

PILOT PROGRAM FOR CLIMATE RESILIENCE

Summary - Project Concept Note for the Use of Additional PPCR Resources

1. Country/Region:	Papua New Guinea (PNG)	2. CIF Project ID#:	XPCRPG067A
3. SPCR endorsement date:	14 November 2012		
4. Project title:	Building Resilience to Climate Change in Papua New Guinea (PNG)		
5. Type of PPCR investment	<i>Private:</i>	<i>Public: X</i>	<i>Mixed:</i>
6. Funding request (in USD million total) (including preparation grant):	<i>Grant:</i> US\$5 million	<i>Loan:</i>	
7. Financing will be used for:	a – topping up an approved PPCR project/program		<input type="checkbox"/>
	b – topping up a PPCR project/program in preparation for Sub-Committee approval		√
	c – a new PPCR project/program		<input type="checkbox"/>
8. Implementing MDB:	Asian Development Bank		
9. National executing agency:	Office of Climate Change and Development (OCCD)		
10. MDB PPCR focal point and project/program task team leader (TTL):	<i>Headquarters-PPCR Focal Point:</i> Cinzia Losenno Senior Environment Specialist (Climate Change Adaptation) Regional and Sustainable Development Department closenno@adb.org	<i>TTL:</i> Maria Lourdes Drilon Senior Natural Resources Economist Pacific Department mldrilon@adb.org	
11. Project Description (including objectives and expected outcomes):			
<p>Building Resilience to Climate Change in Papua New Guinea (the project) aims to achieve transformational change in development planning and support the Climate Compatible Development Strategy (CCDS)'s goal to make PNG's development investments climate resilient. The project is also aligned with PNG Vision 2050, the Development Strategy Plan (DSP), the Medium Term Development Plan (MTDP), and the Public Investment Plan (PIP). The overall outcome of the project will be the enhancement of PNG's resilience to climate change. The impact will be improved access to resources, knowledge, and tools, and more climate resilient infrastructure at the national, sector, district, and community levels. These are prerequisites for effective social development, food security, and overall poverty reduction. The project will contribute to the SPCR with the following mutually reinforcing outputs: (1) enhanced capacity of communities to address priority climate change risks (vulnerability mapping, early warning systems and community emergency preparedness, and community adaptation) and enhanced access to climate change adaptation finance (climate change trust fund); (2) support for pilot adaptation measures in vulnerable communities through investments in priority sectors such as food security, and critical infrastructure (e.g. ports/wharves/jetties) under an enabling environment for climate proofing and strengthening approaches to design, construction, and operation and maintenance; and (3) establishment and operationalization of the project management unit (PMU).</p>			

Expected results under Output 1 would be: (i) the establishment of a pool of trained and qualified specialists to support climate change risk management and mainstreaming activities at national and sector levels and within vulnerable communities; (ii) legal establishment and effective operation of PNG's Climate Change Trust Fund, and the establishment of a small grants program to support priority adaptation projects for farmers, fisherfolk, and vulnerable communities, in particular women; (iii) coastal fisheries that are more resilient to impacts of climate change; (iv) critical infrastructure less vulnerable to impacts of climate change and disasters; and (v) increase in climate resilience of vulnerable communities in remote islands and atolls made. Result of Output 2 would be enhanced access to resources to (a) improve food processing, preserving, and storage systems in communities vulnerable to food insecurity and (b) increased resilience of critical coastal infrastructure including ports/wharves/jetties (and associated infrastructure) to climate variability and change through climate proofing. Expected result of Output 3 would be strengthened capacity and fully functional and effective OCCD supported by an effective PMU.

Current status of project: The PPCR Sub-Committee endorsed the PNG SPCR in November 2012 for a US\$25 million in grant, including US\$750,000 for project preparation. Funded by PPG, ADB approved on 2 May 2013 a project preparation technical assistance (PPTA) for \$750,000 to design the PNG SPCR implementation project for which a technical team was mobilized in mid-August 2013. The PPTA's inception meeting was held in Port Moresby on 17-20 September 2013 and included representatives from ADB, the PPTA team, national stakeholders, and development partners. The outcome of the meeting included (i) agreement on the overall scope of the ensuing project; (ii) endorsement of the Government's to request additional allocation of US\$5 million in PPCR resources to further strengthen the outcome and impact of the project; (iii) a draft preliminary Monitoring and Reporting (M&R) work plan to be further developed during the preparation of feasibility study; (iv) agreement to form a sub-technical working group under the adaptation technical working group constituted by OCCD to design the architecture of the Climate Change Trust Fund (CCTF) together with the required draft legislation for its constitution and enactment; and (v) endorsement of recommendations from the Department of National Planning and Monitoring (DNPM) to assign core staff to the project management unit (PMU) to participate in the detailed design of the project and facilitate implementation, once effective. Follow up missions have reported that the design of project is in progress; the architecture of the CCTF has been drafted and is under review by the government; the required legislation to establish the CCTF is being drafted for consideration by the government. Vulnerability assessment and the social and environmental due diligence was conducted during field visits to Kwaraiwa, Wialoki and the Carteret islands in September 2013. Vulnerability maps were developed highlighting the risks, geographic and demographic profiles and community capacity assessment completed and analyzed and focus group discussions were conducted. The Gender Action Plan (GAP) has been developed for implementation by the PMU. Two social/gender specialists will be responsible for incorporating the GAP into project planning, implementation, monitoring frameworks, including community consultations, capacity building and establishment of gender disaggregated indicators for performance monitoring. An environment assessment and review framework was also developed with procedures, guidelines, and requirements for candidate subprojects. It was agreed that within the PMU, an Environment Social Unit (ESU) will be established to oversee all social and environmental safeguards assessment and review activities. The ESU will include a national environmental management specialist and a social safeguards specialist.

