Establishment of a Climate Change Department

UNDP's Analytical Report to the Ministry of Water, Land, Environment and Climate Change Government of Jamaica

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The National Context

Climate change presents Jamaica with an unprecedented, vast and multi-dimensional challenge, which creates additional barriers to achieving the Millennium Development Goals and Jamaica's own National Development Plan – Vision 2030 Jamaica, if the scale and nature of the risks to be faced from climate change are not adequately addressed. Jamaica is poised to face these risks as articulated in Vision 2030 Goal 4 "Jamaica Has a Healthy Natural Environment" and the supporting National Outcome #14 "Hazard Risk Reduction and Adaptation to Climate Change"

The need for an overarching, comprehensive, and systematic national institutional response to climate change was identified at the highest level as an urgent requirement in 2012. A process to develop such an institutional response strategy and the consequent policy frameworks was instituted under the aegis of the Ministry of Water, Land Environment and Climate Change and with advice from the Climate Change Advisory Committee. This decision gives a clear indication of the Government of Jamaica's political will to effectively deal with climate change in a timely manner, according to the urgency of the matter for Jamaica, with contributions from key experts and stakeholders, and on the basis of globally learnt best practices.

The Process

Key stakeholders from government agencies, non-government entities, academia, civil society and the international donor community were consulted during the process. An assessment was done of existing entities, their mandates and roles, areas of overlap and existing gaps. Based on the review of national assessments, reports, and stakeholder consultations major gaps were identified in terms of the existing climate change governance system.

The Findings

The need to create a Climate Change Department in Jamaica is supported by political commitment, the existence of a dedicated Ministry, a shared sense of urgency of the stakeholders, a rich institutional landscape for implementation, a vast national body of information and knowledge, seasoned negotiators, authoritative scientists and knowledgeable practitioners. The institutional gaps and constraints that were identified during this assessment are counterbalanced by this fertile environment.

The Climate Change Department

This document presents the core elements of a proposal to establish a Climate Change Department within the Ministry of Water, Land, Environment and Climate Change and it places emphasis on the coordinating role of the Climate Change Department and its ability to facilitate and ensure collaboration of key stakeholders and partners.

The role of the Climate Change Department is to lead, provide strategic support, coordinate and monitor the transformational change towards a climate resilient society for Jamaica.

The main functions of the Climate Change Department, in respect of the role identified, would be:

- i. Coordination of policy development and programmes;
- ii. Information and data management;
- iii. Public awareness, education, research and science
- iv. Mobilization of climate finance and other resources including funds from the private sector.
- v. International cooperation and negotiations

In order to carry out these functions, the Climate Change Department would initially be staffed by a Director and two Senior Officers, one for Adaptation and one for Mitigation. In the medium to long term additional Senior Officers would be added to the core staff.

Short-term and Long-term Actions

A set of short-term and long-term actions have been articulated to ensure timely operationalization of the CCD.

The short-term actions include:

- Completion of all political and bureaucratic agreements
- Decision-making on the governance structure of the CCD and interface with the CCAC
- Identification and allocation of budget
- Recruitment of personnel
- Completion of National Climate Change Policy and Action Plan
- Coordinate databases of current activities and on-going projects

The long-term actions include:

- Standard setting for monitoring, evaluation and reporting
- Foster and coordinate cutting edge knowledge building and research activities
- Coordinate, facilitate and ensure creation of integrated policies
- Create an effective resource mobilization strategy
- Ensure effective strategies for communication, advocacy, awareness raising, outreach and education

1. Challenges and Impacts of Climate Change on Jamaica

1.1 Background to a national climate change response

Climate change presents Jamaica with an unprecedented and a multi-dimensional challenge for achievement of its Vision 2030 Jamaica and the Millennium Development Goals (MDGs). As an upper Middle Income Country and a small island developing state, the adverse impacts of climate change pose a serious threat to the sustainability of its inclusive development efforts. The challenge is threefold:

- i. Addressing the vulnerability of Jamaica as a small island country to the adverse impacts of climate change;
- ii. Integrating climate change response strategy in the implementation of the national development plan; and
- iii. Using transformational efforts to exemplify the Island State as a sustainable, resilient and a resource efficient island with low emissions and an inclusive economy that presents a replicable model for other island states.

Jamaica is designated as a small island state in a hurricane belt with a steep hilly interior and a narrow coastline that supports major infrastructure and the majority of the population. Water supply, both for drinking as well as irrigation, has to be managed very carefully given that Jamaica is dependent on tourism and agriculture as its primary resource base. Jamaica is therefore very vulnerable to both short and long term changes in climate, which impact all sectors and affect the overall quality of life for Jamaicans. For instance, the National Development Plan, Vision 2030 highlights that natural disasters have consistently affected community livelihood systems as well as the productive sectors and industries such as agriculture, manufacturing and tourism.¹

Climate change is likely to increase the incidence of natural disasters in Jamaica through more frequent and extreme weather events. Sea-level rise will magnify the impact of storm surge and waves on coastal areas and lead to shoreline erosion and property loss. Climate change is also likely to weaken the protective ecosystems not limited to coral reefs and mangroves due to increased sea-surface temperatures and changes in salinity.²

The Second National Communication³ to the United Nations Framework Convention on Climate Change (UNFCCC) presents climate change impact assessments for the key sectors of health, human settlements, and tourism, while also reviewing agriculture, water, and coastal zones that build upon the findings of the First National Communication. The key vulnerable sectors identified are:

¹ Dr. Michael Taylor, Climate Change and Jamaica, proposal for a Climate Change Department, electronic document, 2012.

² Vision 2030 Jamaica | National Development Plan, Chapter 3: National Outcomes, Page 245.

³ Submitted to the UNFCCC in December 2011

- i. Agriculture and food security food security issues
- ii. Tourism demand fluctuations- imposition of carbon tax
- iii. Coastal resources and communities implications on the integrity of natural resource base and livelihoods of local citizens;
- iv. Water its integrated management including flooding and drought management;
- v. Health increased incidence of dengue, respiratory illnesses, etc.; and
- vi. Energy access to cost effective and sustainable energy services particularly with the coastal infrastructure under threat.⁴

1.2 Natural Disasters

Between 2001 and 2010, on an average, Jamaica has been affected by a disaster event per year. Such disasters not only reveal underlying social, economic and developmental vulnerabilities, they contribute to worsening them. It is the marginalized members of the population, including women and girls that constitute the most vulnerable population and have a higher burden in terms of proportional loss of their assets and lives, and suffer the greatest impact.

In Latin America and the Caribbean, Jamaica is listed as having the second highest economic risk exposure to two or more hazards according to the Natural Disaster Hotspot Study done by the World Bank in 2008. The impact of disasters has been significant on Jamaica's economic progress as each impact can significantly affect the GDP. In the ten-year period between 1998 and 2008 the disasters have cost the country US\$ 14 billion per year.

In the absence of effective and adequate measures to address climate change, its adverse impacts could additionally result in poor economic growth, decreased exports, lost revenues and increased unemployment. In combination with a constrained fiscal space this further affects preparedness for prevention of disasters, relief and reconstruction thereby resulting in a suboptimal allocation of limited resources to address adaptation.

Jamaica is a highly indebted upper MIC. This makes it imperative for the country to address climate change from a long-term perspective that would avoid or alleviate adverse socioeconomic impacts, and ensure that policies reduce indebtedness, and lead to transformational efforts for a climate resilient and a low emissions economy.

1.3 Need for a Robust National Climate Change Response Strategy

Climate change is a sustainable human development issue and cuts across all sectors of equitable growth. Effective strategies to combat climate change by addressing issues of adaptation and adaptive capacity, managing climate risks across sectors and timescales,

⁴ Dr. Michael Taylor, Climate Change and Jamaica, proposal for a Climate Change Department, electronic document, 2012.

building resilience against physical, social and natural shocks and stresses at local and national levels, and putting in place low carbon mitigation options that create sustainable livelihoods therefore, require an integrated approach. This also highlights the critical need to have a robust national policy and strategy to effectively respond to climate change, both at local and national levels as a priority. A common, national climate change policy can assist in coordinating all climate related activities and align them with national priorities.

An implementation norm to an integrated climate change strategy requires the following:

- A focal Ministry with a clearly defined mandate, responsibility and professional capacity to oversee the integrated implementation of national climate change strategy;
- ii. A coherent and accountable strategy of coordination, monitoring, facilitation, knowledge sharing and enforcing evidence based decisions that enables and empowers team building; and
- iii. Enhancing national ability to deploy collective action at the national level that is also reflected in mobilization and accessing diversity of resources under globally agreed upon climate change financing.

Based on an extensive study conducted by UNDP⁵ to identify and share lessons from early efforts in developing national institutional arrangements for climate change in over forty five countries, it is observed that in most countries the responsibility for coordinating climate change response is placed in a climate change department under the ministry of environment. Given the climate change/development nexus and the potential increase in climate change financing it has been found vital for the ministry of environment to coordinate with finance, planning, agriculture, forestry, fisheries, energy, etc. It is also obvious that very few systematic mechanisms exist to guide this important coordination. Effective climate change response invariably requires established coordination process, mechanisms including accountabilities with possible support from technical working groups.

1.3.1 The Scenario for Jamaica

There is currently a disparity in the required institutional arrangement and its governance in Jamaica for effectively dealing with the multiple aspects and impacts of climate change. Despite Jamaica's classification as a small island developing state with significant vulnerability to the adverse effects of climate change, it has inadequate capability to build resilience and strengthen sustainable livelihoods for all its citizens, develop and maintain its vulnerable infrastructure along the coastline specially in the event of natural disasters, or

⁵ In UNDP's survey of over 45 countries, 79% of countries have coordinating bodies that are within the Ministry of Environment or equivalent sector ministry; 15% have under the President/Premier/Prime Minister; 4% have the mechanisms fragmented across a number of agencies and 2% have them under the Ministry of Economy & Development (relates mainly to dealing with multilateral environmental agreements).

have systemic knowledge base to formulate robust strategies for adaptation and low carbon energy development that is sustainable and cost effective.⁶

The National Capacity Self-Assessment Project (NCSA, 2005) had also identified capacity constraints related to combating climate change and highlighted the necessity to integrate climate change strategy into national policy. The NCSA Report especially underscored that "activities [related to climate change] are undertaken in several agencies without any synergy or coordination."

The absence of a coherent institutional framework for climate change response in Jamaica has been identified as the major constraint to integrate climate change into the development planning process. Most of the national policies, sector-wide priorities and plans, local development, and preparedness for disasters do not realistically address climate change risk reduction and resilience building. A very visible example of the lack of such integration is evident in the ineffective management of the river basins. Also, risk assessments and the data to inform planning and processes needs to be strengthened along with the capacity of public sector agencies as well as of local population to ensure that climate change response is an integral element in all actions and strategies.

1.3.2 The Government of Jamaica's Strategic Action

In recognition of the significant effort required to advance to meet the unmet need of combating climate change⁹, Jamaica in January 2012 took the lead among the Small Island Developing States (SIDS) and established a Ministry of Water, Land, Environment and Climate Change. The Government then followed up by initiating the process to put in place a Climate Change Department by the end of 2012 as a priority while instituting a Climate Change Advisory Committee¹⁰.

⁶ Jamaica Strategic Programme for Climate Resilience (SPCR), Pilot Programme for Climate Resilience, p. 82, October 2011.

⁷ National Capacity Self Assessment Report, p.15. National Environment and Planning Agency. Sept. 2005.

⁸ Jamaica Strategic Programme for Climate Resilience (SPCR), Pilot Programme for Climate Resilience, p. 91, October 2011.

⁹ Establishing a Climate Change Department in Jamaica, Clifford Mahlung.

Excerpts from the text of the speech made at the Launch of the Climate Change Advisory Committee by the Most Honourable Portia Simpson-Miller, O.M. Prime Minister of Jamaica on April 19, 2012. Jamaica's Government vision for an effective climate change response was in effect made explicit and highlighted by the Most Honourable Portia Simpson-Miller, O.M., Prime Minister of Jamaica, when launching the Climate Change Advisory Committee on April 19, 2012: "The clear need is to bring national focus on the phenomenon of climate change which cuts across all aspects of life and which holds the potential to adversely impact on, and disrupt our economy and society. Climate change is here with us. It is being felt all over the planet. It is not a matter that is being forecasted, predicted or projected. [....] Climate change is a matter for informed, timely, scientific, technological, strategic, concerted social action in which all members of our society, young and old, public and private sectors, must become involved. It is in defence of the gains that we have already made as a nation and in support of our prospects for future development." "...It is critically important, that while we get our own house in order through appropriate actions, that consistent and strong advocacy in concert with all other peoples of the world to reduce greenhouse gas emissions must be the cry and drive the actions of all of mankind. We must increase the use of renewable energy and other sustainable forms of energy in our systems of production. "... Clearly several of the projects that will arise from this programme will be inter-ministerial and cross-sectoral."

The Minister of Water, Land, Environment and Climate Change highlighted that "this Administration deemed Climate Change so great a threat that the Prime Minister in her wisdom, has chosen to treat it as a separate portfolio responsibility within the Ministry of Water, Land, Environment and Climate Change which I lead ."Hon. Robert Pickersgill, M.P. at the inaugural meeting of the Climate Change Advisory Committee on April 19, 2012.

These actions are a clear demonstration of the Government's recognition, ownership and political support to effectively address climate change responses effectively and in a timely manner. Additionally, the next Medium Term Planning Framework for the period 2012-2015 that reflects continued process achieve Vision 2030, Jamaica emphasizes integration of climate change in the development processes.¹¹

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¹¹ The elements to meet the needs of climate change are reflected in the National Development Plan, Vision 2030, Jamaica. It "provides the framework to ensure that climate change issues are mainstreamed into national policies and development activities. The objective is to avoid or minimize the impact of disasters related to climate change by increasing coping capacity at various levels (including economic sectors and communities) within the country. One of the key areas for action is to embed climate change mitigation and adaptation in the physical planning system. The Plan will ensure that adaptive measures become the mechanism to manage risks, and adjust economic activity to reduce vulnerability." Vision 2030 Jamaica | National Development Plan, Chapter 3: National Outcomes, Page 250. Also, Goal 4 "Jamaica has a Healthy Natural Environment"; Outcome #14 "Hazard Risk Reduction and Adaptation to Climate Change" states that: "We will incorporate climate change scenarios in future economic and land use planning and provide a framework to ensure that we reduce the risks associated with natural hazards by integrating hazard considerations into our country's development planning."

2. Climate Change Institutional Landscape

As discussed earlier, building resilience to climate change and combating climate change requires a new generation government agency that has the ability to bring together all actors to work as one unified "taskforce". This necessitates the need for institutional coherence and governance along with a clear mandate and resources. The necessary starting point is the availability of a robust national climate change strategy, as this would provide the creation of rules and procedures, as well as an accountability framework, tools to monitor, evaluate and enforce guidance to ensure that the policy mandate is being respected and followed up all relevant development actors and partners.

This chapter aims to provide insights into the current institutional context in terms of activities pursued by Jamaican policy makers and institutions nationally and internationally that would provide a fair estimate of existing capacity and Jamaica's ability to deliver global on mandates while meeting national priorities. While identifying the major stakeholders, analytical understanding of the exiting landscape would provide guidance to the structure and efficient operation of Climate Change Department. Figure 1 provides a schematic institutional map of the existing key stakeholders.

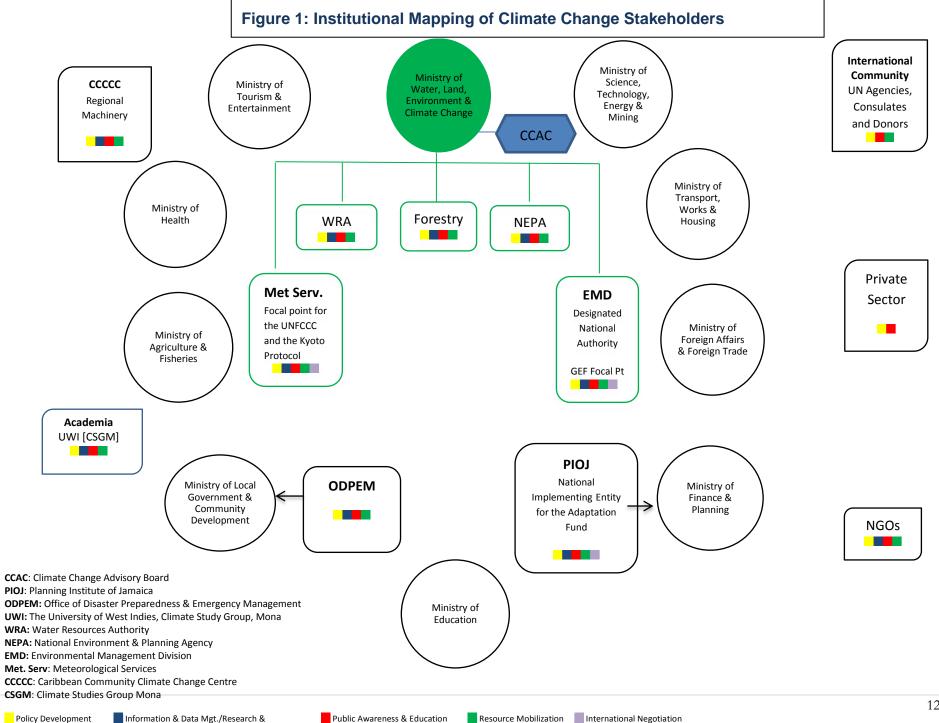
2.1 Current roles in performing climate change actions

Since becoming a Party to the United Nations Framework Convention on Climate Change (UNFCCC) in 1995, Jamaica has implemented climate change activities at the national level and actively participated at the regional and international levels. Jamaica ratified the Kyoto Protocol on 28 June 1999.

2.1.1 International/Regional Levels

Jamaica actively participates in climate change negotiations, as members of executive boards and committees of different international bodies within the negotiating arena, and in different regional fora. The Ministry of Water, Land, Environment and Climate Change has the policy making and regulatory responsibility for climate change issues as well as for water, land and environmental issues. It leads the climate change work at national, regional and global levels through a number of divisions and executive agencies.

- The Meteorological Service of the Ministry of Water, Land, Environment and Climate Change represents Jamaica as the UNFCCC Focal Point at the Conference of Parties to the UNFCCC, with strong support from its Environment Management Division and the Ministry of Foreign Affairs and Foreign Trade. The Meteorological Service is Jamaica's Focal Point to both the UNDCCC and the Kyoto Protocol. The Meteorological Service has been responsible for the preparation of National Communications for climate change and is a member of the Adaptation Fund Board.
 - The Environmental Management Division (EMD) of the Ministry of Water, Land,
 Environment and Climate Change is responsible for environment, planning and



Development

development and monitoring climate change conventions. The EMD is the Designated National Authority (DNA) with a responsibility for issuing and monitoring Letters of Approval (LoA) for proposed projects seeking registration as Clean Development Mechanism (CDM) project activities. It also serves as the GEF Operational Focal Point.

- The Ministry of Foreign Affairs and Foreign Trade promotes Jamaica's interests in the framework of Small Island Developing States (SIDS) relating to climate change, sustainable development and global environmental governance.
- There is also active participation of Jamaica in the Caribbean region through the Caribbean Community Climate Change Centre (CCCCC) located in Belize. The CCCCC has supported implemented the national components of regional projects in Jamaica, such as the Caribbean Planning for Adaptation to Climate Change (CPACC), Adapting to Climate Change in the Caribbean (ACCC) region and Mainstreaming Adaptation to Climate Change (MACC).

2.1.2 National Level

- The core divisions and agencies of the Ministry of Water, Land, Environment and Climate Change leading the national level work on climate change include the Meteorological Service, the National Environment and Planning Agency (NEPA), the Forestry Department, the Water Resources Authority (WRA) and the Environmental Management Division (EMD).
- The National Environment and Planning Agency's NEPA's functions include integrating environmental, planning with sustainable development policies and programmes, promoting sustainable development by ensuring protection of the environment and orderly development, as stated in their Mission, and implementing measures to support the increase in the natural resilience of coastal ecosystems and biodiversity.
- The Planning Institute of Jamaica (PIOJ) under the Ministry of Finance is responsible of coordination of all external cooperation. PIOJ initiates and coordinates the development of plans and programmes to facilitate sustainable development of Jamaica that incorporates assessments of disasters to develop a national strategy for achieving Vision 2030 Jamaica. It has been designated as the National Implementing Entity (NIE) for the Adaptation Fund after a thorough due diligence undertaken by the Adaptation Fund. It is currently the focal point for an EU funded Pilot Programme for Climate Resilience.
- The Office of Disaster Preparedness and Emergency Management (ODPEM) under the Ministry of Local Government and Community Development is responsible for disaster preparedness, response and recovery and for nationwide disaster risk reduction strategy.
 ODPEM coordinates the execution of emergency response and relief operations in major disaster events, advocates, supports and promotes a greater national awareness for disaster management issues through public education and advocacy.
- The Meteorological Service works closely with ODPEM in the observation and forecasting of weather conditions, maintaining continuous Hurricane Watch and has the

responsibility to issue severe weather warning based on its comprehensive analysis stemming from the database of Jamaica's climate variability and change.

- The National Works Agency under the Ministry of Transport Works and Housing is responsible for the implementation of appropriate flood control systems and the maintenance of safe, reliable and efficient main road network. It is also responsible for response to emergency situations arising from natural causes and provision of assistance in disaster management through technical advice and engineering support for coastal defenses and river management programmes.
- The responsibilities of the Water Resources Authority (WRA) for addressing climate change work include water resources assessment, and planning, data collection, compilation for policy work and management in the framework of Integrated Water Resources Management (IWRM).
- The Ministry of Local Government and Community Development lead ODPEM through the Hazard Mitigation and Weather Services Division and monitors the implementation of resilience building, vulnerability reduction and undertaking disaster risk reduction and hazard mitigation policies and initiatives at the local government level. This in the larger framework could also encompass community based adaptation activities.
- The Ministry of Finance and Planning manage the national budget and administer policies for the sound financial management of public funds and allocations for priority actions. The Ministry of Finance has expressed a keen interest to work closely with the Ministry of Water, Land, Environment and Climate Change to facilitate resource mobilization from various sources to enhance effective climate change response strategy within the framework of inclusive development.

