be issued based on the emissions reductions achieved which are used by the Annex 1 Parties to contribute to compliance with their quantified emissions reduction targets. A portion (2%) of the proceeds of the sales of CERs are allocated by the CDM Executive Board for climate change adaptation activities in developing countries and another 2% for the administration of the CDM.

Joint Implementation (JI) – Annex 1 parties can assist other Annex 1 parties to implement project activities to reduce GHG emissions (or remove by sinks) and credits will be issued based on the amount of emission reductions achieved by the project activities. The credit from the JI is called Emission Reduction Unit (ERU).

The International Emissions Trading Mechanism (IETM), which is also known as Emissions Trading, allows developed countries in Annex 1 to trade or transfer part of their assigned amount of emission credits to each other.

There are also other regulated trading regimes, such as the Regional Greenhouse Gas Initiative (RGGI) and the Western Climate Initiative (WCI) both in North America, which may accept offset credits from other regional or international markets.

Voluntary Markets

The voluntary markets transact all carbon offset trades that are not required by regulation. Countries which have not ratified the Kyoto Protocol or do not have a target under the Kyoto Protocol as well as private companies develop projects and seek registration for Verifiable Emissions Reductions (VERs) credits. Usually the VERs are purchased in the expectation that they will be used to comply with future obligations under the Protocol, national regulations or for resale.

The voluntary market encompasses the Chicago Climate Exchange (CCX) and the “Over-the-Counter” (OTC) market. The CCX is a legally binding membership based cap-and-trade system which trades primarily allowance-based credits. However, the OTC market based on bilateral deals and trades primarily VERs, and thus presents an opportunity for Jamaica to participate in the trading of VERs.

Presently, the voluntary markets remain only a small fraction (about 2.9% volume-wise, 0.6% value-wise) of the regulated markets. However, while these markets alone will not achieve the scale needed to address climate change, they are not insignificant in size. Moreover, the voluntary markets' total growth rate of 86% was actually more than twice the regulated markets' growth rate of 40% in 2008. The voluntary offset market is expected to

continue to grow significantly as it is becoming increasingly attractive for companies to use as part of their corporate social responsibility strategy.



1.3.4 Benefits for Participating in Carbon Emission Trading

The additional funding channelled through emission trading can assist with reaching national economic, social, environmental and sustainable development objectives, such as cleaner air and water, and improved land use. Specifically, Jamaica can gain the following opportunities by hosting carbon projects for both the mandatory and voluntary markets. The opportunities include:

- Helping to shift the economy towards being less carbon intensive and less dependent on non-renewable sources of energy.
- Stimulating investment for projects that support national sustainable development goals.
- Providing social benefits such as rural development, employment and poverty alleviation.
- Facilitating active participation of private and public sectors in developing an emission trading sector.
- Serving as an effective tool of technology transfer for renewable energy projects that would replace old and inefficient fossil fuel technology.
- Creating new industries in environmentally sustainable technologies and driving business development for supporting goods and services.
- Contributing to climate change mitigation through engagement in carbon projects.
- Increasing foreign investment and foreign exchange earnings.
- Supporting afforestation activities, land use change and forestry (LULUCF) projects,

- Enhancing the tourism sector's sustainable branding efforts and actions towards achieving carbon neutral travel destination status.
- Facilitating the renewal and operational improvements of important infrastructure such as power stations, waste management systems, sewage treatment plants, etc.

SECTION 2: THE CONTEXT FOR CARBON TRADING IN JAMAICA

2.1 Economic Framework for Investment

The island is increasingly becoming a lucrative business destination with a plethora of investment opportunities including carbon projects. Jamaica has established a stable legal and economic framework for private national and foreign investment with the purpose of attracting the financial and technological resources required to develop the country's wealth of natural resources and diverse potentialities.

Fiscal measures have been introduced to attract direct foreign investment through the liberalization of the foreign exchange market and measures to reduce domestic inflation. Economic reforms have been adopted to streamline business operations and promote a climate that encourages entrepreneurship and investment. New laws and amendments to existing legislation as well as administrative procedures have been made in various areas, including banking, insurance, and taxation to provide greater access to credit and a more effective mechanisms for the distribution of goods and services.

Of the main investor countries in Jamaica, only the Netherlands has a programme for purchasing CERs in Jamaica through the Wigton Wind farm project. Other countries such as Belgium and project developers from the United States, India and parts of Latin America, have also shown interest in engaging in projects in Jamaica.

2.2 Institutional Framework

The Office of the Prime Minister has overall responsibility for the development of policies, programmes, and legislation to guide activities related to the protection, conservation and sustainable use of the island's natural resources as well as the built environment. The Ministry also deals with a wide range of regional and international environmental protocols and conventions. Portfolio areas of the Ministry are sustainable development, biodiversity protection, watersheds management, climate change, hazardous waste management, pollution control and the implementation of international treaties and conventions. The Ministry has oversight responsibility for the National Environment and Planning Agency (NEPA), in terms of environmental issues.

The National Environment and Planning Agency (NEPA), an Executive Agency of the Office of the Prime Minister, is the Authority charged with the responsibility for the management of the natural and built environment in Jamaica. Monitoring the state of the environment is done in collaboration with various agencies.

The Meteorological Service is the national Focal Point to the United Nations Framework Convention on Climate Change, (UNFCCC).

Several other Ministries and agencies administer policies and legislation which directly or indirectly relate to environmental matters, including the

National Solid Waste Management Authority, the Forestry Department, the Water Resources Authority, the Fisheries Division, the Ministry of Health, the Pesticides Control Authority, and the Ministry of Energy and Mining.

2.3 Existing Legislative Framework

In addition to the Natural Resources Conservation Authority Act (NRCA), there are over fifty (50) pieces of legislation which have direct or indirect impact on matters of the environment. The main environmental laws are those dealing with public health, watersheds, beaches, forestry, fisheries, surface and underground water, clean air, national heritage sites, wildlife protection, national parks, mining, petroleum transport, quarries control and waste management.