Use of additional allocation: One of the objectives of the Project is to strengthen design, operation, and maintenance of selected vulnerable ports/wharves/jetties (and associated infrastructure) in order to improve the resilience of vulnerable critical infrastructure to climate change impacts. Under the current financing of \$25 million, the Project will support site-specific assessment of climate change risks on ports, wharves and jetties, and build capacity in PNG Ports Corporation at the provincial/district levels to effectively manage risks to such critical infrastructure. With additional financing of \$5 million, it would be possible to go further and demonstrate the potential for climate proofing infrastructure through a concrete case study of improved design and construction, using selected ports/wharfs and other coastal infrastructure.

12. Activities to be financed from the additional resources (including breakdown of funding by component, as appropriate) :

The additional allocation will be used climate proofing of the selected climate vulnerable coastal infrastructure such as Samarai wharf in Milne Bay province, which will entail the following activities:

Item Description	Amount (USD)
a. General requirements (include among others materials testing and provision of and support facilities for consultants)	100,000
b. Upgrading of bulkhead	1,200,000
c. Upgrading of concrete deck	2,750,000
d. Rehabilitation of concrete pile cap and provision of concrete jacket	250,000
e. Rehabilitation of Steel tubular piles	250,000
f. Miscellaneous works	100,000
g. Detailed Engineering Design	350,000
Total	5,000,000

13. Briefly summarize how the proposed project further advances the objectives of the endorsed SPCR:

PNG's coastal infrastructure is vulnerable to sea-level rise and extreme climate events. As rainfall is projected to increase, and sea-level rise is projected to continue, increased incidences of coastal flooding will cause damage to coastal infrastructure. Nationwide, approximately 4,500 kilometers of the total 17,100 kilometers of shoreline are expected to be moderately to severely inundated with increasing climate change, affecting up to 30% of PNG's population. Ocean acidification is projected to continue causing loss of coral reefs, which serve as natural coastal barriers, further increasing the exposure of the coastal infrastructure to extreme events.

The Project will support the development of climate change risk management policy and strategy for the PNG Ports Corporation and provincial/district governments, site specific climate change risk and vulnerability assessments for coastal infrastructure, revised building codes and engineering design criteria relevant to the design, location, building, operation and maintenance of ports/wharves/jetties and associated infrastructure, and enhanced institutional capacities of PNG Ports Corporation assets and operations. These benefits would be enhanced significantly through the demonstration of improved design and construction of selected coastal infrastructure. It is therefore proposed to undertake climate proofing of selected infrastructure vulnerable to sea level rise and climate extremes. From the inventory of marine infrastructure of small wharves and jetties operated by provincial/local governments, the Samarai wharf was identified as a potential application of climate risk management in the design and construction of critical infrastructure.

Samarai wharf is the second largest marine facilities in Milne Bay province (next to Alotau Port) and is considered vital to the majority of the southeastern islands in Milne Bay province. With a cargo throughput of 10,000 tonnes, the wharf was developed by PNG Ports Corp. Ltd. and was turned over to the provincial government of Milne Bay several years ago. The operation and maintenance of the wharf and associated facilities is currently undertaken by the provincial government of Milne Bay province.

Due to the archipelagic nature of PNG and inadequate transport network linking the different provinces and islands, wharves and jetties have become vital in moving goods and services. The Samarai wharf is a medium scale wharf that is partially exposed to storm surges. The wharf services the whole island of Samarai and also the six big islands surrounding Samarai (islands of Rogeia, Siraba, Sideia, Kwato, Gesila and Ito). The hinterlands of Samarai wharf include some municipalities in the mainland PNG not connected by road from Alotau. The wharf services about 30,000 people in its hinterlands. Given this strategic importance of the wharf, and recognizing its high exposure to risks posed by climate extremes, climate proofing of the wharf will provide for continued services to the people and to the island as a whole, especially during destructive cyclones. Depending on availability of funds, additional coastal infrastructure such as additional wharves and jetties may be included for climate proofing in selected areas benefiting the most vulnerable communities.