2.2 Institutional Gaps

Major disparities in the climate change governance system have been identified and validated through several assessments and reports¹². The following analysis is based on careful review and incorporates the insights of the stakeholders as well as lessons from global experiences. The major gaps and constraints identified can be classified as follows:

2.2.1 Systemic gaps

- A lack of clear identification of climate change as a high priority development issue, absence of a national strategy and its incorporation into national priorities for implementation;
- b. An absence of a single focal agency with core mandate for coordinating climate change issues in Jamaica;

¹² D. Forrest and E. Fischer: National Capacity Self Assessment Report, page 15. National Environment and Planning Agency. September 2005; Jamaica Strategic Programme for Climate Resilience (SPCR), Pilot Programme for Climate Resilience, page 34, October 2011; Government of Jamaica Policy Register, Cabinet Office, 1 July 2011; Public Sector Master Rationalization Plan, Recommendations for the Restructuring of Ministries, Departments and Agencies, Public Sector Transformation Unit, Cabinet Office, Jamaica, May 2011.

- An absence of inter- and intra-Ministerial collaboration even on critical issues relating to vulnerability reduction and resilience building of marginalized population;
- d. Unclear long-term commitment to the institutional changes required for ensuring climate change strategy implementation as a sustainable development issue;
- e. Frequent overlapping/ duplication of mandates and functions among Ministries, agencies, and departments;
- f. A lack of clarity on responsible parties for implementing climate change programmes and projects resulting in an "ad hoc" approach

Policy gaps

- g. An absence of overarching policy framework;
- h. Unclear policy guidance; fragmented and often inconsistent policy approaches;
- i. Lack of policy integration;

• Legal framework gaps

j. Absence of an overarching legal framework;

Governance gaps

- k. Structure:
 - i. A fragmented structure for management of an integrated climate change strategy; it has a limited scope and a weak mandate;
 - ii. Overall, a weak organizational structure with limited accountability;
- I. Capacity constraints:
 - i. Inadequate staff complement;
 - ii. Lack of equipment;
 - iii. Insufficient budgetary appropriations; and
 - iv. Limited financial and material resources.

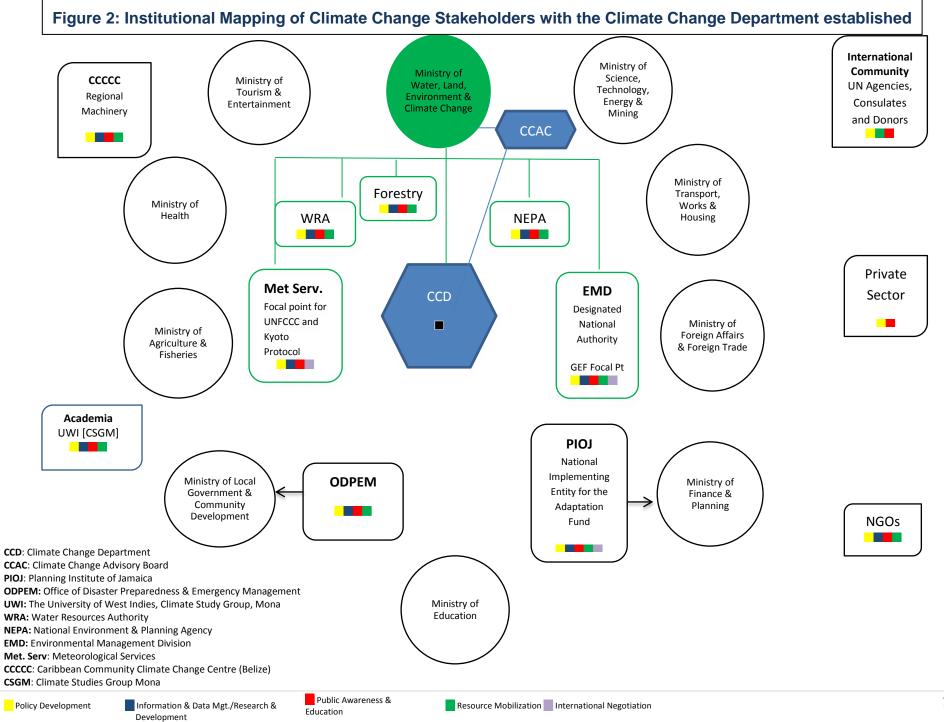
2.2.2 An Enabling Environment

The above discussion defines the basis for an effective governance system to implement a climate change response strategy as an integral component of inclusive development. The political commitment demonstrated by the Government through the creation of a dedicated

Ministry for climate change provides a high degree of confidence and the presence of an enabling environment to establish a national climate change strategy based institution to systematically, successfully and sustainably address this challenge. This is supplemented by:

- A shared understanding of climate change and its disruptive nature leading to a sense of urgency among all stakeholders to integrate climate change in national development priorities;
- Existence of a broad based institutions and professionals with rich experience in understanding, formulating and implementing climate change response strategies along with knowledge networking and exchange experience at regional and global levels;
- Presence of a wealth of seasoned negotiators, authoritative scientists and knowledge practitioners to ensure evidence based and informed decision making to facilitate the creation and implementation of an effective climate change response strategy;
- Existence of a vibrant and participative civil society.
- The creation of a sustainable institutional mechanism to implement an integrated climate change strategy would provide Jamaica a leadership among the SIDS countries as well as the possibility of mobilizing donors' interest in effectively addressing climate change responses.

Figure 2 shows the institutional landscape, as it would be, with the CCD established and providing an enabling environment, as described above.



3. The Climate Change Department (CCD)

This chapter presents the core elements of a Climate Change Department (CCD) within the Ministry of Water, Land, Environment and Climate Change.

An important role of CCD is to put in place a mechanism to enforce the integration of climate change responses in the national development policies and activities. This would enhance the Government's ability to tangibly monitor the implementation of the national strategy to combat climate change. The strength of a CCD would lie in its adeptness to seamlessly coordinate and facilitate collaboration among the various Ministries and diverse stakeholders while also building creative partnerships to ensure integrated and systematic implementation of the national climate change response strategy. By fostering efficient allocation of resources and exchange of timely and relevant information would further its capability in mobilizing additional resources to effectively implement climate change response at local and national levels.

3.1 Mission and Strategic Objectives

The Climate Change Department will ensure that policies, systems, institutions, and monitoring and evaluation mechanisms are in place to undertake climate change as an inclusive development priority that empowers local communities and strengthen resilience, especially in the most vulnerable population. CCD's ability to lead, facilitate and coordinate strategic support, advance resource mobilization and develop innovative partnerships to effectively address climate change at national and local levels will be the litmus test of its success and Jamaica's transformation to a climate resilient society.

Mission Statement

To facilitate integrated and inclusive development in Jamaica to advance an equitable and climate resilient society with adaptive capacity in a low carbon economy and in line with Vision 2030 Jamaica.

- The Climate Change Department will lead the process and put in place, as a matter of priority, a national climate change response policy in a participative manner. The process would review the existing policies, fill in the gaps including those pertaining to policy coordination, integrated implementation etc. to ensure resilient communities with abilities to anticipate adapt, and overcome the adverse impacts of climate change in accordance with Vision 2030 Jamaica priorities.
 - While the strategy should look at both adaptation and mitigation option, it is clear that for a small island country that occupies the most vulnerable status with other island states and with very small contribution to the global carbon regime, the mitigation activities should also prioritize adaptation framework and contribute to strengthening livelihoods, creating jobs, building resilience and sustaining the island economy.
- The CCD should lead the formulation and implementation of a national resource mobilization strategy to meet the implementation requirements of the national climate

change strategy. It should also manage the institutionalization of a mechanism with accountability to make the resource mobilization strategy a tangible and an on-the-ground reality. The CCD will mobilize resources in close collaboration with relevant agencies and institutions and ensuring that the country meets optimal requirements and has vision and adequate capacity and good governance mechanisms in place to generate confidence among international donors, funding agencies and private sector partners in Jamaica's ability to efficiently and transparently deliver.

- Despite protracted agreements on future commitments in the international climate change negotiations led by the Conference of Parties (CoPs) to the United Nations Framework Convention on Climate Change (UNFCCC), there are positive indications and signs of an increasing flow of financial resources from different sources to address climate change responses, especially in the vulnerable countries. The sources include multilateral, bilateral, philanthropic foundations, public funding sources, and ethical private funds, business funding, etc.
- The strategy would require clear political guidance to access the diverse and multiple sources of funding. There is a need to define clear criteria for prioritizing issues and areas, ensure seamless coordination between different government agencies, and establish the existence of adequate human, institutional and system-wide capacities to prepare and implement a pipeline of programmes with clear outcomes and accountabilities.

Strategic Approach – International & Regional Negotiations

As an example of its coordination role, the CCD for instance will work through the Department of Meteorology and continue to strengthen Jamaica's leadership role (especially among the Small Island Developing States) in the climate change negotiations at the Conference of Parties' meetings and at other international fora. This is a vital role to ensure that Jamaica is effectively represented in all discussions on management of, and criteria for potential recipients of existing and emerging source of climate financing.

O While the CCD will play a key role in this process, it is vital that it puts in place a coherent process that empowers exiting institutions with comparative strength in strategic areas to be the focal points for agreed upon source/s - given that the resources have to be mobilized from diverse actors and institutions.

Resource Mobilization Strategy – Strengthening Partnerships

For instance, CCD can leverage PIOJ as an important partner in its strategic resource mobilization strategic efforts. Most multilateral organizations and bilateral agencies work with PIOJ in advancing Jamaica's Nations Development Strategy, Vision 2030 Jamaica. And, PIOJ has been selected as the Adaptation Fund Implementing Agency for Jamaica following an elaborate global due diligence process. While PIOJ would assist in the mobilization of funds through its associated channels as per the priorities of the National Climate Change Strategy and in close cooperation with the CCD, the execution of the projects would be carried out by the respective Ministries/Executive ere Agencies/departments etc. that are instrumental in preparing the proposals.

Mitigation Strategy Components Reinforce Adaptive Capacity

Similarly, structural indebtedness and high energy prices increase fiscal constraints, reduce fiscal space and encumber economic competitiveness. Promoting energy efficiency and demand side management and developing diverse sources of supply including renewable energy will require an enabling regulatory framework and policy consistency that would encourage private sector investments and financing infrastructure. CCD will work with the Ministry of Science, Technology, Energy and Minerals to ensure policy and implementation consistency with the National Climate Change Strategy.

3.1.1 Strategic Objectives

The CCD would be guided by the following strategic objectives:

- i. Coordinate national climate change efforts at all levels, viz., local, national, regional and global and with all actors including Government Ministries, Executive Agencies, Departments, etc., and non-governmental agencies comprising the private sector.
- ii. Lead the formation of a viable National Climate Change Response Strategy is in concordance with Jamaica's national plan, Vision 2030 Jamaica. This would provide CCD the necessary framework to steer all actors towards common objectives and rules of coordination and constitutional ability to enforce decisions and therefore transparency and accountability in its actions. Clearly, the policy formulation should be a participatory process.
- iii. Coordinate and facilitate Jamaica's strategic and unified position at global and regional climate change negotiations thereby providing the country leadership in the SIDS community.
- iv. Coordinate, guide and monitor activities at local and national levels to strengthen adaptive capacities, reduce vulnerabilities to the adverse impacts of climate change and enhance climate resilience including through low carbon development.
- v. Facilitate partnerships across Ministries and departments, civil society and the private sector including the media to increase public awareness, education and training related to climate change issues.
- vi. Coordinate, support and enhance national level information and knowledge generation, analysis and dissemination in collaboration with research institutions and centres of excellence while also creating a community of practice.
- vii. Establish a proactive resource mobilization strategy with clear identification of responsibilities, accountability framework that builds upon the national climate change response strategy. It would be vital to be prepared with a pipeline of programmes and activities that can be quickly leveraged for seeking donor assistance while also having a clear monitoring and evaluation network in place.

3.2 Institutional Arrangements: Horizontal and Vertical Collaboration

The complexity, severity and interconnectedness of climate change impacts necessitate an innovative administrative structure and process that integrates climate change responses within the overall inclusive development framework. Climate change responses require deliberate and high-level coordination and collaboration with a multitude of line ministries and diverse stakeholders. From both efficiency and effectiveness purposes it becomes necessary to leverage competent and experienced specialised agencies and professionals to formulate and implement strategies and policies, while avoiding overlap and duplication. Also, climate change necessitates active engagement of the private sector and the civil society in the formulation and implementation of equitable policies and programmes.

This challenging framework provides an opportunity for the Climate Change Department. By building strong horizontal collaboration capacities with line ministries, leveraging vertical collaboration capacities with specialised agencies and strengthening partnerships with non-state actors, such as private businesses, academia and NGO's, the CCD will effectively integrate interdisciplinary programmes that are at the core of inclusive development.

3.2.1 Horizontal Collaboration with relevant line ministries

Horizontal institutional collaboration contributes to aligning the policies and operations of the relevant line ministries with the national climate change strategy thereby integrating responses to combat the adverse impacts of climate change while also enhancing low carbon development across related sectors. The CCD professionals must have strong political, managerial and collaborative skills and capabilities to ensure that successful horizontal collaboration also leads to strengthened teamwork within the policy makers and Jamaican Civil Service. And, effective collaboration mechanisms are embedded in a clear political vision underlying the commitment towards integrated climate change responses based on an inclusive national climate change policy and a common timeframe for measurable results.

Horizontal collaboration

Standard operating processes underlying horizontal collaboration mechanisms include¹³

- Establishing high-level Inter-ministerial Committees on priority climate change responses and related issues;
- Appointing climate change focal points (at mid-senior decision making levels) in relevant line ministries;
- Incentivizing through fiscal mechanisms to encourage integrated response to climate change activities viz., availability of committed budget for the same, etc.;
- Scheduling regular meetings led by CCD with relevant line ministries to discuss new ideas, monitor the progress of on-going activities, status of and opportunities for resource mobilization, etc.;

¹³ The above list is indicative and not exhaustive. CCD should institute an overview of existing mechanisms that encourage or impede inter-ministerial collaboration and coordination; this would provide a basis to identify the most effective mechanism while removing barriers to working together.

- Including progress of climate change strategy as a standing agenda item in the meetings of the Permanent Secretaries;
- Keeping the bipartisan political leadership regularly apprised of progress achieved, barriers if any, an seeking their assistance in messaging and advocacy;
- Coherent communication strategy that incorporates the diverse media outlets, providing updates to communities and general public and strengthening education and advocacy.

Timely and regular information sharing assists in building ownership of all stakeholders and is a sine qua non for efficient coordination. As the CCD will also the hub for monitoring the progress of a national climate change strategy, it would be useful for the Department to institute a mechanism that would enable line ministries to similarly share information with the Department with minimal transaction costs. Sharing draft documents to get time bound inputs from all relevant ministries for feedback and cooperation prior to its finalization is an effective process. This would be facilitated significantly if the CCD professionals are able to build a seamless relationship with the line ministries they work with. The role of the respective Permanent Secretaries as well as the political leadership becomes equally important in facilitating this process and ensuring that the same message is being communicated at all levels. And, of course clear accountability mechanism and its enforcement provides an effective instrument of effective management practice.

Essential Collaboration: The Ministry of Finance, Planning and the Public Service

The Ministry of Finance plays a key role in ensuring successful implementation of climate change responses in a country and therefore on the effectiveness of national climate change institutions. This vital role emanates from its responsibilities relating to fiduciary management of international climate funds, setting national priorities along with allocation of resources that also includes budget allocation for CCD and related activities.

The CCD should keep the Ministry of Finance, Planning and the Public Service (MoF) closely involved in all strategic decisions including policy planning, results of its activities, resource mobilization opportunities, etc. In fact it would be useful to have a designated focal point in the MoF for facilitation of dialogue with CCD. It would also be equally beneficial to have a synergistic working relationship with PIOJ that reports to MoF and also has the mandate to ensure the achievement of Vision 2030 Jamaica. Building such a relationship could benefit from the following discussion on vertical collaboration.

3.2.2 Vertical Collaboration with Relevant Executive Agencies

Jamaica has an impressive array of specialised Executive Agencies, Departments and Divisions with significant capacities including that of outreach, experience, knowledge and specific implementation mandates. This provides an opportunity for CCD to leverage and coordinate the potential of these entities to add value to effectively implement national climate change strategy in an integrated manner.

As in the case of horizontal collaboration the vertical collaboration opportunity can be maximized by the CCD by (i) working closely with these entities to include climate change

responses as an integral component of their mandates, and (ii) enhancing efficiency of their operations by these entities, for instance by removal of barriers to integrated implementation, resource mobilization for implementation of strategic climate change responses, etc. in the framework provided by the national climate change strategy. The coordination and facilitation role of the CCD would be instrumental building a national team to effectively combat climate change locally and nationally while meeting the global mandates; to use an analogy CCD's role is akin to the conductor of a masterpiece orchestra that has a large number of musicians with varied instruments.

Vertical Collaboration

Standard operating processes underlying vertical collaboration mechanisms include¹⁴:

- Appointing climate change focal points (at mid-senior decision making levels) in relevant executive agencies, divisions and departments;
- High-level participation of the Climate Change Department in existing platforms and taskforces;
- Ensuring the participation of the significant executive agencies and other entities in the scheduled regular meetings led by CCD with relevant line ministries to discuss new ideas, monitor the progress of on-going activities, status of and opportunities for resource mobilization, etc.;
- CCD to lead and establish a formal process to ensure that strategic climate change related activities undertaken by the appropriate executive agencies and other entities (irrespective of whether or not they report to the Minister of Land, Water, Environment and Climate Change) benefit from substantive contribution and collaboration with each other and all germane actors;
- Effective, inclusive and participatory communication strategies and procedures that are common for all actors and institutions engaged in climate change activities to deliver on the national climate change strategy.

The graphic representation depicted in Figure 2 indicates a possible configuration of horizontal and vertical collaboration and functional relations.

3.2.3 Engagement with non-state actors

The uniqueness of the threat of climate change makes it an imperative to (i) foster an integrated approach to inclusive development that ensures the inclusion of mitigation, adaptation and resilience building elements in the strategy, and equally importantly that (ii) all development actors, viz., civil society, private sector, communities, etc. are actively engaged with the public institutions in implementing a strategy to combat and alleviate the threat. The effective implementation of climate change responses requires active citizenry

¹⁴The above list, as in the case of horizontal collaboration, is indicative and not exhaustive. CCD should similarly institute an overview of potential mechanisms that encourage or impede such collaboration and coordination to identify the most effective mechanism to work synergistically. CCD can benefit significantly by tapping on the professionals of Executive Agencies and other relevant government entities to seek creative ideas for collaboration.

that understands the severity of the situation, owns the strategy and responsibility for ensuring accountability of leadership and other actors, and demonstrates willingness to act. It is increasingly becoming clear that the traditional divide between 'public' and 'private' is evolving and the formulation and implementation of effective climate change policies requires an emphasis on good governance that incorporates the "demand side" of democratic governance and incorporates the principles of social audit and accountability. Sustainable development should inherently be equitable and inclusive and would require ownership of all constituents, especially the private sector that must be willing, able and incentivized to invest in low carbon growth while creating resilient and decent jobs.

The CCD has to play a vital role in ensuring the effective participation of non-state actors in all aspects of climate change response at the local and national levels. Possible actions could include:

- Strengthening working relations with the private sector including with the Jamaica Chamber of Commerce, Private Sector Organization of Jamaica as well as the prominent civil society and community based organizations and faith based organizations by engaging them in strategic discussion with the appropriate government agencies to encourage public private partnerships;
- Establish citizens' platforms for participation in climate change discussions;
- Working with non-state actors to identify equitable incentives and enabling environment to encourage private sector investments in strategic areas of adaptation, low-carbon development and resilience building.
- Organizing national awareness raising and education campaigns jointly with the nonstate actors and especially the Ministry of Education and Ministry of Communications;
- Creating formal links with academic institutions as well as other appropriate nonstate actors for translating cutting edge research on climate change responses into tangible on-the-ground activities.
- Consultations with these organizations would lead to additional ideas for effective implementation of climate change responses.

3.3 Validating Effectiveness of the Climate Change Department

The Climate Change Department being established under the Ministry of Water, Land, Environment and Climate Change (MWLECC) is an excellent affirmation of the political commitment by the Government of Jamaica towards combating climate change as an integral strategy to achieve its Vision 2030 Jamaica and beyond, and to make Jamaica "the place of choice to live, work, raise families and do business".

"Getting CCD right" is vital. It will determine the effectiveness with which the Government would be able to achieve its vision and strategy to combat climate change while making Jamaica and Jamaicans resilient to its adverse impacts and pursuing low-carbon development. Based on the earlier discussion, it is clear that the CCD has to be staffed with a small number of high caliber and competent professionals who are well versed with

climate change impacts locally and nationally, and preferably at the regional and global levels, are known to be sensitive managers, team builders and developers of partnerships with "political savvy" so that the Department can achieve its objective of (i) seamless coordination of all significant Government actors as well as non-state actors who are involved in addressing climate change while (ii) making all efforts to facilitate the smooth operations of their activities as an integrated part of inclusive development. Again from the earlier discussion, the proposed functions¹⁵ of CCD can be listed as:

- i. Coordination of participatory strategy and policy development and implementation of integrated programmes;
- ii. Facilitating cutting edge knowledge and information, and coordinating management of vital data;
- iii. Coordinating Jamaica's participation at international and regional fora while facilitating access to a common agreed upon national vision and decisions on important topics by the negotiating team;
- iv. Coordinating development of resource mobilization strategy and mobilization of climate finance from diverse sources including the private sector, and facilitating access to those resources by the integrated programme executing agencies;
- v. Coordinating advocacy, communication and media, public awareness, education, research and science agents and institutions to ensure timely and transparent access to current knowledge, performance of the programmes and accountability, results of monitoring and evaluation, and implementation of climate change strategy.
- vi. Coordinating and facilitating capacity development at human, institutional and system-wide levels;

CCD & Climate Change Advisory Committee

The Government of Jamaica has taken the appropriate step of establishing a Climate Change Advisory Committee¹⁶ (CCAC) under the leadership of MWLECC and consisting of all relevant Government Ministries, Executive Agencies, Academia, and NGO's. This is an excellent move that validates the political commitment of the Government in recognition of the urgency to respond to the threat of climate change.

