

**INTEGRATED SAFEGUARDS DATASHEET
APPRAISAL STAGE**

Report No.:

Date prepared/updated: 7/17/2012

I. Basic Information

1. Basic Project Data

Country: Guyana	Project ID: P132408		
	Additional Project ID (if any):		
Project Name: Cunha Canal Rehabilitation Project			
Task Team Leader: John Morton			
Estimated Appraisal Date: 07/20/2012	Estimated Board Date: 08/06/2012 (RVP); 09/03/2012 (GRIF Steering Committee)		
Managing Unit: LCSDU	Lending Instrument: Co-Financing Grant		
Sector: Flood protection (100%)			
Theme: Natural disaster management (P)			
IBRD Amount (US\$m.): 0.0 IDA Amount (US\$m.): 0.0 GEF Amount (US\$m.): 0.0 PCF Amount (US\$m.): 0.0 Other financing amounts by source: Guyana REDD+ Investment Fund, GRIF (US\$m.): 2.51			
Environmental Category:			
Is this a transferred project	Yes []	No [X]	
Simplified Processing	Simple []	Repeater []	
Is this project processed under OP 8.00 (Rapid Response to Crises and Emergencies)	Yes []	No [X]	

2. Project Objectives:

The objective of the Cunha Canal Rehabilitation Project is to improve relief drainage in the East Demarara Water Conservancy (EDWC), thereby contributing to the Conservancy Adaptation Project (CAP)'s program-level objective of reducing Guyana's vulnerability to the catastrophic flooding of its low-lying coastal area.

The Project will contribute to this goal through rehabilitation of the current drainage channel to allow for increased flow into the Demerara River, and rehabilitation and reinforcement of a sluice to prevent inflow of river water during high tides.

3. Project Description:

The CAP program is financing the development of the technical foundation for a master plan of future interventions within the EDWC and lowland drainage systems, as well as specific

upgrading works and operational improvements. Cunha Canal works were initially contemplated as one of the investments in specific adaptation measures considered under Component 2 of the CAP, and an engineering design for the modified Cunha outlet was financed within the CAP's US\$3.8 million GEF Grant. As of the March 2011 restructuring of the CAP, however, carrying out of civil works to rehabilitate the Cunha Canal is no longer financed with the CAP's US\$3.8 million GEF Grant. The Cunha Canal Rehabilitation Project, funded by a US\$2.5 million co-financing grant from the GRIF, is proposed as a stand-alone operation fitting within the broader CAP program.

The proposed Project will finance the following two activities:

Carrying out of civil works to rehabilitate the Cunha Canal.

- (a) *Rehabilitation of the drainage channel.* The channel will be re-routed along its original alignment, widened and excavated to remove the earth fill and weeds and allow for a straight flow into the Demerara River that eliminates hydraulic restrictions.
- (b) *Rehabilitation and reinforcement of a sluice to prevent inflow of river water during high tides and control the discharge of water from the Cunha Canal to the Demerara River at low tides.* This sluice will be used to control the discharge of water and to prevent river water from entering the canal during high tide. Specifically, the discharge system consists of two water control structures: one at the river to limit back flow, and one at the dam, which was rehabilitated by the government after the 2005 flood.
- (c) *Construction of a bridge on the EBD Public Road.* A new bridge will be constructed at the point where the canal will intercept the EBD Public Road to allow vehicular traffic to traverse the area.

Implementation of Abbreviated Resettlement Plan. The proposed civil works under Component 1 require the acquisition of a portion of land owned by Barama Lumber Company (BLC) and the relocation of certain assets that are within this area. Land acquisition will be carried out by the Government of Guyana, and compensation for other related expenses, detailed below, will be provided by the Project. Resettlement activities will commence after compensation has been paid. The Project will finance the implementation of the Abbreviated Resettlement Plan (RAP), specifically:

- (a) *Relocation of assets.* Assets to be relocated include a log bridge, a steel bridge, a lumber shed, a saw dust pen, equipment, a fence, two guard huts, fuel storage, and utilities. BLC will be responsible for relocation of their displaced assets within an agreed period of six months.
- (b) *Provision of other resettlement assistance.* During the relocation period the company will outsource the work of the affected facilities. Compensation for this cost will be provided by the Project under this Component.

