

PILOT PROGRAM FOR CLIMATE RESILIENCE

Summary Phase 1 Grant Proposal

1. Country/ Region:	Papua New Guinea/Pacific	2. CIF Project ID #:	(Trustee will assign ID)
3. Date of First Joint Mission	Week of 10 May 2010		
4. Funding Request	\$500,000		
5. Type of Request	Accelerated funding for phase 1: <input type="checkbox"/> Yes X <input checked="" type="checkbox"/> No		
6. Multilateral Development Banks/focal points:	<p><i>Asian Development Bank (Lead)</i></p> <p><i>World Bank Group</i></p> <p><i>IFC</i></p>	<p><i>Anne Withford –Pacific Climate Change Team, Pacific Department (PARD), ADB</i></p> <p><i>Samuel Wedderburn, East Asia Social, Environment and Rural Sustainable Development Unit (EASER), WBG</i></p> <p><i>Haru Ohtsuka, Investment Officer, Financial Mechanism for Sustainability, IFC</i></p>	
7. National Implementing Agency: Office of Climate Change and Development (OCCD) National Focal Points: Department of National Planning and Monitoring (DNPM) and OCCD			
8. Project Description:			
<p>(i) Key development challenges (vulnerability) related to climate change/variability:</p> <p>PNG faces climate change challenges due to high exposure to climate change impacts and critical sensitivity of its natural, built and social systems. Despite its natural wealth, PNG is a poor country, with 37% of its population living in poverty. Infrastructure development is recognised as a key driver underpinning socioeconomic development in PNG. The PNG Government’s Climate Compatible Development Strategy recognises that climate change will result in significant impacts, including through enhanced natural hazards. However, capacity to manage such impacts is low. Consequently it is vital that capacity is enhanced to manage climate impacts through a mainstreamed and coordinated approach.</p>			
<p>(ii) Areas of intervention – PNG Government has requested an “Infrastructure Plus” approach. This entails a focus on the infrastructure sector, in particular transport infrastructure, while also considering related economic, social and health impacts, which are important considerations in infrastructure design and implementation. Three thrusts will ensure coherence in program delivery:</p> <ol style="list-style-type: none"> 1. Enhance institutional capacity for mainstreaming climate change resilience into whole-of-government and sectoral legislation, policies, plans and operational activities of key ministries responsible for provision of infrastructure; 2. Strengthen civil society and private sector engagement and gender considerations of climate change resilience-building; and 3. Prepare the Strategic Program for Climate Resilience (SPCR) and related outreach. 			
<p>(iii) Outcome:</p> <p>Three outcomes: (i) enhanced consideration of climate resilience in the day-to-day planning, budgeting, design and infrastructure construction activities of PNG Government infrastructure sector agencies; (ii)</p>			

maximised key stakeholder input into climate change resilience-building in the infrastructure sector, including integration of civil society, private sector and gender issues; and (iii) design of the SPCR (PPCR Phase II) based on climate risk analyses, policy and institutional assessments, consultation processes and awareness-raising.

(iv) Key Results

Outcome 1 will deliver: (i) climate change resilience integrated into key cross-sectoral and sectoral legislation, policies and plans of key ministries responsible for provision of infrastructure; (ii) capacity built (through short-courses, workshops and related training) in key ministries responsible for provision of infrastructure and climate change resilience integrated into budgetary systems, financial allocations and reporting mechanisms; (iii) a set of nationally consistent, reliable and justifiable scientific scenarios of key climate change to ensure harmonization of climate change resilience-building across sectors; (iv) national guideline and best practice manual for the integration of climate change factors into transport infrastructure planning; and (v) sensitivity, vulnerability and adaptation assessments of initial list of infrastructure projects that could be targeted in Phase II.

Outcome 2 will deliver: (i) capacity needs assessment and development of approaches for effective involvement of civil society in the PPCR; (ii) demonstration of opportunities for private sector engagement in climate change adaptation; (iii) development of information products targeted at civil society and the private sector, including possible support of a national conference on climate resilience building in the infrastructure sector; and (iv) development of approaches for integrating gender concerns into climate change adaptation (through pilot projects).

Outcome 3 will deliver: (i) a Strategic Program for Climate Resilience (SPCR) for PPCR Phase II including design of public and private actions for SPCR in priority sectors; and (ii) a web-based platform of Phase I products and learning events.

9. Budget (indicative)

Expenditures	Amount (\$) - estimates
Theme 1	\$260,000
Theme 2	\$75,000
Theme 3	\$85,000
Project Management	\$50,000
Equipment	\$9,000
Contingency (5% of total)	\$21,000
	TOTAL: \$500,000

Other Contributions (bilateral or private sector):

10. Timeframe (tentative) – milestones

Submission for PPCR Sub-Committee approval:	September 2010
Phase I – Second Joint mission:	March 2011
SPCR for PPCR Sub-Committee approval:	June 2011



DEPARTMENT OF NATIONAL PLANNING & MONITORING

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9 September 2010
SAD/Spec.Proj.10/HIA

Ms. Patricia Bliss-Guest
Program Manager

Climate Investment Funds, Administrative Unit
The World Bank
Washington, D.C. 20433, USA
Fax: (202) 473 1000

Dear Ms. Patricia Bliss-Guest,

**SUBJECT : SUBMISSION OF THE DESCRIPTION OF THE PROPOSAL
PHASE1 ACTIVITIES REPORT ON THE PILOT PROGRAM
FOR CLIMATE RESILIENCE (PPCR) PROCESS IN PAPUA
NEW GUINEA**

The Department of National Planning and Monitoring, on behalf of the Government of Papua New Guinea, wishes to formally forward the proposal for Phase 1 of Papua New Guinea's Pilot Program for Climate Resilience.

The Proposal is an outcome of a consultation process between Papua New Guinea stakeholders and the Joint Team from the Asian Development Bank with partners from the World Bank, United Nations Development Programme and the Australian Agency for International Development that took place during the weeks of 10 May 2010 and 12 July 2010.