The CCD must work closely with the Climate Change Advisory Committee in the participatory preparation of a national climate change strategy, seeking its assistance in effectively fulfilling its mandate of coordination, facilitation and partnership building. Given the representation of all pertinent players in the Climate Change Advisory Committee, (including chairs of appropriate thematic groups) the CCAC can be of significant assistance to CCD in integrating climate change responses in the national planning priorities and processes.

It should be ensured that the ToRs of CCD and Climate Change Advisory Committee reflect this relationship.

¹⁵ An expanded specification of the core functions is enclosed in Annex B: Terms of Reference of a Climate Change Department.

¹⁶ Inaugural meeting 19 April 2012

3.4 Institutional Settings & Climate Governance: Global Experience

Global good practices in integrating climate change issues into national development plans and efficient operations of departments similar to CCD are few. It is not surprising, as this is a complex and a challenging subject and evolves through a learning-by-doing capacity development process. Also there is no one solution; in fact possible institutional responses to climate change are led by country specific criteria including the structure and procedures of civil service and instruments of non-state actors¹⁷.

While the lessons learnt highlight the intricacy they support the methodology of a focused "climate change department" working closely with a high-level advisory group that determines various operating clusters to ensure priorities are addressed in an integrated manner. Some of the barriers that can constrain efficient working of climate change departments include:

- Lack of common climate change policy and gaps in national climate change policy;
- Narrowly defined institutional mandates and a lack of specialized institutional frameworks;
- Weak coordination mechanisms with little or no accountability;
- Lack of leadership, commitment, capabilities and resources and issues of sustainability.

The existence of effective leadership and political vision and commitment at the highest levels that translates into enforceable policies and decisions to enable implementation of integrated programmes by competent professionals are critical elements of a good governance system. Accordingly, CCD must be able to demonstrate strategic vision, capacity to deliver, participatory approaches and procedural legitimacy and ability to prudently manage resources.

• Climate Change Governance

The approaches to climate change governance reflect national circumstances including commitment and vision of the Government, awareness of the citizenry to climate change impacts and solutions, budgetary constraints, division of responsibilities among various ministries and their adaptive flexibilities to meet national priorities.

Developing countries are increasingly putting in place mechanisms and strategies to support climate action at local and national levels. UNDP has conducted an extensive study of 45 developing countries to identify and share lessons learned from these early strides in developing national institutional arrangements for climate change. A comprehensive summary of the experience of other countries is provided in Annex G.

¹⁷ The institutional arrangements for climate change differ from country to country. Developed countries with commitments to reduce carbon emission under the Kyoto Protocol established coherent administrative structures prior to 2008 (beginning of the first commitment period under the Kyoto Protocol). While many developing countries recognize the complexity and urgency of mainstreaming climate change as a development issue are increasingly attempting to reposition climate change governance structure as per emerging demands. For instance, the institution in the case of the Philippines focuses mainly on mobilizing climate finance.

It is clear that whilst the establishment of a dedicated entity to coordinate climate change activities is important, successful implementation of climate change related activities into national development planning requires appropriate policies, legal and institutional framework, adequate technical capacity, funding and continued support from the highest level of the government.

Various models to staff "climate change units" various possibilities range from (i) having one to two professionals¹⁸ focusing on climate change as a part of other similar tasks usually in an expert organization or under the Ministry of the Environment or Ministry of Foreign Affairs; (ii) one to two persons working full time on climate change as a part of another department or division¹⁹ viz., sustainable development, environment, energy, air protection, disaster risk management; (iii) responsibilities for climate change issues are divided between different ministries/sectors²⁰, like energy, agriculture, development, foreign affairs, etc.; (iv) three to ten people with division of tasks from head to administrative support²¹ and based in an organization viz., national hydro-meteorological service, environmental agency, water agency, agricultural agency, academia, etc.; having a large administrative department²² including 10 to 150 people who cover a whole range of regulatory work on mitigation, adaptation, agriculture, industry, finance, negotiations - this model is mainly in a few developed countries given their Kyoto commitments; and having a committed Ministry/State Department of Climate Change (usually, and in some cases also includes Energy) established to implement a committed approach to transform the energy sector in line with climate change international obligations in the context of the Kyoto Protocol and other climate change related issues in developed countries.²³

3.5 Proposed Governance Structure for CCD

The MWLECC has determined that cost efficiency in operationalizing CCD will include provision of supporting services such as human resources, administration and accounting by the parent Ministry. Keeping in view the national circumstances, size of the country and needs, the institutional context, key functions, and issues of sustainability and learning from other developing countries, it is recommended that the Climate Change Department should be initially staffed by three professionals as follows:

- Head of Department with overall responsibility of CCD with gravitas and ability to institute an impeccable coordination and facilitation mechanism including close cooperation with the Climate Change Advisory Committee;
- Senior Technical Officer for adaptation and resilience building with competence and ability to facilitate and coordinate integrated programmes in strengthening adaptive capacity and resilience including against natural disasters;

¹⁸National communications to the UNFCCC, Annual Reports of European Environmental Agency on GHG Emission; Examples: Barbados; Comoros; and Djibouti

¹⁹Ibid; Examples: Croatia, Antigua and Barbuda

²⁰Ibid; Examples: Japan; Kenya, Bhutan and Botswana

²¹Ibid; Examples: Austria; Azerbaijan; South Africa and Peru.

²²Ibid; Examples: Belgium, France and Ireland

²³Ibid; Examples: Australia, UK, Germany and Denmark

 Senior Technical Officer for low carbon development with competence in carbon mitigation including renewable energy sources and demand side management of energy as well as knowledgeable in international cooperation and negotiations.

The responsibility for coordination of information and data management, public advocacy awareness, education, research and science extends to all three positions in their respective areas of focus.

The competence and ability of the CCD staff would be an important factor for its success. As MWLECC prepares to carry out due diligence to staff the positions it could try recruitment from both external sources as well consider competent officials internally by having them transferred from other departments, agencies, or services, etc. to CCD.

It is critical that CCD should start small and carefully document lessons learnt as they proceed to operationalize integrated approach to climate change response. Also a phased approach will itself highlight issue related to financial and operational sustainability. Otherwise lack of resources may lead to a scenario with the department being in name only without having the ability to fulfil its mission.

The structural organogram for the CCD, in the Short Term, for the start-up phase, is shown in Figure 3.

Draft Terms of Reference for these positions are given in Annex B along with the Terms of Reference for the CCD. In the Medium to Long-Term the core staff of the CCD may be expanded to increase the depth of the functionalities offered by the CCD. In this respect, three other additional members of staff are envisaged.

- Senior Technical Officer for resource mobilization with competence in the identification of financial and other resources, spanning the private sector, public sector, civil society and international donor partners, and a demonstrated ability to mobilize and secure these resources
- Senior Technical Officer for research and development with competence in the identification of novel, relevant and/or appropriate technologies for application, and to support the development of a climate resilient nation.
- Senior Technical Officer for partnership that will include information and data management, public awareness, education and outreach and co-ordination of international negotiations

The structural organogram for the CCD, in the Medium to Long Term, is shown in Figure 4. Terms of Reference for these positions should be developed by the CCD over time.

Figure 3: Proposed Structural Organogram for the Climate Change Department

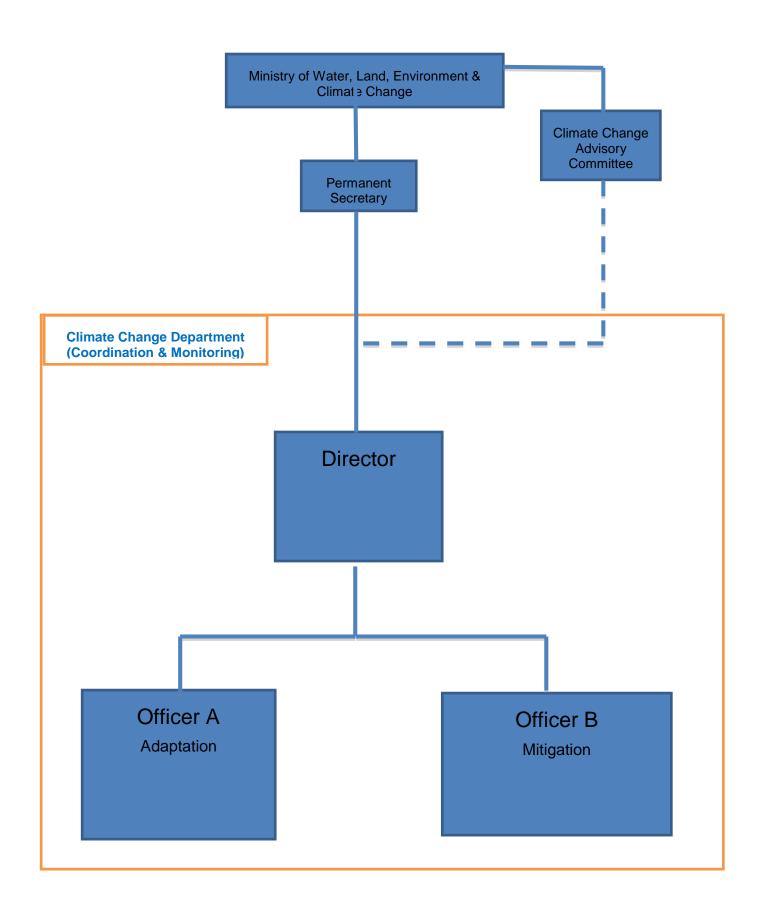
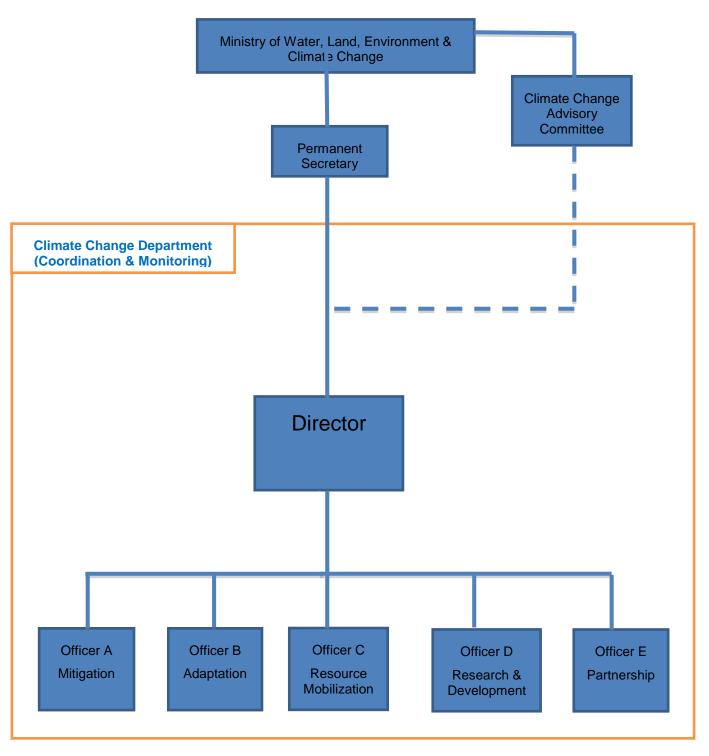


Figure 4: Proposed Medium to Long-Term Structural Organogram for the Climate Change Department ²⁴



²⁴ Support services such as human resources, procurement, finance and information technology to be provided by the Ministry of Water, Land, Environment and Climate Change.

4 Recommended Course of Action

This section outlines a recommended course of action to make CCD operational quickly by putting in place institutional mechanisms identifying, resources and defining priorities while ensuring its sustainability through an iterative process. The need for effective leadership, a coherent vision and an efficient strategy, clearly identified responsibilities and accountability, and ensuring timely and tangible delivery cannot be over emphasized. Timelines for the establishment of the Climate Change Department are given in Table 1 of Annex H.

The leadership would ensure the ownership of the Department, visions and objectives by all stakeholders; set a strategic direction for assuring an integrated approach while building a strong team across stakeholders; have the ability to enforce agreed upon decisions transparently and in the framework of accountability; build upon bipartisan political momentum; facilitate strengthening of institutional capabilities; and make sure that CCD is sustainable.

The strategic perspective would aim to leverage incentives and remove barriers that safeguard a synergistic and an integrated approach to implementing climate change responses in line with the national strategy. While the measured outputs and outcomes to implement the national climate strategy would be a gauge of progress, its success would be defined by the ability of CCD to empower its stakeholders to deliver on agreed upon vision and strategy. This in turn would be determined its ability to foster a common purpose and ownership and build creative partnerships.

In addition to the above, effective delivery of results would be contingent on explicitly defined priorities, clearly defined roles, responsibilities and modes of delivery, well-directed plans of action and clear and transparent accountabilities.

Short term actions

To be completed within a three month period, with an emphasis on low-hanging fruits and comprise:

- i. Completion of all political and bureaucratic agreements including approval by the Cabinet of the mandate to establish a Climate Change Department;
- Deliberated and agreed upon decision on the governance structure of CCD along with its relationship with the Climate Change Advisory Group that is reflected in each other's ToRs;
- iii. Availability of a budget and allocation of resources to ensure delivery of the workplan objectives for the first year. It is hoped that CCD would be able to leverage external resources to supplement national commitment in the subsequent years based on its ability to showcase concrete results.
- iv. Selection of the three competent personnel to manage and shape CCD. The competence and ability of the CCD staff would be an important factor for its success. As described earlier the three staff include a Head of Department with overall

responsibility of CCD with gravitas and ability to institute an impeccable coordination and facilitation mechanism, etc.; a Senior Technical Officer for adaptation and resilience building with competence and ability to facilitate and coordinate integrated programmes in strengthening adaptive capacity and resilience including against natural disasters, etc.; and a Senior Technical Officer for low carbon development with competence in and carbon mitigation including renewable energy sources and demand side management of energy as well as knowledgeable in international cooperation and negotiations, etc.

- v. Ensure the completion of a National Climate Change Policy and Action Plan that has the ownership of national stakeholders. The draft National Climate Change Policy and Action Plan developed as a follow up to the Second National Communication may provide a starting point. It would be helpful for the Climate change Advisory Board to supervise the process lead by CCD.
- vi. Coordinate the databases of current activities and on-going projects and project proposals in the pipeline. This would an important component in the preparation of an effective resource mobilization strategy.

Longer term actions

- i. Institute a strategic transition to move the governance structure from the start up phase (Figure 3) to the long term phase (Figure 4)
- ii. Set standards for monitoring, reporting and evaluation of integrated climate change programmes and activities and ensure their timely completion;
- iii. Foster and coordinate cutting edge knowledge building initiatives and research activities;
- iv. Coordinate, facilitate and ensure the creation of integrated policies in various priority areas, for e.g., Comprehensive Disaster Management Policy, Strategy and Action Plan; Integrated Water Resources Management and Water Resources Master Plan; Agriculture Sector Plan under Vision 2030 Jamaica; and the Medium Term Socio-Economic Framework (MTF) 2009-2012, etc.;
- v. Create an effective resources mobilization strategy with clear responsibilities and well defined delivery mechanisms;
- vi. Ensure an effective communication, advocacy, and awareness raising and outreach, and education strategies.

Mobilizing Resources

The existence of an efficiently functioning CCD would be catalyst to mobilize resources from existing and new sources. These sources range from the Green Climate Change Fund, Adaptation Fund, other funds created by the existing and post-2012 climate change agreements, from the private sector and foundations as well as through south-south and north-south cooperation. The shift from projects to programmes, sectors or budgetary allocations requires enhanced monitoring, validation and reporting. It is anticipated that CCD would have to work with MoF and PIOJ to facilitate access to direct budget support and establishing transparent systems to track development financing.

National coordination for resource mobilization would identify and track financing opportunities, establish a system for coordinating donor and UNFCCC financing, take stock of existing knowledge, resources, and initiatives, and leverage capacity development initiatives including for proposal preparation and programme oversight, quality control, and developing criteria for the eligibility of programmes.

4.2 Access to Additional Resources

The existing and post-2012 climate change agreements are creating and likely to confirm new funding arrangements that could significantly scale up financing for developing countries, especially vulnerable developing countries. These agreements (e.g. the Green Climate Fund) are anticipated to support national entities to access funds directly under agreed processes standards, as has been established under the Adaptation Fund. The funding would therefore be allocated for programmes, sectors or budgets rather than on the basis of an individual project. A coherent national climate change response strategy will serve as a framework for leveraging funds for climate change programmes. The shift from projects to programmes, sectors or budgetary allocations requires enhanced monitoring, validation and reporting. Expertise would be required in the areas of budget support, integrated policy/framework development, and establishing systems to track development financing.

The Climate Change Department will play a key role in this context by national coordination of climate change issues, programmatic framework development, and accessing resources for adaptation, mitigation, and technology leapfrogging.

National coordination for resource mobilization would identify and track financing opportunities, establish a system for coordinating donor and UNFCCC financing, take stock of existing knowledge, resources, and initiatives, and leverage capacity development initiatives.

The Department will also identify barriers and strengths to low emissions and climateresilient development, promote the implementation of baseline and needs assessment for data and monitoring systems, including vulnerability indicators for adaptation.

To access and channel funds for adaptation and mitigation, and technology acquisition, the Department will enhance capacity in weaker areas, including for proposal preparation and programme oversight, quality control, and developing criteria for the eligibility of programmes.

Additionally, the Climate Change Department will foster private sector participation, by means of investment in key economic sectors and activities, in the context of climate resilience and low emissions economic development, and engage national financial institutions.

5 Conclusions

This document comprises a proposal to establish an operational Climate Change Department within the Ministry of Water, Land Environment and Climate Change. The draft defines an approach to establish a Climate Change Department, presents an outline of its structure, provides guidance for action and emphasizes the high quality of staff and a good governance system as essential to its success. It is presented to the leadership of the Ministry for consideration and follow-up.

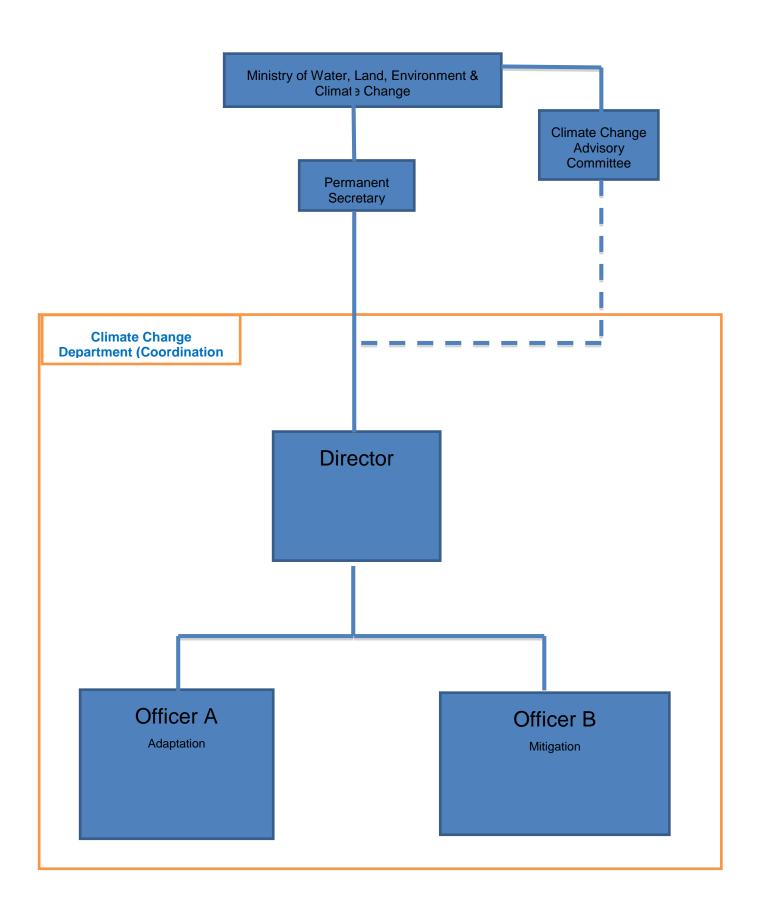
UNDP stands ready to assist the Government in advancing the proposal and efficient operation of CCD to its final conclusion and in an iterative manner. The analytical conclusions that substantiate the draft proposal are:

- 1. A shared sense of the necessity for a comprehensive, unified climate change mandate is clearly perceived and needs to be addressed comprehensively;
- 2. Currently only ad hoc arrangements cover some of the coordination space. There is an unmet demand to institutionalize cross-sectoral cooperation and coordination mechanism around climate change responses.
- 3. Jamaica has the leadership, political will and knowledge base to effectively integrate climate change strategy into inclusive development priorities. It presents a fertile and enabling environment for the inception of a national climate change response strategy and a climate change governance structure;
- There is a broad spectrum of organizations with rich climate change related experience, understanding and knowledge as well as rich informal networking facilitating knowledge exchange;
- 5. There is a multitude of climate change related activities, with an emphasis on adaptation in key sectors and in capacity building;
- 6. There is a wealth of seasoned negotiators, authoritative scientists and knowledgeable practitioners;
- 7. Political momentum, leadership and expertise exists in Jamaica and those positive elements need to be harnessed towards a common goal;
- 8. Budgetary and financial constrains limit the scope for national actions. The CCD could enhance capacity to access international climate finance through a coordinated approach;
- 9. The rich institutional landscape for implementing climate change actions and initiatives requires an *integrated* national framework for coordination, policy and strategy. A number of diverse adaptation and mitigation policies and strategies seem to coexist under different agency and budgetary spaces. Consistency and effectiveness would be ensured by a comprehensive national climate change policy and response strategy;
- 10. There is a vast body of data, information and scientific knowledge that requires a sound knowledge management system to optimize its use and avoid duplication;



Annex A: Organogram

1. Proposed Governance Structure (Start Up Phase):



ANNEX B-1: Terms of Reference of the Climate Change Department

Climate Change Department Ministry of Water, Land, Environment and Climate Change

The Prime Minister of Jamaica mandated the Ministry of Water, Land, Environment and Climate Change with an integrated Climate Change portfolio. Further, the Prime Minister announced the plan of establishing a Climate Change Department by end of year 2012. The purpose of establishing a Climate Change Department is to ensure a climate change resilient society and to promote sustainable development in Jamaica by enhancing the coordination and monitoring of progresses among existing state and non-state actors.

