National Climate Change Adaptation Planning

JAMAICA
Jamaica
PART 1

STRATEGIC VISION AND OBJECTIVE OF THE NAP
Importance of National Adaptation Planning process

• Building resilience to impacts of climate change - **high priority**
• Major threat to island’s overall development - key economic sectors such as water, tourism, agriculture, fisheries and forestry are **highly dependent on natural resources and are climate sensitive**
• Imperative:
  – adopt necessary policies and actions,
  – adaptation strategies mainstreamed into economic and fiscal management,
  – development of country’s physical infrastructure, land use and coastal zone planning and management
Our Approach to National Adaptation Planning

- **Sector integration of climate adaptation**
  - Based on key/priority sectors identified in Second National Communications on climate change.

- Jamaica’s long-term national development plan, Vision 2030,
  - **Strategic guide or roadmap** to achieve national development
  - short- & medium-term priorities, policies and programmes captured in Medium Term Socio-Economic Policy Framework,
  - The Plan provides dynamism and flexibility,
  - Implementation Framework facilitates consistent monitoring and evaluation,
  - Considerations integrated into priority sector-specific policies
NAP cont.

- **Climate Change Policy Framework,**
  - Mainstreaming CC into national policies and development planning
  - Support research & data collection in CC
  - Facilitate and coordinate national response to CC and Promote low carbon development
  - Improve communication of CC to decision-makers & the general public
  - Mobilise climate financing for adaptation and mitigation
  - Special Initiatives based on new and existing programmes and activities which will be prioritized for early implementation
  - Climate change legislation
PART 2
FRAMING THE NAP CONSIDERING THE SDG’S, SENDAI AND OTHER DEVELOPMENT STRATEGIES AND FRAMEWORKS
MTF 2015-2018 National Priorities

- **National Goal #4**: Jamaica has a Healthy Natural Environment
- **National Outcome #14**: Hazard Risk Reduction and Adaptation to Climate Change
- **National Strategy 14-3**: Develop Measures to Adapt to Climate Change
- **Sector Strategies:**
  - Identify Strategic Priorities for Climate Change
  - Adopt Best Practices for Climate Change Adaptation
  - Promote Knowledge of Climate Change and Facilitate Knowledge Transfer

- **National Strategy 14-4**: Contribute to the Effort to Reduce the Global Rate of Climate Change
- **Participate in Developing Global Solutions to Climate Change**
National Adaptation Planning Process

• UNFCCC Obligation – To engage in a national adaptation planning process
• Many options available:
  – OECD - Policy Guidance on Integrating Climate Change Adaptation
  – UNFCCC – Guidance document on National Adaptation Plans
  – National Communications – Guidance document on national adaptation planning processes
• No One Size Fits All Approach!
• All have built in flexibility
• All promote a national adaptation planning process
Capacity Building efforts

• National Adaptation Plan (NAP) Global Network
  – Sharing lessons learned in climate change adaptation planning
  – Policy-makers and Practitioners

• Climate Change Focal Point Network (National & Local Government Levels)
  – Ongoing training of policy-makers and practitioners
  – Support development of, implementation and monitoring of climate change actions and activities
  – Local Government level to be launched in 2017
Institutional Arrangements

Adaptation Planning (National Climate Change Policy Framework) → Development Planning (Vision 2030)

Cabinet

Ministry of Economic Growth & Job Creation

Climate Change Division

Climate Change Focal Point Network

Climate Change Advisory Board

Integration of adaptation and development planning

Ministry of Finance & Planning

Planning Institute of Jamaica

Vision 2030 Thematic Working Group on Hazard Risk Reduction & Adaptation to Climate Change

27 representatives from ministries, departments & agencies (more expected to join soon)
Some Policies, Guidelines, Orders etc.

• Vision 2030: Jamaica National Development Plan
  – National Strategy for Climate Change Reduction, Adaptation, and Disaster Risk Reduction,
  – Resilience pillar of Growth Inducement Strategy
• Revised Policies: Forest, Water Sector, Land etc.
• Climate Change Policy Framework for Jamaica
• State of the Jamaican Climate
• Draft National Water Sector Adaptation Strategy
• Environmental Impact Assessment Policy- Drafted
• Parish and Local Area Development Orders – Revised
• National Building Plan - Revised
Sector Strategies & Action Plans

- **Bilateral Support**
  - Forestry
  - Energy
  - Transport
  - Agriculture
  - Finance
  - Waste

- **Pilot Programme for Climate Resilience**
  - Water
  - Health
  - Tourism
  - Fisheries
  - Human Settlements
  - Coastal Resources
Third National Communication

- Integration of climate change considerations into local, national and sectoral development priorities,
- Increase public awareness, and strengthen technical and institutional capacities of institutions
- 1st Biennial Update Report submitted to UNFCCC Secretariat
  - Project activities included:
    - Conduct a national inventory of greenhouse gas emissions
    - Undertake vulnerability and adaptation assessments by developing case studies in communities that are at greatest risk from climate change impacts
    - Compile and publish/disseminate the Third National Communication document
PART 3
KEY ISSUES, RISKS AND VULNERABILITIES, NATIONAL SYSTEMS FOR ASSESSMENTS
Our Reality

- Geographically and physically vulnerable: Small island state in storm belt
- Small fragile economy
- 236 km (146 miles) long and 35-82 km (22-51 miles) wide
- Hilly interior, narrow coastal shelf along north coast, wide plains on south coast
- 60% of population, industry and commerce along the coast
- Primary economic drivers are climate sensitive

Table 8.2.1: Impacts of Climate Change on Freshwater Resources.

