An overview of Papua New Guinea’s readiness efforts towards the mitigating of its greenhouse gases

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Session I NAMAs, BURs and MRV: - Part 2: Lessons learned from country-based practical experience in NAMAs, BURs and MRV institutional arrangements in the Pacific region
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Presentation Outline

Objective

- International Commitment
- National Commitment
- Policy
- Activities
- Lesson learned
- Q&A
Objective

1. Share Papua New Guinea’s readiness effort to reducing its greenhouse gases

2. Share lessons learned in the process
Situated north of Australia, west of Solomon and East of Indonesia.

September 16, 1975 got its independence from Australia under Westminster arrangement.

Divided into four regions: Southern, Highlands, Momase, and New Guinea Islands.

The regions are sub-divided into 22 provinces.

>800 languages and cultural backgrounds.

Landownership is 97% customarily own while 3% held by government or privately held under 99 years lease back arrangement.

7,059,653 people (2011 fig), 83% still live in rural areas.

Average growth rate of 3.2%.
What is GoPNG doing?
PNG is a global leader in pushing climate change negotiations forward

2005
Founding member of Coalition for Rainforest Nations

Dec, 2007
Bali: PNG plays a key role in adopting Bali Roadmap

Dec, 2009
Copenhagen: PNG submitted most ambitious emission reduction targets

May, 2010
Oslo: PNG becomes co-chair with Japan of partnership secretariat

Dec, 2011
Durban: REDD+ financing included

Dec, 2013
Qartar: REDD+ financing included

PNG is a member to 46 Multilateral Environmental Agreements (MEA) which also include the Rio+20, UNCCD, CBD, etc. It ratified the UNFCCC in 1993 and Kyoto Protocol in 2002
International climate change process is important

From the Kyoto Protocol ...

- Environmental treaty
  - Emission reductions focused on developed world (Annex 1 countries)
  - No coverage of forestry and agriculture
  - International funding limited to CDM/JI mechanism
  - System based on compliance; reporting against obligations
  - UNFCCC 80% of the game

... to the Copenhagen Accord

- Economic transformation programme
  - Covers mitigation in all countries, i.e., both developed and developing world, while recognizing differentiated responsibility
  - Covers all sectors, specifically recognizing forestry and land-use
  - Provides $30b in fast-start funding (2010–12); acknowledges need for $100b financing by 2020
  - System based on self-interested commitments within a framework for performance transparency
  - UNFCCC 20% of the game

... and the Cancun Agreement

- Translates the Copenhagen outcome into UNFCCC agreed documents, but adds
  - Outline of an agreement for technology sharing
  - A framework for implementing REDD+
  - Details on the establishment of a Green Climate Fund

SOURCE: OCCD
National Commitment

The Papua New Guinea

Vision 2050

“We will be a Smart, Wise, Fair, and Happy Society by 2050”

“We will be ranked in the top 50 in the United Nations Human Development Index by 2050, creating opportunities for personal and national advancement through economic growth, innovative ideas, quality service and ensuring fair and equitable distribution of benefits in a safe and secure environment for all citizens.”

Critical Enablers

What will make things work?

1. Effective Leadership & Good Governance
2. Healthy, Educated & Skilled Citizens
3. Enabling legislation and Policies
4. Enabling Basic Infrastructure
5. Financial Capacity
6. Effective Service Delivery
7. Enabling Citizen Values & Participation
8. Performance & Accountability

The OCCD’s governance structure has been put in place

Office of Climate Change and Development\(^1\)
Led by Executive Director and three directors for REDD+ & Low Carbon Growth, Adaptation, MRV & National Communication

1 OCCD Executive Director reporting directly to Prime Minister

SOURCE: NEC decision 54/2010, OCCD analysis
PNG’s Climate-Compatible Development Strategy is an evolving document that describes economic development opportunities in alignment with Pillar 5 Vision 2050