A list of the pieces of environmental legislation which may apply to the implementation of carbon trading projects is shown at Appendix 1.

The Natural Resources Conservation Authority (Permits and Licences) Regulations, 1996 is applicable to many projects. It provides for the permits and licensing system to control the undertaking of any new construction or development of a prescribed nature. Certain activities may require an environmental impact assessment (EIA) before a permit can be issued.

SECTION 3: PRIORITY AREAS FOR PROJECT DEVELOPMENT

In September 2002, the Government of Jamaica gave approval to the Government of the Netherlands for the operation of a 20 MW Wigton Wind Farm in Manchester as the first CDM project hosted in Jamaica. Since commencement in 2004 and up to March 2009, the wind farm has avoided 208,934 tonnes of CO₂ emissions. This translates into 147,365 barrels of oil import being avoided with savings amounting to US\$ 9,495,978 in the nation's oil import bill. However, Jamaica could stand to earn substantially more from carbon trading projects, particularly in the category areas of renewable energy, energy efficiency, forestry and waste management for both the mandatory and voluntary markets. Other areas of potential may include agriculture and transportation such as use of alternative fuels.

3.1 Renewable Energy

A number of countries including Jamaica have been pursuing alternative energy not because of the Kyoto Protocol but due to the high cost of oil and the demands on the fiscal budget. The country's engagement in carbon trading projects could therefore assist the country in meeting the projection under the Energy Policy of increasing the contribution of renewable energy sources to the electricity sector from the current level of 6% to 11% by 2012, 12.5% by 2015 and 20% by 2030.



Information available on the Renewable Energies Potential in Jamaica indicates that the increased use of renewable energy for the electricity sector exceeds by far, what is now realized. The draft national Energy Policy has indicated that several investment opportunities exist to develop the renewable energy sector in Jamaica such as wind farms and mini-hydro systems to generate electricity, biogas generators for domestic and institutional applications, and for the harnessing of solar water heater heating systems.

3.2 Forestry

The umbrella of projects in the land use, land-use change and forestry sector (LULUCF) is another promising source of carbon credit generation for Jamaica. Sequestration and carbon (biomass) accumulation for tropical countries, such as Jamaica are greater than that of temperate countries. Although carbon or biomass accumulation rates are poorly known for most parts of the tropical world, with considerable range in estimates, the potential

for carbon accumulation for humid tropics may be about 2.5 to 5.0 t C/ha/year; other sources suggest 4.5 to 14t C/ha/year.

However, credits generated from Reducing Emissions from Deforestation and Forest Degradation (REDD) projects are currently excluded from the CDM, but a decision regarding their inclusion is expected at the upcoming UNFCCC Copenhagen meetings in 2009. At the same time, afforestation and reforestation (AR) forestry activities are currently eligible for the CDM. These AR activities include afforestation or reforestation of degraded lands, conversion of agricultural land to agro-forestry systems and commercial plantations, among others. While AR-CDM project activities are subject to the specific modalities and procedures of the CDM, they have the potential of leveraging investments in the forestry sector that would not occur in absence of the possibility of selling CERs.

Jamaica recognises that there is potential for the development of wood-to-energy plantations in the country. An initial calculation was done based on the development of a forestry project involving up to 10,000 hectares of rapid growth plantations with average yields of 12 tones of dry matter per year for rotation periods of 3-5 years. The available biomass could produce up to 80 GWh per year for a total estimated level of 66,720 tones CO₂/year.



3.3 Energy Efficiency

Energy efficiency has been identified in the Energy Policy as having the greatest scope for reducing emissions and dependence on imported energy. The Energy Policy includes measures to support energy efficiency and conservation including information dissemination, demand side management programmes for the power sector, and energy efficiency building code.

Almost all of Jamaica's electricity is generated from imported fossil fuels. Transportation and industry also rely heavily on imported fuels. Examination of the GHG emissions (CO₂) resulting from Jamaica's energy use across all sectors, including power generation and industrial production, as reported in the country's national communication to the Climate Change Convention ,

provides an indication of where the highest reductions in emissions might be obtained through efficiency improvements.

On this basis, the largest opportunities to reduce Jamaica's GHG emissions, as well as reduce the country's dependence on imported energy, appear therefore to be through the use of energy efficiency measures in bauxite, manufacturing, transportation, and improved end-use electricity efficiency in all sectors. Lesser opportunities exist in fuel efficiency measures in the residential, commercial, cement, and agricultural sectors.

3.4 Waste Management

Landfill gas (LFG) projects under the Clean Development Mechanism (CDM) are becoming more financially attractive and easy to implement. In many instances however project developers find landfill sites not adequately operated and managed in a way that would meet western requirements and standards. Such inappropriate management techniques such as disposal of waste in inadequate locations, missing compaction of the tipped waste, missing coverage or sailings and a lack of infrastructure inside waste disposal sites, make adequate LFG measurement difficult.

For Jamaica, in terms of the amount of waste generated (1.6 million m³ as per 1996) and the amount of methane emissions make it favourable for the development of CDM projects. There are however, landfill management issues including the following which would have to be resolved in the medium to long term to make CDM landfill projects feasible.

- There is no regular covering for the waste at the landfills. The generation of biogas is due to the decomposition of organic waste in the absence of oxygen therefore, if the waste is not covered, there is no biogas generated and therefore no emissions reduction.
- Regular fires on the landfill represent a hazard for the project operation and results in combustion of the waste and of the methane being generated.



