

Environmental Monitoring Report

Monthly Report
February – April 2015

Papua New Guinea: Pilot Border Trade and Investment Development Program

Prepared by Border Development Authority for the Government of PNG and the Asian Development Bank.

This environmental monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

Wutung Pilot Border Trade & Investment Development Project



**Environmental Monitoring Report
Feb-April 2015**

Environmental Monitoring Report (Feb-April) 2015

Heading/Section	Contents
Introduction	<p>The Wutung Pilot Border Trade and Investment Development Project in the West Sepik Province consists of the following three components:</p> <ul style="list-style-type: none">(I) construction of border facilities at Wutung;(II) capacity development; and(III) a social development program. <p>These components remain the same as originally conceived in the Project Design and these are being implemented by the Border Development Authority (BDA).</p> <p>The Project is intended to produce the following outputs:</p> <ul style="list-style-type: none">(i) border facilities including customs, immigration, and quarantine facilities; resident housing, roads, car parks, and facilities for public convenience such as kiosk, and bus shelter;(ii) one stop service office under BDA for promoting trade investment, and tourism for WSP;(iii) broadened human capital base with 500 individuals trained in commerce and trade; and(iv) improved human development in the five border villages. <p>The Environmental Management Plan (EMP) for the Wutung Border Trade & Development Project was designed to determine the extent of variations and changes in the levels of pollutions in the environment surrounding the project site and the indicators considering the implementation or operation of the project. The EMP was based on the internationally accepted environmental management and conservation practices, existing environmental laws and regulations of the Government of Papua New Guinea.</p> <p>The Environmental Management Plan (EMP) is designed to ensure that the mitigating measures recommended to addressing the adverse impacts of the project on environment, life and property are properly followed while positive impacts are enhanced to gain maximum benefit. This Environment and Monitoring Report (EMR) forms the bases of the EMP.</p>

<p>Monitoring Activities</p>	<p>Environmental monitoring has been performed by personnel from the Border Development Authority and the construction Contractors for Contract 2113 (Covec PNG Ltd).</p> <p>Following the substantial completion of the Border Office Complex in November 2014, and the conclusion of the engagement of the Supervising Consultant (A&L of Australia), BDA through the PMO office took over the role of environmental monitoring. Monitoring is performed continuously with reports prepared by the PMO on a monthly basis and submitted to ADB. BDA will prepare a summary report each month or quarterly to highlight any areas of concern or any issues which may have arisen during the month/quarter.</p>
<p>Works in Progress</p>	<p>Noted substantial completion of the two main office complexes, the Quarantine building, the bonded warehouse, vehicle inspection, wash bay, five new H65 houses, guard houses, gen-set houses, bus-stop, a crafts market, all electricity and communications systems, and utilities. The office furniture and electrical appliances including communications and the V-Sat for internet have been purchased and installed.</p> <p>The contract is currently under defects liability period for a period of 12 months from the date when the Certificate of Completion was issued.</p> <p>Presently, BDA is monitoring some of the noted environmental issues affecting the project following exceptional heavy rains over the first quarter of 2015.</p> <p>Exposed gravel surfacing washout has occurred as a result of Heavy rains on unseal access road and car-parks within the new office complex as this item was deleted from the original scope due to no sealing Contractor wanting to mobilised to site for a small volume of work in the province. The scope was deferred pending a Sealing Contractor to come to Vanimo under a separate contract arrangement. In view of the urgency to address the erosions, BDA opted to remedy the situation by sourcing a sealing contractor from Indonesian side of Jayapura to carry out the sealing work under a RFQ arrangement.</p> <p>BDA agreed to start operating some of the new facilities before the actual opening of the Multi-Million Kina Project.</p>