- A reference document for PNG strategic framework of economic development, mitigation, and adaptation actions, which includes:
  - Environmentally-sustainable and low-carbon economic growth
  - Opportunities of reducing carbon emissions
  - Adaptation to climate-driven hazards

CCDS will be improved with inputs from further stakeholder consultation, pilots and MRV learning

SOURCE: PNG Climate-Compatible Development Strategy
PNG’s Climate-Compatible Development Strategy combines economic development with mitigation and adaptation

**Strategic framework**

- **Development**
- **Mitigation**
- **Adaptation**

**Economic Development**
- Achieve GDP per capita of USD 3,000 by 2030, as set out in our Vision 2050

**Mitigation**
- Potential to reduce emissions of greenhouse gases, by at least 50% by 2030 driven mainly by abatement measures in land use, land-use change and forestry
- Become carbon neutral by 2050, investing into low-carbon infrastructure today

**Adaptation**
- Reduce vulnerability to climate change-associated risks
  - Gradual hazards (e.g., disease)
  - Event-driven hazards (e.g., landslides, coastal flooding)

*SOURCE: PNG Climate-Compatible Development Strategy, OCCD analysis*
Clear mitigation and adaptation priorities have been identified

**Pilots and programs**

| Adaptation | Mangrove planting to protect coastal villages  
|            | Coastal early flood warning system  
|            | Coastal engineering  
|            | Inland flood warning |

| REDD+ | Review of agriculture leases  
|       | Locate palm plantation on non-forest land  
|       | Afforestation/reforestation programs  
|       | Secondary forest management  
|       | Reduced impact logging  
|       | Forest Conservation |

| Low-carbon growth | Renewable energy for Port Moresby  
|                   | Rural electrification via rehabilitation of existing and new micro hydro plants  
|                   | Energy efficiency measures  
|                   | Mitain capture in Palm Oil waste |

**SOURCE:** PNG Climate-Compatible Development Strategy, OCCD analysis
GoPNG through OCCD has translated our country’s constitutional priorities and long-term development goals into tangible actions.

PNG’s climate compatible development strategy (CCDS) has identified the country’s mitigation and adaptation priorities, which have been translated into tangible actions in the Interim Action Plan (IAP).

SOURCE: OCCD

CCDS & IAP

OCCD: Implementation Plan

OCCD Corporate Plan, 2011-2013

NEC Decision, 54/2010

Annual Workplan, 2013

Medium Term Development Plan, 2011-2015

Development Strategic Plan, 2010-2050

Vision 2050, Pillar 5: Environmental Sustainability and Climate Change

SOURCE: OCCD
The journey so far has progressed significantly with different stakeholders

**Nov 2009**
- Development of PNG’s reaction concept to climate change

**March 2013**
- Provincial/local consultation and pilot projects to inform about, test and refine concept

**Government departments**
- Department of Prime Minister
- Department of Environment and Conservation
- Department of Agriculture and Livestock

**Development partners**
- Australian Government
- ADB
- World Bank
- UNDP

**Provinces/landowners**

**NGOs and CBOs**
- Natural Conservancy
- WWF

**Civil society, esp. CBOs**

**Private companies, Research and Academic Institutions**
... and is responsible for ensuring a whole-of-government approach to Climate Mitigation design and implementation

- Landowners
- PNGFA/JICA
- FRI
- DEC
- DAL
- DLPP
- Mapping Bureau
- Mineral Resources
- UPNG
- NARI
- DPE
- UNITECH
- Provincial government

Program or system design requirements
Synthesized information for decision making
Strategy and policy recommendations
Stronger stakeholder coordination and collaboration
National Climate Change and Development Policy Thematic Areas

• Enabling Environment/Mainstreaming
• Data and Information/MRV
• Adaptation
• Mitigation
• Financing
• Partnership
Forestry and agriculture is the biggest driver of emissions in PNG