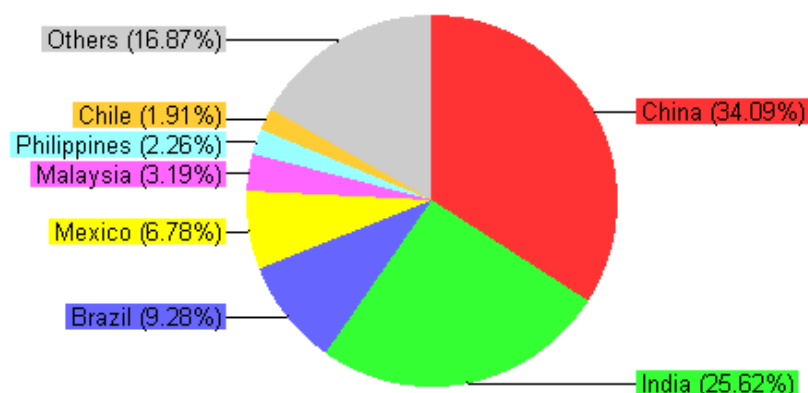
SECTION 4: POLICY ISSUES AND EMERGING TRENDS RELATED TO CARBON TRADING

4.1 Sustainable Development and Equity

Despite the success of the global carbon market in terms of volume and value, views have been expressed that carbon-trading under the CDM has not been as helpful to developing countries as expected with only few of the larger developing countries of Asia and Latin America reaping most of the benefits.

As at July 2009, there were 1,745 registered Clean Development Mechanism projects in developing countries, 1258 in Asia and the Pacific, 31 in Africa, 427 in Latin America, 3 in the Spanish Speaking Caribbean (2 in Cuba and one in the Dominican Republic) and 2 in the English Speaking Caribbean (one in Jamaica and Guyana). Its reach has been geographically limited, mainly to Asia and Latin America with China, India, Brazil and Mexico having a combined share of approximately 75.77% of the total projects registered.

Registered project activities by host party. Total: 1,725



<http://cdm.unfccc.int> (c) 14.07.2009 18:52

In addition to the disparity in CDM projects amongst developing countries, issues related to equity in access to markets as well as distributional and procedural justice in decision making and planning pose further consideration as to whether carbon trading can achieve real sustainable development benefits. Project development may impact local peoples' access to valuable resources, including environmental services that may involve competing interests in ownership and property rights. Therefore, local needs must

coalesce with interests of investors, brokers, national governments and NGOs to ensure an equitable distribution of benefits.

4.2 Reducing Emissions from Deforestation and Forest Degradation (REDD)

Land-use changes account for approximately 20% of global greenhouse gas emissions. The majority of these land-use changes come from deforestation and forest degradation in developing countries that are primarily caused by agriculture, logging and road expansion. Consequently, as forests are important carbon sinks, abating deforestation through REDD activities is one of the most cost-effective ways to reduce emissions. These activities can be divided into three categories. Project-based REDD activities generate credits based on the maintenance of carbon stocks in a localized area. Policy-based REDD activities generate credits by reforming land use policies in a manner that would lead to reduced deforestation. While sectoral REDD activities would generate market-based credits by reducing net deforestation rates over an entire country. REDD activities; however, face several technical and policy design challenges, such as leakage, permanence, additionality and baseline determination that have accounted for their exclusion from the Kyoto Protocol and mandatory markets to date.

At the 13th UNFCCC Conference of the Parties (COP 13) in Bali, however, the Bali Action Plan formally listed REDD as a potential means to achieve emission targets and left the decision of whether and how REDD will fit into the international climate mitigation strategy until Dec 2009 in Copenhagen. In so doing, the decision sent a signal to the international community that capacity building and the development of pilot REDD projects should be undertaken in anticipation of the outcome of the Copenhagen meetings. At that time, the UNFCCC will decide the mechanisms by which countries can meet their emission reduction targets, including whether REDD will be incentivized through market-based incentives, or if REDD activities will be accomplished through a fund that rewards countries for measurable, reportable and verifiable reductions in emissions from forestry. The inclusion of REDD in the Kyoto would undoubtedly pose immense opportunity for the forestry sector in Jamaica in helping to curb deforestation.

4.3 Carbon Neutrality

There is an emerging trend for tourist destinations to become “carbon neutral” by fostering a tourism sector that does not contribute to a net increase in global warming. This development has emerged in response to the acknowledgement by the international community that the tourism is a major contributor to GHG emissions. The United Nations World Tourism Organization (UNWTO) in its 2007 Davos Declaration called for concerted action to be taken by the sector to mitigate its contribution to climate change, such as through the application of existing and new technology to improve energy efficiency. The declaration also prescribes the implementation of incentives and market responsive mechanisms to mitigate climate change throughout the tourism value chain. In addition, it recommends that tourists

should be encouraged to reduce their carbon footprint and to offset the emissions that cannot be reduced directly.

The framework for achieving this goal of carbon neutrality is, however, still evolving at multiple levels (regional, country, local). Many issues still need to be reconciled that include shared responsibilities amongst source markets and destinations, boundary definition, baseline calculations, and cooperation from all actors in the sector, particularly from the aviation industry. Adherence to the emerging trend of carbon neutrality through carbon project development as well as the procurement and trading of credits, however, is important to the competitiveness of the Jamaican tourism sector. The destination status as carbon neutral would pose as a significant marketing asset to the sector. And, it would support the regional Caribsave project in its efforts to transition the Caribbean to the World's first carbon neutral tourism region. The Caribsave project is a partnership between the Caribbean Community Climate Change Centre (CCCCC) and the University of Oxford geared towards addressing the impacts and challenges surrounding climate change, tourism, the environment, economic development and community livelihoods across the Caribbean Basin.



The destination status as carbon neutral would pose as a significant marketing asset to the sector. And, it would support the regional Caribsave project in its efforts to transition the Caribbean to the World's first carbon neutral tourism region. The Caribsave project is a partnership between the Caribbean Community Climate Change Centre (CCCCC) and the University of Oxford geared towards addressing the impacts and challenges surrounding climate change, tourism, the environment, economic development and community livelihoods across the Caribbean Basin.

4.4 Carbon Capture and Storage

Carbon capture and storage (CCS) technology involves capturing carbon dioxide emissions from industrial sources and transporting them by pipeline to sites where they are injected into deep rock formations underground for permanent storage. It is considered one of the main strategies for reducing CO₂ emissions.