14. Expected Key Results from the use of the new resources		
Result	Indicators (consistent with approved PPCR Results Framework)	
a. Improved climate resilient design and construction of coastal infrastructure under an enabling policy environment	Quality and extent to which climate responsive instruments and tools are developed and tested for climate proofing coastal infrastructure	
b. Improved mobility of people and connectivity to facilitate exchange of goods and services	Extent to which vulnerable households, communities, businesses and public sector services use PPCR supported tools and instruments in the design and construction of climate proofed coastal infrastructure to respond to climate variability and/or climate change	
c. Increased economic activities to support the livelihood and social needs of the communities	Number of people supported by the additional allocation for climate proofed infrastructure to better cope with the effects of climate change through percentage or total quantitative increase in mobility of people, goods and services and percentage or total quantitative reduction of climate change induced losses % Increase in economic activities (as % of GDP)	
d. Enhanced capacities to manage climate change risks	Number of persons recruited and trained to operate various climate resilient subprojects, including CCTF and SGP as evidence of strengthened government capacity and coordination mechanism to mainstream climate resilience	
15. Expected Co-Financing for the project or program ¹ :		
	<i>Amount (USD million):</i>	<i>Type of contribution:</i>
• Government (provincial government)	0.025	Budgetary allocation
• MDB		
• Private Sector (please specify)		
• Bilateral (please specify)		
• Others (please specify)		
Total	0.025 (for 5 years)	
16. Expected Project Timeframe		
Project Preparatory Technical Assistance (PPTA): August 2013 – June 2014 Expected date of PPCR Sub-Committee approval of the ensuing Project: July 2014 Expected date of approval of the Project by the ADB Board of Directors: October 2014		
17. Other Information:		
<i>Selection Criteria</i> Selection criteria for climate proofing coastal infrastructure include the level of vulnerabilities to climate extremes and the consequent risks to the regional economy (traffic /throughput in '000 tons). Samarai wharf was selected for pilot demonstration on account of (a) economic significance and high level of risk to climate extremes, (b) magnitude of passenger traffic (with use of dinghy & ferry), and (c) heritage value of Samarai (it was former district headquarters for the Milne Bay before the advent of provinces. Moreover, it was a hub for		

¹ This includes: in-kind contributions (monetary value), MDB loan or grant, parallel financing, etc.

many islanders and a government nerve-centre for Milne Bay District in the south eastern tip of PNG). Willingness of provincial and district government to cooperate and provide budgetary allocation for co-financing was also a contributory factor, as well as the support of the affected communities. Initial consultations were held in Port Moresby with DNPM, PNG Ports Corporation, and OCCD. The prefeasibility study of Samarai wharf will be completed during the project preparation stage.

Stakeholder Consultation

The project was developed through an extensive broad-based national consultative process. The process included assessments by sector thematic working groups, community consultations, a series of focus group meetings, and national consultative workshops that included representatives from key government agencies, and vulnerable communities.² The consultative process identified areas of support for PNG's current national approach to climate change adaptation. A similar process was employed in the selection of infrastructure for climate proofing. Stakeholder consultation was undertaken at the national, provincial and district level as well as with beneficiary stakeholders. Following the endorsement by technical working group for additional PPCR financing, consultations were undertaken with the PNG Ports Corporation, the concerned provincial and district agencies, and other stakeholders, and priority infrastructure for climate proofing identified. As stated earlier, willingness of the provincial and district governments and the affected communities has been a contributory factor in the selection of the wharf for climate proofing. Similar processes will be employed for the selection of additional sites should funds permit. The active, inclusive process of working towards a common purpose with the aim of fostering relationships of trust and build social capital among clans, generations, and genders has been an important element of the consultation process. All activities will promote the inclusion of poor and vulnerable groups, especially women and the youth, through the implementation of a participatory process at the community level.

Gender Dimensions

The review of climate change risk management and design /construction codes for PNG Ports and provincial governments demonstrate that specific needs of women and children have been considered. For example, wharves used for passenger embarkation have hygienic toilets and safe waiting areas for mothers and children. Women and girls living in Samarai and the surrounding islands working on food processing, fisheries and tourism will especially benefit from better access to markets and services, increase in food availability including marketing surpluses and livelihood opportunities, and overall promotion of their economic empowerment. Reliable maritime infrastructure is an essential prerequisite for trade, economic development, health services and poverty reduction in PNG. In Milne Bay only 21% of the population lives within 5 km of a national road, so sea transport facilities remain extremely important.

Knowledge Management

A project knowledge depository will be established in OCCD with dedicated web page which will disseminate information on all project activities and report on its progress; coordinate knowledge management activities carried out under the project including the GIS database, project baseline data, targets and progress made towards achieving project targets, best practices and guidelines on climate change risk management, and application of tools including climate proofing of infrastructure. The project will also pilot and demonstrate a strategic risk-based approach to building climate resilience in vulnerable communities/sectors that can be replicated in other vulnerable communities and sectors, and through the Regional SPCR, to other vulnerable Pacific island developing countries.

² Department of Agriculture and Livestock, Department of Environment and Conservation, Department of Finance, Dept. of Lands and Physical Planning, Department of Nat. Planning and Monitoring, Department of Provincial and Local Level Government Affairs, Department of Transport, Department of Treasury, Department of Works, National Agriculture Research Institute, National Department of Health, National Fisheries Authority, National Research Institute, National Weather Service, Office of Rural Development, Port Moresby Geophysical Observatory, University of Papua New Guinea, National Maritime Safety Authority.