4. Project Location and salient physical characteristics relevant to the safeguard analysis:

The Project will focus on activities in Region 4, the most populated region of the country. Ninety percent of Guyana's inhabitants live on the narrow coastal plain, which represents 10 percent of the country's area. This is an area of reclaimed lands, much of which lies below sea level, situated between a water storage basin and a protective seawall complex. The coastal zone is transected by a dense network of drainage and irrigation canals, which links up with several water conservancies, including the East Demerara Water Conservancy (EDWC), a water storage system that provides regional agricultural lands and urban areas with irrigation and drinking water. Located to the south of Georgetown in Administrative Region 4, the EDWC is estimated to have a total catchment area of 582 km². The conservancy is formed by an embankment of approximately 60 km long and rests on poor ground conditions in some areas. The areas most affected by the EDWC are along the East Coast Demara, in particular Mahaica.

The Cunha Canal works are located within Guyana's Coastal Plain at Land of Canaan in Administrative Region 4. This area is downstream of the EDWC dam and EDWC system. Land of Canaan is located on the right bank of the Demerara River, approximately 20 kilometers upstream from the mouth of the river. The Cunha Canal is located on the western side of the EDWC, between the Conservancy Dam and the Demerara River, and discharges into the Demerara River. The entire project area has been heavily modified by human activity and consists largely of an old field environment.

The present pattern of land use in the vicinity of the canal is a combination of residential, industrial and commercial uses. The nearby EBD Public Road facilitates a high volume of traffic. These include traffic to and from the international airport, local towns and the interior locations of Guyana. Given that most residential areas are not in close proximity to the road, pedestrian traffic is low. Project activities are not likely to result in any loss of livelihood sources, as few residents currently use the canal for these purposes and they will not be prevented from doing so once the Cunha Canal has been widened and rehabilitated.

Immediately south of the Canal are lands owned by the Barama Lumber Company (BLC). Currently, most of these lands east of the Public Road are not being utilized and are utilized characterized as vacant fields. Housing facilities for the employees of BLC, as well as a plywood retailing outlet, are located in close proximity to the East Bank Demerara (EBD) Public Road. North of the Canal and closer to the Conservancy are lands covered with secondary vegetation followed by a private residential housing scheme.

5. Environmental and Social Safeguards Specialists on the Team:

Mr Gerald E. Meier (Environmental Specialist, Consultant); Mr Jason Paiement (Social Development Specialist, LCSSO)

6. Safeguard Policies Triggered (<i>please explain why</i>)	Yes	No
Environmental Assessment (OP/BP 4.01)	X	
Natural Habitats (OP/BP 4.04)	X	
Forests (OP/BP 4.36)		X
Pest Management (OP 4.09)		X
Physical Cultural Resources (OP/BP 4.11)		X
Indigenous Peoples (OP/BP 4.10)		X
Involuntary Resettlement (OP/BP 4.12)	X	
Safety of Dams (OP/BP 4.37)	X	
Projects on International Waterways (OP/BP 7.50)		X
Projects in Disputed Areas (OP/BP 7.60)		X

II. Key Safeguard Policy Issues and Their Management

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

Environmental Assessment (EA) (OP/BP4.01):

The Project is considered a category B investment under World Bank Operational Policy 4.01. Civil works funded under this Project include the widening of the Cunha outlet structure. The Cunha Canal leads directly to the Demerara River. Its only function is to provide relief capacity to the EDWC system to protect the EDWC dam during the two rainy annual seasons. This canal is not associated with the irrigation or potable water supply functions of the EDWC system. The canal is for relief purposes only and will not impact the water use activities of the conservancy. Impacts to the biophysical and socio-economic environments are expected to be minimal, as the canal is in a disturbed area which is currently used to deposit lumber waste. The canal therefore does not contribute to deforestation and does not drain coastal lowlands. As a relief canal, the Cunha also serves to limit risk of dam failure, and its rehabilitation contributes to the preservation of the Conservancy as it currently functions.

Environmental impacts expected from the rehabilitation of the canal are related only to the need to construct a bridge in the main road from the capital to the northern interior area of the country, and the impacts associated with excavation activities in the Cunha Canal area. These works will be contracted using appropriate environmental management clauses to assure contractor compliance with accepted environmental practices. A formal Environmental Assessment was produced for the project and includes an environmental management plan to be executed by the contractor under GoG supervision. Although there will be major disruption to vehicular and pedestrian traffic, the location of the bridge will be easily bypassed with a temporary road cut around the construction site, which would be a gravel road diversion of approximately 100 meters. The construction activity will be limited to the existing ditch right-of-way alignment.