The Climate Change Department will be responsible for co-ordination and monitoring of:

- i. Policy development
- ii. Information and data management/research and development
- iii. Public awareness and education
- iv. International negotiations
- v. Resource mobilization of climate financing and other resources

Functions

A. Coordination and Monitoring

- i. Establish an appropriate procedure for the coordination of all relevant institutions and stakeholders involved in climate change resilience building.
- ii. Coordinate monitoring, reporting and evaluation of the National Climate Change Policy and the implementation of adaptation, mitigation and outreach programmes across Government.
- iii. Coordinate the preparation and validation of climate change related national regulatory frameworks.
- iv. Act as the focal point for CDM and other market mechanisms.
- v. Work with Executive Agencies to monitor implementation of climate change projects that are aimed at protecting biodiversity and other ecosystems.
- vi. Lead the process of consultation with key sectors for the development of the Government's strategy and programmes on adaptation to climate change and guide their effective implementation
- ii. Coordinate and prioritize adaptation programmes in different sectors and systems, identify priority adaptation actions, assess the resource needs, monitor and evaluate performance of programmes, projects and adaptation activities, develop procedures for evaluating adaptation actions, analyse and determine incremental costs of adaptation actions.

iii. Coordinate the preparation and prioritization of mitigation actions, locus of the Designated National Authority, facilitate the elaboration of baselines and methodologies, facilitate access to funding for mitigation actions in renewable energy and energy efficiency initiatives.

B. Policy Development:

- i. Lead the process for the development of Jamaica's National Climate Change Policy and guide its implementation in collaboration with other Ministries and Executive Agencies.
- ii. Facilitate the integration of climate change issues into key sectoral policies related to agriculture, tourism, infrastructure, health, energy, and transport among others.
- iii. Provide technical support to the Permanent Secretary, Ministry of Land, Water, Environment and Climate Change, by reviewing and appraising all Climate Change related policies, before the Ministry's approval.
- iv. Prepare a comprehensive and climate change response strategy.

C. Information and Data Management and Research and Development

- i. Coordinate climate change research activities and contribute to the determination of research priorities, promote the use of evidenced based planning by encouraging research centres and universities engaged in climate change research, facilitate the functioning and access to resources of existing research institutions, vulnerability and risk assessments, develop infrastructure for research activities, facilitate national participation in the activities of the Intergovernmental Panel on Climate Change (IPCC), promote scientific and technical cooperation on matters related to climate systems and climate change.
- ii. Oversee the collection of climate change information and data. Create and maintain a database for on-going and pipeline projects on Climate Change by state and non-state and facilitate access to and use of information. Develop protocols to standardize information gathering and exchange.

D. Public Awareness and Education

i. Coordinate awareness raising education and outreach activities, set national communication goals, develop programmes for communication of climate change information and tools for effective outreach, training and capacity building on climate change, pursue partnerships with appropriate information and education agencies of government, NGOs and the private sector to ensure sustained and targeted education and awareness.

E. International negotiations

i. Play a key role in coordinating Jamaica's representation for international climate change negotiations, analysing and articulating national positions, leading the process of preparing national positions for multilateral negotiations and regional for a, including as a Party to the United Nations Framework Convention on Climate Change, its Kyoto Protocol and any new instrument(s) that is ratified in the future.

F. Resource Mobilization

- i. Identify sources of climate finance, establish relation with donor agencies and funding sources –multilateral, regional, and national.
- ii. Elaborate allocation criteria, contribute to prioritize amongst proposed actions, and monitor and evaluate implementation.

iii. Elaborate investment guidance.

Reporting Relationships

The Climate Change Department reports to the Ministry of Land, Water, Environment and Climate Change through the Permanent Secretary.

The Climate Change Department works closely with the Climate Change Advisory Committee in order to advance climate change policies, strategies and regulatory frameworks. The CCAC should guide the CCD in fulfilling its mandate of coordination, facilitation and partnership building, towards integrating climate change responses in the national planning priorities and processes.

Periodic reports on the work of the unit will be prepared and presented to the Vision 2030 Thematic Working Group on Hazard Risk Reduction and Adaptation to Climate Change (HRRACC TWG) and the Thematic Working Group on Environment and Natural Resources Management/Sustainable Urban and Rural Development (ENRM/SURD).

ANNEX B-2: Terms of Reference for Director, Climate Change Department, Ministry of Water, Land Environment and Climate Change

The Ministry of Water, Land, Environment and Climate Change will be establishing a Climate Change Department within the Ministry. The purpose of establishing a Climate Change Department is to ensure a climate change resilient society and to promote sustainable development in Jamaica by enhancing the coordination and monitoring of progresses among existing state and non-state actors.

The Climate Change Department will be responsible for co-ordination and monitoring of:

- i. Policy development
- ii. Information and data management/research and development
- iii. Public awareness and education
- iv. International negotiations
- v. Resource mobilization of climate financing and other resources

Functions of the Director

The Director of the Climate Change Department will have overall responsibility for the Department with gravitas and the ability to institute an impeccable coordination and facilitation mechanism including, close cooperation with the Climate Change Advisory Committee.

In particular, the Director will be required to:

- i. Establish an appropriate procedure for the coordination of all relevant institutions and stakeholders involved in climate change resilience building.
- ii. Coordinate monitoring, reporting and evaluation of the National Climate Change Policy and the implementation of adaptation, mitigation and outreach programmes across Government.
- iii. Coordinate the preparation and validation of climate change related national regulatory frameworks.
- iv. Work with Executive Agencies to monitor implementation of climate change projects for adaptation and mitigation.
- v. Lead the process of consultation with key sectors for the development of the Government's strategy and programmes on adaptation to climate change and guide their effective implementation
- vi. Lead the process for the development of Jamaica's National Climate Change Policy and guide its implementation in collaboration with other Ministries and Executive Agencies.
- vii. Facilitate the integration of climate change issues into key sectoral policies related to agriculture, tourism, infrastructure, health, energy, and transport among others.
- viii. Provide technical support to the Permanent Secretary, Ministry of Land, Water, Environment and Climate Change, by reviewing and appraising all Climate Change related policies, before the Ministry's approval.

- ix. Prepare a comprehensive climate change response strategy.
- x. Coordinate climate change research activities and contribute to the determination of research priorities, promote the use of evidenced based planning by encouraging research centres and universities engaged in climate change research, facilitate the functioning and access to resources of existing research institutions, vulnerability and risk assessments, develop infrastructure for research activities, facilitate national participation in the activities of the Intergovernmental Panel on Climate Change (IPCC), promote scientific and technical cooperation on matters related to climate systems and climate change.
- xi. Oversee the collection of climate change information and data in the areas of adaptation and mitigation.
- xii. Coordinate awareness raising education and outreach activities, set national communication goals, develop programmes for communication of climate change information and tools for effective outreach, training and capacity building on climate change, pursue partnerships with appropriate information and education agencies of government, NGOs and the private sector to ensure sustained and targeted education and awareness.
- xiii. Play a key role in coordinating Jamaica's representation for international climate change negotiations, analysing and articulating national positions, leading the process of preparing national positions for multilateral negotiations and regional for a, including as a Party to the United Nations Framework Convention on Climate Change, its Kyoto Protocol and any new instrument(s) that is ratified in the future.
- xiv. Identify sources of climate finance, establish relation with donor agencies and funding sources –multilateral, regional, and national.
- xv. Elaborate allocation criteria, contribute to prioritize amongst proposed actions, and monitor and evaluate implementation.
- xvi. Elaborate investment guidance.
- xvii. Submit required reports and documentation to the Permanent Secretary and the Climate Change Advisory Committee.

Reporting Relationships

The Climate Change Department reports to the Ministry of Land, Water, Environment and Climate Change. The Director will report directly to the Permanent Secretary within the Ministry. The Director will supervisor Senior Officer A – Adaptation and Senior Officer B – Mitigation.

The Climate Change Department works closely with the Climate Change Advisory Committee in order to advance climate change policies, strategies and regulatory frameworks. The CCAC should guide the CCD in fulfilling its mandate of coordination, facilitation and partnership building, towards integrating climate change responses in the national planning priorities and processes.

Periodic reports on the work of the unit will be prepared and presented to the Vision 2030 Thematic Working Group on Hazard Risk Reduction and Adaptation to Climate Change (HRRACC TWG) and the Thematic Working Group on Environment and Natural Resources Management/Sustainable Urban and Rural Development (ENRM/SURD).

Qualifications

1. Master's Degree or equivalent in Geography, Environmental Sciences, Natural Sciences, Business Administration, Engineering, Policy Development or a related discipline

- 2. Minimum of fifteen (15) years of relevant experience at the national or international level, with significant managerial experience and involvement in design, monitoring and/or evaluation in the areas of climate change adaptation and mitigation
- 3. Experience in standard software applications and in handling web-based management systems
- 4. Demonstrated excellence in written and oral English
- 5. Demonstrated skills in strategically leading and chairing meetings
- 6. Proven ability to work effectively with diverse stakeholders at all levels, including private sector, public sector, civil society, academia and the international donor community

ANNEX B-3: Terms of Reference for Senior Officer A – Adaptation, Climate Change Department, Ministry of Water, Land Environment and Climate Change

The Ministry of Water, Land, Environment and Climate Change will be establishing a Climate Change Department within the Ministry. The purpose of establishing a Climate Change Department is to ensure a climate change resilient society and to promote sustainable development in Jamaica by enhancing the coordination and monitoring of progresses among existing state and non-state actors.

The Climate Change Department will be responsible for co-ordination and monitoring of:

- vi. Policy development
- vii. Information and data management/research and development
- viii. Public awareness and education
- ix. International negotiations
- x. Resource mobilization of climate financing and other resources

Functions of Senior Officer A

Senior Officer A – Adaptation will coordinate and monitor activities related to climate change adaptation at the national level. Officer A - Adaptation will report directly to the Director of the Climate Change Department and will support the Director in meeting the Terms of Reference of the CCD in the area of climate change adaptation.

In particular, Senior Officer A – Adaptation will be required to:

- i. Establish an appropriate procedure for the coordination of all relevant institutions and stakeholders involved in climate change adaptation
- ii. Coordinate monitoring, reporting and evaluation of the National Climate Change Policy and the implementation of adaptation programmes across Government.
- iii. Work with Executive Agencies to monitor implementation of climate change adaptation projects that are aimed at protecting biodiversity and other ecosystems.
- iv. Participate in the process of consultation with key sectors for the development of the Government's strategy and programmes on climate change adaptation and guide their effective implementation.
- v. Coordinate and prioritize adaptation programmes in different sectors and systems, identify priority adaptation actions, assess the resource needs, monitor and evaluate performance of programmes, projects and adaptation activities, develop procedures for evaluating adaptation actions, analyse and determine incremental costs of adaptation actions.
- vi. Participate in the process for the development of Jamaica's National Climate Change Policy and guide its implementation in collaboration with other Ministries and Executive Agencies.
- vii. Participate in the preparation of a comprehensive and climate change response strategy.

- viii. Oversee the collection of climate change information and data as related to climate change adaptation
- ix. Create and maintain a database for on-going and pipeline projects on climate change adaptation by state and non-state and facilitate access to, and use of, the information.
- x. Develop protocols to standardize information gathering and exchange.
- xi. Coordinate awareness raising education and outreach activities, and pursue partnerships with appropriate information and education agencies of government, NGOs and the private sector to ensure sustained and targeted education and awareness
- xii. Identify sources of climate finance establish relationships with donor agencies and funding sources –multilateral, regional, and national.
- xiii. Prepare reports, documentation of meetings and make presentations as required.

Reporting Relationships

Senior Officer A- Adaptation will report directly to the Director, Climate Change Department and work closely with Senior Officer B – Mitigation.

The Climate Change Department reports to the Ministry of Land, Water, Environment and Climate Change through the Permanent Secretary.

The Climate Change Department works closely with the Climate Change Advisory Committee in order to advance climate change policies, strategies and regulatory frameworks. The CCAC should guide the CCD in fulfilling its mandate of coordination, facilitation and partnership building, towards integrating climate change responses in the national planning priorities and processes.

Periodic reports on the work of the unit will be prepared and presented to the Vision 2030 Thematic Working Group on Hazard Risk Reduction and Adaptation to Climate Change (HRRACC TWG) and the Thematic Working Group on Environment and Natural Resources Management/Sustainable Urban and Rural Development (ENRM/SURD).

Qualifications

- 1. Master's Degree or equivalent in Geography, Environmental Sciences, Natural Sciences or a related discipline
- 2. Minimum of ten (10) years of relevant experience at the national or international level, with hands-on /practical experience in design, monitoring and/or evaluation in the area of climate change adaptation
- 3. Experience in standard software applications and in handling web-based management systems
- 4. Demonstrated excellence in written and oral English
- 5. Demonstrated skills in strategically leading and chairing meetings
- 6. Proven ability to work effectively with diverse stakeholders

ANNEX B-4: Terms of Reference for Senior Officer B – Mitigation, Climate Change Department, Ministry of Water, Land Environment and Climate Change

The Ministry of Water, Land, Environment and Climate Change will be establishing a Climate Change Department within the Ministry. The purpose of establishing a Climate Change Department is to ensure a climate change resilient society and to promote sustainable development in Jamaica by enhancing the coordination and monitoring of progresses among existing state and non-state actors.

The Climate Change Department will be responsible for co-ordination and monitoring of:

- vi. Policy development
- vii. Information and data management/research and development
- viii. Public awareness and education
- ix. International negotiations
- x. Resource mobilization of climate financing and other resources

Functions of Senior Officer B

Senior Officer B - Mitigation will coordinate and monitor activities related to climate change mitigation at the national level. Senior Officer B - Mitigation will report directly to the Director of the Climate Change Department and will support the Director in meeting the Terms of Reference of the CCD in the area of climate change adaptation.

In particular, Senior Officer B – Mitigation will be required to:

- i. Establish an appropriate procedure for the coordination of all relevant institutions and stakeholders involved in climate change mitigation.
- ii. Coordinate monitoring, reporting and evaluation of the National Climate Change Policy and the implementation of mitigation and outreach programmes across Government.
- iii. Act as the focal point for CDM and other market mechanisms.
- iv. Work with Executive Agencies to monitor implementation of climate change mitigation projects
- v. Participate in the process of consultation with key sectors for the development of the Government's strategy and programmes on adaptation to climate change and guide their effective implementation
- vi. Coordinate the preparation and prioritization of mitigation actions, locus of the Designated National Authority, facilitate the elaboration of baselines and methodologies, and facilitate access to funding for mitigation actions in renewable energy and energy efficiency initiatives.

- vii. Participate in the process for the development of Jamaica's National Climate Change Policy and guide its implementation in collaboration with other Ministries and Executive Agencies.
- viii. Oversee the collection of climate change information and data. Create and maintain a database for on-going and pipeline projects on climate change mitigation by state and non-state and facilitate access to and use of information. Develop protocols to standardize information gathering and exchange.
- ix. Coordinate awareness raising education and outreach activities, set national communication goals, develop programmes for communication of climate change information and tools for effective outreach, training and capacity building on climate change, pursue partnerships with appropriate information and education agencies of government, NGOs and the private sector to ensure sustained and targeted education and awareness.
- x. Identify sources of climate finance, establish relation with donor agencies and funding sources –multilateral, regional, and national.
- xi. Prepare reports, documentation of meetings and make presentations as required.

Reporting Relationships

Senior Officer B – Mitigation will report directly to the Director, Climate Change Department and work closely with Senior Officer A – Adaptation.

The Climate Change Department reports to the Ministry of Land, Water, Environment and Climate Change through the Permanent Secretary.

The Climate Change Department works closely with the Climate Change Advisory Committee in order to advance climate change policies, strategies and regulatory frameworks. The CCAC should guide the CCD in fulfilling its mandate of coordination, facilitation and partnership building, towards integrating climate change responses in the national planning priorities and processes.

Periodic reports on the work of the unit will be prepared and presented to the Vision 2030 Thematic Working Group on Hazard Risk Reduction and Adaptation to Climate Change (HRRACC TWG) and the Thematic Working Group on Environment and Natural Resources Management/Sustainable Urban and Rural Development (ENRM/SURD).

Qualifications

- 1. Master's Degree or equivalent in Geography, Environmental Sciences, Natural Sciences or a related discipline
- 2. Minimum of ten (10) years of relevant experience at the national or international level, with hands-on /practical experience in design, monitoring and/or evaluation in the area of climate change mitigation
- 3. Experience in standard software applications and in handling web-based management systems
- 4. Demonstrated excellence in written and oral English
- 5. Demonstrated skills in strategically leading and chairing meetings
- 6. Proven ability to work effectively with diverse stakeholders

Annex C: Current roles and responsibilities in performing climate change actions

Institution	Function
Meteorological Service, Jamaica	 Observation and forecasting of weather conditions over and around the island; maintain a continuous Hurricane Watch during the hurricane season and is responsible for the issuance of severe weather warning. Responsible for maintaining a current database of the climate of Jamaica and for the utilization of this data in informing productive sectors of the country National Focal Point to the UNFCCC Member of the Adaptation Fund Board Responsible for the preparation of the National Communication for climate change
National Environment and Planning Agency (NEPA)	 Integrate environmental, planning and sustainable development policies and programmes Promote sustainable development by ensuring protection of the environment and orderly development in Jamaica Implement measures to support the increase in the natural resilience of coastal ecosystems and biodiversity Set standards, monitor and regulate the environment
Planning Institute of Jamaica (PIOJ)	 Initiate and coordinate the development of plans and programmes to facilitate sustainable development of Jamaica National Focal Point for Vision 2030 Jamaica – National Development Plan National Implementing Entity (NIE) for the Adaptation Fund and the Focal Point for PPCR Provide technical and administrative support to the Hazard Risk Reduction and Adaptation to Climate Change TWG through its Technical Secretariat Co-manager for the GOJ/EU/UNEP CCADRRP Conduct socio-economic and environmental assessment of disasters
Office of Disaster Preparedness and Emergency Management (ODPEM):	 Designated National Disaster Organization, with responsibility for disaster management Responsible for taking action to reduce the impact of disasters and emergencies on the Jamaican population and its economy Play coordinating role in the execution of emergency response and relief operations in major disaster events Providing early warning, emergency response, relief and recovery operations in emergency situations. Advocating and supporting risk reduction measures. Providing training in all areas of disaster management. Promoting a greater national awareness for disaster management issues through public education and awareness. Conducting hazard identification and risk assessments. Conducting research in social behaviour in relation to disaster mitigation and response. Establishing and maintaining mutual assistance and cooperation agreements among partner agencies, private sector and international donor organizations
Water Resources Authority (WRA)	Hydrologic data collection, compilation, and analysis Water resources investigation, assessment, and planning Water resources allocation Environmental monitoring and impact assessment.
Environmental Management Division	Responsible for environment, planning and development Monitoring climate change conventions
Ministry of Foreign Affairs and Foreign Trade	Promote Jamaica's interests and the interests of Small Island Developing States (SIDS) in the areas of climate change, sustainable development and global environmental governance Responsible for the implementation of Jamaica's foreign

Institution	Function		
	policy, the management of Jamaica's international relations and the promotion of its interests overseas		
Ministry of Local Government and Community Development Hazard Mitigation and Weather Services Division	 Monitor the implementation of climate change adaptation and hazard mitigation policies and initiatives at the local government planning levels 		
Ministry of Finance and Planning	 Create the environment that will promote sustainable economic growth Effectively manage the national budget and administed policies for the sound financial management of publifunds 		
Ministry of Water, Land, Environment and Climate Change	 Policy making and regulatory responsibility for climate change issues Policy making and regulatory responsibility for water, land and environmental issues. 		

Annex D: National Climate Change Response Strategy

Objectives

Jamaica will implement concerted actions to build a climate resilient country and promote a fair transition to a low emission, climate resilient economy, in the context of national priorities for sustainable development, a secure, cohesive and just society, a prosperous and internationally competitive economy, a diversified energy matrix, and a healthy natural environment, empowering Jamaicans to achieve their fullest potential.

To achieve these objectives, Jamaica will:

- Strengthen national capacity to face climate change and coordinate climate actions. The Climate Change Department will play a key role in optimizing national efforts.
- Manage climate risks and build adaptive capacities, to enhance social, economic, and environmental resilience as well as disaster risk management.
- Reinforce coordination efforts to access, allocate, effectively use and account for climate finance.
- Contribute to global cooperation initiatives to mitigate climate change, on the basis of the agreed principles.
- Ensure that climate actions are designed, implemented and monitored in a participatory manner.

Priorities

This White Paper states the national climate change response strategy and the institutional and organizational structure to achieve the desired objectives in a manner consistent with the principles and approach outlined above.

While the priorities of the Climate Change Advisory Committee and Climate Change Department have already been set at Jamaica's highest level of governance, for the purpose of organizing the climate change institutional response, those priorities have been structured in the following set of issues:

1. Policy Development, leading to review of legislation and development of a legislative framework and agenda.

Policy and regulatory alignment.

Review existing legislation, national policies, and strategies, with a view to identify the climate change dimension in order to ensure consistency and optimize climate change co-benefits.

2. Integrated planning.

Mainstreaming of climate change considerations and responses into all relevant sectors and planning bodies.

- 3. Climate Change monitoring and evaluation, science & technology and research & development.
 - Informed decision-making and planning on evidence-based information. Prioritize research, systematic observation, knowledge generation, information management and strengthen early warning systems.
- 4. Climate Change database development, project development, management and coordination as one of the key functions of the Climate Change Department.
- 5. Climate Change adaptation and resilience projects, including inter alia, the following:

- i. Protect and enhance tourism and remedy any existing problems resulting from Climate Change.
- ii. Improved Food Security through Agriculture and Fisheries Projects
- iii. Watershed Management and Soil Conservation and River Training
- iv. Rehabilitation of saline groundwater resources and aquifer recharge in general
- v. Coastal resource management
- vi. Prevention and remediation of health impacts
- vii. Other sectoral responses to climate change impacts and vulnerabilities.