<table>
<thead>
<tr>
<th>Driver of emissions</th>
<th>2010 emissions&lt;sup&gt;1&lt;/sup&gt; Mt CO&lt;sub&gt;2&lt;/sub&gt;e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logging</td>
<td>68-69</td>
</tr>
<tr>
<td>Subsistence agriculture</td>
<td>28-43</td>
</tr>
<tr>
<td>Agriculture leases&lt;sup&gt;2&lt;/sup&gt;</td>
<td>6</td>
</tr>
<tr>
<td>Commercial agriculture</td>
<td>3</td>
</tr>
<tr>
<td>Everything else</td>
<td>10</td>
</tr>
</tbody>
</table>

Land use, land use change and forestry (LULUCF) contributes ~95% of total emissions in PNG

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1 Estimate of 2010 extrapolated from 2008/09 data
2 Exact emission for 2010 still to be verified

SOURCE: REDD+ technical working group
A number of priority abatement actions have been identified

<table>
<thead>
<tr>
<th>Opportunities for PNG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced impact logging</td>
</tr>
<tr>
<td>Agriculture leases review</td>
</tr>
<tr>
<td>Secondary forest management</td>
</tr>
<tr>
<td>Land use planning</td>
</tr>
<tr>
<td>Afforestation/ reforestation</td>
</tr>
<tr>
<td>Agriculture extension program</td>
</tr>
<tr>
<td>Community REDD+ schemes</td>
</tr>
<tr>
<td>Commercial plantation on non-forest land</td>
</tr>
</tbody>
</table>

Low carbon growth includes all non-LULUCF sectors

Development

Mitigation

Adaptation

Low carbon growth

Sectors
- Power
- Transport
- Oil and Gas
- Industry

Examples
- Energy Industry Policy
- Hydro pilots
- Energy efficiency
The production of clean electricity and development of low-carbon sectors are important components of PNG’s climate compatible development.

### Produce “Clean”-Electricity

**Solar**
- Solar panels convert sunlight into electricity
- Solar panels can be installed close to location of usage (roofs)

**Hydroelectric power**
- Benefiting from constant water flows to generate electricity
- Requires construction of pipe leading to a turbine

**Geothermal**
- Clean energy can be produced from heat at volcanic areas
- Requires technical expertise and large capital investments

### Build Low-Carbon Sectors

**Agriculture**
- Invest in quality and marketing of coffee, cocoa and copra
- Increase production and quality of fresh fruit and vegetables to reduce imports

**Tourism**
- Promote eco- and niche tourism
- Develop hotels and activities for domestic tourist market

**Processing**
- Develop industry around low-cost energy hubs (hydro, geothermal)
- Encourage processing of wood and agricultural exports

**Source:** Vision 2050, DNPM; Low-Carbon Growth technical working group
## Activities (Govt)

<table>
<thead>
<tr>
<th>#</th>
<th>Type</th>
<th>Description</th>
<th>Activity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PNGFA</td>
<td>April-Salome REDD+ Pilot Project</td>
<td>A forest concession area of 521,500 ha involve the holistic REDD+ project approach</td>
<td>East Sepik</td>
</tr>
<tr>
<td>2</td>
<td>PNGFA</td>
<td>Central Suau</td>
<td>A lowland forest concession with an area of 60,780 ha to capture reduce impact logging which also involve FPIC, land boundary mapping and land-use planning</td>
<td>Milne Bay</td>
</tr>
<tr>
<td>3</td>
<td>PNGFA</td>
<td>JICA/PNGFA Project</td>
<td>Capacity development Forest base-map</td>
<td>NCD</td>
</tr>
<tr>
<td>4</td>
<td>OCCD</td>
<td>UN-REDD Programme</td>
<td>National Monitoring System Stakeholder engagement</td>
<td>NCD</td>
</tr>
<tr>
<td>5</td>
<td>PNGFA</td>
<td>EU/FAO/PNGFA</td>
<td>National Forest Inventory</td>
<td>Nationwide</td>
</tr>
<tr>
<td>6</td>
<td>NCD</td>
<td>Waste Management Facility</td>
<td>The National Capital District will be supported by JICA to build facility for both solid and liquid waste. Potential methane capture there.</td>
<td>NCD</td>
</tr>
</tbody>
</table>
## Activities (Non-Govt)