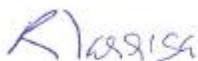
The objectives of the missions were to develop a Proposal Phase 1 Activities for the formulation of a Strategic Program for Climate Resilience, through broad-based consultation dialogue with key stakeholders, and analysis of key development plans, policies and strategies.

Prior to the mission, activities that included stocktaking of relevant information on climate resilience, compilation of all country level programs and activities that were relevant to the PPCR and initial consultation with relevant stakeholders were reviewed.

With regards to the above, therefore, the Government of Papua New Guinea wishes to proceed with the implementation of the Proposal Phase I activities.

Thank you and we are hopeful that this proposal will be given its fullest consideration.

Sincerely yours,



Ruby Zarriga
Officer In Charge

- cc: - All concerning Ministries and PPCR's Focal points
- World Bank PNG Country Office
 - PNRM, ADB Office
 - UNDP
 - AusAID



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17th September 2010

Ms. Patricia Bliss-Guest
Program Manager
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Fax: (202) 473 1000

Dear Ms. Patricia Bliss-Guest,

SUBJECT: ENDORSEMENT AND THE SUBMISSION OF THE DESCRIPTION OF THE PROPOSAL PHASE1 ACTIVITIES REPORT ON THE PILOT PROGRAM FOR CLIMATE RESILIENCE (PPCR) PROCESS IN PAPUA NEW GUINEA

The Department of Environment and Conservation, along with the Department of National Planning and Monitoring, also on behalf of the Government of Papua New Guinea (GoPNG), wishes to officially endorse and formally forward the proposal for Phase 1 of Papua New Guinea's Pilot Program for Climate Resilience.

Various joint missions were undertaken by GoPNG and the Asian Development Bank, along with key partners from the World Bank, United Nations Development Programme and the Australian Agency for International Development between the 10th of May 2010 and 12th July, 2010. The objectives of the missions were to develop a proposal for Phase 1 Activities for the formulation of a Strategic Program for Climate Resilience.

The Proposal now forwarded to you is a result of an extensive and comprehensive consultation process between Papua New Guinea stakeholders and the Joint Team. On that note the Government of Papua New Guinea wishes to proceed with the implementation of the proposed

Phase I activities, and thus together with my colleague Secretary in the Department of National Planning and Monitoring, we are hopeful that this proposal will be given its fullest consideration.

Sincerely yours,

A handwritten signature in blue ink, appearing to read 'Wari Iamo', with a horizontal line underneath.

Dr. Wari Iamo
Secretary

- cc:
- All concerning Ministries and PPCR's Focal points
 - World Bank PNG Country Office
 - PNRM, ADB Office
 - UNDP
 - AusAID

Pilot Program for Climate Resilience
Proposal for Papua New Guinea Phase 1 Activities



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List of Abbreviations

ADB	Asian Development Bank
CCDS	Climate Compatible Development Strategy
CROP	Coordinating Regional Organisations of the Pacific
CSOs	Civil Society Organisations
DCD	Department of Community Development
DEC	Department of Environment and Conservation
DMPGM	Department of Mineral Policy and Geohazards Management
DNPM	Department of National Planning and Monitoring
DoT	Department of Transport
DoW	Department of Works
DPCCT	Development Partners Climate Change Task
DRR	Disaster Risk Reduction
DSP	Development Strategic Plan
EA	Executing Agency
GDP	Gross Domestic Product
GEF	Global Environment Facility
GoPNG	Government of PNG
HDI	Human Development Index
IA	Implementing Agency
ICCAI	International Climate Change Adaptation Initiative (of the Australian Government)
IEPNG	Institute of Engineers PNG
MDB	Multi-Lateral Development Bank
NAC	National Airports Corporation
NCCC	National Climate Change Committee
NCCCC	National Climate Change Coordinating Committee
NEC	National Executive Council
NGO	Non Governmental Organisation
NMSA	National Maritime Safety Authority
NPM	National Programme Manager (for PPR Phase I)
NRA	National Roads Authority
OCCD	(National) Office of Climate Change and Development
PNG	Papua New Guinea
PNGCCI	PNG Chamber of Commerce and Industry
PPCR	Pilot Program on Climate Resilience
REDD	Reducing Emissions from Deforestation and Forest Degradation
SNC	Second National Communication (to the UNFCCC)
SPCR	Strategic Program for Climate Resilience
SPREP	Secretariat of the Pacific Regional Environment Programme
TSMIC	Transport Sector Monitoring and Implementation Committee
TSSP	Transport Sector Support Program (of AusAID);
TWG	Technical Working Group
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar
V&A	Vulnerability and Adaptation
WBG	The World Bank Group

I OVERVIEW

I. Country Context-Geography and Socioeconomic Situation

1. Papua New Guinea (PNG) occupies the eastern half of the rugged tropical island of New Guinea, sharing a border with the Indonesian province of West Papua to the west, Australia to the south, the Solomon Islands to the east, and the Federated States of Micronesia (FSM) to the north. It has four large islands (Manus, New Ireland, New Britain, and Bougainville) and some 600 small islands lying between the Coral Sea and the South Pacific Ocean. It has a total land area of 462,243 sq km and an exclusive economic zone (EEZ), whose area has been estimated from 2.3-3.1 million sq km.¹ PNG is located in the so-called 'Pacific Ring of Fire' and has active volcanoes and significant earthquakes and mudslides, and its coastal areas are prone to tsunamis and floods.



2. PNG has an estimated population of 6.3 million (in 2007), with an annual growth rate of 2.6%. Overall population density is low, although pockets of overpopulation exist. Only approximately 270,000 people are employed in the formal sector; the rest are in non-formal employment, most being semi-subsistence farmers. Few people who commence school continue on to tertiary institutions such as universities.²
3. PNG's economy is divided into two key parts (i) a large-scale export sector based on natural resources (minerals and petroleum, timber, fish, and tree crops) supporting a

¹ FAO. 2010. *Fishery and Aquaculture Country Profiles: Papua New Guinea*. http://www.fao.org/fishery/country_sector/FI-CP_PG/en. Accessed 2 April 2010.