In light of the current uncertainties surrounding the use of CCS technologies such as the potential for leakage or adverse impact on public safety or the environment and given the absence of international rules and guidance for the implementation of such projects by the Executive Board of the CDM, Jamaica will not give approval for carbon trading projects involving CCS technology.

4.5 Programmatic CDM

Originally, CDM requirements were that stand alone projects involving a government policy could not qualify as CDM projects and this was providing disincentives for governments in developing countries to develop clean energy CDM projects. In 2005, the scope of the CDM was modified where it was stated that a local/regional/national policy or standard cannot be

considered as CDM project but that project activities under a programme of activity can be registered as a CDM activity.

Programmatic CDM has opened up new possibilities for smaller countries like Jamaica to establish or encourage programmes serving a larger number of households and smaller industrial firms offering them improved technology such as cooking stoves, appliances, lighting, motors, and air-conditioners. Assigning a CER value under a CDM Programme of Action could provide an incentive for developing countries to implement climate friendly policies and measures.

4.6 Barriers for Effective Participation

With regard to participation in the CDM, the main barriers for developing countries are related to the CDM itself and to the development and implementation of productive projects for developing countries. Some of these barriers also apply to trading in the voluntary market and include:

List of Barriers Impacting Effective Participation in Carbon Trading	
<ul style="list-style-type: none"> • High transaction costs 	<ul style="list-style-type: none"> • Inefficient or non-existent national CDM governance structure
<ul style="list-style-type: none"> • A low level of awareness of CDM opportunities, risks and scope in all the sectors (public, private, civil society, academia) 	<ul style="list-style-type: none"> • Lack of the establishment of offices or units that was fully devoted to the promotion of CDM
<ul style="list-style-type: none"> • A low capacity to develop CDM projects 	<ul style="list-style-type: none"> • Complexities of the CDM modalities and procedures.
<ul style="list-style-type: none"> • The lack of a legal instrument that recognizes that CER as a tradable instrument in the local financial market. 	<ul style="list-style-type: none"> • Property Rights and Ownership definition of the CERs

Many of these barriers have been recognized and some have been addressed by the CDM Executive Board and where applicable incorporated into the policy framework. These solutions include:

- | |
|---|
| <ul style="list-style-type: none">• The approval of a wide range and number of methodologies has made it easier to prove additionality. |
| <ul style="list-style-type: none">• The introduction of small scale project activity reduces transaction cost |
| <ul style="list-style-type: none">• Innovation such as bundling several small projects into a single project |
| <ul style="list-style-type: none">• The introduction of the Programme of Activity where the implementation of a national policy to reduce GHG emissions can qualify as a CDM project activity |
| <ul style="list-style-type: none">• The Board has established a web based interface that can match potential buyers of CERs with potential host of CDM project activities. |

SECTION 5: POLICY GOALS, OBJECTIVES AND STRATEGIES

The Policy Goals, Objectives and Strategies are geared towards ensuring the establishment of an enabling environment for successful project development and implementation. This framework incorporates best practices in carbon trading from the international community that have experienced success in the commercialization of projects.

Goal 1: A host country reputation for the efficient and successful commercialization of high quality and economically feasible trading projects.

Objective 1: *Foster national engagement in the successful commercialization of carbon trading projects for the CDM and voluntary markets.*

Strategies

The government will support participation in carbon emission trading under the following carbon trading arrangements:

1) Bilateral/Multilateral CDM

Jamaica will enter into bilateral and multilateral arrangements for CDM projects activities. Under a bilateral arrangement an entity from the investor (Annex 1) country may co-operate with an entity from Jamaica under the supervision of both governments to develop the project. Under multilateral arrangements, an entity, such as the World Bank Carbon Finance Programme, may be approached to assist a national entity with the development of a CDM project activity with investment funds from governments or non-governmental entities interested in buying certified emission reductions (CERs) or entering into contractual arrangements with Jamaica entities for the purchase of the CERs.

2) Unilateral CDM

Jamaica will give approval for CDM projects that are established with funds provided solely by national entities. Annex 1 investors will be sought upon certification of the emissions reductions and issuance of the CERs to the national registry.

3) The Voluntary Carbon Market

(i) The government will require that projects intended to generate offset credits for the voluntary market are verified by an independent third party auditor as aligning with internationally recognized voluntary market standards and national requirements where applicable.

(ii) The government will allow local entities to partake in the commercialization, selling and purchasing of Verifiable Emission Reductions (VERs).

(iii) The government will allow local entities to co-operate and enter into contractual relationships with any other suppliers (foreign or domestic)

operating in the value chain of the carbon trading process. These suppliers can operate at several levels in the value chain, such as retailer, wholesaler/aggregator, broker, project developer, consultant, hedge fund, investment bank, facilitators, NGOs, and several other business types.

Objective 2: *Foster the development of a national community for participating in the carbon trading market through industry awareness and capacity building.*

Strategies

1) The government will support relevant programs to strengthen the capacity of industry stakeholders to commercialize (formulate, develop, implement and market) carbon projects in various sectors.

These stakeholders include Designated National Authority (DNA) staff members, the national focal point to the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, government policy makers of all levels, academics, NGOs and the local business community, encompassing project developers, investors, local consultants, technical experts and any other entity involved in the governance or development of carbon projects. Therefore, the programs will be designed to address the differing interests of the various stakeholders.

2) The government will support relevant programs to facilitate broad stakeholder dialogue and knowledge sharing that will help improve the quality and competitiveness of carbon projects.

Goal 2: An enabling investment conducive environment with an adherence to risk mitigation.

Objective 1: *Promote investor confidence and participation in carbon trading projects for both the CDM and voluntary markets through reduced risk and transaction cost.*

Strategies

1) The Designated National Authority (DNA) will be the national body responsible for providing transparency in procedure and governance in project evaluation and approval for CDM and **voluntary (?) markets.**

(i) The DNA will evaluate and approve projects according to sustainable development criteria. The DNA will establish these criteria, inclusive of general conditions, specific sectoral requirements and appropriate indicators established through broad stakeholder consultation.