The EA for the broader CAP program requires that once the detailed works for the Cunha Canal rehabilitation are identified, a site-specific Environmental Assessment Management Plan (EMP)

be developed in accordance with World Bank policies and that the findings of this assessment be incorporated into final designs. The GoG has accordingly developed the draft design and a separate EMP was prepared specifically addressing the reconstruction of the Cunha Canal and associated bridge works. This document was finalized in March 2010 under the CAP, and included a detailed evaluation of the impacts and mitigation measures. The EA and EMP have been disclosed in Infoshop and in Guyana through the Ministry of Agriculture's website before Appraisal.

Natural Habitats (OP/BP 4.04):

A portion of the Project activities takes place within the East Demerara Water Conservancy. This is a man made structure that is considered a natural habitat. No adverse impacts to the Conservancy are envisioned under the project. At the same time, by improving the drainage capacity of the EDWC and assessing the weak portion of the EDWC Dam, the works aim to ensure that this natural habitat remains intact. Rehabilitation works for the Cunha Canal will be confined entirely to lands already disturbed by human activity. The construction site is defined as an old field and is currently used as a disposal area for lumber operations waste (chips and wood debris).

Involuntary Resettlement (OP/BP 4.12):

Some land acquisition from a lumber company will be necessary to expand the right of way for the Cunha Canal. An MoU has been signed with the Barama Lumber Company giving their support for implementation of the project and an Abbreviated Resettlement Plan (RAP) has been prepared that describes the valuation of affected assets and income sources, consultations with the Barama company over acceptable design and compensation alternatives, institutional arrangements for preparing and implementing the RAP, compensation to be provided, and a timetable and budget. This RAP will be disclosed by the Grantee and the World Bank before Appraisal and will be implemented before commencing any civil works that require acquisition of land and/or associated assets.

Specifically, the proposed civil works under Component 1 require the acquisition of a portion of land owned by Barama Lumber Company (BLC) and the relocation of certain assets that are within this area. Land acquisition will be carried out by the Government of Guyana, and compensation for other related expenses, detailed below, will be provided by the Project. Resettlement activities will commence after compensation has been paid. The Project will finance the implementation of the Abbreviated Resettlement Plan (RAP), specifically:

- (a) *Relocation of assets.* Assets to be relocated include a log bridge, a steel bridge, a lumber shed, a saw dust pen, equipment, a fence, two guard huts, fuel storage, and utilities. BLC will be responsible for resettlement of their displaced assets within an agreed period of six months.
- (b) *Provision of other resettlement assistance.* During the relocation period the company will outsource the work of the affected facilities. Compensation for this cost will be provided by the Project under this Component.

These investments are expected to contribute substantially to the outcomes of the CAP program. They will improve the ability of the GoG to manage water levels behind the EDWC dam during heavy rains by increasing real-time EDWC drainage relief capacity to the Demerara River and Atlantic Ocean.

Safety of Dams (OP/BP 4.37)

The Project triggers Safety of Dams (OP/BP 4.37), as the EDWC is bordered to the north by a 30 mile long earthen dam constructed some 150 years ago. As defined under Bank policy, this is an existing small dam (under 15 meters height). While no civil works are to be conducted on the dam, a detailed engineering assessment of the dam and its associated drainage structures is being completed under the CAP program (and outside the scope of the Cunha Canal Rehabilitation Project).

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

No negative long term impacts are expected to materialize as a result of the Project. By improving the drainage capacity of the EDWC, the Project aims to improve management response time to rising waters within the conservancy improving capacity to protect the dam and reduce the need for using eastern discharges which contribute to flooding along the Mahaica River. This contributes to the wider objectives of the CAP program, which seek to address improved performance and safety of the EDWC system.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts:

An alternative alignment for the Cunha Canal was considered to minimize use of the lumber company's land, but this alternative was turned down due to technical considerations.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described:

Only four safeguard policies are triggered under this Project. Three of the safeguard policies triggered under the CAP program - Forests (OP/BP 4.36), Physical Cultural Resources (OP/BP 4.11), and Pest Management (OP 4.09) - are not triggered by the Cunha Canal Rehabilitation Project due to the narrow scope of Project activities and their highly localized nature. While a forest borders the southern portion of the EDWC, investments will be made nowhere in the proximity of the forest, and the Project will have neither negative nor positive impacts on it; likewise, pesticides will not be used under the Project, as NDIA – the agency in charge of maintaining the canal - uses mechanical means of weed control; finally, the sites of physical work to take place under the Project have been surveyed by Bank technical staff, who have assessed the likelihood of cultural resources to be found at the Project sites as extremely low.