² WBG, 2009, *ibid*.

small urban formal sector and the public sector; and (ii) a semi-subsistence rural economy supporting more than 80% of the population.³

4. Agriculture continues to be the most important source of GDP for the country.⁴ Together with forestry and fisheries, agriculture contributed 28% of Gross Domestic Product (GDP), with the major contributors oil palm, logs, coffee, and cocoa. The mining and petroleum sector also had a large share in overall GDP, contributing 26%. Mining of mainly copper, gold, and silver and petroleum constitute the major export earnings for PNG.⁵
5. Despite its vast natural wealth, PNG is a very poor country, with 37% of its population living in poverty. Approximately 40% of the population enrol in schools, 5.5% of babies born will die before reaching the age of two, and the average life expectancy is 57 years.⁶ PNG's ranking on the Human Development Index (HDI) is 145 out of 177 countries.

II. Participatory process followed in preparing the proposal

6. **First joint mission.** Following scoping consultations in November 2009, Phase 1 preparation commenced with the First Joint Mission in the week of 10 May 2010. The Mission was jointly led by the Department of National Planning and Monitoring (DNPM), Department of Environment and Conservation (DEC) and ADB. The Mission included representatives of the World Bank Group, United Nations Development Programme (UNDP) and AusAID. During the mission, consultations were held with government, civil society organisations/Non Governmental Organisations (NGOs), the private sector and development partners. The key purpose of consultations was to take stock of current climate change adaptation activities in country, assess opportunities for mainstreaming climate change adaptation in national planning/budgetary processes, and to identify the scope of activities and implementation arrangements for PPCR Phase 1. The Aide Memoire for the joint mission can be downloaded from the CIF Website.⁷ Follow on technical consultations with the same stakeholders were held in the week of 12 July 2010.
7. **Government Processes.** Following on from initial scoping missions, DNPM and DEC, with the support of ADB and UNDP and AusAID, undertook further consultations with representatives from government agencies, including DMPGM, PNG Forest Authority, Department of Transport (DoT), PNG Ports and the National Disaster Centre. Findings informed the design and development of PPCR Phase 1 activities. Consultations were coordinated by DNPM.
8. **Private Sector Engagement.** Representative bodies in PNG were engaged during the First Joint Mission and follow on technical consultations. The PNG Chamber of

³ ADB. 2006. *Country Strategy and Program: Papua New Guinea (2006-2010)*. Manila, Philippines., and ADB. 2010. *Papua New Guinea Country Partnership Strategy (CPS) 2011-2015*. Manila Philippines.

⁴ Agriculture is mainly tree crops cultivated for cash income together with the major tree crops being coffee, cocoa, copra, and palm oil.

⁵ World Bank Group, 2009, *ibid*.

⁶ UNDP. 2010. *UNDP in Papua New Guinea*. <http://www.undp.org.pg>. Accessed 2 April 2010.

⁷

http://www.climateinvestmentfunds.org/cif/sites/climateinvestmentfunds.org/files/100616_Published_ADB%20WB%20PNG%20Aide%20Mem_FJM%2010-14%20May%202010.pdf

Commerce and Industry (PNGCCI) represents a broad range of PNG businesses, including manufacturing, services, agriculture and transport. The meetings confirmed the willingness of the PNGCCI to raise awareness of climate change adaptation issues among its members and to become actively engaged in Phase I activities, both to design PPCR activities in PNG to maximise private sector engagement and also to initiate the process of adaptation mainstreaming into operations of members. The Institute of Engineers PNG (IEPNG) represents professional engineers and those engaged in the engineering profession. It has an active membership of over 1,500 and regularly organises professional development and capacity building events. IEPNG is responsible for the registration of Professional Engineers in PNG. IEPNG has significant scope for promoting climate change adaptation in the technical community responsible for planning, design and maintenance of infrastructure in PNG. It is positive with respect to opportunities to engage with the PPCR.

9. **Civil Society Consultations.** Consultations were held with Civil Society Organisations (CSOs) during the First Joint Mission and during follow up technical consultations. The consultations, facilitated by the Department of Community Development (DCD) and DNPM, were attended by local and international CSOs. Subsequent consultations with CSOs were also undertaken, again facilitated by DCD. The critical role played by CSOs in all aspects of community development in PNG was stressed during these consultations. In particular, the consultations outlined that the varied and complex nature of traditional society in PNG will require careful design of Phase I activities to ensure meaningful and effective engagement at a community level, including in the selection of sites for on-ground climate resilience building projects during PPCR Phase II. It was recognised during the CSO consultations that various CSOs have been engaged in climate change projects, with a focus on Reducing Emissions from Deforestation and Forest Degradation (REDD), which has raised awareness of climate change issues. This is likely to provide a useful platform on which to build climate change adaptation activities through the PPCR.
10. **Development Partner Consultations.** The First Joint Mission attended a Development Partners Climate Change Taskforce (DPCCT) meeting. Mr Wari Iamo, Secretary of DEC and Acting Executive Director of the National Office of Climate Change and Development (OCCD) chaired the meeting. The meeting, attended by the WBG, ADB, UNDP, AusAid, Embassy of Japan and the European Union, was also attended by key Government of PNG (GoPNG) staff from DNPM, DEC, PNG Forestry Service, Department of Treasury and Department of Mineral Policy and Geohazards Management (DMPGM). The Development Partner consultations stressed the importance of ensuring donor harmonisation with respect to climate change adaptation activities, and for the PPCR to work within existing institutional structures, while recognizing the importance of whole-of-government implementation. Subsequent development partner consultations reinforced the potential for the PPCR to contribute to current and pipeline development projects and programmes, with details to be elicited during Phase I.