	<p>For progress photographs please refer to the Quarterly Progress Report</p>
<p>Monitoring Results and Actions Required</p>	<p>The contract for Supervising Consultants (Alexander & Lloyds) expired in November last year (2014) and BDA has taken the role of both Supervising the Project and Monitoring the Environmental Impacts of the project incurs on the surroundings. Over the expected wet weather period from December 2014 to March 2015, heavy rains and flash flooding occurred on site resulting in gravel loss and surface washout sedimentation on unseal gravel surfacing into the drainage system. The line drains disposed over the cliff has caused washout of coronus steeped cliff surfacing over hanged, causing environmental damages to food and garden areas at the foothill of Wutung Villages. The main lined drain runoff cuts into traditional lands by less than 5 meters of which the Contractor was denied access by the traditional landowners. BDA is now addressing the issues with the Landowners to get access to site in order to address the drainage disposal over the cliff.</p> <p>Landslips have occurred over the Water supply line, resulting in the major slip occurring at the base of the 90 kilolitres tank, which is likely to result in relocation of storage tank and pipe relocation. A design review is being done to remedy the situation on site.</p> <p>Disposal of domestic wastes from the Office complex and staff housing and camp site requires more frequent attention to avoid unpleasant odours and possible health risks to travelling public and occupants of the camp. BDA proposed to acquire a customary piece of land for waste disposal. Ward Development Committee has identified a parcel of land yet to be surveyed by the Sandaun Administration lands Division unit. BDA is currently organising a Contractor to carry out waste collections and disposal on site. The waste disposal site currently used is found to be less than satisfactory with wastes being dumped at random. These conditions are not sanitary and there is a risk of contamination of ground water resources and spread of disease through vermin, insects, and human contact.</p>
<p>Summary and Conclusions</p>	<p>Heavy rain falls towards the end of April 2015 resulted in some major environmental impacts in the quarter affecting contract CSTB 2113 and the Social Projects both the Water Supply and the Sanitation. The continuous heavy rain resulted in major erosions and land slips.</p> <p>As a result of that BDA urgently needs to engage a sealing Contractor to carry out the sealing works on site before more compact soil and gravels are weathered/eroded and creating potholes. BDA also needs to relocate the 90 KL tank for the water supply intake to another location due to the land slip.</p>

	Every other Environmental issue are under control and monitored well by BDA.
--	--

Monitoring Environmental Management Checklist (Feb-April) 2015

Item/Impact		Action/Mitigation Measure	Mitigation Implementation		Impacts Observed/Location	Action Required (incl. by date)	Contractor Response
Item Description	Environmental Impacts		Yes/No	Effectiveness (1 to 5)			
Operation of construction plant & equipment creating noise	1-Noise in community	1-Maintain construction vehicles exhaust systems	Yes	3	Contractor's vehicles and equipment have all been purchased brand new and have been maintained in very good condition. Vehicle exhaust systems are all in perfect condition and there is no evidence of noise or air pollution from exhaust emissions. The Contractor works to agreed hours and the site and surrounding area is not disturbed by the Contractor's activities outside these hours. Both BDA & Contractor not in good terms with villagers to agree on works schedule. The Contractor has now provided appropriate safety equipment for the employees. Employees without appropriate equipment will no longer be allowed on site.	Nil Contractor to provide appropriate safety equipment for all personnel working on the Project. Replacement equipment to be provided whenever necessary. Enforcement of safety requirements to be followed up.	Personal safety equipment provided and being used by employees.
	2-Impact on construction workers	2-Contractor developed a schedule of operations with village chiefs & BDA to identify days of no work & hours for certain activities	Yes	3			
		3-Agree works schedule with village leaders	No	3			
		4-Provide workers with noise abatement equipment	Yes	3			
		5-Complaints addressed by Contractor	Yes	3			

Effectiveness rating; 1 = non-compliant - corrective actions required; 2 = partial compliance – corrective or alternative actions required; 3 = adequately implementing CEMP measures; 4 = more than adequately implementing CEMP measures; 5 = excellent compliance, incl. measures in addition to CEMP