The works to be funded by the proposed Project are common in Guyana and well within the experience and capacity of the implementing agencies; moreover, they involve manageable social, environmental and technical risks. The National Irrigation and Drainage Authority (NDIA) and Ministry of Agriculture (MoA) are deemed to have sufficient capacity to plan and implement the measures described in the EMP due to their pre-existing familiarity with World Bank environmental safeguard instruments under the CAP program. Indeed, the implementing agency (ASDU) has successfully implemented the CAP EA to date. ASDU has also updated the Cunha Canal Environmental Management Plan (EMP), which will be finalized during Appraisal. Involuntary Resettlement questions are being addressed by the MoA and World Bank safeguards teams as part of Project preparation. An Abbreviated Resettlement Plan (RAP) has been prepared that documents: (a) the assessment of impacts, (b) the consultation process and agreements reached with BLC, and (c) the amount, budget source, and timeline for compensating BLC for the impacts on its assets, access to assets, and loss of income. The GoG is undertaking two independent assessments of the valuation for the compensation for loss of assets and operations to be provided under the RAP, and the Bank will carry out a third independent assessment as part of Appraisal.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people:

The stakeholders directly impacted by the works under the proposed co-financing are the Barama Lumber Company (BLC) through whose property the canal will traverse, and the users of the public road that will experience delays during construction. As documented in the RAP, numerous consultations took place between 2010 and 2012 between the MoA and BLC. A workshop will also be held in Georgetown on June 19, 2012 with local NGOs, academics and donors to discuss the proposed design and implementation arrangements. Additionally, the Ministry of Public Works and Communications will be closely involved with any constructions associated with the north-south roadway.

Primary stakeholders in the broader context of the CAP program include the coastal communities (including the capital Georgetown) north of the EDWC system. These communities will directly benefit from the Cunha Canal Rehabilitation Project through an improved ability to manage the Conservancy for flood protection and irrigation. The Bank team will implement a communications strategy to coordinate and regularly inform stakeholders (including other donors and Government agencies) of the progress of this Project and of the CAP, largely.

<i>B. Disclosure Requirements Date</i>	
Environmental Assessment/Audit/Management Plan/Other:	
Was the document disclosed <i>prior to appraisal</i> ?	Yes
Date of receipt by the Bank	6/15/2012
Date of "in-country" disclosure	7/12/2012
Date of submission to InfoShop	7/11/2012

For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors	N/A
Resettlement Action Plan/Framework/Policy Process:	
Was the document disclosed <i>prior to appraisal</i> ?	Yes
Date of receipt by the Bank	7/10/2012
Date of "in-country" disclosure	7/12/2012
Date of submission to InfoShop	7/11/2012
Indigenous Peoples Plan/Planning Framework:	
Was the document disclosed <i>prior to appraisal</i> ?	N/A
Date of receipt by the Bank	
Date of "in-country" disclosure	
Date of submission to InfoShop	
Pest Management Plan:	
Was the document disclosed <i>prior to appraisal</i> ?	N/A
Date of receipt by the Bank	
Date of "in-country" disclosure	
Date of submission to InfoShop	
* If the project triggers the Pest Management and/or Physical Cultural Resources policies, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.	
If in-country disclosure of any of the above documents is not expected, please explain why:	

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

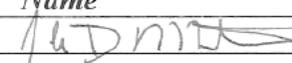
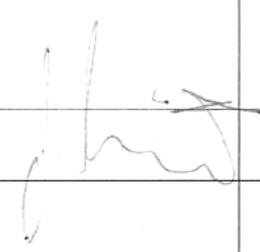
OP/BP 4.01 - Environment Assessment	
Does the project require a stand-alone EA (including EMP) report?	Yes [X] No [] N/A []
If yes, then did the Regional Environment Unit or Sector Manager (SM) review and approve the EA report?	07/11/2012
Are the cost and the accountabilities for the EMP incorporated in the credit/loan?	Yes
OP/BP 4.04 - Natural Habitats	
Would the project result in any significant conversion or degradation of critical natural habitats?	Yes [] No [X] N/A []
If the project would result in significant conversion or degradation of other (non-critical) natural habitats, does the project include mitigation measures acceptable to the Bank?	No natural habitats occur in the canal project area. Mitigation measures have been included in the EMP, although impacts are expected to be negligible.
OP 4.09 - Pest Management	
Does the EA adequately address the pest management issues?	Yes [] No [] N/A [X]