Risk reduction and management and enhancing adaptive capacity.

Stepwise approach, prioritizing near-term adaptation interventions that address observed and immediate threats and developing medium and long term strategies and policies and measures.

- 6. Mitigation actions with significant outcomes.
 - i. Renewable energy generation.
 - ii. Afforestation and Reforestation for economic production and bringing Jamaica's Carbon Sink Capacity in line with, or in excess of its carbon dioxide emission rate, among other things.
- 7. Public education. Elaboration of a detailed national strategic education plan and its implementation.

Facilitate behaviour change through choice, including education, training and awareness raising programmes to build capacities to make informed choices that contribute to a climate resilient society and a low emissions economy.

8. Coordinate and enhance policy design and implementation.

Use policy instruments, establish regulatory frameworks, employ fiscal and financial incentives and disincentives to promote behaviour change towards a low emissions and climate resilient society and economy.

9. Resource mobilization.

Strengthening capacity to access, apply, and account for the use of climate finance; create enabling environment for investment, engage the national financial system and expand capacity to prepare and implement cooperation projects and technology transfer.

10. Technology deployment.

Foster technological development in a way that addresses low emission growth objectives and national development priorities

Interviews to government and institutions authorities and academic representatives

During the first mission the following meetings with relevant actors and institutions were held:

Nº	Institution	Name	Responsibility
1	Association of		Responsibility
I	Development Agencies	Ms. Amsale Maryam	
2	Cabinet Office	Ms. Veronica Whilby	Corporate Management Division of Cabinet Office
3	Canadian High Commission	Ms. Marie Legault	
4	Caribbean Coastal Area Management, CCAM	Ms. Ingrid Parchment	CEO
5	Environmental Foundation of Jamaica	Mrs. Karen McDonald-Gayle	CEO
6	European Union	Mr. Thomas Opperer	
7		Mr. Alexandre Dropinski	
8	Forestry Department	Ms. Marilyn Headley	CEO and Conservator of Forests
9	International Finance	Ms. Eleanor Ereira	
10	Corporation	Mr. Lambkin	
11	Institute of Sustainable Development, ISD	Dr. David Smith	
12	Jamaica Environment	Ms. Suzanne Stanley	Programme Officer
13	Trust, JET	Ms. Danielle Andrade	Legal Director
14	Meteorological Service	Mr. Jeffery Spooner	Director of the Meteorological Service and UNFCCC Focal Point
15		Mr. Clifford Mahlung	Meteorological Service
16	Ministry of Agriculture	Mr. Donovan Stanberry	Permanent Secretary
17		Mrs. Zulekha Budhan,	Principal Director
18		Mrs. Georgia Doman	Economist
19	Ministry of Finance and Planning	Mr. Devon Rowe	Director General
20	Ministry of Health	Mr. Leopold Daubon	
21		Mr. Basil McFarlene	
22	Ministry of Tourism	Mrs. Tina Williams	
23	Ministry of Water, Land,	Hon. Robert Pickersgill	Minister
24	Environment and Climate	Mrs. Genefa Hibbert	Permanent Secretary
25	Change	Dr. Conrad Douglas	Chairman of the Climate Change Advisory Committee
26		Col. Oral Kahn	Chief Technical Director
27		Dr. Alwin Hales	Director General
28		Ms. Rachel Allen	Senior Advisor to the Minister on Climate Change
29		Ms. Kerri Ann Dryden	Legal Officer representing Mrs. Genefa Hibbert
30		Ms. Nicole O'Reggio	Environmental Management Division
31	National Environment and	Mr. Peter Knight	CEO
32	Planning Agency, NEPA	Ms. Simone McCullough	
33	National Water Commission	Mr. Don Street	
34	Office of Disaster Preparedness and Emergency Management, ODPEM	Mr. Ronald Jackson	Director General

35	PANOS Caribbean	Mr. Indi McLymont-Lafayette	
36	Planning Institute of	Mr. Hopeton Peterson	Manager of the Sustainable
	Jamaica, PIOJ		Development and Regional Planning Division, Focal Point
			for the Pilot Programme for
			Climate Resilience (PPCR)
37		Ms. Leann Roper	Focal Point for the Adaptation
			Fund Project
38		Mrs. Mary Gooden	Project Manager for EU Project
39		Mrs. Delores Wade	External Cooperation
			Management Division
40		Mrs. Elizabeth Emmanuel	Vision 2030 Secretariat
41		Ms. Sherricca Hawthorne	Vision 2030 Secretariat
42	Private Sector	Mr. Richard Lumsden	Vision 2030 Secretariat
43	Organization of Jamaica	Mr. Omar Chedda	
44	Rural Agricultural	Ms. Cavell Francis-Rhiney,	
	Development Agency,		
45	RADA	D. Mr. I. I.Mr.	
45	Sir Arthur Lewis Institute for Social and Economic	Dr. Michael Witter	
	Studies, SALISES		
46	Statistical Institute of	Mrs. Janet Geoghagen-Martin	
	Jamaica (STATIN)		
47	St. Luke's Church	Archdeacon Patrick	
40	LINI A	Cunningham	LINIDD OFF Oreall Oreate
48	UN Agencies	Ms. Hyacinth Douglas	UNDP GEF Small Grants Programme
49		Dr. Pedro Mas Bermejo	PAHO
50		Mr. Cesar Torres	UNESCO
51		Mr. Christopher Corbin,	UNEP-CEP
52		Mr. Robert Kerr	FAO
53	University of the West	Ms. Marcia Creary	Centre for Marine Sciences,
	Indies, UWI		and President of Jamaica Institute of Environmental
			Professionals
54		Prof. Edward (Ted) Robinson	Professor Emeritus, Director
		,	Marine Geology Unit
55		Dr. Michael Taylor	Head of Department, Physics
			Department/Climate Studies
FC		Dr. Dovid Smith	Group Mona
56		Dr. David Smith	Institute of Sustainable Development
57	Urban Development	Ms. Sara Simpson	
	Corporation		
58	USAID	Ms. Suzanne Ebert	
59	Water Resources	Mr. Basil Fernandez	Director
	Authority		

Annex F: Itinerary of the Mission

Mission itinerary

Mission to guide the establishment of a Climate Change Department for the Ministry of Water, Land, Environment and Climate Change

Kingston, Jamaica, June 11-15, 2012

Date	Activity	Venue
Jun 10	Arrival of Mission Team to Jamaica Hernan Carlino, International Consultant, Argentina Gabriela Fischerova, UNDP Bratislava Petrus van de Pol, UNDP New York	Arrival at Norman Manley International Airport, Kingston. JUTA transfer to the Courtleigh Hotel
June 11	Security Briefing at UNDSS	UNDSS
	Inception Meeting with Res. Rep., Deputy Res. Rep. and Environment and Energy Team	UNDP CO RR's Meeting Room
	Meeting with UNDP CO Environment and Energy Team for UNDP CO portfolio on climate change adaptation and mitigation	UNDP CO RR's Meeting Room
	Meeting with Dr. Conrad Douglas, Chairman of the Climate Change Advisory Committee and Mr. Jeffery Spooner, Actg. Director of the Meteorological Service and UNFCCC Focal Point and Coll. Oral Kahn, CTD MWLECC	UNDP CO
	Meeting with PIOJ – Hopeton Peterson, Sustainable Development and Regional Planning Division/PPCR; Mary Gooden, Project Manager for EU Project, Leann Roper Adaptation Fund Project; Delores Wade, External Cooperation Management	PIOJ
June 12	Re-cap Meeting with UNDP	UNDP CO
	Ms. Veronica Whilby, Corporate Management Division of Cabinet Office	UNDP CO
Special Combined Meeting of the Hazard Risk Reduction and Adaptation to Climate Change Thematic Working Group AND the Environment and Natural Resources Management/Sustainable Urban and Rural Development Thematic Working Group (NGO's, CSOs, Private Sector, Academia, GOJ) Ms. Suzanne Stanley, Programme Officer/Ms. Danielle Andrade, Legal Director, Jamaica Environment Trust		Office of Disaster Preparedness and Emergency Management Haining Road
		UNDP
	Dr. David Smith (Institute of Sustainable Development, ISD) and Dr. Michael Witter (Sir Arthur Lewis Institute for Social and Economic Studies, SALISES)	ISD, UWI
Jun 13	Re-cap Meeting with UNDP	UNDP CO
		RR's Meeting Room
	Mr. Devon Rowe, Ministry of Finance and Planning	Ministry of Finance

Meeting with Hon. Minister Robert Pickersgill, Permanent Secretary Genefa Hibbert, Dr. Conrad Douglas, Mr. Jeffery Spooner, Dr. Alwin Hales, Ms. Rachel Allen		Ministry of Water, Land Environment and Climate Change
	Mr. Donovan Stanberry, Permanent Secretary, Ministry of Agriculture	UNDP
	Mr. Omar Chedda, Private Sector Organization of Jamaica	UNDP
Jun 14	Meeting with UN Agencies	UNDP CO, Main Conference Room
	Meeting with Basil Fernandez, Water Resources Authority	UNDP CO
	Climate Change Advisory Committee members	Ministry of Water, Land, Environment and Climate Change
Jun 15	Presentation of Findings and Recommendations with the Ministry of Water, Land, Environment and Climate Change, PS, Dr. Conrad Douglas	Ministry of Water, Land, Environment and Climate Change
	Mr. Spooner and key GOJ officials	
	Meeting with CIDA for IFC Mission and Donors (EU, USAID) - The Climate Technology Program	Canadian High Commission

Annex G: Consolidated Country Experiences

	Country	National Institutions dedicated to CC activities and/or Other Arrangements	Structure & Mandate	Comments
1.	Namibia	Ministry of Environment & Tourism (MET); Ministry of Agriculture, Water and Forestry (adaptation); Ministry of Mines and Energy and Ministry of Works and Transport (mitigation); Ministry of Trade and Industry and Ministry of Finance, and the National Planning Commission Secretariat (finance)	MET has the mandate to restructure the National Climate Change Committee (NCCC) - an advisory body to help provide technical advice to senior policy makers; and lead the formulation of a National Climate Change Policy to help provide a clear direction as to how Namibia should address Climate Change.	So far the arrangements have been working due to the fact that Namibia is aiming at strengthening both institutional and individual capacities to address climate change action using various support sources including the UN. Also, as part of the progressive and adaptive management approach, Namibia managed to include the issue of environmental sustainability as one of the five mandatory issues in the current third National Development Plan (NPD 3), which is a good starting point and foundation for integrating climate change issues into national development frameworks.
2.	Ukraine	Ministry of Environmental Protection of Ukraine; National Environmental Investment Agency of Ukraine	Ministry of Environmental Protection of Ukraine oversees the development, coordination, and implementation of Ukraine's environmental policies. It acts as coordinator of activities to fulfill the commitments of Ukraine under the UNFCCC and the Kyoto Protocol. National Environmental Investment Agency of Ukraine: Development of the investment policy in the area of environmental protection; Acts as the government authority responsible for funding and processing AAU trading and Green Investment Scheme; Acts as the Designated Focal Point for Joint Implementation (JI) projects; Preparation (under MoE supervision) of the National Inventory Report of anthropogenic emissions and removals of GHGs to be submitted to the UNFCCC annually.	Ukraine has created appropriate legislative framework and institutional arrangements required by UNFCCC and its Kyoto Protocol. In practice, however, these arrangements are relevant for initiation of carbon markets only. They don't envisage strong capacity in climate change-related adaptation/mitigation, technology transfer, scientific research, public awareness, etc. As to Kyoto Protocol economic mechanisms, JI projects are being processed with huge delays and AAU proceeds within GIS are subject to rumored frauds. The main reasons lie within political instability coincided with frequent reshuffling of the top officials as well as economic strain and

Change and Meteorological Services : Ministry of Natural Resources, Energy and Environment. It has the mandate to monitor, predict and provide information on weather and climate that would contribute towards the socio-economic development of Forestry (DOF); Department of Forestry (DOF); Department of Fisheries; Environmental Affairs Department of Fisheries; Environmental Affairs Department of Department; Department of Fisheries; Department; Department of Department; Department; Department; Department; Department; Department; Department; Department; Department in responding to the international obligations on Climate Change. DOF is the focal point for the UNCCD. Department of Fisheries; goal is to maintain fish species and biodiversity. Academic institutions have Climate Change as part of their curriculum or are in the process of introducing the subject. Coordination of UNDP projects on climate change have been entrusted to the Ministry of Planning & Development Cooperation with the Department of Fivinonmental Affairs as secretariat and at the technical level is chaired by the Ministry of Planning and Development Cooperation with the Department of Climate Change and Meteorology. Policy unit in the office of the President and cabinet focuses on the implementation of different sectoral policies. The Climate Change Facilitation Unit - Department of Climate Change Facilitation Unit has assisted change Facilitation Unit has assisted change Facilitation Unit has assisted where the works closed with interesponsibilities can not ideal because the responsibilities can retard the Ministry of Natural Resources, Energy and Environmental Affairs as the added content to expert and the technical fish on the Ministry of Manural Resources, the peartment of Environment and Natural discourse the responsibilities can the responsibilities can the responsibilities and responsibilities are fragmentage in the responsibilities and responsibilities are fragmentage in the responsibilities ar			l	1	low awareness.
Unit - Department of under the Department of Environment and Natural Change Facilitation Unit has assisted			Change and Meteorological Services - Ministry of Natural Resources, Energy and Environment Department of Forestry (DOF); Department of Fisheries; Environmental Affairs Department; University of Malawi & constituent colleges; Policy level committee on climate change Policy unit in the office of the President and cabinet	Meteorological Services is within the Ministry of Natural Resources, Energy and Environment. It has the mandate to monitor, predict and provide information on weather and climate that would contribute towards the socio-economic development of the country. It also has the added responsibility of formulating a strategic plan to take on new climate change mandates such as advocacy and public awareness. The Department works closely with the Environmental Affairs Department in responding to the international obligations on Climate Change. DOF is the focal point for the UNCCD. Department of Fisheries: goal is to maintain fish species and biodiversity. Academic institutions have Climate Change as part of their curriculum or are in the process of introducing the subject. Coordination of UNDP projects on climate change have been entrusted to the Ministry of Planning & Development because of its coordinator role on policies. Policy level committee on climate change is chaired by the Ministry of Planning and Development Cooperation with the Department of Environmental Affairs as secretariat and at the technical level is chaired by the Department of Climate Change and Meteorology. Policy unit in the office of the President and cabinet focuses on the implementation of different sectoral policies.	arrangements are not ideal because the responsibilities are fragmented. The Ministry of Natural Resources, Energy and Environment is currently deliberating on how climate change responsibilities can be streamlined within the Ministry and how it can be coordinated outside the Ministry.
Environment and Natural Resources, Ministry of Tourism, Environment and in coordination and shaping the Natural Resources. The Unit is a temporary national agenda for climate change	4.	Zamula	Unit - Department of Environment and Natural	under the Department of Environment and Natural Resources, Ministry of Tourism, Environment and	Change Facilitation Unit has assisted in coordination and shaping the

			structure while the climate change response strategy, policy and legal framework are being developed. The Unit has assumed responsibilities for coordination and is serving as depository for dissemination of information. It also serves as a secretariat for PPCR (The Pilot Program for Climate Resilience) and adaptation funds.	response. However, since it is in the Ministry of Environment, the challenges of coordination with other line ministries persist and the perception of climate change as an environmental issue may continue. A permanent structure/institution outside the Ministry of Environment like National Aids Council or Human Rights Commissions could provide impetus for addressing and coordinating climate change issues.
5.	Kenya	Ministry of Environment and Mineral Resources (MEMR); Technical issues of Mitigation handled by: National Environment Management Authority (NEMA) addresses CDM; Kenya Forestry Service (KFS) addresses REDD.	MEMR spearheads and coordinates government and donors' climate change programs and projects. It has established a Climate Change Secretariat that focuses primarily on policy and programmatic issues around adaptation and mitigation policy. NEMA & KFS are under the Ministry of Environment and Mineral Resources. The climate change advisory office supports climate change coordination in the country and works closely with the Climate Change Secretariat.	The current government climate change institutional and operational arrangements are well thought out. However, these institutions face serious capacity and resource constraints. This problem is further compounded by high staff movement within departments.
		The office of the Prime Minister has a climate change advisory office.		
6.	Bhutan	National Environment Commission; Gross National Happiness Commission (Financing, Aid- coordination and national planning); Ministry of Agriculture and Forestry (in particular Department of Agriculture and Department of Forest and Park Services); Ministry of Economic Affairs	The National Environment Commission is the UNFCCC focal point in the country and serves as the National Committee on Climate Change. It is responsible for CC enabling activities, policies and legislation. GNNHC is responsible for overall planning of national development programs and aid coordination. Its mandate is to ensure that Gross National Happiness is mainstreamed into the planning, policy making and implementation process and that proper coordination is undertaken to ensure proper implementation of plans and programs.	Although the current institutional arrangements are working, they can be improved to ensure better coordination and mainstreaming at the local, national and regional level. In order to ensure that climate change is addressed as a cross sectoral issue, there is a need for a National Climate Change Strategy to strengthen the mandate of NEC to address climate change issues more effectively. To further mainstream climate change within stakeholder agencies and to enhance the participation of these stakeholder agencies in climate

		(in particular Department of Energy, Department of Industry and Department of Geology and Mines); Ministry of Home and Cultural Affairs; Ministry of Finance	Ministry of Agriculture and Forestry: The Watershed Management Division of the Department of Forest and Park Services, under the Ministry of Agriculture and Forestry, has been designated as the Focal Point for UN REDD activities and UN REDD readiness activities. Ministry of Economic Affairs: The Department of Energy, under the Ministry of Economic Affairs, is responsible for the formulation of energy and power sector policy, plans, programs and guidelines/regulations. Ministry of Home and Cultural Affairs: The Department of Disaster Management, under the Ministry of Home and Cultural Affairs, is responsible for coordinating disaster risk management at the national and local levels in coordination with relevant agencies.	change related activities, a Technical National Climate Change Committee could be established to support the NEC. Research on climate change impacts in all sectors and capacity development for data collection and modeling would also benefit and strengthen the existing institutional arrangements. CC adaptation and mitigation aspects also need to be further addressed at the local level through integration in local development planning and implementation, and regional mechanisms should play a more active role to facilitate sharing of knowledge, information and capacity building programmes in Climate Change related areas. There is also a need to strengthen overall capacity of the government in the implementation of CC-related activities. The expertise in the government is very limited and concentrated in a few agencies/ministries.
7.	Uganda	Climate Change Unit – Ministry of Water and Environment; Other arrangements: National Forestry Authority; National Environment Management Authority; Uganda Wildlife Authority; National Planning Authority; Uganda Parliamentary Forum	The Climate Change Unit is the main national institution responsible for coordinating climate change issues. It is under the direct supervision of Ministry of Water and Environment. It houses the Government Technical Focal Point for the UNFCCC. National Forestry Authority coordinates REDD issues. National Environment Management Authority handles CDM projects. Uganda Wildlife Authority manages all protected areas;	There is need to strengthen the policy, legal and institutional framework for climate change interventions. Uganda has no climate change policy and needs to develop one. There is also need to review the legal and institutional framework for climate change action with a view of harmonizing and developing climate change action enabling laws and institutions. Uganda developed a National Adaptation Plan of Action in 2007 but this has largely not yet been implemented due to capacity gaps in
		on Climate Change	The National Planning Authority is responsible for	terms of inadequate technical, financial

			coordination of national and decentralized development planning and management processes and production of comprehensive integrated National Development Plans. The Uganda Parliamentary Forum on Climate Change is spearheaded by Members of Parliamentary Committee on Environment and Natural Resources but comprises of other members of parliament, and has been at the forefront for advocating for strengthening Climate change action in Uganda.	and material inputs. So there is need to popularize and implement the NAPA. There is need to strengthen participation of non government institutions, private sector and communities in the decision making, planning, budgeting, financing and implementation of climate change mitigation and adaptation interventions. This could be done through working with umbrella NGO organizations. There is need to strengthen integrated climate change and disaster risk reduction in Uganda. This calls for integrated review, harmonization and development of policies, laws and regulations related to climate change and disaster risk reduction.
8.	Lesotho	Lesotho Meteorological Services – Ministry of Natural Resources; Department of Energy - Ministry of Natural Resources; Department of Environment - Ministry of Tourism, Environment and Culture; Ministry of Finance and Development Planning	The Lesotho Meteorological Services - a department within the Ministry of Natural Resources - is the overall coordinator of climate change related interventions. The Department also hosts the National Focal Point for UNFCCC and the CDM-DNA. The Department of Energy, also within the Ministry of Natural Resources, is responsible for all energy related issues in the country and regulation there off. The Department of Environment, within the Ministry of Tourism, Environment and Culture, serves as the overall coordinator of environmental issues (<i>environmental watchdog</i>). The Ministry of Development Planning is responsible for finance and development planning and the overall coordination of donor funding.	The placement of the key institutions within the overall government structure is critical for the successful implementation of climate change interventions and indeed any other environmental issue as these are cross-cutting in nature. The arrangements are working to some extent but could improve if they are placed at a location where they could have authority and control over issues. Financing is also a major problem. Coordination requires extensive consultation, negotiation and facilitation of processes for formulation of strategies and programmes that further require financing for implementation. The current arrangements do not

				facilitate adequate integration of climate change issues into development planning. Climate change is still viewed in many sectors as a separate issue that needs to be dealt with separately. However, climate change in now slowly receiving recognition hence it is among the five clusters to be covered in the National Development Plan. Climate change and related concepts and issues are generally not understood by many at all levels. The institutions responsible for the coordination of climate change initiatives therefore need to be capacitated in order for them to be more effective.
9.	Pakistan	Federal Ministry of Environment;	Federal Ministry: signatory to UNFCCC; DNA for CDM; DNA for Adaptation Fund; National and	The main lead is being taken by the Federal Ministry of Environment.
		Energy Conservation Center	Political focal point for GEF; has a dedicated wing for climate change related coordination and policy	However, major institutional capacity gaps have been identified by the
		(ENERCON);	making.	national task force on climate change that need to be addressed. UNDP,
		Office of the Inspector	ENERCON: allied to Federal Ministry of	through one UN Joint Programme on
		General of Forests (OIGF);	Environment. National Energy Conservation Policy is owned by this department. Engaged in energy	Environment, is providing assistance for establishing a common
		Global Change Impact Studies Center (GCISC);	conservation / efficiency related projects. (Main inputs to mitigation and adaptation related work).	coordination platform and strengthen the climate change wing within the
		Alternative Energy	OIGF: Focal point for UNCBD and UNCCD; REDD	Ministry of Environment. A major initiative is needed to sensitize the
		Development Board (AEDB);	programme; and, National forest Policy (Main	provincial (sub-national) governments,
		Planning Commission;	inputs to adaptation related work).	economic and finance ministries and planning boards on climate change
		-	GCISC: Dedicated research center with	related risks to different sectors of
		Environment and Alternative Energy Department,	undertakings related to climate change research, regional modeling and climate change impact	economy.
		Government of Sindh;	analysis on different time horizons. (Main inputs to	
		Water Management Institute,	in-depth research and analysis work).	
		Pakistan Agriculture	AEDB: works under the Federal Ministry of Water	
		Research Council;	and Power with the main responsibility of promoting	

			renewable energy sources. (Main inputs to mitigation related work). Planning Commission: Leads the Prime Minister's Task Force on Climate Change. Environment and Alternative Energy Department: promotion of alternative energy (wind and solar) in Sindh Province. Water Management Institute: Research on impact of climate change on glaciers and medium term water flow in the Indus river system	
10.	Montenegro	Ministry for Economy (sector for energy and energy efficiency); Ministry for Spatial Planning and Environmental Protection; Agency for Environmental Protection; Hydro meteorological Institute; Department for protection of the atmosphere	UNFCCC and future Adaptation Fund focal points are/will be located within the Ministry for Spatial Planning and Environmental Protection. The Agency is responsible for the management of GHG inventory. Technical operational body within the Agency has been formed for the purpose of implementation of the CDM The Department is mandated with ensuring the legislative compliance with the EC acquis communitaire in the area of air and fuel quality, emissions from unmovable engines, emissions from organic substances, emissions from persistent organic polluters, GHG emissions, noise protection, establishment and monitoring of a national network for air quality, implementation of international treaties and conventions in the area of climate change, development of a National plan for combating CC, etc.	Conducted in 2006, the National Capacity Self Assessment process showed major strengths and weaknesses of the existing institutional system vis a vis implementation of and compliance with the UNFCCC obligations: a) lack of specialized institutional organizational components for climate change within the existing institutions; b) lack of existing training and capacity building programs for the public administration staff especially vis a vis the convention; c) lack of trained and specialized personnel; and d) lack of technical and financial resources for identifying and maintaining a set of environmental indicators for the purpose of monitoring and policy making. While the existing set up remains largely fragmented, characterized by a lack of a coordinated, systematic approach to policy development, implementation, and capacity strengthening of human resources, the process of capacity assessment of the main partner Ministry and the relevant institutions will be completed by the end of the year in partnership with