III. Key Climate Change Issues in PNG

Climate Diagnostics

11. **PNG faces climate change challenges**, as its natural environment is extremely fragile and highly vulnerable to natural and human impacts. The PNG Climate Compatible Development Strategy (CCDS)⁸ recognised the sensitivity of PNG to natural hazards such as coastal flooding, inland flooding, landslides and drought. The CCDS highlighted the significant risks posed by climate change to the PNG environment, economy and population including from natural disasters enhanced by climate change and gradual shifts in climatic conditions. The CCDS stressed that these will likely “disrupt daily life, cause damage to assets and infrastructure, destroy livelihoods, endanger cultural and ecological treasures, and kill or injure people.” Analysis in the CCDS of enhanced impacts of climate change on two such natural hazards, namely coastal flooding and malaria, estimated that total expected losses could increase from USD 150 million in 2010 to USD 300–350 million by 2030.
12. **PNG’s Initial Communication to the United Nations Framework Convention on Climate Change (UNFCCC) (2000)** reported that the country’s climate and weather patterns indicate an increasing vulnerability to climate change in coming years:
- Both temperature and precipitation trends in PNG resemble global and regional trends of high rainfall intensity events and prolonged droughts;
 - Increases in the mean near surface temperatures, especially over the last 25 years, appear to be above the global mean;
 - The increase in mean minimum temperatures has been greater than that of the mean maximum temperatures since 1970;
 - Dry seasonal patterns exhibit weakening La Nina impacts during the dry season, and the weakening is influencing the weak dry conditions, implying longer decadal phases of dry conditions;
 - There is already relative sea level rise around the country, but this is strongly influenced by El Nino and La Nina signals. A significant increase in sea level is projected over the next century; and
 - There has been an increase of 0.5°C in the mean near surface temperatures, but since the mid-1970s much of this increase could be attributed to the rapid increase in minimum temperatures rather than traditional maximum temperatures.
13. GoPNG is actively engaged in monitoring and assessing climate change and its potential impacts. The Second National Communication (SNC) to the UNFCCC is currently under development. The SNC will synthesise vulnerability and adaptation (V&A) assessments across key sectors and regions undertaken to date, and is scheduled for completion by 30 September 2010. PNG has been an active participant in regional scientific programmes to develop better understanding of how climate change will impact the region, including the Australian-led International Climate Change Adaptation Initiative (ICCAI) which aims to produce updated, high resolution regional climate change scenarios by mid to late 2011. These will be a significant improvement on current predictions of climate change in PNG, and it is planned that these will feed directly into Phase I activities.

⁸ The CCDS can be obtained from the GoPNG National Office of Climate Change and Development

Institutional Arrangements and Strategic Coordination

14. **Recent institutional and policy reforms in PNG** aim to provide a revitalised institutional framework to address climate change adaptation activities in PNG. In particular, the establishment in 2010 of the OCCD was motivated by a desire by the PNG Government to ensure clear institutional responsibility for climate resilience. The OCCD will report directly to the Prime Minister. The OCCD will be supported by cross-agency expertise through a National Climate Change Committee (NCCC) and three Technical Working Groups (TWGs), including one on adaptation. The work programmes developed by the TWGs and guided by the CCDS and strategic development planning documents (see Para 17) aim to ensure whole-of-government coordination of adaptation initiatives and clear alignment with broader national development objectives.
15. Key documents that have informed improvements to institutional arrangements and associated capacity building in PNG include:
 - Climate Compatible Development for Papua New Guinea (Draft March, 2010 – endorsed in-principle by the National Executive Council (NEC) on 20 March 2010)
 - Framework for the National Climate Change Strategy and Action Plan (Draft, March 2010)
 - National Climate Resilience Plan (Draft, March 2010)
 - National Climate Change Policy framework (Draft, March 2010).
16. Historically, there has been limited attention provided by Government to climate risk concerns in national and sector policy planning and budgetary processes or in the design of individual projects. However, since 2009 efforts have been progressed to incorporate climate change considerations, primarily at the national strategic level, with the preparation of the CCDS and related strategies and the establishment of the OCCD. Substantial progress has been made at the policy and strategy level, and a commitment has been given to fast-track pilot programs in the future. Nonetheless, the real task of implementing climate change adaptation at the operational level is yet to begin. Climate risk management is still to be integrated into policy, planning, and budgetary processes. There is limited budget to meet even current priority development needs, let alone the cost of adaptation. There is also limited understanding of climate risks and a lack of technical capacity to integrate climate risk management into planning processes. Further, there is no evidence of significant training at national, sectoral, or provincial/local levels to provide this capacity, although the consultations revealed a strong desire for the PPCR to support such efforts.
17. According to GoPNG policy, all climate change activities across the Government should accord with the objectives and approaches outlined in the CCDS, which in turn should align with the Governments overarching development planning documents. These include Vision 2050, the Development Strategic Plan (DSP) (2010-2030) and Medium Term Development Plan. The Vision 2050 document, given its long time horizon, includes a number of key strategic directions for Climate Change and Environmental Sustainability. An important component of the Vision 2050 document is the definition of a number of climate change adaptation objectives, priority activities, key outcomes, key performance indicators and means of verification.

18. The sectoral agencies with responsibilities for climate change adaptation have shown considerable willingness, through consultations undertaken in the preparation of this Phase I proposal, to work collaboratively to implement climate-proofing activities. Given the rapidly emerging institutional and policy landscape in PNG, agencies represented through the National Climate Change Coordinating Committee (NCCCC) and the OCCD Adaptation TWG will play a key role in implementing PPCR. The core agencies responsible for the planning, design and construction of transport infrastructure, coordinated through the Transport Sector Monitoring and Implementation Committee (TSMIC) will also play a key role, given the 'infrastructure plus' focus for PPCR Phase 1 (see Para 24-29).

IV. Cooperation arrangements with other development partners

19. Phase I activities will coordinate with ongoing and future development partner activities through the dual mechanisms of the ongoing DPCCT meetings and coordination mechanisms employed for the PPCR (see Para 18 and Appendix 1). This will ensure coordination with specific climate change resilience building projects in PNG and transport-sector specific projects. Phase I will endeavour to ensure that linkages between the transport and climate-change specific coordination activities are established.

20. There are a number of climate change support activities supported by development partners in PNG. These activities include: Australian support for regional scientific, capacity building and operational adaptation together with extensive support for infrastructure projects through the Transport Sector Support Program (TSSP); UNDP/GEF support for National Communications to the UNFCCC; European Union support for climate change adaptation initiatives focused on rural economic development; ADB support for regional climate change projects through its Pacific Climate Change Program; and World Bank Group support for a number of regional and PNG-specific climate change projects with a focus on policy and capacity building. Further details on development partner activities on climate change, Disaster Risk Reduction (DRR) and infrastructure provision are contained in the Aide Memoire of the First Joint Mission.