<table>
<thead>
<tr>
<th>Climate Change Variables and Extreme events</th>
<th>Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Level Rise</td>
<td>Groundwater quality continues to be and will be further affected by the proximity of some basins to the coast. (4,p.74)</td>
</tr>
<tr>
<td></td>
<td>Sea water intrusion has resulted in the loss of 100 million cubic metres of groundwater (10% of local supply) annually. (4,p.74)</td>
</tr>
<tr>
<td>Heavy Rainfall/Storms</td>
<td>Some water catchment areas are prone to flooding and exposed to the risk of debris and sediment flows. (4,p.67)</td>
</tr>
</tbody>
</table>
Some Perspective

Tourism
- >US$2 billion in foreign exchange receipts from tourism
- Tourism accounts for 15% of GDP
- Second largest employer – approx. 200,000 jobs

Agriculture
- Agriculture accounts for 6.7% of GDP
- Employs approx. 19% of population, >200,000 farmers
- In 2016, estimated real GDP growth of 28% over previous 2nd quarter due to improved rainfall after multiple years of extended drought
Perspective Cont.

Storms

- 3 major hurricanes and several flood events between 2002 and 2007 resulted in J$73.19 billion in losses
- **GDP impact**: Gilbert – 65%
- **Costs (J$B)**: Gilbert – 8.3
- Elevating 4km of Palisadoes road just over 3m in 2010 cost Jamaica some $65 million – connect airport to Capital – Kingston
  - **Major economic decision**

Poverty

- Trending at about 16.5%

---

**EVENT** | **Year** | **Category** | **Cost($J billions)** | **Impact (% GDP)**
--- | --- | --- | --- | ---
Hurricane Michelle | 2001 | 4 | 2.52 | 0.8
May/June Flood Rains | 2002 | | 2.47 | 0.7
Hurricane Charley | 2004 | 4 | 0.44 | 0.02
Hurricane Ivan | 2004 | 3 | 36.9 | 8.0
Hurricanes Dennis & Emily | 2005 | 4 | 5.98 | 1.2
Hurricane Wilma | 2005 | 5 | 3.6 | 0.7
Hurricane Dean | 2007 | 4 | 23.8 | 3.4
Tropical Storm Gustav | 2008 | | 15.5 | 2.0
Tropical Storm Nicole | 2010 | | 20.6 | 1.9

Source: Compiled by the PIOJ with data from various agencies.
Our Expectations

• **Sea level rise**
  – Saline intrusion into freshwater aquifers
  – Coastal flooding and erosion

• **Increased temperatures**
  – Heat stress
  – Coral bleaching
  – Biodiversity loss
  – Increased emergence of vector borne diseases
Our Expectations cont.

• Changes in rainfall patterns
  – Decreased fresh water availability
  – Major impact on agriculture

• Increased intensity of storm activity
  – Direct damage to infrastructure
  – Loss of lives
Some Critical Sectors

• Tourism
  – Climate sensitive and heavily influenced by quality of beaches and temperature
  – Sea level rise, beach erosion, storm surge and increase in sea surface temperature impacts coral and other marine life
  – Fragile state of some ecosystems which are fundamental to viability of sun sea and sand model as well as eco-tourism
  – Progressive loss of beach
  – Potential increases in tropical diseases such as dengue
  – Potential for heat stress and associated high cost of cooling for hotels
  – Potential loss of competitive advantage
• Agriculture & Fisheries
  – Rain-fed and exposed to ravages of climate hazards
  – Flood and drought incidences causes decline in food security and increase in food import bill
  – Increased temperatures: impact crop yield and heighten risk of plant diseases
  – Heat stress affect livestock, lower reproduction rates and increase in parasitic diseases
  – Increase input costs e.g. demand for water (plant and livestock)
  – Fisheries likely to be negatively affected
Sectors cont.

• Infrastructure
  – Over 60% of population resides in coastal zone
  – Approx. US$18.6 billion worth of assets exposed,
  – Assets generates approx. 90% of GDP
  – Critical infrastructure include:
    • Transportation network (road, bridges),
    • water & sewerage,
    • electricity,
    • ports and airports
Why We Need to Adapt!

Adaptation Options
• Improve hydro-met services
• Improve drought & storm forecasting
• Promote water conservation practices
• Employ rainwater harvesting techniques
• Improve irrigation practices
• Improve pest management practices
Adapt! cont.