(ii) The DNA will also support internationally recognized standards to ensure that voluntary offset projects produce real environmental benefits.

(iii) The DNA will foster ministerial cooperation and adequate representation on the Technical Committee to ensure timely project approvals.

These strategies will promote quality assurance and help investors mitigate the risk of project approval.

2) The Government will amend the designation of the DNA to be the Ministry responsible for environment. Currently, the DNA is designated according to the practice of stating the name of a particular Ministry that is subject to change with the portfolio responsibilities of Ministers/Ministries. This new amendment will, therefore, provide stakeholders with permanence in the designation of the DNA.

3) The Government will support the establishment of a body independent from the DNA to help identify and promote project opportunities, as well as facilitate participation of relevant sectors in both mandatory and voluntary markets.

The National Carbon Trading Promotional organization would be responsible for the following:

- (i) Public education and awareness - formation dissemination to investors, entrepreneurs, professionals and the general public
- (ii) Developing and improving upon the portfolio of projects eligible for consideration under all relevant carbon trading schemes
- (iii) Marketing the project portfolio to buyers and investors nationally and internationally
- (iv) Designing a national promotion strategy and coordinating project investment promotion
- (v) Facilitating communication and cooperation between the different actors involved in the commercialization of CERs and VERs.

4) The government will pursue project development under Programmatic CDM especially for energy efficiency projects to help small scale projects access investment funding.

5) The Government will, through the Planning Institute of Jamaica, facilitate meetings between project proponents and potential financiers, including national and international institutions such as the Development Bank of Jamaica, Commercial Banks, the World Bank and other multilateral development banks, to help establish facilities for financing and insurance.

6) The government will encourage local entities to become DOEs. This strategy will help reduce transaction costs involved in validation, registration, verification and certification of CDM projects.

Objective 2: Secure a sustained source of funding to support the provision of DNA related activities and services.

Strategies

An application fee will be applied to all CDM applications submitted to the DNA representing the cost of approving a CDM project and calculated based on the amount of additional man-hours required for the evaluation of projects as well as capacity for carrying out the roles of the DNA. The funds will be used to finance the services of the Technical Review Committee or any other expert which may be used.

Goal 3: An emission trading sector that is aligned with national interests and welfare.

***Objective 1:** Ensure the prioritization of public benefit and ownership interests in emission trading practices and outcomes.*

Strategies

1) The Government will make provisions for the sharing of revenue in instances where the project from a private developer involves incentives provided by government.

The revenue sharing may be in the form of:

- Debt financing where a financial institution provides a portion of the project's finance in the form of a loan secured by the Government of Jamaica against the assets of the project.
 - The use of national resources, provision of land, office space, or other facilities
 - The provision of staff, technical expertise or equipment to support the implementation of the project.
- 2) The Government will create a mechanism that allows for private company ownership of CERs and VERs.
- 3) This could be in the form of a sharing arrangement between the Government and the private entity. The extent of the arrangement could be determined by:
- The assistance given by the Government to the Project.
 - The extent of the private sector expenditure
 - Incentives for continued private sector initiatives concerning environmental protection
 - The need to monitor the transfer and ensure that it is in keeping with the Government's environmental policies and general relations with states.

***Objective 2:** Ensure the management of public safety and welfare interests in emission trading practices and outcomes.*

Strategies

1) The DNA will consult with the academic and scientific community to ensure that emerging and future emission reducing technologies or practices, that may potentially have an adverse impact on public safety and welfare are identified and not approved, unless satisfactory measures can be implemented and managed to reduce adverse risk to the local environment and to reduce the negative direct or indirect impacts on human health and the natural environment.

Goal 4: An emission trading sector with a diversified project portfolio and established linkages across the economy.

Objective 1: Promote the development and commercialization of projects in the renewable energy sector.

Strategies

1) The Government will, as outlined in the national Energy Policy Green Paper (2006-2020), pursue the following initiatives:

- Tax policies to encourage development of the renewable energy sector.
- Development of a domestic industry for the production of solar systems and biogas technologies.
- Facilitating through national institutions low cost funding for implementation of solar heating solutions at the household and institutional levels.
- Strengthening of the legislative and regulatory framework and establishing appropriate protocols to facilitate the development of the energy sector.
- Undertaking resource assessment and inventory of potential renewable energy sources.

Objective 2: Promote the development and commercialization of forestry-related projects

Carbon forestry projects encompass land use, land-use and forestry (LULUCF) initiatives, including afforestation, reforestation, sustainable forest management and avoided deforestation projects. Jamaica's participation in these projects will contribute to its national Forest Management and Conservation Plan (2001) by establishing forest cover to benefit present and future generations and preserving the ecosystem services provided by forestry.

Strategies

1) The Government will encourage the participation of the private sector in carbon forestry; assist in capacity development in genetically superior seedlings in a timely manner and to undertake a large-scale annual planting programme.

2) The government will place strategic emphasis on increasing the sustainable production of wood from accessible plantations environmentally and economically suitable for harvesting, and encourage the development of such plantations on suitable private lands to reduce the exploitation pressure on natural forests and sensitive areas.

3) Depending on the outcome of the UNFCCC Copenhagen meetings in 2009, the government will support the promotion of REDD projects.

Objective 3: Promote the development of Energy Efficiency projects.

Strategies

The government will support programmatic CDM as an incentive to promote Energy Efficiency improvement projects, as this approach increases the economic feasibility and the potential number of participants engaged in this project type.

Pursuing carbon trading projects under Programmatic CDM, especially for energy efficiency projects will require the development of a Programme of Action (PoA) outlining the variety of small emission reduction activities or actions to be implemented in order to meet a defined goal and to be submitted as a single CDM activity with one set of methodologies for baseline determination and monitoring of the project performance. The PoA will include a programme to implement an energy efficiency standard, a demand-side management programme, or efforts to switch to industrial facilities from fossil fuel to natural gas. The programmes physical boundary may extend to more than one country.