21. The suite of development partners activities in PNG and regionally provide a solid platform on which PPCR Phase I activities can be built. This should also ensure synergies between the PPCR and such activities. For example, the synergies with the development of significantly enhanced regional climate change scientific capacity will provide a solid basis for the development of practical decision-focused outputs during PPCR Phase I, outlined in the next Section.

II PPCR LINKAGES TO NATIONAL PROCESSES

22. The recent work on the CCDS – the key national document dealing with climate change including REDD+, low carbon growth, and adaptation issues – and associated institutional reform in establishing the OCCD will provide the context for close alignment of the PPCR with national processes (see Table 1).

23. The PNG Government will align PPCR climate resilience efforts with its Vision 2050, Development Strategic Plan (DSP) 2010-2030, and Mid-Term Development Plan 2011-2015 (see Para 17).

Table 1 Alignment of PPCR Phase 1 Activities to the PNG Climate Compatible Development Strategy

Proposed PPCR Phase I Activities	Alignment with PNG Climate Compatible Development Strategy (section numbers in parentheses)
Enhance institutional capacity for mainstreaming climate change resilience into whole-of-government and sectoral legislation, policies, plans and operational activities of key ministries responsible for provision of infrastructure.	<ul style="list-style-type: none"> • The government recognizes that the policy frameworks, institutional structures and capacity for implementing climate-compatible development measures ... are currently insufficient (5a). • Many aspects of climate-compatible development require existing institutions to develop new capacities and ways of working (5a). • Further research and analysis will be required on issues where scientific understanding is limited (5a). • Effective action on climate change will depend on broad understanding and buy-in across the government and among our people (5a).
Strengthen civil society and private sector engagement and gender considerations of climate change resilience-building.	<ul style="list-style-type: none"> • Climate-compatible development will require broad cooperation across all elements of Papua New Guinean society ... the refinement and successful implementation of the climate-compatible development strategy will require strong coordination and collaboration with private sectors and NGOs (Executive Summary).
Prepare a detailed design for PPCR Phase 2 (investment phase), called Strategic Program for Climate Resilience (SPCR), and related outreach.	<ul style="list-style-type: none"> • Design must be compatible with national development planning including Vision 2050, the Long-Term Development Strategy, and Medium Term Development Plans. This will require close engagement with key departments and development partners (5a).

III. TRENTHENING NATIONAL LEVEL CLIMATE RESILIENCE AND ENHANCING PPCR IMPLEMENTATION

24. The Government of PNG - through analysis of the CCDS, key national development planning documents and consideration of PPCR goals to scale-up and have transformative impact – has chosen a focused mainstreaming approach, namely **'infrastructure plus' (Infrastructure⁺)**. This approach is aimed at building climate resilience of infrastructure and climate proofing of Government infrastructure development projects. The Infrastructure⁺ approach will focus on the infrastructure

sector, while also considering related economic, social and health impacts (including malaria, dengue and vector water-borne diseases), which are important considerations in PPCR infrastructure design and implementation. The PNG Government's Climate-Compatible Development Plan, and supporting strategies including the Interim Action Plan for Climate Compatible Development: Document for Public Consultation⁹ will be the starting point.

25. Under the overall Infrastructure⁺ focus, there are three organizing themes that will drive PPCR design and implementation and ensure coherence in program delivery. These three themes are: a) Enhance institutional capacity for mainstreaming climate change resilience into whole-of-government and sectoral legislation, policies, plans and operational activities of key ministries responsible for provision of infrastructure. Implementation will be supported by investments in evidence-based decision-making, including further analysis of climate change impacts. The flow of targeted, decision-relevant climate change information generated by scientific assessments will also be enhanced; b) strengthen civil society and private sector engagement and gender considerations of climate change resilience-building; and c) Prepare the Strategic Program for Climate Resilience (SPCR) and related outreach. Details of the sub-components of each of these three themes are outlined in the next section.
26. A critical underpinning consideration in ensuring that PPCR is a significant contributor to strengthening climate change resilience in PNG is to deliver practical concrete outputs. The Government of PNG recognises that mainstreaming climate change resilience building measures is a key national development priority and has committed to maximise the uptake of practical hands-on, day-to-day decision-support tools (supported by rigorous scientific input).
27. Key transport subsectors selected for targeting through PPCR are:
 - I. Air transport: airport runways, terminals, and associated navigation aids;
 - II. Road transport: road pavements, drainage systems, and bridges; and
 - III. Sea transport: wharves, ports, jetties, and cargo handling.
28. In addition, infrastructure elements that build the climate resilience of transport infrastructure will also be analysed during Phase I. For example, coastal protection infrastructure, including hard infrastructure (e.g. seawalls, groynes) and soft infrastructure (e.g. mangrove planting), and provision for clean and safe water at the community level will be assessed.
29. Further details on specific potential projects for climate change resilience- building are included in the First Joint Mission Aide Memoire. These will be subject to detailed assessment during PPCR Phase I. During consultations, it was agreed that a consensus-based multi-criteria approach will be used to develop an initial list of infrastructure projects that could be targeted in Phase II, based on national development priorities and practical consideration of the status of Government and MDB investment pipelines. These potential target projects will then be subject to assessments of their sensitivities and potential exposures to climate change impacts. The results of these analyses will be fed into a short-list of Phase II target projects that will then be subject to detailed costing analysis for input into the SPCR.¹⁰

⁹ Released June 2010 and available from the GoPNG OCCD.

¹⁰ Example criteria to develop the initial list of projects will include but not be limited to: transport sector (e.g. air, sea, road); geographic location (e.g. highlands, coastal zone, islands); infrastructure lifecycle stage (e.g. planning, design,

30. PNG PPCR activities are part of the broader PPCR Pacific regional pilot which comprises four components, three country-specific activities in PNG, Tonga and Samoa and region-wide activities covering all 14 Pacific participating countries.¹¹ In addition to PNG-specific PPCR activities, PNG will also benefit from region-wide PPCR activities that include sharing of lessons learned and best practices, capacity – building to support climate resilience in national and regional planning, and other such regional initiatives. In turn, the Pacific region will benefit from lessons and experience gained from Phase I PPCR activities in PNG.