Is a separate PMP required?	Yes [] No [] N/A [X]
If yes, has the PMP been reviewed and approved by a safeguards specialist or Sector Manager? Are PMP requirements included in project design? If yes, does the project team include a Pest Management Specialist?	Pesticides will not be used under the Project, as NDIA – the agency in charge of maintaining the canal - uses mechanical means for canal maintenance and vegetation control.
OP/BP 4.11 – Physical Cultural Resources	
Does the EA include adequate measures related to cultural property?	Yes [] No [] N/A [X]
Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on physical cultural resources?	The sites of physical work to take place under the Project have been surveyed by Bank technical staff, who have assessed the likelihood of cultural resources to be found at the Project sites as extremely low.
OP/BP 4.10 - Indigenous Peoples	
Has a separate Indigenous Peoples Plan/Planning Framework (as appropriate) been prepared in consultation with affected Indigenous Peoples?	Yes [] No [] N/A [X]
If yes, then did the Regional unit responsible for safeguards or Sector Manager review the plan?	
If the whole project is designed to benefit IP, has the design been reviewed and approved by the Regional Social Development Unit?	
OP/BP 4.12 - Involuntary Resettlement	
Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?	Yes [X] No [] N/A []
If yes, then did the Regional unit responsible for safeguards or Sector Manager review and approve the plan/policy framework/process framework?	07/12/2012
OP/BP 4.36 – Forests	
Has the sector-wide analysis of policy and institutional issues and constraints been carried out?	Yes [] No [] N/A [X]
Does the project design include satisfactory measures to overcome these constraints?	While a forest borders the southern portion of the EDWC, investments will be made nowhere in the proximity of the forest, and the Project will have neither negative nor positive impacts on it.
Does the project finance commercial harvesting, and if so, does it include provisions for certification system?	
OP/BP 4.37 - Safety of Dams	
Have dam safety plans been prepared?	Yes [] No [X] N/A []

Have the TORs as well as composition for the independent Panel of Experts (POE) been reviewed and approved by the Bank?	N/A: The Project triggers Safety of Dams (OP/BP 4.37) because the EDWC is bordered to the north by a 30 mile long earthen dam constructed some 150 years ago. As defined under Bank policy, this is an existing small dam (under 15 meters height); moreover, no civil works are to be conducted on the dam.
Has an Emergency Preparedness Plan (EPP) been prepared and arrangements been made for public awareness and training?	N/A: While no civil works are to be conducted on the dam, a detailed engineering assessment of the dam and its associated drainage structures is being completed under the CAP program (and outside the scope of the Cunha Canal Rehabilitation Project). An Emergency Operations Plan for the EDWC was prepared subsequent to the 2005 floods and is being updated under the CAP project.
OP/BP 7.50 - Projects on International Waterways	
Have the other riparians been notified of the project?	Yes [] No [] N/A [X]
If the project falls under one of the exceptions to the notification requirement, has this been cleared with the Legal Department, and the memo to the RVP prepared and sent?	
What are the reasons for the exception? Please explain:	
Has the RVP approved such an exception?	
OP/BP 7.60 - Projects in Disputed Areas	
Has the memo conveying all pertinent information on the international aspects of the project, including the procedures to be followed, and the recommendations for dealing with the issue, been prepared	Yes [] No [] N/A [X]
Does the PAD/MOP include the standard disclaimer referred to in the OP?	
The World Bank Policy on Disclosure of Information	
Have relevant safeguard policies documents been sent to the World Bank's Infoshop?	Yes [X] No [] N/A []
Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?	7/12/2012
All Safeguard Policies	

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?	Yes [X] No [] N/A []
Have costs related to safeguard policy measures been included in the project cost?	Yes
Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?	Yes
Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?	Yes

D. Approvals

<i>Signed and submitted by:</i>	<i>Name</i>	<i>Date</i>
Task Team Leader:	John Morton 	07/11/2012
Environmental Specialist:	Gerald E. Meier, 	07/11/2012
Social Development Specialist:	Jason Jacques Paiement 	07/11/2012
Additional Environmental and/or Social Development Specialist(s):	N/A	
<i>Approved by:</i>		
Sector Manager:	Anna Wellenstein 	7/12/2012
Comments:		