Recognizing that the multi-dimensional nature of programmatic project activities demands a more intricate treatment of CDM parameters (boundary, leakage, baseline, additionality, crediting period, double counting, monitoring, etc), the DNA will foster specific workshops or consultations to provide additional guidance in this area.

Objective 4: Promote the development of Waste Management projects.

Strategies

The government will facilitate a working group (public and private sectors, local communities) to help municipal waste management authorities integrate CDM project activities into their operations. The working group will design creative approaches to supporting landfill gas projects. For example, landfills need regular covering in order to generate biogas.

Objective 5: Foster the development of the carbon emission trading sector across a wide cross-section of the economy.

Strategies

1) The National Carbon Trading Promotional organization will include the development of a diversified project portfolio to link and engage a wide cross section of the economy in an effort to capitalize on investment opportunities that can benefit multiple sectors in their mandate.

2) The National Carbon Trading Promotional organization will help interested businesses to identify eligible carbon projects within communities that would support their corporate social responsibilities strategies. The National Carbon Trading Promotional organization will also encourage the business community at large across all sectors to implement carbon projects, such as energy efficiency projects, into their operations to achieve energy savings, while benefiting from the generation and sale of credits through programmatic CDM or the bundling of VERs to the international marketplace.

3) To help Jamaica become one of the first destinations to achieve a carbon neutral travel destination status, government will support the establishment of one or more national aggregator/offset providers that would aggregate and sell credits incurred from Jamaican carbon projects that may be used to offset emissions generated from travel to the country and from tourism businesses. This outcome would in turn would further differentiate and enhance Jamaica's reputation as a sustainable or "environmentally responsible" destination.

Goal 5: An emission trading sector that is innovative, progressive, dynamic and responsive to change.

Objective 1: Foster innovation and the adoption of best practices in emission trading practices.

Strategies

The government will subject this policy framework to continuous review to ensure that its policy objectives and strategies are appropriately developed to enable efficiency, investment growth and sustainable development from carbon emission trading. The government will undertake this policy review through broad stakeholder consultation in emission trading monitoring and evaluation activities.



SECTION 6: MONITORING AND EVALUATION

A continuous programme for monitoring and evaluation, conducted by relevant stakeholders from public and private sectors, will be implemented.

The Ministry responsible for the Environment will conduct broad stakeholders' consultations periodically to review and assess the effectiveness of the Policy using the indicators identified below as a guide. The results of the assessment including recommendations will be published in an annual report for submission to the Cabinet.

Performance Indicators for Carbon Emissions Trading Policy Assessment

Indicators	Unit of Measure	Rationale for Indicator
Projects Submitted for Approval	Number	This measure would indicate the effectiveness of the policy/performance of the DNA in fostering industry awareness, capacity building and investment in enhancing carbon project development.
Projects Approved by DNA	Percentage	This measure would reflect the effectiveness of the Technical Committee's in evaluating projects according to EB's guidelines and regulations (not a direct policy objective).
Project Approved By Sector	Percentage	This measure would indicate the effectiveness of the policy/performance of the DNA in diversifying the project portfolio across the various sectors. It would also indicate the effectiveness of the sectoral policy strategies in creating incentives towards project development in that particular sector.
Project Evaluated and Assessed	Number of days	This measure will be used to benchmark DNA's efficiency in project approval relative to international counterparts.
Source of Funding	% local, foreign or combination	This measure would indicate Jamaica's host country reputation on the international carbon marketplace.
CERs Issued	Number	This measure would indicate Jamaica's transaction volume and contribution to emission mitigation, as one environmental benefit of carbon emission trading.
Employment generated	Number	This measure would indicate the socio-economic benefits and contribution to poverty alleviation from these projects.

APPENDICES

APPENDIX I

GLOSSARY

Adaptation fund

A fund generated by charging an adaptation levy on Clean Development Mechanism projects. The purpose of the fund is to help particularly vulnerable developing countries meet the costs of adapting to a changing climate.

Additionality

For Joint Implementation and Clean Development Mechanism projects, emissions reductions must be additional to those that would otherwise occur. Additionality is when there is a positive difference between the emissions that occur in the baseline scenario, and the emissions associated with a proposed project.

Annex I, or Annex B

The signatory nations to the Kyoto Protocol that are subject to caps on their emissions of greenhouse gases and committed to reduction targets – countries with developed economies. Annex I refers to the 36 countries identified for reduction in the UNFCCC while the Annex B is an adjusted list of 39 countries identified under the more recent Kyoto Protocol. Annex B countries have their reduction targets formally stated.

Annex II

A subset of Annex 1/B, Annex II countries are signatory nations to the UNFCCC which are also members of the OECD - the most industrialised economies. They have extra obligations to help developing nations combat climate change via technology transfer and financial help.

A/R

Afforestation and reforestation. Term given to the class of projects devoted to the planting of trees on unforested land for carbon emissions reduction and other environmental benefits.

Banking and borrowing

The ability under an emissions trading scheme to save emission permits issued in one for use in later years (banking), or bring forward some of a future year's permit allocation for use in the current year (borrowing).

Banking

A maximum limit of 2.5% of a country's assigned amount (target) has been set for banking credits for future use in the next commitment period, for both

Emission Reduction Units from Joint Implementation projects and Certified Emission Reductions from Clean Development Mechanism projects. Assigned Amount Units from emissions trading can be carried forward without restriction, whereas Removal Units assigned to removal of CO₂ by sinks cannot be banked at all.

Baseline and credit

A type of emissions trading scheme where firms are encouraged to reduce their greenhouse gas emissions below a projected "business as usual" path of increasing emissions. Any reductions below that future path earn credits for the difference which can be sold to other emitters struggling to contain increases to baseline levels.

Biofuels

Biofuels are renewable fuels made from plants that can be used to supplement or replace the fossil fuels petroleum and diesel used for transport. The two main biofuels are ethanol and biodiesel. Ethanol is produced from the fermentation of sugar or starch in crops such as corn and sugar cane. Biodiesel is made from vegetable oils in crops such as soybean, or from animal fats. Depending on the processes used to make biofuels, greenhouse emissions from cars and fuel-powered machinery can be substantially reduced by their use.