IV. OUTLINE OF KEY ACTION AREAS IN PREPARING THE STRATEGIC PROGRAM FOR CLIMATE RESILIENCE (SPCR)

31. As outlined above (see Para 24) there are three themes under the Infrastructure+ approach. The approach will focus on the infrastructure sector, but also consider related economic, social and health impacts including malaria, dengue and vector water-borne diseases and livelihoods. The GoPNG's Climate-Compatible Development Plan, and supporting strategies, will be the starting point. The three themes under this approach were developed from consensus gained during the PPCR First Joint Mission to PNG (week of 10 May 2010), which involved consultations between government, the mission (ADB/WBG/UNDP/ AusAID), civil society and private sector. They were refined during follow up technical consultations in the week of 12 July 2010. These three themes are described below.

Theme 1: Enhance institutional capacity for mainstreaming climate change resilience into whole-of-government and sectoral legislation, policies, plans and operational activities of key ministries responsible for provision of infrastructure.

32. **Immediate Outcome 1:** Enhanced consideration of climate resilience in the day-to-day planning, budgeting, design and construction activities of PNG Government infrastructure sector agencies (e.g. Transport, water supply).
33. From First Joint Mission consultations, the consensus as to PPCR action areas was to initially focus on infrastructure resilience-building measures for Government and development partner funded investments to enhance climate proofing of Government infrastructure development projects. The initial focus of PPCR will include transport infrastructure. This sector was judged to best fit within the country's priorities and MDB pipelines, and to demonstrate scaled-up and transformative potential. Key agencies within the transport-infrastructure sector targeted by Phase I activities will be: Department of Works; Civil Aviation Authority; PNG Ports and the National Maritime Safety Authority.
34. Theme 1 will focus on a practical set of actions, construction design building standards, codes, guidelines and methods that can be used in the day-to-day work of those in the transport infrastructure sector. This will be a practical approach, underpinned by rigorous and best-practice science.

maintenance, retrofitting); investment source (e.g. Government, ADB, World Bank Group, AusAID); co-benefits/synergies with other projects; and degree of alignment with national development priorities.

¹¹ Fiji Islands, Kiribati, Marshall Islands, Federated States of Micronesia, Palau, Samoa, Solomon Islands, Tonga, Vanuatu, Cook Islands, Nauru, Papua New Guinea, Timor-Leste and Tuvalu

35. The development of rigorous and nationally consistent climate change scenarios will be undertaken through a consensus-based approach by leveraging current regional and national scientific initiatives supported by development partners such as Australia.
36. On-ground testing of mainstreaming methods will be supported through a focused set of vulnerability and adaptation assessments. These will be chosen carefully during Phase I to build on previous assessments and to utilize existing data and lessons learned.
37. Key Outputs under Theme 1 are:
- I. The process of factoring in climate change resilience into key cross-sectoral and sectoral legislation, policies and plans of key ministries and agencies responsible for provision of infrastructure is initiated;
 - II. Capacity building initiated in key ministries responsible for provision of infrastructure, to integrate climate change resilience in budgetary systems, financial allocations and reporting mechanisms, through short-courses, workshops and related training;
 - III. A set of strategic-level nationally consistent, reliable and justifiable scientific scenarios of key climate change to ensure harmonization of climate change resilience-building across sectors initiated; and
 - IV. National guideline and best practice manual for the integration of climate change factors into transport infrastructure planning; and
 - V. Sensitivity, vulnerability and adaptation assessments of initial list of infrastructure projects that could be targeted in PPCR Phase II.

Theme 2: Strengthen civil society and private sector engagement and enhance gender considerations in climate change resilience- building.

38. **Immediate Outcome 2:** Key stakeholder input into climate change resilience- building in the infrastructure sector is maximised, including integration of civil society, private sector and gender issues.
39. Successful mainstreaming of climate change resilience-building in PNG will require broad stakeholder support to address the needs and concerns of key stakeholder groups including women. Consultations revealed a considerable, yet largely untapped, pool of expertise able to contribute to the consideration of climatic factors in planning, design, construction and maintenance of transport infrastructure to meet development objectives. Careful assessment of these capacities will be required to ensure targeted engagement in the drafting of the SPCR and that the PPCR meets key stakeholder needs. This will be tested through the development of a range of information and outreach products, including those targeted at civil society and the private sector.
40. Key Outputs under Theme 2 are:
- I. Capacity needs assessment and development of approaches for effective involvement of civil society in the PPCR;
 - II. Development of information products targeted at civil society and the private sector, including possible support of a national conference on climate resilience building in the infrastructure sector;
 - III. Demonstration of opportunities for private sector engagement in climate change adaptation; and

- IV. Development of approaches for integrating gender concerns into climate change adaptation (through pilot projects: see Output 1.5).

Theme 3: Prepare Strategic Program for Climate Resilience (SPCR) and related outreach.

41. **Immediate Outcome 3:** Design of the SPCR (PPCR Phase II) based on climate risk analyses, policy and institutional assessments, consultation processes and awareness-raising described in components 1 and 2 above. The SPCR will outline a public and private investment program in the Infrastructure⁺ sectors and outline the actions to be supported by CSO. Phase II will focus on implementing the SPCR through actions such as support to policy reform, institutional strengthening and scaling up investments in key sectors.
42. This outcome will include improved understanding of Government (at national, provincial and local levels), civil society and the private sector to address climate resilience in infrastructure planning, design, construction and maintenance for national development objectives.
43. Theme 3 will involve significant outreach activities. Outreach components will possibly include development of a specific web-based information hub for improved access to climate and relevant sector data and analysis. The design of the web system will ensure rapid information sharing with regional climate change adaptation platforms, such as that currently being implemented through the Coordinating Regional Organisations of the Pacific (CROPs) and led by the South Pacific Regional Environment Programme (SPREP). Linkage to global adaptation learning platforms, such as the Asia Pacific Adaptation Network and Adaptation Learning Mechanism, will be included in system design. Outreach will include national learning events, linked to activities undertaken under Themes 1 and 2.
44. Key Outputs under Theme 3 are:
 - I. A Strategic Program for Climate Resilience (SPCR) for PPCR Phase II including design of public and private actions for SPCR in priority sectors; and
 - II. Web-based platform of Phase I products (including all information products) and learning events that can also be shared on regional adaptation learning platforms.