Item/Impact		Action/Mitigation Measure	Mitigation Implementation		Impacts Observed/Location	Action Required (incl. by date)	Contractor Response
Item Description	Environmental Impacts		Yes/No	Effectiveness (1 to 5)			
Works in or adjacent to rivers & streams & in the vicinity of the coast	1-Construction materials are washed out into receiving waters 2-Reduction in river & coastal water quality	1-Use of silt control devices & sediment traps/fences during construction activities	Yes	3	Runoff from the site is minimal mainly due to the very porous nature of the limestone material underlying the entire site. Most rainfall is absorbed directly into the ground and there is very little surface runoff from the site. The access track to the area at the south of the administration complex has been completed. Drainage and erosion control measures now need to be addressed. Recent heavy rain falls in Vanimo have eroded and weathered most unsealed soil base at the site (CSTB 2113). There is no evidence of pollution of adjacent streams, the ocean or the underground water reserves. All liquids and materials on site are stored appropriately in secure and safe areas. Gravel and boulders have been extracted from local streams for construction of retaining walls and lining of absorption pits for septic tank installations. This has not caused any erosion of streams and the frequent flooding during wet season rainfall and high bed load in the streams has resulted in frequent replenishment of extracted material.	Nil Contractor to complete clean up, drainage and erosion control measures. BDA to engage a sealing contractor ASAP to seal off all unsealed soil base.	
		2-Minimize size & duration of cleared areas & undertake progressive re-vegetation of cleared/work areas	Yes	3			
		3-Avoid clearing activities & excavation activities during rainy season where possible	Yes	3			
		4-No discharges to rivers, surface waters, intertidal or coastal areas	Yes	3			
		5-Appropriate storage & disposal of spoils	Yes	3			
		6-Abstraction from, or pollution of water resources & coastal waters not permitted	No	3			
		7-All waste materials & chemicals stored properly away from the coast, surface waters or rivers	Yes	3			

Effectiveness rating; 1 = non-compliant - corrective actions required; 2 = partial compliance – corrective or alternative actions required; 3 = adequately implementing CEMP measures; 4 = more than adequately implementing CEMP measures; 5 = excellent compliance, incl. measures in addition to CEMP

Item/Impact		Action/Mitigation Measure	Mitigation Implementation		Impacts Observed/Location	Action Required (incl. by date)	Contractor Response
Item Description	Environmental Impacts		Yes/No	Effectiveness (1 to 5)			
Clearing, grubbing, cut & fill activities	1-Soil erosion & silt generation	1-Stockpiles on unused or non-agricultural land	Yes	3	<p>A small amount of backfilling work was performed on the Contract 2113 site during February. The work did not result in any erosion or sediment and there was no undue runoff from the site to surrounding areas. Material was obtained from the coronus pit to the east of the Contractor's camp and stockpiled on site. This activity did not result in any uncontrolled sedimentation or contamination of water courses. The retaining wall contains any erosion within the site and there has been no sediment escape from the site.</p> <p>Gravel extraction from streams has stopped for Contract 2113 due to its completion. This work is used to be performed under the supervision of the Contractor's environment officer and to date no evidence of erosion of stream banks or beds as a result of this work.</p> <p>Borrow area is well managed and that undue erosion or sedimentation is not occurring as a result of the borrow operations.</p>	Nil	
	2-Sediment contamination of rivers	2-Erosion monitored & rapid stabilization done as required for unexpected events	Yes	3			
	3-Gravel extraction from rivers leads to erosion	3-Slope areas re-vegetated as quickly as possible	Yes	3			
		4-Uncontrolled tipping of soils or any other materials not permitted	Yes	3			

Effectiveness rating; 1 = non-compliant - corrective actions required; 2 = partial compliance – corrective or alternative actions required; 3 = adequately implementing CEMP measures; 4 = more than adequately implementing CEMP measures; 5 = excellent compliance, incl. measures in addition to CEMP

Item/Impact		Action/Mitigation Measure	Mitigation Implementation		Impacts Observed/Location	Action Required (incl. by date)	Contractor Response
Item Description	Environmental Impacts		Yes/No	Effectiveness (1 to 5)			
Accidental Spills of hazardous substances & need for emergency response	1-Hydrocarbon & chemical leakage/spills harm physical & biological resources 2-Accidents placing people at risks	1-Detailed Emergency Response Plan to cover hazardous materials/oil storage, spills & accidents	No	2	Contractor's response plan has not been sighted There have not been any hydrocarbon or chemical spills observed on either Contract. All liquids and chemicals have been stored in secure and safe storages with appropriate bunds and safety precautions. All vehicles and plant have been maintained in good working condition with no evidence of leaks or loss of liquids into the environment.	BDA to request Contractor to provide copy of response plan.	
		2-Appropriate storage of chemicals	Yes	3			
		3-Ensure all construction vehicles & plant are well maintained	Yes	3			
		4-Accidents reported to Police & Provincial Administration within 24 hours	Yes	3			
Presence of vehicles & equipment in villages, traffic & safety issues	1-Traffic & access disrupted during construction 2-Traffic safety affected	1-Traffic management plan prepared	Yes	2	Covec & BDA have been requested to erect prominent site signage on site to direct traffic and alert workers to requirements for safety equipment. Safety barriers must also be erected around all construction sites to keep public out and to ensure safety of workers. The Contractor has been very careful with regard to safety equipment. Any workers without safety ware are not allowed to enter the project site.	Workers without appropriate safety equipment are not allowed on Site. Safety barriers and fencing already installed.	
		2-Signage used in vicinity of works	No	2			
		3-Safe access across work sites provided for the public	No	2			
		4-Community awareness ascertain village concerns regarding traffic management matters	Yes	3			