Carbon footprint

The global warming impact of human activities in terms of the amount of greenhouse gases they produce. The emissions associated with the use of power, transport, food and other consumption for an individual, family or organisation are added up to give one comparable measure in units of carbon dioxide equivalent.

Carbon neutral

An individual, household or organisation that is responsible for no net emissions of greenhouse gases from all its activities is considered "carbon neutral". Emissions must be cut to a minimum and any necessary emissions then offset by emission reducing activities elsewhere. Buying accredited clean electricity helps cut household or office greenhouse emissions, while investing in sustainable energy projects or afforestation schemes are examples of offsets.

Carbon sink

Natural and potentially man-made features on the Earth's surface where carbon dioxide is removed from the atmosphere. The major natural sinks are forests and oceans which have processes that absorb CO₂. Carbon sinks are vital to fighting global warming because they counteract sources of carbon emissions, such as industry and transport.

Carbon capture and storage (CCS)

A two-step measure to prevent carbon dioxide emissions from the burning of fossil fuels entering the atmosphere, particularly from power generation. Instead of CO₂ being vented, it is contained and pumped underground under pressure, where it cannot contribute to global warming. This technology is still in its infancy with results largely unproven.

Clean Development Mechanism (CDM)

A Kyoto Protocol initiative under which projects set up in developing countries to reduce greenhouse gas emissions generate tradable credits called CERs, the first step towards a global carbon market. These credits can be used by industrialised nations to offset carbon emissions at home and meet their Kyoto reduction targets. The projects include renewable energy generation, reforestation and clean fuels switching.

CDM Executive Board

The CDM Executive Board approves CDM projects, certifies operational entities and will issue carbon credits for CDM projects.

Certified Emission Reduction (CER)

A credit generated under Kyoto's Clean Development Mechanism (CDM) for the reduction of emissions of greenhouse gases equal to one tonne of CO₂-equivalent. They are designed to be used by industrialised countries to count toward their Kyoto targets but can also be used by EU companies and governments as offsets against their emissions under the EU Emissions Trading Scheme.

Credits

These are assigned for emissions reductions. There are four types of Kyoto credit - Assigned Amount Units, Certified Emission Reductions, Emission Reduction Units, and Removal Units. The former are allocated to countries who have Kyoto Protocol targets, and the latter three types are generated through different types of projects.

Designated National Authority (DNA)

The DNA is the official body representing the Government which takes part in the arrangement of CDM/JI projects. For JI host countries, the DNA approves the projects and issues the emission reduction units.

Designated Operational Entity (DOE)

A Designated Operational Entity is an independent body accredited by the CDM Executive Board (CDM EB) that either validates a project proposal and recommends it for registration by the CDM EB, or verifies the monitoring data and recommends to the CDM EB the amount of carbon credits that should be issued.

Emissions trading

One form of carbon price creating a market-based system for regulating the emission of greenhouse gases. The quantity of emissions is controlled and the price allowed to vary by the issuing of tradable emission permits. These rights to emit can be traded in a commercial market under an emissions trading scheme.

Joint Implementation (JI)

A Kyoto Protocol mechanism which allows developed countries, particularly those in transition to a market economy, to host carbon-reducing projects funded by another developed country. The arrangement sees the credits generated, called ERUs, go to the investor country while the emission allowances (AAUs) of the host country are reduced by the same amount.

Kyoto Protocol

The agreement reached in Kyoto in 1997 committing developed countries and countries making the transition to a market economy (Annex I countries) to achieve quantified targets for decreasing their emissions of greenhouse gases.

Leakage, carbon leakage

Occurs when laws or activities designed to cut greenhouse gas emissions implemented in one jurisdiction or project area lead to the shifting of the targeted emitting activities elsewhere, thus undermining the attempt to reduce emissions.

Land use, land use change and forestry (LULUCF)

The term given to the sector covering reforestation & afforestation, land clearing and agriculture. Each of these activities can make significant contributions to atmospheric carbon emissions and/or removals.

Offsets

Carbon offsets, offset credits. Credits issued in return for a reduction of atmospheric carbon emissions through projects such as the provision of renewable energy to replace fossil fuel energy, or reforesting cleared land to create a carbon sink. By paying for such emission reducing activities, individuals and organisations can use the resulting credits to offset their own emissions, either voluntarily or under the rules of most emissions trading

schemes. One offset credit equates to an emission reduction of one tonne of CO₂.

Permanence

A key pre-requisite for the credibility of any carbon sequestration activity, particularly tree planting; that it have in place safeguards to cover the possibility that carbon removed from the atmosphere may be released in the future, for example, due to fire, disease or logging. In practice, ongoing verification of planted trees must take place where carbon offset credits have been generated for those carbon reductions.

REDD

Reduced Emissions from Deforestation and Degradation. An initiative to cut greenhouse gas emissions associated with forest clearing by the inclusion of “avoided deforestation” in carbon market mechanisms. More simply, payment in return for the active preservation of existing forests.

UNFCCC

United Nations Framework Convention on Climate Change. Also referred to informally as the UN climate change convention. It is the international agreement for action on climate change and was drawn up in 1992. A framework was agreed for action aimed at stabilising atmospheric concentrations of greenhouse gases. The UNFCCC entered into force on March 1994 and currently has 192 signatory parties. The UNFCCC in turn agreed the Kyoto Protocol in 1997 to implement emission reductions in industrialised countries up to 2012 and is currently seeking the negotiation of a new treaty to extend commitments beyond 2012.

VCU

Voluntary Carbon Unit. The name of carbon offset credits specifically verified to the Voluntary Carbon Standard, one of the leading independent standards established to demonstrate integrity in project-based emission reductions in the unregulated voluntary carbon market.

VERs

Verified Emission Reductions. The general name given to carbon offset credits in the voluntary carbon market. These are tradable credits for greenhouse emission reductions generated to meet voluntary demand for carbon credits by organisations and individuals wanting to offset their own emissions.