				UNDP with the objective of revealing and offering the most adequate institutional set up relative to the existing challenges of, among others, climate change.
11.	Colombia	The Group for Climate Change Mitigation - Ministry of Environment, Housing and Land Management; The Institute of Hydrology, Meteorology and Environmental Studies, Ministry of Environment, Housing and Land Management; Environmental and Sustainable Development Group, National Department of Planning; Ministry of Agriculture and Rural Development; National Institute of Health; Ministry of Environmental Protection; Department of Integrated Risk Management, Ministry of Interior and Justice; Treasury and the Presidency Agency for Social Action.	Ministry of Environment, Housing and Land Management is in charge of environmental policy; also serves as the rector of the National Environmental System. The Group for Climate Change Mitigation, within the Ministry of Environment, is in charge of mitigation and adaptation to climate change, including REDD. The Group contributes to the elaboration of the National Communications for the UNFCC; participates in the international negotiations and contributes to the coordination of climate change initiatives and the definition of policies. The Institute of Hydrology, Meteorology and Environmental Studies has a working group on climate change and is responsible for the elaboration of the National Communications on Climate Change for the UNFCC and the development of national climate change scenarios. Additionally, it is the national entity designated for the implementation of the two national pilots in adaptation. Environmental and Sustainable Development Group: mandated with designing the national policy on climate change that defines responsibilities, objectives, goals, indicators, timeframe, budget and institutional arrangements.	The institutions in charge lack the sufficient capacity to coordinate and support all the adaptation and mitigation initiatives being developed in the country. There is a need to strengthen national capacities to: 1) manage climate change actions, 2) provide technical support to planning and implementation, 3) improve technological infrastructure to capture and analyse climate information. There is no national policy on climate change, despite work that has being doing in this direction since 2007. Thus, the institutional arrangements for coordination and implementation of both mitigation and adaptation measures are not clear, and investment and research priorities have not been established. More effort is needed to include climate change considerations in other sectors. Local planning mechanisms such as the Environmental Corporations (in charge of implementing all environmental actions at regional level), Regional and Local Risk Management Committees, Municipalities, Governorates, etc. should consider climate change
12.	Croatia	Croatian	CEA: Responsible for data gathering for climate	impacts and opportunities. To address both vulnerability and
12.	Jioana	Environment Agency (CEA);	change, environmental data, participates in numerous efforts.	mitigation effectively, there is a need to improve coordination among the

		Croatian Forests Ltd.; Croatian Central Office for Development Strategy and Coordination of EU Funds (CODEF); Environmental Protection and Energy Efficiency Fund (EPEEF); Croatian Ministry of Economy, Labour and Entrepreneurship (MELE); Croatian Ministry of Sea, Transport, and Infrastructure (MSTI); Ministry of Environmental Protection, Physical Planning and Construction (MEPPPC)	Croatian Forests Ltd.: Forest management, including reforestation plans. CODEF: Responsible for distributing EC funds and development strategy for Croatia/ accession to the EU. EPEEF: Promotes renewable energy sources, energy efficiency, and emissions reduction schemes through funding and partnership. MELE: Promotes energy efficiency in government owned businesses, buildings, feed in tariff system for renewable energy. MSTI: Analyzing data for the transport sector to introduce programmes for emissions reduction. MEPPPC: Focal point for climate change in Croatia, deals with the legislative framework.	different actors involved. A high–level, inter-ministerial committee on climate change should be established to facilitate discussions within the Government and then collaborate with important stakeholders, such as businesses, civil society and the general public. There is a need for high-level support to integrate climate issues into decision-making.
13.	DPR Korea	National Coordinating Committee for Environment The committee is comprised of the following state agencies: Ministry of Land and Environment Protection (MoLEP); State Commission on Science and Technology;	National Coordinating Committee for Environment: designated national entity to coordinate climate change related activities. MoLEP: responsible for regulating and coordinating overall in-country climate change related activities; lead agency for initiation, development and implementation of CDM projects in land use, land use change and forestry and on REDD. State Commission on Science and Technology: mandated with research, development and transfer of technologies in the field of mitigation and	The government of DPR Korea has established institutional arrangement to address the implementation of UNFCCC and Kyoto Protocol. However, relative weak institutional capacity is a major challenge. DPRK would also like to see more options being explored for climate change mitigation and country contexts should be taken into account. There is also need for more interaction, knowledge and experience

		National Meteorological and Hydrologic Administration; Ministry of Electric Power Industry; Ministry of Coal Industry; Ministry of Chemical Industry; Ministry of City Management; Ministry of Metal Industry; Ministry of Agriculture; State Academy of Science	adaptation to climate change. National Meteorological and Hydrologic Administration: responsible to observe and forecast the country's climate change dynamics through regular meteorological and hydrologic observations. Other government organizations, including Ministry of Electric Power Industry, are mandated with their sector specific and respective mitigation activities for climate change through the pursuance of energy efficiency planning and development; development of renewable and alternative energy sources including hydro-power development among others.	sharing and collaboration with relevant international agencies. This is crucial especially for development of national CDM projects and participation in subregional climate change initiatives. Several international protocols and resolutions have been adopted in regard to climate change mitigation. However, effective implementation of these could only be enhanced if the requisite human and institutional capacities are built at national and regional levels.
14.	Costa Rica	Ministry of Environment, Energy and Telecommunications (MINAET) MINAET is comprised of the following: National Fund for Forestry Financing (FONAFIFO); Costa Rican Office of Joint Implementation (OCIC); National Meteorological Institute (IMN)	MINAET: leads the national initiatives on climate change, through the National Board on Climate Change (DNCC). It is responsible for defining the action of this Ministry and related sectors in the elaboration, development, evaluation and control of policies related to climate change. FONAFIFO: focal point for the UN-REDD Programme; also responsible for the development of the Payment for Ecosystem Service (PES) schemes. OCIC: responsible for the elaboration of national goals and targets on reducing greenhouse gas emissions; focal point for the UNFCCC; national designated authority for the CDM - representing the Ministry of Environment. IMN: scientific body coordinating all meteorological activities. It documents, studies and analyzes all weather-related information that is necessary for the elaboration of research in agrometeorology, climatology, climate variation, atmospheric pollution, interaction ocean-atmosphere, global warming, and climate change.	There is growing concern among the scientific community assessing the present and emerging impacts of climate change in Costa Rica, that there are not enough adaptation measures being taken. Although Costa Rica is a developing economy that does not generate a large amount of GHG emissions, there is greater emphasis on the mitigation agenda. Meanwhile, studies carried out by IMN have already identified the high level of vulnerability in the coasts, especially in the Pacific coast which is densely populated; and the northern area, where most of the agricultural and livestock production of the country takes place. Although the National Commission for Disaster Risk Prevention and Emergencies (CNE) has not been specifically appointed to execute adaptation measures, this governmental body has executed

				some actions for risk prevention that are key to plan processes and actions that might be necessary in the future.
15.	Mexico	Climate Change Inter- Ministerial Commission (CICC) CICC has representation from the following federal ministries: Ministry of Environment and Natural Resources (SEMARNAT) - includes the National Commission for Natural Protected Areas, the National Forest Commission, the National Water Commission and the National Institute of Ecology; Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food; Ministry of Health; Ministry of Communications and Transportation; Ministry of Treasury and Public Credit; Ministry of Energy; Ministry of Foreign Affairs;	CICC: mandate to coordinate the formulation and implementation of federal national strategies on mitigation of GHG emissions and adaptation to climate change; National Designated Authority for the UNFCCC; oversees CDM's projects and grants national approval. CICC is composed of five working groups: Mitigation, Adaptation, REDD, International Policies and Implementation of the Special Programme for Climate Change; a Climate Change Consulting Board (C4); and a working table focused on Private Sector cooperation and regulation processes. Each ministry in the CICC operates according to its sectoral responsibilities and its relationship with climate change impacts. Representation of each ministry within the CICC is at a Secretary or Under-Secretary level, while the Working Groups operate at a technical level. Working Groups are integrated by all the ministries, except for the Committee for Emissions Reduction and GHG Sequestration Projects (COMEGEI) in which the Ministry of Foreign Affairs (SRE) does not participate. Nevertheless the SRE, through its General Direction for Global Issues, coordinates the Working Group for International Negotiations. The Directorate for Climate Change, with the National Forest Commission, is in charge of leading the formulation of the REDD strategy and with the National Institute of Ecology (INE) the elaboration of the adaptation strategy. INE is also in charge of promoting and technically advising the elaboration of Climate Change State Programs.	that might be necessary in the future. The CICC is able to engage all pertinent sectors in a viable institutional framework towards a common climate change policy agenda and the implementation of the Special Climate Change Programme (PECC). It allows for institutional coordination and mainstreaming of climate change concerns and policy through the sector-oriented government structure. The Working Groups allow technical experts to create coordination and communication channels regarding specific climate change issues. Although the CICC and its Working Groups still have to tune operational aspects and increase technical capacities among the different representatives of the Ministries, this arrangement creates a necessary work space to globally and integrally mainstream climate change issues into national policy. One of the challenges of this arrangement, however, is that the PECC establishes the mobilization of resources and compromises only at the federal level and in the short term (until 2012). This challenge is being gradually addressed by the Federal Government's support to the elaboration of the Climate Change Programs at State level, although methodologies still need to be aligned to guarantee coherence and allow for
		Ministry of Social Development; Ministry of Internal Affairs		more accurate measuring and monitoring of results. However, even if the PECC suggests an integrated approach, for example, it does not

				effectively engage the private sector. In terms of implementation efficiency, it does not foresee the overlap between the annual budget allocation and the targets, therefore it is difficult to perform a cost-benefit analysis to prioritize adaptation measures.
16.	Gambia	Ministry of Forestry and the Environment (MOFEN); Ministry of Fisheries, Water Resources and National Assembly Matters; National Environment Agency (NEA); Ministry of Economic Planning and Industrial Development (MEPID); National Disaster Management Agency (NDMA) Other arrangements: Forestry Department; Department of Parks & Wildlife Management; The Gambia Parliamentary select committee on the environment including climate change; Department of Livestock Services; National Climate Change	MOFEN: responsible for spearheading and coordinating Climate Change issues at the policy level. This is done through NEA - a semi-autonomous Agency within the environment sector. NEA: government's environmental watchdog as well as the national GEF operational focal point. Ministry of Fisheries, water resources and National assembly Matters: houses national focal points for UNFCCC and CDM. Ministry of Energy: responsible for energy efficiency and conservation. MEPID: responsible for aid coordination in the country; coordinates the development and implementation of the PRSP. NDMA: handles Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) matters. Forestry Department: REDD issues. Department of Parks & Wildlife Management: mandate to manage all Protected Areas (PAs), wetlands, etc. Department of Livestock Services: responsible for rangelands.	The institutions face serious capacity and resource constraints typical to many of the developing countries and governments. This is further complicated by the unprecedented high staff attrition rate. Discussions have been initiated at the highest level of government (Office of the President) with relevant development partners to establish a National Climate Change Secretariat (NCCS). This is premised on the fact that the Gambia has been reacting to climate-sensitive issues with ad-hoc and uncoordinated initiatives due primarily to lack of or inadequate framework to coordinate climate change issues in the country. The climate change Secretariat will put in place proactive measures and integrate all facets of climate change and responses into national development activities as they relate to the priority sectors of the national economy.

		Committee;		
		National Technical Committee on DRR and Climate Change Adaptation		
17.	Timor-Leste	No national institution fully dedicated to helping in the implementation of climate change related interventions. Other arrangements: National Directorate for International Environment Affairs (NDIEA), Ministry of Economy and Development. Its mandate is to coordinate and address all issues relating to the Multi-lateral Environmental Agreements. Ministry for Agriculture and Fisheries; State Secretariat for Energy Policy, Office of the Prime Minister;	NDIEA: mandate is to coordinate and address all issues relating to the Multi-lateral Environmental Agreements. Ministry for Agriculture and Fisheries: plays a very minor role in the implementation of climate change related interventions. State Secretariat for Energy Policy, Office of the Prime Minister: implement activities aiming at increasing use of renewable energy sources.	Current institutional arrangements around Climate Change are weak as NDIEA is limited to the mandate established in the government's Organic Law, where the levels of power and authority are presented in a hierarchical structure and do not appear to encourage horizontal integration. NDIEA is a project focused institution, where its coordination is not carried out in a strategic manner with a mid-to-long term vision. It is both under staffed and funded, and its staff members often do not have relevant qualifications. The Timor-Leste UNFCCC focal point, the national expert on Climate Change, is not fully dedicated to working with the NDIEA. Stronger collaboration with NDIEA could bring greater leverage to the entity through the focal point's recognized technical capacity. NDIEA has limited funding constraining efforts to go beyond Enabling Activities or focusing on Capacity Development activities. The NAPA process has supported and strengthened the work of NDIEA, producing information on Climate Change and promoting discussion across different sectors of government and other stakeholders. With NDIEA

18.	Suriname	Ministry of Labour,	ATM is responsible for the development of overall	taking the lead on the NAPA discussions with UNDP, they are now recognized by the different stakeholders in the working groups as the leading body for Climate Change in Timor-Leste. However, strengthening this coordinating role rather than becoming a dedicated Climate Change institution is the best strategy to avoid undoing steps taken over two decades towards Environmental Mainstreaming. While current arrangements in place
		Technological Development and Environment (ATM); Ministry of Physical Planning, Land and Forest Management (ROGB)	environmental policy and the coordination and monitoring of all activities regarding environmental policy. The Government has established a National Climate Change Steering Committee under ATM that is responsible for overall guidance, monitoring and evaluation of climate change related programmes and projects. The Committee also provides technical oversight and guidance to the Second National Communication to the UNFCCC project. It comprises of representatives from: The Environment Division , ATM; The National Institute for Environment and Development; The Meteorological Department of the Ministry of Public Works; The Ministry of Agriculture, Animal Husbandry and Fisheries; The Ministry of Trade and Industry; The Geological Mining Service , Ministry of Natural Resources; University of Suriname; Non-governmental representation: private sector and civil society. UNDP and Embassy of the Netherlands participate as observers. ROGB is responsible for the REDD process and has established a team comprised of members from different ministries and NGOs.	indicate a growing acknowledgement by the government of the possible impact of Climate Change, several gaps have been identified in meeting the convention's requirements based on the UNFCCC thematic assessment, which is part of the National Capacity Self Assessment: 1)At the policy making level: policy makers, due to limited resources and facilities are lacking the necessary knowledge, tools and experience; 2) Implementing institutions: due to limited facilities and financial resources, implementing agencies are missing operational power; 3) Data networks: lack technicians, skilled fieldworkers and appropriate instruments and techniques for adequate data collection; 4) Information networks: exchange of information and database access show large deficiencies; this knowledge base needs to be strengthened; 5) Dialogue networks: these hardly exist, interaction between different portals needs to be strengthened and international knowledge sharing and cooperation
				need to be promoted. The finalization of the National Climate

				Change Action Plan and Green Economic Strategy as a basis for national development will provide impetus for the required institutional reform and capacity building that is essential to have a more effective institutional arrangement.
19.	Central African Republic	No institution fully dedicated to the implementation of activities aimed at combating climate change (adaptation and the mitigation including REDD and finance). Other arrangements: Ministry of Environment	Ministry of Environment is in charge of the implementation of all activities related to climate change (adaptation, mitigation, REDD and finance). This national coordination body is driven by a National Steering Committee in which all stakeholders are represented, including Government, NGOs, private sector and civil society. Implementation of climate change activities nationally is supported by the following specific small teams in the National Steering Committee: 1) monitoring the implementation of urgent climate change adaptation measures; 2) monitoring the implementation of the CC projects, including the CDM and mitigation measures; 3) REDD and REDD+ mechanisms; 4) follow-up actions aimed the mobilization of resources (finance) for the implementation of CC activities.	The teams within the National Steering Committee do not work very effectively and should be strengthened in terms of individual and institutional capacity. Additional funds are needed for the restructuring and/or capacity building of the existing national structures and, above all, to put in place a strong institution in charge of the climate change program. It is suggested that the Government implement a more substantial structure, a real "Climate Team", which includes all stakeholders and which would be entrusted to relay information and make proposals to the Ministry of Environment, the principal authority for implementing CC activities.
20.	Thailand	Office of Natural Resources and Environmental Policy and Planning (ONEP), Ministry of Natural Resources and Environment; Thailand Greenhouse-Gas Management Organization (TGO), Ministry of Natural Resources and Environment; Climate Change Management Centre, National Electronics and Computer Technology Center/ National Science and	ONEP largely coordinates implementation of climate change related interventions. ONEP's Office of Climate Change Coordination is also the national focal point of UNFCCC. Most of the climate change related interventions are allocated within the relevant ministries/agencies i.e. Department of National Parks, Wildlife and Plant Conservation for REDD; Ministry of Agriculture and ONEP (for Adaptation); Ministry of Industry and Ministry of Energy (for Mitigation). TGO has the specific responsibility in promoting GHG emission reduction. This public organization, under the Ministry of Natural Resources and Environment, also serves as the Designated National Authority of CDM. TGO's mandates	The implementation of climate change interventions remains piece-meal, due to constraints on inter-agencies coordination. The NCCC only meets occasionally or on ad-hoc basis and there is yet to be a clear implementation mechanism. The Office of Climate Change Coordination lacks human and financial resources to cope with climate change challenges. It also needs a systematic and long-term institutional/ individual capacity building. To address the gap on inter-agencies coordination for Climate Change, in

		Technology Development Agency; National Climate Change Committee (NCCC)	include promoting low carbon activities; investment and marketing on GHG emission reductions; establishing GHG information centre; reviewing CDM projects for approval; providing capacity development and outreach for CDM stakeholders and promote low carbon activities. The Ministry of Science and Technology established the Climate Change Management Centre under the National Electronics and Computer Technology Center / National Science and Technology Development Agency. The unit's mission is to collect, synthesize and disseminate knowledge on climate change to support strategic planning of government agencies, private sector as well as local community, with the aim to strengthen coping capacity to climate risk. The NCCC, chaired by the Prime Minister, is responsible for: setting up national climate change strategies and providing strategies, guidelines, and mechanism for international cooperation on climate change. Committee members comprise: Minister of Natural Resources and Environment, Minister of Energy, Minister of Industry, Minister of Agriculture and Agricultural Cooperatives, Minister of Finance, Minister of Science and Technology, Minister of Transport, Minister of Public Health, and academia and CSO representatives. ONEP's Office of National Climate Change Coordination serves as the office of the secretariat of this committee.	September 2009, the Thai government designated Climate Change Coordination Officers in all 19 ministries as well as 11 related agencies, including the Office of National Economic and Social Development Board – which is responsible for overall national development.
21.	Cape Verde	Ministry of Environment Rural Development and Marine Resources (MADRRM)	MADRRM coordinates and implements the policies on environment, agriculture and food security, soil and water conservation, forestry, livestock, meteorology and geophysics, marine resources. It is organized into specialized branches that provide expertise for the implementation of climate change projects and activities: 1) General Directorate of Environment is responsible for conception, coordination, monitoring, implementation and evaluation of specific policies defined by the Government for	The current institutional arrangements work, if considering the achievements. However, overall capacity building on Climate Change could enhance their capabilities to take these issues to key sectors, for example tourism, infrastructure, land planning, transportation, etc. The screening of Cape Verde UN country program and projects and the Poverty Reduction Strategic Paper

natural resources and environmental management. It is the GEF operational focal point and implements GEF/UNDP funded projects on biodiversity and Climate Change Adaptation for Coastal Zones;

- 2) National Institute for Meteorology and Geophysics is the UNFCCC focal point and is responsible for the elaboration of the 2nd national communication to UNFCCC. It is also responsible for all meteorology, climatology and geophysics data collection.
- 3) National Council on the Environment is an advisory body that ensures the articulation of policies and cooperation between public and private organizations directly or indirectly involved with the environment:
- 4) General Direction of Planning and Budget is in charge of the formulation, monitoring and evaluation of policies for the environment sectors, agriculture forestry, livestock, fisheries and nutrition.
- 5) General Direction for Agriculture, Forestry and Animal husbandry is responsible for promoting and implementing environment laws and regulations in rural areas:
- 6) National Institute for Water Resource Management is responsible for the management of surface and groundwater of the archipelago.
- 7) National Institute for Agrarian Research and Development is responsible for research, experimentation and development in agricultural science and agricultural technologies and natural resources and environment.
- 8) National Institute for Fisheries Development leads research on fisheries, biology and ecology and formulates the recommendations for the

(PRSP-II) showed that climate change is not yet integrated into the strategic documents. This exercise showed key entry points as well as risks and adaptation opportunities. The role of UN agencies can be critical to ensure that climate change and environmental sustainability is not only mainstreamed in the next CCA and UNDAF but also in the next PRSP.

