



Climate-Compatible Development for Papua New Guinea

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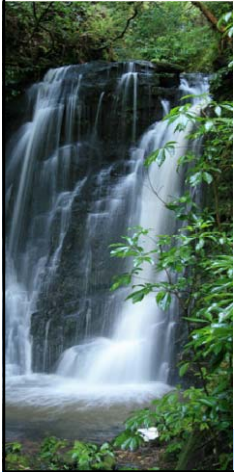
Presentation to REDD workshop
1 March 2010

Objectives for today

- Review outcomes of COP15, the 'Copenhagen Accord' and what they mean for PNG
- Update on PNG's strategy, including the climate-compatible development plan
- Share next steps for strategy and institutional arrangements



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- **COP15 Copenhagen**
- PNG's Climate compatible development plan
- Next steps
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Why PNG supports the Copenhagen Accord

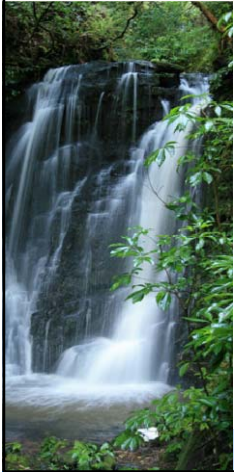
Copenhagen Accord fits our national development priorities

- The Accord emphasizes the issues of greatest relevance to countries like PNG, including REDD+ and adaptation
- It also recognises that tackling climate change is inseparable from development

More money is available and will be allocated more fairly

- Substantial funds available for REDD+ (at least \$1bn a year worldwide) and adaptation (at least \$5bn per year)
- Funding will be allocated on the basis of country need and strategic intent, not just technical capacity as with the Clean Development Mechanism under the Kyoto Protocol

Copenhagen has many shortcomings, but is a step in the right direction



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Over the last 2 months we have conducted a comprehensive consultation effort to involve the most important government stakeholders, external experts and donors

Government ministries & agencies

- Prime Minister's Office
- Dept. of Finance & Dept. of Treasury
- PNG Forest Authority
- Dept. of Agriculture and Livestock
- Dept. of Petroleum and Energy
- Dept of National Planning & Monitoring
- Dept. of Transport
- Dept of Lands & Physical planning
- Dept. of Health
- Department of Minerals & Mining
- National Disaster Centre
- National Weather Service
- Office of Climate Change and Environmental Sustainability

Academics/Research Institutions

- PNG Institute of Medical Research
- National Agriculture Research Institute
- National Research Institute
- UPNG – Remote Sensing Centre
- UPNG – Environmental science and geography
- PNG Forest Research Institute
- Australia National University

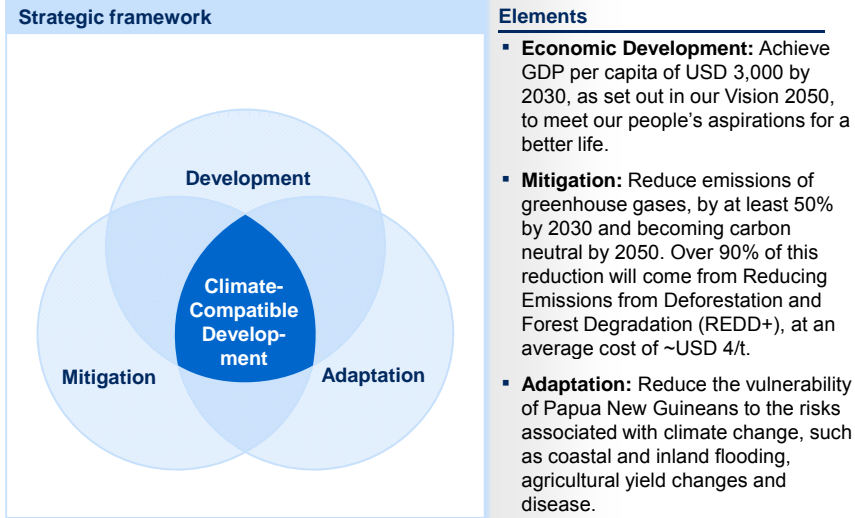
NGOs & private sector

- WWF
- Institute of National Affairs
- Wildlife Conservation Society
- Forestry Industry Association
- PNG Sustainable Development Program
- The Nature Conservancy