V. Main PPCR Implementation Risks and Mitigation strategies

45. There are risks to PPCR implementation in PNG. These include (with corresponding mitigation actions shown):
 - I. Weak coordination between implementing agencies. Mitigation strategy: promote effective coordination between agencies through OCCD Adaptation Technical Working Group and related mechanisms.
 - II. Low willingness of key agencies to work together in full cooperation to achieve Phase I objectives. Mitigation strategy: Utilize existing coordination mechanisms

established at national levels under the OCCD Adaptation Technical Working Group and related mechanisms.

- III. Rapidly evolving institutional landscape for climate change adaptation in PNG is not sufficiently stable or developed to allow effective coordination and implementation support. Mitigation strategy: Support GoPNG efforts to ensure OCCD is established and functional prior to PPCR Phase I implementation, or use alternative arrangements identified in the event OCCD is not established and functional.

VI. Implementation Modalities for Phase 1

46. The OCCD will be the Implementing Agency (IA) responsible for delivery of PPCR Phase I. DNPM and DEC will provide program monitoring and oversight through standard Government financial and performance reporting arrangements.
47. OCCD Director of Adaptation will be the PPCR National Programme Manager (NPM) for Phase I. The NPM will work with his/her Adaptation Analyst staff to ensure effective delivery of the PPCR in PNG.
48. The Government of PNG is committed to achieving the outcomes of the PPCR, hence its commitment to ensuring a whole-of-government approach from the highest level of government, the Prime Ministers Office, in accordance with the Prime Minister's role driving climate change strategies and plans at the national level. Key infrastructure agencies, being the frontline agencies in project implementation, will also be fully engaged through the NCCC, Adaptation TWG, TSMIC and related mechanisms.
49. In addition to Government consultation arrangements, a partnership mechanism will be established to ensure that non-State actors, such as civil society and private sector, are able to fully participate in development of the SPCR during PPCR Phase I.
50. ADB, as MDB lead and Executing Agency (EA), will continue to coordinate and engage with the PNG Government and stakeholders. Close coordination between the Multilateral Development Banks (MDBs) (ABD/WBG) and other development partners including AusAID and UNDP will be achieved through the climate change and transport-sector coordination mechanisms shown in Appendix 1.

VII. Budget and Timetable for Phase 1 Activities¹²

51. The budget, Assignment of Responsibilities and timetable of activities for Phase I activities are shown below.

¹² Note that PPCR support will be complementary to efforts by other government and donor initiatives to achieve the outputs in each theme.

Table 2 Phase 1 Budget and Assignment of Responsibilities

Theme/outputs	Budget (\$US)	Lead Responsibility	
		MDB Lead	PNG Ministry
Theme 1: Enhance institutional capacity for mainstreaming climate change resilience into whole-of-government and sectoral legislation, policies, plans and operational activities of key ministries responsible for provision of infrastructure.			OCCD, Transport Sector Agencies
Outputs:			
1.1 The process of factoring in climate change resilience into key cross-sectoral and sectoral legislation, policies and plans of key ministries and agencies responsible for provision of infrastructure is initiated;	50,000	ADB, WB	
1.2 Capacity building initiated in key ministries responsible for provision of infrastructure, to integrate climate change resilience in budgetary systems, financial allocations and reporting mechanisms, through short-courses, workshops and related training;	60,000	ADB, WB	
1.3 A set of strategic-level nationally consistent, reliable and justifiable scientific scenarios of key climate change to ensure harmonization of climate change resilience-building	25,000	ADB, WB	
1.4 National guideline and best practice manual for the integration of climate change factors into transport infrastructure planning; and	50,000	ADB, WB	
1.5 Sensitivity, vulnerability and adaptation assessments of initial list of infrastructure projects that could be targeted in PPCR Phase II.	75,000	ADB, WB	
Sub-total	260,000		
Theme 2: Strengthen civil society and private sector engagement and gender considerations of climate change resilience building.			OCCD, Transport Sector Agencies
Outputs:			
2.1 Capacity needs assessment and development of approaches for effective involvement of civil society in the PPCR	20,000	ADB, WB	
2.2 Development of information products targeted at civil society and the private sector including possible support of a national conference on climate resilience building in the infrastructure sector	10,000	ADB, WB	
2.3 Demonstration of opportunities for private sector engagement in climate change adaptation.	35,000	ADB, WB	
2.4 Development of approaches for integrating gender concerns into climate change adaptation (through pilot projects: see Output 1.5)	10,000	ADB, WB	
Sub-total	75,000		
Theme 3: Prepare Strategic Program for Climate Resilience (SPCR) and related outreach.			OCCD, DPNM
Outputs:			
3.1 A Strategic Program for Climate Resilience (SPCR) for PPCR Phase II including design of public and private actions for SPCR in priority sectors and regions	70,000	ADB, WB	
3.2 Web-based platform of Phase I products (including all information products) and learning events that can also be shared on regional adaptation learning platforms.	15,000	ADB, WB	
Sub-total	85,000		
Total PPCR Phase I cost			
Themes 1-3	420,000		
Project Management	50,000		
Equipment	9,000		
Contingency (5% of total)	21,000		
Grand total	500,000		