Climate change adaptation, mitigation and risks screening needs to be further disseminated to all stakeholders (government and NGO's) to ensure the same level of awareness and understanding during the planning process. The department in charge of the entire government planning process and the compilation of the strategic documents lacks human resources and expertise to facilitate the cross sectoral integration of climate change risks and opportunities into development planning.

Considering the uncertainties associated with the regional climate models, the country is taking initial steps in modeling climate scenario that best predicts the future climate of these small islands. The major challenges are associated with the lack of a reliable and modern system of data collection and a robust research program.

			exploitation of fisheries resources on a sustainable basis.	
22.	Nicaragua	Ministry of Environment and Natural Resources (MARENA); Other institutions working on climate change: Nicaraguan Institute of Territorial Studies (INETER); National System of Disaster Warning and Prevention (SINAPRED); Ministry of Agriculture and Forestry (MAGFOR); Ministry of Energy and Mining (MEM)	MARENA is the guiding institution on environmental issues in Nicaragua and is in charge of promoting and implementing climate change mitigation and adaptation activities in the country. A General Directorate of Climate Change has been established within MARENA with the aim to promote activities and measures related to climate change adaptation, mitigation and environmental disasters. The General Directorate also represents MARENA as a UNFCC focal point for participation in the international negotiations on climate change. It is divided into three departments with specific focus: Department of Environmental Emergencies, National Office of Clean Development and Department of Climate Change. INETER is in charge of collecting information on climate variability. SINAPRED is in charge of providing assistance during emergencies caused by extreme climate events. MAGFOR is in charge of addressing climate change impacts in agriculture, particularly in cases of extreme events such as draughts and floods. MEM specifically works in mitigation and identifying	A principal weakness of the General Directorate of Climate Change is that it lacks the operational budget as all posts are funded through the international cooperation programs. Additionally, the General Directorate does not have the strength or legal mandate for providing inter-institutional coordination, which could foster mainstreaming of climate change into other sectors. It could be more effective to create a dedicated body with the mainstreaming mandate. While there are other institutions working on climate change, the coordination with MARENA is weak.
23.	Bosnia and	There are neither State nor	renewable and alternative energy sources. In FBiH, implementation of environmental policy	While climate change is mentioned in
	Herzegovina	Entity level institutions fully dedicated to helping in the implementation of climate change related interventions. Other arrangements:	falls within the jurisdiction of the Ministry of the Environment and Tourism. In the Republic of Srpska (RS) this falls within the jurisdiction of the Ministry of Physical Planning, Civil Engineering and Ecology.	some sectoral strategies, there is a lack of concrete proposals for action (mitigation or adaptation). As a Non Annex I country, Bosnia and Herzegovina is eligible to benefit from CDM projects. However, a Designated National Authority has not been
		In the Federation of Bosnia and Herzegovina (FBiH) : Ministry of the Environment and Tourism.	The Ministry of Spatial Planning, Construction and Ecology of Republic of Srpska (RS) is the UNFCCC Focal Point for BiH.	established. Recently there has been significant improvement. With technical

		In the Republic of Srpska (RS): Ministry of Physical Planning, Civil Engineering and Ecology Ministry of Spatial Planning, Construction and Ecology of Republic of Srpska (RS)	Although a BiH Climate Change Committee and a Sub-Committee were formed for successful implementation of Bosnia and Herzegovina's obligations under the Convention, these committees are no longer functional. Actions related to climate change are negligible and they are mostly related to preparation of reports for multilateral environmental agreements.	assistance from the UNDP CO and with financial support from GEF, Bosnia and Herzegovina finished preparation of the Initial National Communication to UNFCCC. However, it is only a first step in addressing the challenges represented by climate change and its effects. Three recommendations have emerged from the findings of the report to support continued work in this area: 1) Develop a national climate change mitigation strategy and action plan; 2) Take steps to implement commitments under the South East European Climate Change Framework Action Plan for Adaptation; and 3) Begin preparations for the Second National Communication as soon as possible.
24.	Indonesia	National Development Planning Agency	BAPPENAS is responsible for overall development coordination which includes the management of	National level capacity building and debates on climate change is ongoing,
		(BAPPENAS);	financial/technical assistance from Development	but further attention should be directed
		Ministry of Forestry (MoFor);	Partners. It has established the Indonesia Climate Change Trust Fund "ICCTF."	to local Government institutions to allow them to follow up with the various laws and decrees resulting
		Coordinating Ministry of Economic Affairs;	MoFor has the responsibility to manage the nation's forest. It developed the initial REDD	from the national debate.
		Ministry of Finance (MoF);	strategy and issues REDD regulations.	The issue of climate change adaptation is still confined largely to
		National Council on Climate	MoF is responsible for the design and implementation of payment mechanisms, including	research and information dissemination at the national level.
		Change (DNPI);	sharing of REDD generated revenues.	Line Ministries should be capacitated to deal with the issue in a substantial
		Ministry of Environment (KLH);	Coordinating Ministry of Economic Affairs develops and oversees economic development. It is	manner.
		Meteorological Ministry;	responsible for mainstreaming climate change into general development policies and issuing REDD	The debate on climate change and institutional arrangements is closely
			regulations.	related to the REDD+ debate, largely
		Ministry of Energy;	DNPI provides advise and oversees	involving the role of the Ministry of Forestry in relation to other institutions
		Ministry of Industry;	implementation of both climate change adaptation	and also the establishment of new

	Ministry of Agriculture; Special agencies set up directly under the President, such as the UKP4 (the Presidential Working Unit for Supervision and Management of Development).	and mitigation policies. It is the UNFCCC focal point and comprises six working groups to deal with issues of adaptation, mitigation, technology transfer, finance, forestry, and post-Kyoto mechanisms. DNPI reports its activity directly to the President. KLH is responsible for developing and overseeing national policies on environmental management issues. The UKP4 works on developing the necessary	mechanisms.
		arrangements for implementing the USD 1 billion from Norway to deal with REDD+.	
Pacific Island Countries (Fiji, Vanuatu, Tonga and Palau)	Fiji: Ministry of Environment; National Disaster Management Office; NGOs; Palau: Office of Environmental Response and Coordination (OERC); Palau Energy Office; NGOs; Vanuatu: Department of Environment; Department of Meteorology; Department of Energy; Tonga: Ministry for Environment and Climate Change; National Emergency Management Office; Marshall Islands: Office of Environmental Planning and Programme Coordination (OEPPC); Ministry of Resources and Development (Renewable Energy & Mitigation projects)	Fiji: Ministry of Environment - the Sustainable Development Strategy recognizes climate change as an environment issue; however, the Ministry of Environment focuses on environment impact assessment, waste management, pollution control, conservation environmental information and education; Tonga: Ministry of Environment and Climate Change - coordinating agency for climate change and leadership in preparation and implementation of processes jointly with other agencies; Vanuatu: Department of Meteorology - mandated with overall responsibility for the Government's climate change activities; Department of Environment - mandate to conduct community awareness of the need to protect the environment including reduction of risks from natural hazards; and Develop and implement risk reduction programs in communities. Department of Energy - mandate to extend coverage of rural electrification by the most cost efficient means. Palau: OERC - mandated to ensure compliance with Palau's obligations under the UN Conventions on climate change, biodiversity, ozone and dessertification, as well as to facilitate coordinated approach to Palau's national level response to	Tonga has assessed its vulnerabilities and identified priorities and gaps, and has decided to prepare a joint plan for Climate Change Adaptation (CCA) and Disaster Risk Management (DRM). Integration of DRM and CCA planning and implementation in Tonga has started to cascade into revision and strengthening of institutional arrangements.

			environmental degradation, protection and rehabilitation of natural habitat.	
26.	Papua New Guinea	Office of Climate Change and Development (OCCD); Department of National Planning and Monitoring (DNPM); Department of Agriculture and Livestock (DAL); National Disaster Center (NDC); PNG National Forestry Authority	OCCD is under the Prime Minister's Department. The main objective of OCCD is to act as a coordination mechanism at the national level for the research, analysis and development of policy and legislative framework for the management of climate change adaptation and mitigation with the Government's National Strategy on Climate Compatible Development. OCCD is overseen by a National Climate Change Committee (NCCC) that comprises key central agencies including Departments of National Planning and Monitoring, Treasury, Environment and Conservation, Forest Authority, Agriculture and Livestock and National Agricultural Research Institute. Between the NCCC and PM are two entities that provide advisory services to the PM's office and they include an Advisory Board that consist of international and national experts and a national Ministerial Committee chaired by the Prime Minister. DNPM is the central agency that oversees all other government agencies and assists agencies in developing budget applications for program implementation. Recently, DNPM indicated that all international climate change assistance should be coordinated through their Aid Coordination Division. DAL specifically implements climate change adaptation initiatives of relevance to the agricultural sector. NDC coordinates natural disaster preparedness and emergency responses through the Provincial Disaster Centers and other stakeholders in all affected areas in the country. PNG National Forestry Authority is focused on climate change mitigation through REDD and has recently developed a Forestry and Climate Change Framework.	There are many challenges with regard to coordination in responding to planning, designing and monitoring CC initiatives amongst key government agencies. The capacity particularly in the formal government structure is inadequate when it comes to planning strategic climate change adaptation and mitigation initiatives. In the case of implementation, there are conflicting institutional mandates. There is also the issue of limited technical expertise to provide sound strategic advise to relevant authorities for decision making. There is disconnect between national, provincial and district level agencies due to lack of effective communication to disseminate information. Finally, there is the absence of a climate change policy and legal framework.

Sri Lanka Ministry of Environment: **Designated National** Authority for CDM; Climate Change Secretariat; National Ozone Unit for Montreal Protocol Programmes; Forest Department; Central Environment Authority: Two climate change study centers Other Key Government Agencies: **Department of Coast** Conservation: Department of Agriculture: Department of Meteorology; Department of Irrigation; Mahaweli Authority; National Building Research Organization; Institute of Policy Studies; Universities: Rice Research Development Institute:

> Non-Governmental Entities: Munasinghe Institute of Development (MIND); Green Movement of Sri Lanka; Nature Forum, etc.

Sustainable Energy Authority

Climate Change Secretariat, within the Ministry of Environment: overall coordination and dedicated focal point for climate change work.

National Ozone Unit, within the Ministry of Environment: implementation of the Montreal Protocol to protect the ozone layer.

Forest Department, within the Ministry of Environment: UNREDD.

Central Environment Authority, within the Ministry of Environment: comprises a division for air emission regulation under enforcement and an Air Resources Management Center- a data clearing and coordinating body that facilitates development of emission standards, mobile emission testing and fuel standards.

Department of Coast Conservation: coastal hazard profile development (UNDP supported) that includes climate change (sea level rise, salinity and coastal erosion).

Department of Agriculture: drought hazard profile (UNDP supported) at national scale that also includes climate change and adaptation measures. DoA also deals with economics of climate change on agriculture and potential changes to crop varieties, etc.

Department of Meteorology: Under the Ministry of Disaster Management – involved in downscaling climate change predictions and in charge of rainfall and weather data. Also responsible for developing the Cyclone Hazard Profile (UNDP funded) for the country, which will have climate components.

Department of Irrigation: in charge of all major rivers and collecting of flow data in major rivers. Entrusted with developing the flood profile for the country (UNDP funded) and closely works with JICA in developing a number of river flow

Although the country's climate change agenda is moving along well, gaps exist in coordination to reduce duplication (both among donors as well as Govt. entities); characterization of the climate change impact (downscaling, economics and social impacts); prioritization of initiatives suitable to Sri Lanka; and professional skills available to support increasing demand. Capacity issues in the Ministry of Environment and National Planning Department, among others. are the main bottlenecks for propagation of Climate Change projects. Having been set up recently, the Climate Change Secretariat is yet to be recognized as an honest and pro-active entity in the area by other "established" agencies. In addition, the competition for potential funding associated with climate change affects the sincere collaborations between agencies.

diversions type projects, also issues early warning for floods.

Mahaweli Authority: in charge of a number of major irrigation schemes. Works closely with Colombia University Climate group to develop weather forecasts, etc. Has the ability to introduce adaptation measures to farmer communities.

National Building Research Organization (NBRO): under the Ministry of Disaster Management, has a division named "Landslide Studies Division" that has mapped the landslide prone areas in the country. Is in a position to include climate change in landslide hazards. NBRO is also entrusted to develop the Landslide Hazard Profile (UNDP supported).

Institute of Policy Studies: established to evaluate government policies and has done a number of studies related to green accounting and climate change.

Universities: number of Universities working on climate change mitigation and adaptation. Eg. a) University of Moratuwa; b) University of Sri Jayawardenapura; c) University of Ruhuna; d) University of Peradeniya; e) Open University of Sri Lanka; f) Jaffna University; g) Eastern University and h) Wayamba University. These universities are government-affiliated.

Rice Research Development Institute: successfully developed a number of paddy varieties and management practices to meet salinity and flooding conditions in paddy cultivation. Both conditions are expected to increase with climate change therefore, the interventions can be considered as pro-active adaptation initiatives (supported by UNDP).

Sustainable Energy Authority: supports policy studies on climate change adaptation and promotion of renewable energy. Implements a subsidy scheme and a tariff system to promote

			renewable energy.	
28.	Romania	Ministry of Environment and Forests:	The Ministry of Environment and Forests: central authority empowered to carry out legal activities	Positive aspects:
		Torests,	related to the implementation, coordination,	The legislative and institutional
		National Agency for	monitoring and evaluation of the legislative	framework for the implementation of
		Environment Protection;	measures transposing the UNFCCC /Kyoto	the climate change related initiatives
			Protocol and the climate change related European	are in place, and the institutional
		Ministry of Economy,	Directives. The Ministry is designated as national	mandates at national and local level
		Commerce and Business	focal point for UNFCCC and coordinates and	are enabling the implementation of a
		Environment;	develops the National Climate Change Strategy	wide range of activities and measures;
			and Action Plan. It draws upon a number of	
		Ministry of Agriculture and	consultative bodies: a) Interministerial Committee	The relevant authorities at regional
		Rural Development;	for Sustainable Development; b) Ministerial	and local level, are already
		N	Committee for Emergency Situation; c) Technical-	implementing a series of interventions
		National Commission for	Economic Commission; d) National Commission for	with considerable impact towards
		Climate Change;	Climate Change.	adaptation to climate change in particular;
		Local municipalities;	The National Agency for Environment Protection:	_ , _ , _ , _ ,
		Oth an Institutions	under the Ministry of Environment and Forest, it is	There are several successful
		Other Institutions	the main authority responsible for the implementation and enforcement of policies and	examples of synergistic implementation of various initiatives in
			legislation in environment protection, at national	order to capitalize on existing financial
			level and at local level through its local regional and	and human resources;
			county level agencies.	and naman recourses,
				Most of the institutions at national and
			The Ministry of Economy, Commerce and Business	local level have relevant databases,
			Environment: has important prerogatives related to	institutional memory and adequate
			development and implementation of policies in the	experience in project development;
			fields of energy and industry and a key factor in the	
			implementation of the relevant European Directive	There are adequate conditions for a
			2003/87/CE.	better engagement of academia and
			The Ministry of Agriculture and Rural Development:	other civil society representatives in various climate change initiatives,
			with clear prerogatives related to agriculture,	coordinated by the competent
			desertification, irrigations and land use and rural	authorities.
			development; its most important consultative body	
			is the National Committee for Combating Drought,	Negative aspects:
			Land Degradation and Desertification entailing 45	
			members representing line ministries, national and	The legal mandates and jurisdictions
			regional agencies and academia, addressing	of the competent authorities are
			desertification and drought also in the context of	sometimes overlapping;
			climate change.	Door awareness of MEAs and their
	<u> </u>			Poor awareness of MEAs and their

			The National Commission for Climate Change: plays an important role in integrating climate change as a cross-cutting inter-sectoral issue. It is an inter-ministerial body functioning in coordination with the Inter-ministerial Committee for Agriculture, Rural development and Environment and its activity is related to the mandate of the Ministry of Environment and Forests. Local municipalities: are integrating climate change adaptation measures into urban planning, development strategies, land use, water use, energy transport, infrastructure and emergency situations and Joint Implementation projects development. Other Institutions: a) National Institute for Research and Development in Bucharest (ICIM); b) National Meteorology Administration; c) The Institute for Research and Forestry. At national level, the line ministries, among which the Ministry of Environment and Forests as the main competent authority for climate change affairs, have different mandates and report to the Prime Minister. At local and regional level, they have decentralized offices.	provisions, therefore the personnel of the relevant authorities, particularly at local level, is rarely aware of the impact of a climate change related initiative taken at local/regional level, in terms of responsiveness to either UNFCCC or other international environmental convention; The national vision or rather the lack of it, the weak planning and the current local and regional institutional arrangements is not favoring a proper horizontal and vertical coordination among various institutions, hence a poor harmonization among various initiatives and deficient bottom-up environmental reporting; There is a serious need for targeted and coordinated capacity building programmes that could lead to increased awareness of the importance of coordination among similar initiatives and institutions; The economic crisis and the very recent austerity measures taken by the Romanian government, such as salaries cuts and restructuring of 25% of the current public servants posts, has led to discontinuing of the strategies and initiatives undertaken by the competent authorities; the high staff turnover is also affecting institutional memory at national and local level.
29.	Rwanda	Rwanda Environment Management Authority (REMA) is composed of: Climate Change and International Obligations	Climate Change and International Obligations Department: Developing national capacity in Clean Development Mechanisms; Operationalizing the Secretariat of the Designated National Authority under the Kyoto Protocol's CDM; Providing technical advice with regard to mitigation and	No comments provided

		Department; Environmental Regulation and Pollution Control Department; Research, Environmental Planning and Development Department; Environmental Education and Mainstreaming Department	adaptation measures on climate change; Providing technical input in negotiating and implementing environmental regional and international conventions, protocols and treaties; Providing technical advice related to Global Environmental Facility endorsement of projects. Environmental Regulation and Pollution Control Department: Formulation and setting up of environmental regulations and standards; Environmental Inspections and Environmental Audits; Technical advice for the prevention of environmental accidents and for environmental remediation; Prevention and control of pollutants and other hazardous substances. Research, Environmental Planning and Development Department: Research to facilitate integration of environmental considerations into development policies, plans, programmes and projects; Research to address environmental degradation for the purpose of rehabilitation; Coordinating the preparation of the State of Environment Report; Coordination and management of environmental information systems. Environmental Education and Mainstreaming Department: Mainstreaming environmental issues into formal and informal education systems; Support central and decentralized institutions, communities and civil society to address environmental issues; Establishment and management of the environmental documentation centre; Undertaking outreach programmes.	
30.	Angola	Ministry of Environment National Committee on Climate Change is being established. Other institutions:	Ministry of Environment: responsible for elaborating and coordinating national programmes on climate change and ozone layer depletion, aimed at controlling and reducing gas emissions. The Ministry also has the mandate to promote sustainable development, to manage the environment, nature conservation, international conventions and agreements, and waste	Angola has approved its National Strategy to Implement the UNFCCC and Kyoto Protocol in 2007. The new government has been settled recently, therefore, assessment on how the arrangements are working would be premature. It is however recognized that Climate Change needs to be

		Ministry of Agriculture and Rural Development; Waters and Energy; Petroleum; Territorial Administration; Superior Education; Science and Technology; Transportation; Planning; Finance; Telecommunications and Information Technology; Trade; and Ministry of Geology, Mine and Industry.	management. The Ministry of Waters and Energy is responsible for renewable energy.	mainstreamed into the development agenda and poverty alleviation.
31.	Dominican Republic	National Council for Climate Change and Clean Development Mechanism (CNCCMDL)	CNCCMDL is the national institution solely dedicated to address the issues of climate change and clean development mechanism in the country. It is also the focal point for climate change negotiations within the United Nations Framework Convention on Climate Change. Among other tasks it is mandated to formulate, design and execute the public policies necessary for the prevention and mitigation of emissions of greenhouse gases (GHG), the adaptation to adverse effects of Climate Change, and promote the development of programs, projects and strategies of climate action related to the compliance with the commitments of the Dominican Republic in the UNFCCC and the instruments derived from it, particularly the Kyoto Protocol. CNCCMDL has been established directly under the authority of the President of the Dominican Republic.	The establishment of the CNCCMDL directly under the authority of the President of the country clearly shows the importance that the government is giving to climate change and their commitment to address the issues associated with it.
32.	Niger	National Council for Environment and Sustainable Development (CNEDD)	CNEDD focuses on the implementation of the activities on climate change and serves as the UNFCCC national focal point. CNEED hosts a National Technical Commission dealing specifically with climate change and climate variability (CNTCCV). This is a task force in which all stakeholders are represented, including all ministries working with environment issues and NGO's. CNEDD works in close collaboration with the Ministry of Water and Environment (MEE/LCD).	UNDP Niger, with support from GEF and other partners, is helping the country to address climate change through several projects. However, the UNDP country office needs more resources to support the country effort to address climate change.