Development partners

- AusAID
- UNDP
- ADB
- World Bank
- NZ High Commission
- European Union

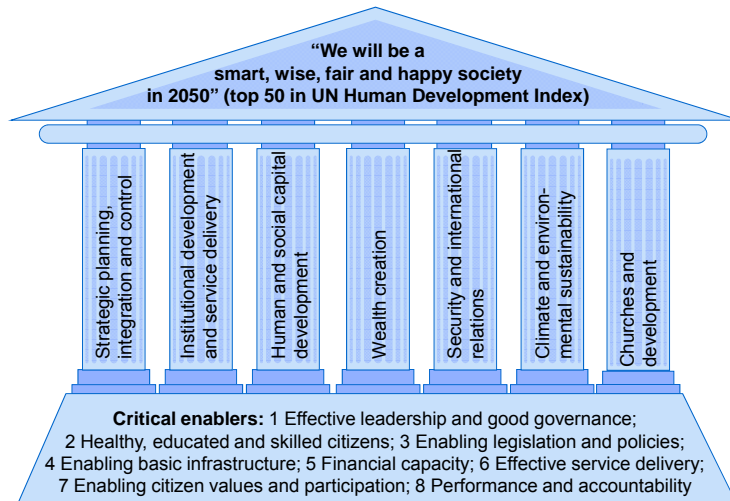
Papua New Guinea’s strategy for Climate-Compatible Development has three elements



SOURCE: McKinsey






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Our strategy is based on Vision 2050 – climate and environmental sustainability, but also pillars 1, 2, 3 and eventually 4



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Historically, deforestation and forest degradation in PNG has mainly been caused by smallholder agriculture and forestry






Driver of deforestation	Proportion	Description
 Smallholder agriculture	20-30	<ul style="list-style-type: none"> Increasing population leads to expansion of cropping area into forest (and shortening of rotation cycle)
 Commercial agriculture	10-15	<ul style="list-style-type: none"> Clearing of forest for establishment of commercial plantations (predominantly oil palm), mainly on fertile lowland forests
 Timber harvesting	50-65	<ul style="list-style-type: none"> Logging results in significant deforestation and degradation, mainly in lowlands/islands and middle altitudes Current logging practices are unsustainable
 Mining, infrastructure	5-10	<ul style="list-style-type: none"> Historically largely from mining, less from infrastructure Comprises direct and indirect deforestation (e.g. forest dieback due to Ok Tedi spill)
 Fire	2-3	<ul style="list-style-type: none"> Caused by humans (hunting, spreading from subsistence burning) and lightning, mainly in upper montane forests Forest degradation makes fires more likely

SOURCE: Shearman (2008), Fox (2009)

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5 hazards resulting from climate change were identified, with detailed analysis on coastal flooding and malaria

USD million

Hazard	Risk exposure	Annual expected losses		Costs and benefits of adaptation measures	
		2010	2030	Cost of investing in counter-measure	Benefit (reduced loss)
 Coastal flooding	<ul style="list-style-type: none"> Affects ~6,000, displaces ~400, and kills several people annually Financial loss from damaged buildings 	20	90-100	40	80 (~2x)
 Inland flooding	<ul style="list-style-type: none"> Affects ~26,000, displaces ~8,000, and kills several people annually Financial loss from damaged buildings 	10-15	Analysis in progress by technical working group		
 Malaria	<ul style="list-style-type: none"> Epidemic malaria outbreaks will move into the highlands affecting ~200k more people Current malaria zones will see more severe cases 	130	210-250	45-50	150-170 (~3x)
 Agricultural yield loss	<ul style="list-style-type: none"> 3 million people depend on climate-sensitive crops Yield loss of 10% on sensitive crops could lose USD 100 – 150m of value 	Next priority area for analysis			
 Coral reef decay	<ul style="list-style-type: none"> ~70k people earn a living from reefs Reefs are valued at USD 170 m per year, rising to potentially USD 700-900 m by 2030 Decay, bleaching may reduce this value 	Next priority area for analysis			

SOURCE: Dartmouth Flooding Database; EM-DAT; Reliefweb.int; press clippings; academic journals; Reefbase; WHO; PNAS; Worldbank; FAO; IMF; WRI; TEEB; ANU; Internet research; interviews; team analysis

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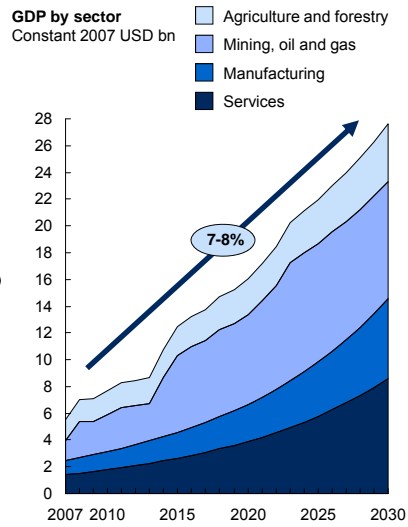
Low-carbon growth means decarbonising existing sectors and promoting low-emissions sectors and technology

Substantial change from Business as Usual to low-carbon growth

Assumptions by sector – high growth scenario

Agriculture and forestry	Food crops	2% yield growth p.a.
	Palm oil	2% yield, 7.5% area
	Coffee	2% yield
	Cocoa	2% yield
	Forestry	Reduced impact logging
Mining, oil and gas	Gold	Double production by 2020
	Copper	Double production by 2020
	Nickel	Double production by 2020
	Oil	Gradual decline
	Gas	Open 2 plants (2013,2023)
Industry	Manufacturing	8% p.a.
	Construction	8% p.a.
	Power	10% hydro and solar
Services	Retail	8% p.a.
	Transport	8% p.a.
	Telecoms	8% p.a.
	Tourism	12% p.a.
	Financial services	8% p.a.