Table 3 Schedule for Implementation of Phase 1 of the PPCR

Theme/outputs	1	2	3	4	5	6	7	8	9
Theme 1: Enhance institutional capacity for mainstreaming climate change resilience into whole-of-government and sectoral legislation, policies, plans and operational activities of key ministries responsible for provision of infrastructure.									
Outputs:									
1.1 The process of factoring in climate change resilience into key cross-sectoral and sectoral legislation, policies and plans of key ministries and agencies responsible for provision of infrastructure is initiated;									
1.2 Capacity building initiated in key ministries responsible for provision of infrastructure, to integrate climate change resilience in budgetary systems, financial allocations and reporting mechanisms, through short-courses, workshops and related training;									
1.3 A set of strategic-level nationally consistent, reliable and justifiable scientific scenarios of key climate change to ensure harmonization of climate change resilience-building across sectors initiated; and									
1.4 National guideline and best practice manual for the integration of climate change factors into transport infrastructure planning; and									
1.5 Sensitivity, vulnerability and adaptation assessments of initial list of infrastructure projects that could be targeted in PPCR Phase II.									
Theme 2: Strengthen civil society and private sector engagement and gender considerations of climate change resilience building.									
Outputs:									
2.1 Capacity needs assessment and development of approaches for effective involvement of civil society in the PPCR									
2.2 Development of information products targeted at civil society and the private sector including possible support of a national conference on climate resilience building in the infrastructure sector									
2.3 Demonstration of opportunities for private sector engagement in climate change adaptation.									
2.4 Development of approaches for integrating gender concerns into climate change adaptation (through pilot projects: see Output 1.5)									
Theme 3: Preparation of the Strategic Program for Climate Resilience (SPCR) and related outreach									
Outputs:									
3.1 A Strategic Program for Climate Resilience (SPCR) for PPCR Phase II including design of public and private actions for SPCR in priority sectors and regions									
3.2 Web-based platform of Phase I products (including all information products) and learning events that can also be shared on regional adaptation learning platforms.									

Appendix 1 PNG Climate Change and Transport Sector Coordination Mechanisms

The coordination mechanisms for the delivery of climate change programmes and transport-sector programs will include those established through the CCDS and the Transport Sector Coordination Monitoring and Implementation Committee (TSCMIC).

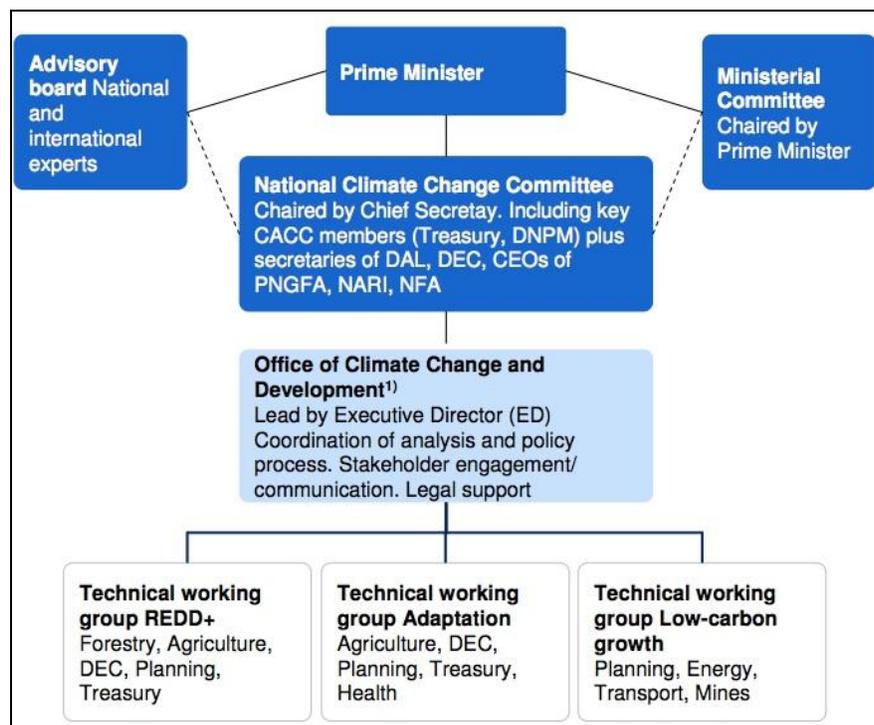


Figure 1 PNG climate change coordination mechanisms

National Climate Change Coordination Committee (NCCCC)

- Chief Secretary (Chair)
- Secretary, Department of Finance,
- Secretary, Department of Treasury
- Secretary, Department of National Planning and Monitoring
- Secretary Attorney General and Justice, and Provincial and Local Level Government Affairs
- Secretary, Department of Agriculture and Livestock
- Secretary, Department of Environment and Conservation
- CEO, PNG Forest Authority
- CEO, National Agriculture Research Institute
- CEO, National Fisheries Authority.

Adaptation Technical Working Group (TWG)

Members are drawn from operational and technical staff across GoPNG agencies. Agencies that are invited to attend the TWG at present are listed below.

- Department of Environment and Conservation (Chair)

- Department of Treasury
- Department of National Planning and Monitoring
- Attorney General and Justice, and Provincial and Local Level Government Affairs
- Secretary, Department of Agriculture and Livestock
- PNG Forest Authority
- National Agriculture Research Institute
- National Fisheries Authority
- Department of Health
- Department of Transport (PNG National Weather Service)
- Department of Works
- National Disaster Center
- AusAID
- UNDP.

Development Partners Climate Change Taskforce (DPCCT)

Members are drawn from both Development Partners and senior staff across GoPNG agencies – including agencies represented on the NCCCC and Adaptation TWG. The Development Partners invited to attend the DPCCT are listed below.

- European Union
- Japan
- United Kingdom
- Australia
- New Zealand
- ADB
- WBG
- UNDP.

Transport Sector Coordination Monitoring and Implementation Committee (TSCMIC)

- Secretary, Department of Transport (DoT) (Chair)
- Secretary, Department of National Planning and Monitoring
- Secretary, Department of Treasury
- Secretary, Department of Works (DoW)
- Managing Director, PNG National Airports Corporation (NAC)
- CEO, PNG Ports Corporation Ltd
- General Manager / CEO, National Maritime Safety Authority (NMSA)
- CEO, National Roads Authority (NRA)
- Executive Director, National Road Safety Council
- Acting CEO / Director Civil Aviation Authority
- CEO, PNG Air Services Limited
- Minister Counsellor, AusAID.