Adaptation Options

- Promote diversification of livelihoods – supplemental income
- Increase in ecosystem-based adaptation practices
- Promote renewable energy (solar and wind)
- Improve quality and access to vulnerability mapping
- Improve integrated landuse planning
- Improve epidemic alert systems – dengue, chic v, zika, malaria, yellow fever
- Improve public health campaigns – vector control management
PART 4
ROADMAP TOWARDS FORMULATION OF A NAP AND ACCESS TO GCF READINESS NAP FUNDING
Roadmap

• Guidance for Climate Resilient Sector Plans – 2014
  – Process for Developing a Sectoral Climate Change Strategy and Action Plan

• Two useful elements:
  – Participation of stakeholders
    • Analysis and definition of strategies and actions
    • Widen information available for consideration and help achieve commitment and buy-in for strategies and actions developed
  – Use of data and information
    • Data analysis is important for informed decision making
7 Key Steps

1. Diagnostics
   • What are the issues associated with climate variability and change affecting the sectors and sub-sectors?
   • Definition of sector and sub-sector vulnerability and potential adaptation options:
     – literature review and expert consultation
   • Definition of GHG emission sources and potential mitigation options:
     – literature review, expert consultation and modeling analysis where possible

*Expert consultations to include: key sector experts, academic community, NGOs etc. Done using individual interviews, focus groups and/or workshop for validation.*
2. Draft list of measures
   - Ensure measures have climate change objective whether for adaptation or mitigation,
   - To reduce vulnerabilities identified and transform sector into low-carbon, energy efficient one while having outcomes of growth in sector

3. Research
   - Costs and benefits for mitigation and adaptation potential of measures
   - Conduct thorough analysis of costs and benefits associated with potential measures.
Key Steps 4-5

4. Expert consultation with information to produce a prioritized measures list
   - Utilize sector goals and priorities according to Vision 2030 and current MTF as well as current National Communications to UNFCCC

*Bring together key sector experts within the MDAs, academia and private sector and utilize participatory tools to prioritize. Utilize available tools*

5. Wider consultations on prioritized measures list
   - Include sector and sub-sector stakeholders for input on prioritized adaptation and mitigation measures.
6. Development of an implementation plan

- Includes timelines, responsible parties, schedule, resource requirements, indicators of progress, etc.
- Workshop for prioritized measures, develop implementation plan
  - Ensures next steps towards implementation are defined and stakeholders agree on elements of plan
- Develop financing plan for implementation plan
  - Includes commitment to financing - slate of grant, loan and other financing mechanisms
    - incl. government through annual budgetary contributions
Key Steps 7

7. Development of a monitoring and evaluation system
   – To track changes as a result of implementation
   – Use of strategic set of indicators
   – Develop plan for tracking implementation and achievement of reducing vulnerability, improving resilience and mitigating the causes of climate change
   – Discuss methods for monitoring success of the CC SAP
## Some Progress in Implementation

### Priorities

1. **Access GCF Readiness support**

2. **Application to GCF for 4 Project proposals (2 Project Preparation Grant (PPG))**
   - i. Funding proposal by Caribbean Community Climate Change Centre - Enhancing Coastal Protection for Climate Change Resilience Project (US$20.0M)
   - ii. Funding proposal on behalf PIOJ/ Government of Jamaica and World Bank - Resilience to Climate-Related Natural Disasters Project (US$15.0M)
   - iii. Funding proposal by United Nations Development Programme (UNDP), regarding Global Small Island Developing States Sustainable Transition in Energy Programme (SIDS-STEP)
   - iv. Funding proposal for by UN Environment (UNEP) regarding ‘Jamaica REDD+ to Reef Landscape Project’ cross-cutting (climate change mitigation and adaptation. (PPG))

### Progress

- GCF readiness grant (US$0.3M) to strengthen CCD and develop Country Programme approved.
- Grant Agreement and bank info to finalise.
- No-objection letters endorsement. Current status:
  - 5Cs Project concept note submitted to GCF.
  - PIOJ/GOJ/World Bank Full Project Proposal developed and submitted.
  - SIDS-STEP – awaiting further correspondence
  - UNEP- REDD+ PPG submitted to GCF and undergoing completeness check
## Progress in Implementation cont.

<table>
<thead>
<tr>
<th>Priorities</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. National organisations accredited to GCF</td>
<td>- Development Bank of Jamaica nominated</td>
</tr>
<tr>
<td>4. Pipeline of project concepts to access identified financing.</td>
<td>- Pipeline projects to facilitate following activities through various funding mechanisms:</td>
</tr>
<tr>
<td></td>
<td>- Enhancing MRV system as outlined in A. 13 of the Paris Agreement [GEF/Capacity Building Initiative for Transparency]</td>
</tr>
<tr>
<td></td>
<td>- Support climate expenditure analysis and mechanism [NDC Invest]</td>
</tr>
<tr>
<td></td>
<td>- Draft Climate Risk Project Concept (IDB’s Regional TC)</td>
</tr>
<tr>
<td>5. ACS Sandy Shoreline Project launch</td>
<td>- Project launched in July includes monitoring tower at one selected site to monitor sea level and shoreline changes.</td>
</tr>
<tr>
<td></td>
<td>- Needs assessment on-going</td>
</tr>
</tbody>
</table>
Thank you

For further information contact:

Climate Change Division
Ministry of Economic Growth & Job Creation

climate.change@megjc.gov.jm