GDP by sector Constant 2007 USD bn



SOURCE: Low-carbon growth working group and McKinsey analysis

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In conclusion, climate-compatible development is a better deal for Papua New Guinea for five reasons

- 1 People working in the agriculture and forestry sectors will benefit from more high-skilled jobs, increased yields and more sustainable livelihoods
- 2 Low-carbon growth in the rest of the economy has potential to raise GDP per capita to ~ USD 3,000 by 2030, in line with Vision 2050
- 3 Greenhouse gas emissions will fall from 90-100Mt of carbon dioxide equivalent (CO₂e) now to 40-50Mt by 2030, with a goal of carbon neutrality by 2050
- 4 The economic and human cost of climate change will be reduced by early action on adaptation. An annual investment of USD 90-100m could avert USD 200-250m of damage from coastal flooding and malaria
- 5 Future generations will still enjoy our unique natural environment, including forests and coral reefs

SOURCE: Team analysis

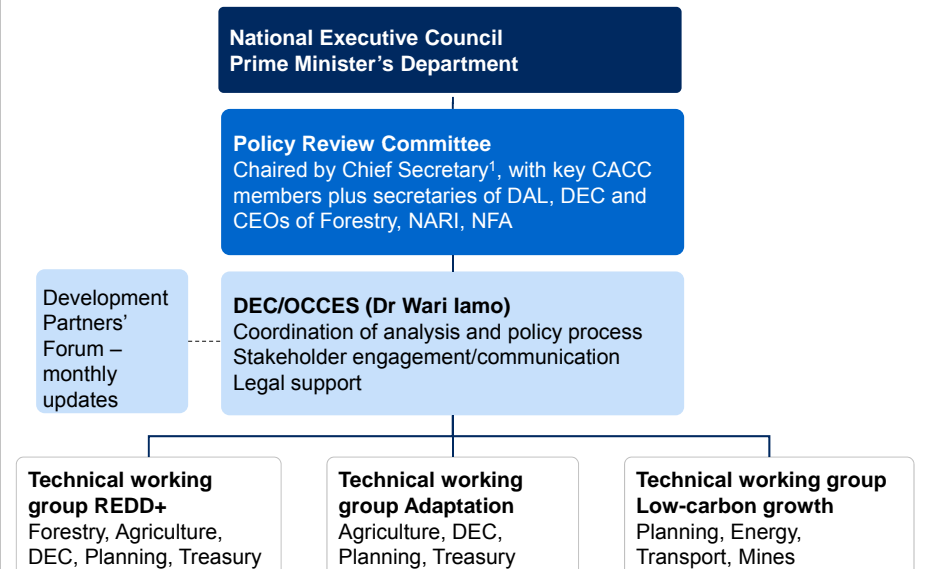
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Currently, the strategy is being taken further by technical working groups, managed by DEC and reporting to a Policy Review Committee



¹ May be chaired by Secretaries of Planning or Treasury in Chief Secretary's absence

Design principles for the new organisation

- **Authority** Equip the institution with the required authority and power
- **Coordination** Coordinate activities across the different ministries and stakeholders
- **Inclusion** Include all stakeholders, for the relevant topics at the right time
- **People and capabilities** Hire and develop a highly qualified set of people with the required knowledge and skills
- **Integrity** Ensure highest possible integrity of people and processes

The technical working groups are now helping take this strategy forward towards implementation

Initial strategy work identified focus areas for climate-compatible development

- **Mitigation:** developed emissions forecasts and opportunities for abatement, using a cost curve approach
- **Adaptation:** identified climate change related hazards identified, quantified impact, assessed costs and benefits of counter-measures
- **Low-carbon growth:** developed scenarios for growth of all economic sectors and opportunities to decarbonise them

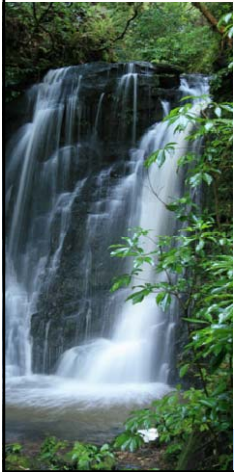


Now we are working to complete the strategy and begin implementation

- A** **CCDP**
 - Refining analysis with technical working groups
 - Integrating with Vision 2050, LTDS, MTDP
- B** **Program design**
 - Working groups identify pilot & programs to test / scale up approaches
 - Preparing donor requests
- C** **Institution and capability building**
 - Strengthening and recreating climate change institutions
- D** **Stakeholder engagement**
 - Communication with government and select stakeholders in Pt Moresby
 - Broader national outreach planned



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Questions & AOB