APPENDIX II

APPLICATION PROCEDURE FOR APPROVAL BY THE DESIGNATED NATIONAL AUTHORITY

All applications for CDM National approval should follow the following procedure:

- (a) Formal Submission of CDM Project Proposal from project proponent to the DNA for CDM national approval
- (b) DNA acknowledges receipt of project proposal.
- (c) Project circulated by DNA to Technical Review Team and/or Ad hoc Committee for evaluation
- (d) The Opinion of the Technical Review Committee is received stating whether the project contributes to sustainable development
- (e) If project is approved, the DNA prepares letter of approval for legal review.
- (f) Communication of National Approval to the Project Participant
- (g) National Project monitoring after registration by the Executive Board.
- (h) Visits to the project site/area may also be conducted to get further information about the project.

DOCUMENTATION REQUIRED

(a) The Project Proposal should be in the form of the Project Design Document (PDD) prepared in accordance with the guidelines of the CDM Executive Board.

(b) Depending on the nature and scale of the proposal, the following additional documentation may be requested:

- The Environmental Impact Assessment
- A statement declaration by the project developer as to why they think the proposed project activity would contribute to sustainable development of the country
- Verification by local stakeholders that they have been consulted on the project and have no substantial objections to the project.

APPENDIX III

JAMAICA'S SUSTAINABLE DEVELOPMENT CRITERIA FOR THE ASSESSMENT AND SELECTION OF PROJECTS UNDER THE CLEAN DEVELOPMENT MECHANISM

Projects submitted for consideration under the CDM must fulfil the broad sustainable development objectives of:

- Increased energy efficiency and conservation
- Sustainable energy production
- Transfer of technologies and financial resources
- Local environmental benefits, e.g. cleaner air and water
- Local environmental side benefits, such as health benefits from reduced local air pollution
- Poverty alleviation and equity considerations through income and employment generation
- Private and public sector capacity development
- Catalyzing green investing priorities

In the selection process, the DNA will assess projects to ensure that the overall sustainable development impacts are positive. The table below shows the broad economic social and environmental considerations that will be taken into account when assessing CDM projects.

Dimension of Sustainable Development Criteria	
Economic	net generates employment
	reduces economic burden of energy imports and reduces foreign exchange demands
	Provides financial returns to local entities
	Positives impact on Balance of Payments
	technological transfer
	macroeconomic, fiscal and economic sustainability
	cost-effectiveness
Social	increases equity
	increases energy access
	considers gender issues
	Provides education and training
	Provides positive health impacts (direct and indirect)
	alleviates or reduces poverty
	improves quality of life
Environmental	reduces greenhouse gas (GHG) emissions and use of fossil fuels
	reduces pressure on local environments
	local environmental benefits, e.g. related to: air pollution, water, soil, waste reduction
	promotes the development, application, and transfer of climate-friendly technologies
	use of renewable resources
	energy efficiency
	sustainable land use
	biodiversity protection (conservation or preservation)
Political or Governance	participation of local populations
	participation of local authorities
	information sharing
	governance
	legal framework

Modified from: OLADE Capacity Study

Specific Criteria Related to Sustainable Energy Use

In assessing and evaluating projects the DNA will seek to advance the objectives of the Jamaica Energy Sector Policy which places emphasis on energy efficiency, fuel sources and energy use in transportation. Projects submitted for consideration should satisfy at least one of the following outlined objectives:

- diversify the energy base and encourage the development of indigenous energy resources where economically viable and technically feasible; and ensure the security of energy supplies;
- encourage efficiency in energy production, conversion and use with the overall objective of reducing the energy intensity of the economy;
- ensure stable and adequate energy supplies at the least economic cost in a deregulated and liberalized environment to enhance international competitiveness and to improve quality of life of householders;
- provide an appropriate environment conducive to private sector participation in electricity generation;
- make electricity available to the remaining areas of the island, especially in deep rural areas and at affordable rates to lifeline customers;
- complement the country's Industrial Policy recognizing the importance of energy as a critical input to industrial growth and stability;
- minimize the adverse environmental effects and pollution caused by the production, storage, transport and use of energy, and minimize environmental degradation as a result of the use of fuel wood; and
- reduce reliance of the energy intensive sectors of the economy such as bauxite, electricity and transport on a single fuel type. Natural gas, coal and renewable energy sources are among the alternatives which will be explored.
- reduce motor vehicle use and electricity consumption in the public sector with emphasis on major users.

The DNA reserves the right to revise and redevelop the following criteria based on shift in government priorities.

Appendix IV

Existing Legislation

Legislation	Purpose
Natural Resources (Prescribed Areas) (Prohibition of Categories of Enterprise, Construction and Development) Order, 1996	Provides that the entire island of Jamaica is a prescribed area and lists specified categories of enterprise, construction or development that require a permit.
Natural Resources Conservation Authority (Permits and Licences) Regulations, 1996	Administers the permits and licensing system to control the undertaking of any new construction or development of a prescribed nature. Certain activities may require an environmental impact assessment before a permit can be issued.
Natural Resources Conservation Authority (Air quality) Regulations 2006	Regulates ambient, air and stack emissions
Natural Resources Conservation (Waste Water and Sludge) Regulations (draft)	Fosters compliance with the standards for discharge of sewage and trade effluent to the environment.
Forest Act 1996; Forest Regulations 2001	The Forest Act and Regulations provide for the protection and management of designated forest reserves.
Mining Act, 1947	Provides the legal framework governing mining and its operations. It deals with prospecting rights, exclusive prospecting licences and mining leases.
Quarries Control Act , 1984	Controls and manages all quarrying activities in Jamaica
Public Health Act, 1985	Provides for the protection of public and environmental health, waste management and pollution control
The National Solid Waste Management Act, 2001	Provides for the management of solid waste in an environmentally sound manner.
Petroleum Act, 1979	Provides for the exploration of oil and the development of Jamaica's petroleum resources.