Effectiveness rating; 1 = non-compliant - corrective actions required; 2 = partial compliance – corrective or alternative actions required; 3 = adequately implementing CEMP measures; 4 = more than adequately implementing CEMP measures; 5 = excellent compliance, incl. measures in addition to CEMP

Item/Impact		Action/Mitigation Measure	Mitigation Implementation		Impacts Observed/Location	Action Required (incl. by date)	Contractor Response
Item Description	Environmental Impacts		Yes/No	Effectiveness (1 to 5)			
Presence of construction workers associations with local people	1-Social disruption	1-Village/Construction Camp protocols established	Yes	3	The Contractor has now constructed temporary accommodation for their national staff at the 2113 work site.	BDA to come up with strict protocols to be developed for management of all workers accommodated on site. Contractor to provide all necessary signs and security for the work site.	
		2-Contractor manages workers actions outside camp site in accordance with the protocols	No	3	Toilets, water supply, ablutions, cooking facilities, and waste disposal facilities have been provided.		
		3-Signage & security at camp & worksites	No	2	Some employees may move into the Bonded Warehouse when the houses under Contract 2114 are handed over.		
	2-Spread of STIs & HIV/AIDS	1-Implementation of awareness & prevention program - contractor	Yes	3	The Contractor has been requested to continue their HIV-AIDS awareness program for Contract 2113.	Contractor to continue HIV AIDS awareness program for workers and for local communities.	
		2-Implementation of awareness & prevention program – community (villages)	No	3			

Effectiveness rating; 1 = non-compliant - corrective actions required; 2 = partial compliance – corrective or alternative actions required; 3 = adequately implementing CEMP measures; 4 = more than adequately implementing CEMP measures; 5 = excellent compliance, incl. measures in addition to CEMP

Item/Impact		Action/Mitigation Measure	Mitigation Implementation		Impacts Observed/Location	Action Required (incl. by date)	Contractor Response
Item Description	Environmental Impacts		Yes/No	Effectiveness (1 to 5)			
Waste generated at construction camps	1-Contamination local water supplies through wastes	1-All wastes from worksites & camps to be disposed of in approved landfill/areas	Yes	1	Solid wastes from the Contractor's camp site and construction area are being disposed of in open landfill areas. These are not sanitary and a new site needs to be identified for this purpose so that appropriate sanitary landfill operations can be commenced. Sewage is disposed of in septic facilities at the camp sites. New pit latrines have been provided on site for use by the labour force on Contract 2113.	Domestic wastes from camp site require more frequent collection and disposal. Sanitary landfill site inspected by the BDA. A new site to be identified and improved waste disposal systems implemented as soon as possible.	WDC not cooperating with BDA to identify a land area for waste disposal.
	2-Discharges of waste waters to rivers & small streams	2-Adequate drainage & proper handling of sewage & other liquid wastes	Yes	3			
Exposure of asbestos during demolition of existing buildings	Construction workers & villagers exposed to asbestos materials	1-Contractor to prepare a Hazardous Material Assessment & Work Plan in accordance with the code of practice for the safe removal of Asbestos 2 nd Edition (Australian National Occupational Health & Safety Council 2002 (2005)	Yes	3	There has not been any asbestos material handled on site as a result of any demolition during February. The old office buildings have now been demolished but there was no asbestos material involved.	Nil	

Effectiveness rating; 1 = non-compliant - corrective actions required; 2 = partial compliance – corrective or alternative actions required; 3 = adequately implementing CEMP measures; 4 = more than adequately implementing CEMP measures; 5 = excellent compliance, incl. measures in addition to CEMP