33.	Haiti	The Ministry of the Environment (MDE); Designated National Authority of Haiti (ANDH); Committee for Territorial Planning (CIAT)	MDE is responsible for executive coordination of the activities related to development and implementation of national environmental policy and is leading the policy formulation on climate change. The UNFCCC Focal Point reports directly to the Ministry as do the Policy and Technical Focal Points of the GEF. The ANDH is an entity within the MDE. It is responsible for implementing the provisions of the CDM. Inter-ministerial Committee for Territorial Planning (CIAT) was established with the participation of six ministries: the Ministry of Interior and Local Authorities; the Ministry of Economy and Finance; the Ministry of Planning and International Cooperation; the Ministry of Agriculture, Natural Resources and Rural Development; the Ministry of Public Works, Transportation and Communications (MTPTC), and the Ministry of the Environment. CIAT reports to the Prime Minister's Office and is chaired by the Prime Minister. It is responsible for coordinating and harmonizing the policy pursued by the government on planning, protection and management of watersheds, water management, sanitation, urban planning and infrastructure and promoting synergies through informed planning of all governmental and non-governmental interventions in these areas. The Bureau of Mines and Energy (BME) is under the supervision of the Ministry of Public Works, Transportation and Communications (MTPTC). It manages the activities related to the inventory of greenhouse gas emissions.	Because of the low political and technical capacity of the MDE, the current tendency is to coordinate adaptation projects at CIAT. However, the Focal Point of the UNFCCC liaises with CIAT from the MDE. The CIAT has the advantage of being chaired by the Prime Minister, which may facilitate the mainstreaming and help bring the issue of climate change at the highest political level. For example, CIAT has been chosen to coordinate the activities of the Pilot Program for Resilience to Climate Change in Haiti. Discussions are underway with CIAT and MDE for the GEF project currently being formulated called "Strengthening adaptive capacities to address climate change threats to sustainable development strategies for coastal communities in Haiti." The project will be led by CIAT, but implemented by the MDE.
34.	Uruguay	Climate Change Unit (UCC), National Environment Directorate (DINAMA) of the Ministry of Housing, Land Use Planning and Environment (MVOTMA)	UCC has conducted several national exercises to fulfill the country's commitments under the UNFCCC, such as the national communications and climate change plans. It is also the Designated National Authority (DNA) to the Kyoto Protocol. NCCRS is a multi-institutional body representing a	The MVOTMA has been working on climate change for more than a decade now, fulfilling its obligations effectively. However, the issue has been gaining considerable political relevance, due to increased consciousness at high political levels,

		National Climate Change Response System (NCCRS) Other ministries that have policies relevant to climate change: Ministry of Industry, Energy and Mines; Ministry of Agriculture (MGAP)	wide spectrum of ministries and institutions, including Finance, Agriculture, Environment, Energy, etc. The NCCRS has created several technical sectoral groups and designed a National Climate Change Plan In 2009 and is now defining the activities of the plan. MGAP designs policies to address climate risks in the agricultural sector. MVOTMA, through its National Directorate of Water and Sanitation (DINASA), addresses water issues in relation to adaptation to climate change.	the international negotiations and also to a series of drought and floods that the country has suffered, leading to a wider involvement of several ministries such as finance, agriculture, energy, etc. There is a need to consolidate the new institutions such as the National Climate Change Response System and to strengthen national capacities within the ministries and in the Presidency of the Republic. The first steps have been taken. At this time, a new government has taken office, the budget for the following years will be defined in the months to come, and this will be crucial to consolidate the new institutional framework.
35.	Lebanon	Lebanon does not have a dedicated national institution that is implementing climate-related interventions. Other arrangements: Ministry of Environment; Ministry of Energy and Water; Local and International NGOs; Development Agencies;	Ministry of Environment, being the UNFCCC Focal Point as well as the CDM DNA has taken the lead in pushing the climate change agenda at the national level. The Ministry of Energy and Water, through the Lebanese Centre for Energy Conservation, whose mandate includes the management of energy services, has been active in promoting mitigation activities such as demand side management at the individual consumer level and in the commercial sectors, energy efficiency as well as renewable energy. Both Ministries have included climate action in their work programmes for the upcoming 4 years and have successfully pushed these priorities into the Office of the Prime Minister.	A dedicated coordinating unit for climate change is needed to move the implementation of climate change activities at the national level, since policy, technical and institutional-level coordination is needed across the different sectors that contribute to and are impacted by climate change. The creation of such a unit has been proposed and funding is being sought to establish it within the Office of the Prime Minister.
36.	Serbia	Academia There is no national institution fully dedicated to helping in the implementation of climate change related interventions. Other arrangements:	Ministry of Environment and Spatial Planning is coordinating overall climate change activities in Serbia and serves as the UNFCCC focal point. There is a climate change unit operating under the Sector of European Integration, International Cooperation and Project Management within the Ministry. Serbian Agency for Environment Protection, established under the Ministry of	Even though a national Climate Center "Milankovic" is established under the Republic Hydromet Service it is not functional and main activities in the area of climate change are handled by the Ministry of Environment and Spatial Planning and other line ministries. Further strengthening of the

		Climate Change (NPCC), Ministry of Environment and Water	Environment and Water, manages national activities related to climate change. In coordination with the Ministry of Development Planning, it is responsible for mainstreaming climate change issues in all sectors. NPCC is in-charge of preparing the National Communications and the National Adaptation Strategies, and implementing related decisions and recommendations on adaptation as well as mitigation. The NPCC is also responsible for the coordination and implementation of REDD+ initiatives in the country such as UNREDD, FCPF (WB) and others. Until recently the NPCC was participating in the international climate change negotiations. However, this participation is now managed directly by the Ministry of Foreign Affairs in coordination with the Ministry of Environment and Water.	among policy makers of the importance of including climate change considerations into general development plans and poverty alleviation, it has proven difficult for the NPCC to mainstream the issue into other key sectors and ministries due to lack of coordination and resources.
38.	Swaziland	Climate Change Coordination Office, Ministry of Tourism and Environmental Affairs	The Climate Change Coordination Office was recently established and cooperates closely with the National Disaster Management Agency (NDMA) in national coordination of preparedness and response to Climate Change impacts activities. The Office is established under the Ministry of Tourism and Environmental Affairs and the NDMA is under the Deputy Prime Minister's Office. The NDMA has the national mandate for coordinating Disaster Risk Reduction and Disaster Risk Management interventions.	The Climate Change arrangement is relatively new and is yet to be assessed. Since the NDMA is established under a higher office (Deputy Prime Minister's Office), it has the power to drive other sectors to cooperate in various interventions.
39.	El Salvador	No national institution fully dedicated to climate change related interventions. Other arrangements: Ministry of Environment; Ministry of Public Works; National Council of Energy	Ministry of Environment and Natural Resources is in charge of implementing Climate Change interventions and has a Climate Change unit. The Climate Change unit is in charge of the CC negotiations, development of a national CC plan, implementation of adaptation and mitigation projects, and mobilizing resources. The Ministry of Environment and Natural Resources is also involved in joint initiatives with various ministries. For example, the Ministry of Environment and the Ministry of Public works are working jointly on activities related to infrastructure climate proofing. National Council of Energy: implements energy efficiency projects.	The Climate Change Unit in the Ministry of Environment needs to be strengthened. It is now composed of one person who is in charge of CC negotiations, mitigation and adaptation. Furthermore, the Climate Change unit does not formally appear in the organizational chart of the Ministry. The creation of a proper implementation unit would also be important for the execution of projects and the mobilization of alternative sources of funding such as carbon

				finance.
40.	India	Prime Minister's Council on Climate Change; Ministry of External Affairs; Ministry of Environment and Forests (MoEF) National Action Plan on Climate Change (NAPCC) comprises eight National Missions: Solar; Enhanced Energy Efficiency; Sustainable Habitat; Water; Sustaining the Himalayan Ecosystem; Sustainable Agriculture; Green India; Strategic Knowledge	The Council is the apex body set up to respond effectively to the challenge of climate change. Chaired by the Prime Minister, the Council has representation from key stakeholders including government, industry and civil society, and sets out broad direction for addressing Climate Change in the country. The Council provides guidance on matters relating to coordinated national action on the domestic agenda as well as international negotiations including bilateral, multilateral programmes for collaboration, research and development. The Ministry of External Affairs plays an important role in the international negotiations arena. MoEF hosts the CDM DNA. The Government launched the NAPCC under the guidance of the Prime Minister's Council, which provides an overall framework to promote development objectives while yielding co-benefits for addressing climate change. The Council has the responsibility of periodically reviewing the progress of the eight National Missions, established under the NAPCC. The Missions are being institutionalized by the respective ministries (New and Renewable Sources, Bureau of Energy efficiency/Power, Urban development, Water Resources, Environment and Forests, Agriculture, Science and technology). There are efforts being made to align with the existing sectoral programs (e.g. REDD+ within the Green India Mission and Forestry Act) as well as explore new and innovative areas and activities. These efforts are organized through inter-sectoral groups which include related Ministries, Ministry of Finance, the Planning Commission, experts from the industry, academia and civil society. The institutional structure varies depending on the task to be addressed by the Mission and the structure of	As poverty alleviation and energy security are over-riding priorities, there is less focus on environmental issues. However, the National Five Year Plan does recognize the need to address environmental issues and developmental issues together. There has been significant progress towards awareness creation and policy development relevant to climate change. However, the overall strategy is still broad based, and the time frames, targets and actual impacts are not always clear. Implementation also poses a challenge especially owning to the multi-sectoral nature of the issue and the need for concerted and coordinated effort. Most of the initiatives remain metro centric and/or limited to the environment departments. While state level actions are a good vehicle to take these efforts to sub-national levels, greater capacities need to be added across sectors and levels to bring in the level of understanding and undertaking initiatives required to deal with the magnitude of the issue.

			the Ministry involved. The overall coordination for the implementation of the NAPCC is being done by MoEF.	
41.	Emirates Ministry of Water and Environment; Ministry of Foreign Affairs; Federal Electricity and Water Authority		Ministry of Energy is the UNFCCC focal point. Ministry of Water and Environment has established a Climate Change Department. The Ministry has a mandate to: Protect and develop ecosystems; Develop and sustain water resources; Develop and sustain animal, fish and agricultural wealth. Ministry of Foreign Affairs has an Environment Department. CDM-DNA of the Kyoto Protocol resides in local government, but works at the national level.	The Ministries of Energy and Water are active in environmental work and the government has been successful in developing a positive attitude to environmental projects that has created real results. The Environment Agency in Abu Dhabi has also completed many programs and remains a leader in environmental action. However, problems lie at the organizational level. There needs to be clearer delineations between the various sectors in the country. The private, public, and various levels of government need to be clearly separated in order to function smoothly together. The situation arising from the present predicament often leads to different organizations with similar mandates competing for influence.
42.	Saudi Arabia	Ministry of Petroleum and Minerals; Presidency of Meteorology and Environment; Supreme Environment Council; Center for Excellence in Climate Change Research, King Abdul-Aziz University; Saudi Environment Society Other Government entities partially focused on CC issues: Ministry of Commerce and	Ministry of Petroleum and Minerals: lead for CC mitigation/clean energy, UNFCCC Focal Point, host of CDM DNA. Presidency of Meteorology and Environment: lead for CC vulnerability/adaptation, National Communications, environment policy, EIA, pollution control. Supreme Environment Council: coordination of environment policies among ministries, chaired by Presidency of Meteorology & Environment. Center for Excellence in Climate Change Research, King Abdul-Aziz University: new lead center for climate forecasting/modeling. Saudi Environment Society: promotion of awareness raising on climate and environment related issues.	Given the dispersed nature of mandates and policies related to climate change mitigation and adaptation, there is a large need for improved coordination of climate-related policies and a need for an overarching climate policy or strategy. While there are several climate-related national policies, such as the National Development Plan and National Industrial Strategy both of which have a large focus on clean energy and water conservation among other things, and various sector strategies under the various ministries and in the private sector, the lack of an overall national policy leaves efforts disjointed. In particular, there is lack of coordination between the two main Government entities, the Ministry of

		Industry; Ministry of Economy and Planning; Saudi Arabia Investment Authority; Ministry of Civil Defense; Ministry of Agriculture; National Commission for Wildlife Conservation & Development	The ministries lead sectoral strategies under the umbrella of national policies and plans to achieve various aspects of climate change related issues such as clean energy development, water resource management, etc. Each ministry has a Minister who reports to the King via the Cabinet on targets, results, etc. and to the Shura Council (quasilegislative body under the King) regarding formulation of laws and national policies. There are also several universities which lead efforts for R&D on issues of climate change and renewable energy, hosting leading international climate expert. These universities have strong alliances with other global centers of excellence.	Petroleum as UNFCCC focal point and CDM DNA host, and the Presidency of Meteorology and Environment which undertakes National Communications and overall environment policy.
43.	Turkey	The inter-ministerial Coordination Board on Climate Change (CBCC); Climate Change Department, Ministry of Environment and Forestry	CBCC holds national level responsibility for designing and implementing climate change mitigation and adaptation policies and strategies. It consists of senior representatives of various relevant Ministries. The Ministry of Environment and Forestry has the chairmanship role of the CBCC and is responsible for coordination of the tasks of the ten technical working groups which are coordinated by the several line ministries and executed with various member institutions. The technical working groups are as follows: Researching Impacts of Climate Change; Emission Inventory of GHG; Mitigation of GHG from Industry, Building, Waste Management and Service Sector; Mitigation of GHG from Energy Sector; Mitigation of GHG from Transportation; Land Use, Land use change and Forestry; Development of Policies & Strategies; Education and Public Awareness; Adaptation; and Financial Resources. Some of the ministries and associated directorates also have established their own internal working groups specific to elements of the UNFCCC such as AFOLU, Technology Development and Transfer and Mitigation in Industry. The Climate Change Department established under	Climate change is not mainstreamed into the mandates of governmental institutions. However, the recently approved National Climate Change Strategy is expected to enforce mainstreaming climate change into sectoral policies and strategies while building on institutional capacity building and awareness raising. Inadequate financial, technical, and human resources continue to be a challenge.

			the Ministry of Environment acts as the focal point to the UNFCCC while having responsibility for overall coordination between the member institutions of the Coordination Board on Climate Change (CBCC).	
44.	Madagascar	Ministry of Environment; REDD Technical Committee	Ministry of Environment is responsible for addressing climate change issues and has established a platform for climate change, within which discussions and exchanges are conducted on the ministry's climate change strategy and mandate. REDD Technical Committee is co-chaired by the Director General of the Ministry of Forestry. The committee's main task is to develop the Readiness Preparation Proposal (R-PP) - the document on country preparedness for REDD. The Committee has a "Climate Change" Working Group.	The development of the R-PP has mobilized various other ministries (transport, agriculture, territorial development, land use, etc.).
45.	China	National Leading Group on Climate Change (NLGCC); National Development and Reform Commission (NDRC); Ministry of Foreign Affairs (MOFA); Ministry of Finance (MOF); Ministry of Environment Protection (MOEP); State Forest Administration (SFA); Ministry of Science and Technology (MOST); Ministry of Agriculture (MOA);	The Government established NLGCC to effectively address climate change issues. The Premier serves as its leader and members include representatives from twenty ministries and government sectors, including the State Council, Ministry of Foreign Affairs, National Development and Reform Commission, Ministry of Science and Technology, Ministry of Industry and Information Technology, Ministry of Finance, Ministry of Land and Resource, Ministry of Environment Protection, etc. NLGCC's operation and coordination is led by the National Development and Reform Commission (NDRC). NDRC: responsible for comprehensively analyzing the impact of climate change on social-economic development; organizing and coordinating the formulation of key strategies, plans and policies dealing with climate change, taking the lead in the implementation of UNFCCC, and in collaborating with other relative parties in international climate change negotiations; coordinating and carrying out	Overall the institutional arrangements are effective. The creation of the high level leading group on climate change and clearly defined ministerial responsibilities have laid the ground for materializing the cross ministerial coordination on climate change issues at national and sub-national levels. Distribution of quantity targets for the abatement of GHG emissions and inclusion of the distributed targets in the Performance Assessment System enabled proactive efforts by the involved ministries and sub-national government.

State Meteorological Administration (SMA);

State Energy Administration (SEA)

international cooperation in response to climate change and related capacity building; organizing and implementing the work relating to clean development mechanism (CDM); and undertaking concrete work assigned by the National Leading Group Dealing with Climate Change, Energy Conservation and Emission Reduction. The Department of Climate Change at NDRC guides and implements climate change activities nationwide.

MOFA: responsible for concluding bilateral and multilateral treaties and conducting international judicial cooperation between China and other countries. It handles legal cases involving foreign country or party, coordinates the compliance of international treaties, and organizes the participation in diplomatic negotiations on climate change and environmental treaties, etc.

MOF is managing multilateral financing support to China's sustainable development, e.g. the GEF, IFAD, the World Bank and Asia Development Bank, in areas of climate change adaptation and mitigation.

MOEP is responsible for developing and implanting national policies and plans for environmental protection, and taking charge overall coordination, supervision and management of key environmental issues for achieving national target on emission reduction.

SFA is the leading agency for REDD discussions and has implemented a large number of afforestation projects.

MOST implements climate change programmes related to technology innovation and technology transfer, including implementation of Clean Development Mechanism (CDM).

MOA works both in climate change adaptation and

	mitigation. It implements rural renewable energy programmes.	
	SMA is responsible for implementing the climate change related research programme.	
	SEA formulates and implements energy related policy advocacy and capacity building programmes.	

The process to develop an institutional response strategy and the consequent policy framework has therefore been instituted under the aegis of the Ministry of Water, Land Environment and Climate Change and with advice of the Climate Change Advisory Committee.

These activities are being implemented in Jamaica's 50th year of Independence and a period of challenge and opportunities for Jamaica given the ongoing discussions with the International Monetary Fund, introduction of complementary budgetary reforms, and monitoring and evaluation of the public sector,

With such a system in place, the Climate Change Department (CCD) could be instrumental in leading the Government to address the adverse impacts of climate change and guide the national and local response to the key challenges faced by the country.

to clear climate change related key documents, strategies/policies and activities with the Climate Change Department before submitting it for approval to the Minister of MLWECC

- There is a lot of knowledge and expertise in the country however, it is scattered around different institutions and organizations.
- Number of climate change related projects, activities and initiatives are ongoing, mostly without any coordination or building on synergies among them
- The information and knowledge is shared through the informal network mostly on personal basis
- Strong and respected engagement in international negotiations and science
- Common understanding across the whole spectrum of stakeholders that some integrating arrangements are needed for better coordination, harmonization and knowledge sharing
- Strong political will was presented towards the establishment of CC department
- There is a Vision 2030 and quite a number of sector or issue specific strategies and policies, but the national climate change strategy is missing
- National framework setting priorities across all sectors is lacking
- Interest from donor side to get involved into climate change initiatives exist but is not fully utilized, also due to uncoordinated approach and lack of strong leadership

- Country is facing very strong capacity and resource constraints which limits its possibilities to set up appropriate administrative structure in a short time international finance may partially mitigate this problem, however there is a need to strengthen capacities for resource mobilization to access the international funds
- UNDP Country Office has a good relation with the key stakeholders and is deeply involved in the national climate change considerations

Preliminary recommendations:

- Mandate of the newly established department:
- policy formulation;
- o coordination of national climate change efforts
- resource mobilization
- o engagement in international for a
- o Awareness raising, education, training
- o Information and knowledge management, including data compilation and management for GHG inventory
- Proposed structure: based on existing administrative system under the Ministry of Water, land, Environment and Climate Change, however, as the CC is complex, global and cross-sectoral issue, it needs new approaches also to the management
- Operational arrangements were proposed (Minister and CC Advisory committee to set goal, priorities and course of action for the department; as one of the first tasks the formulation of the national policy/strategy was recommended)
- Need for both horizontal (across the relevant ministries) and vertical (across the specific departments within the Ministry of water, land, Environment and Climate Change) need to be established
- Close working relation with Ministry of Finance needs to be set up from the very beginning of the department operation
- Initially, department should focus on Quick Wins: administrative approval of the mandate by the Cabinet, taking leadership role in formulation of national strategy, develop some sectoral climate change strategies, establish and maintain database or current CC activities and data available

Annex H: Timelines for Establishing the Climate Change Department

Table 1: Key Milestones towards Establishment of a Climate Change Department, Jamaica in the Year 2012

		Months (Year 2012)																						
	June			July					Au	gust			September			October				November			er	Dec
UNDP Expert Mission to Jamaica (UNDP)	Х																							
Engagement of Stakeholders (MWLECC)	Х																							
Preparation draft CCD Report (UNDP)	Х	Х	X	Х																				
Review by Stakeholders (MWLECC)					Х	Χ	Х																	
Collation of Stakeholders' comments (MWLECC)								Х	Х															
Preparation of Draft Final Report (UNDP 21/09)										Х	Х	Χ	Х	Х										
Review by MWLECC (MWLECC)															Х	Х								
Presentation to MWLECC (10/10)																	Х							
Resubmission to MWLECC																		Χ						
Presentation to Broad Stakeholder Group																			Х					
Preparation of Cabinet Submission (MWLECC)																			Х	Х				
Cabinet Submission (MWLECC)																					Χ			
Cabinet Approval of CCD (Cabinet)																						Χ		
Recruitment of CCD Staff (MWLECC)																							Х	Х
Preparation of Climate Change Strategy (MWLECC)																								Х
Official Opening of CCD by PM (Ministry/PM)																								>