<table>
<thead>
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<th>#</th>
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<th>Activity</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>WCS</td>
<td>Village REDD+ demonstration</td>
<td>Grassroots capacity building on forest inventory, FPIC, carbon rights study, land boundary mapping, and land-use planning.</td>
<td>East Sepik</td>
</tr>
<tr>
<td>2</td>
<td>TNC</td>
<td>Central Suau</td>
<td>Grassroots capacity building on carbon biomass measurement and land boundary mapping and land-use planning</td>
<td>Milne Bay</td>
</tr>
<tr>
<td>3</td>
<td>TNC</td>
<td>Manus</td>
<td>Ridge to reef conservation project</td>
<td>Manus</td>
</tr>
<tr>
<td>4</td>
<td>ForCert</td>
<td>Village base planning</td>
<td>Grassroots capacity building on forest inventory and conservation as a business model</td>
<td>East New Britain</td>
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<tr>
<td>5</td>
<td>ForCert</td>
<td>Village base planning</td>
<td>Grassroots capacity building on forest inventory and conservation as a business model</td>
<td>West New Britain</td>
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## Activities (Industries)

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<tbody>
<tr>
<td>1</td>
<td>PNG Power Ltd</td>
<td>Divune Hydropower CDM Project</td>
<td>With the support PPL has manage to get their Program of Activity by the CDM Board is expected to generate estimated GHG emission reduction over a period of 7 years of 145,600 tCO₂-e</td>
<td>East Sepik</td>
</tr>
<tr>
<td>2</td>
<td>NBPOL</td>
<td>Methane Avoidance CDM Project</td>
<td>Sangara Methane Avoidance Project is expected to generate estimated GHG emission reduction over a period of 10 years of 666,360 tCO₂-e</td>
<td>Oro</td>
</tr>
<tr>
<td>3</td>
<td>NBPOL</td>
<td>Methane Avoidance CDM Project</td>
<td>Hagita Methane Avoidance Project is expected to generate estimated GHG emission reduction over a period of 10 years of 582,241 tCO₂-e</td>
<td>Milne Bay</td>
</tr>
<tr>
<td>4</td>
<td>Oil Search Ltd</td>
<td>Flare and Vent Gas Conservation CDM Project</td>
<td>The project will cover various location of their processing facilities (CPF, CPF Refinery, APF, and GPF). An estimate GHG emission reduction 674,030 over 7 years period</td>
<td>Central and Southern Highlands</td>
</tr>
<tr>
<td>5</td>
<td>STC</td>
<td>Grand Papua Hotel</td>
<td>Steamship Trading Company has build two hotels that are using 50% of their energy from solar and are recycling their water usage.</td>
<td>NCD</td>
</tr>
</tbody>
</table>
MRV

Technical support Brazil INPE through UN FAO team under UN-REDD National Programme
BUR 1: Next Steps (Inventory Schedule/Timeline)

Technical support by USAid EPA & UNFCCC ALU project through SEA GHG Inventory Project.
Lessons Learned

1. Good Political leadership is important

2. A stand alone and designated office to deal with the issue of climate change, GoPNG created Office of Climate Change & Development

3. Develop a good and sustainable network of key and relevant stakeholders that can work together to develop and implement policies

4. Alignment of different sectoral policies with the Vision 2050 Pillar 5 and the National Climate Change Policy
Lessons Learned

5. A Policy that can deliver must be supported by sustainable funding and technical support both nationally and global.

6. Activities must be supported by funding that’s additional, predictable transparent and credible sources like the green climate fund.

7. Very good technical support by Annex I Parties is very important for developing country like PNG.

8. Capacity building is important to delivery of sustainable tangible outcomes.
Thank you

Please log-on to OCCD website for more information

www.occd.gov.pg

Email: jnpokana@gmail.com

Canopy Walk, a co-benefit of REDD+ Project
Questions?