

**INTEGRATED SAFEGUARDS DATA SHEET
CONCEPT STAGE**

Report No.: **71006**

Date ISDS Prepared/Updated: 07/10/12

I. BASIC INFORMATION

A. 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: July 20, 2012	Estimated Board Date: N/A	
Managing Unit: LCSUW	Lending Instrument: Co-Financing Grant	
Sector: Flood protection (100%)		
Theme: Natural disaster management (P)		
IBRD Amount (US\$m.):	0.0	
IDA Amount (US\$m.):	0.25	
GEF Amount (US\$m.):	1.9	
PCF Amount (US\$m.):	0.0	
Other financing amounts by source: N/A		
Environmental Category: B		
Simplified Processing	Simple []	Repeater []
Is this a transferred project	Yes []	No [X]

B. Project Objectives:

The objective of the Cunha Canal Rehabilitation Project is to improve drainage in the East Demarara Water Conservancy (EDWC), thereby contributing to the CAP program-level objective of reducing the vulnerability of catastrophic flooding in Guyana's low-lying coastal area that is currently threatened by sea level rise resulting from global climate change.

The CAP program objective will be achieved through a) strengthening the GoG's and donor understanding of the EDWC system and coastal plain drainage regimes while identifying key drainage regimes for follow-on intervention; b) implementing infrastructure investments aimed at increasing the drainage capacity of the EDWC; c) strengthening institutional capacity of the GoG to manage water levels in the EDWC and to guide interventions aimed reducing Guyana's vulnerability to floods. Cunha Canal rehabilitation will improve drainage in the EDWC through: a) rehabilitation and widening of the current drainage channel to allow for increased flow into the Demerara River; b) building a new sluice to prevent inflow of river water during high tides; and c) construction of a bridge across the canal on the nearby public road.

At CAP Program completion, the GoG will be in possession of a master plan for future upgrading of the EDWC. Possible interventions for at least 10 key drainage regimes will be identified and presented to the donor community, and the drainage relief capacity of the EDWC to the Demerara River by will be increased by at least 35 percent.

C. Project Description:

The CAP program will finance 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 aimed at enhancing the flood control capacity of the EDWC. The tools developed under the analytical component of the CAP will be used by the GoG and donor agencies to guide future investments.

Component 1 - Pre-investment studies for engineering design of works (Total US\$2.45 mil / GEF portion US\$2.0 mil): The objective of this component is to provide the hydrologic baseline necessary for contemplating rational interventions aimed at increasing the current discharge capacity of the flood control system. The key outcome of these pre-investment studies will be a topographic model of the inhabited coastal plain to be used as the basis for hydrologic analysis of the region under projected climate scenarios. The results from this component will pinpoint key areas of intervention to increase discharge capacity critical for flood zone management. Pre-engineering designs will be completed for a set of prioritized interventions. Specialized staff within the following agencies will be trained in the application of the analytical tools produced: NDIA, the Lands and Surveys Commission, the Ministry of Works River and Sea Defense Division, the Guyana Environmental Protection Agency and the Civil Defense Commission.

Component 2 - Investments in specific adaptation measures (Total US\$17.2 mil / GEF portion US\$1.5 mil): The objective of this component is to counteract the effects of sea level rise, which has decreased the GoG's ability to manage water levels of the EDWC system. The investments will improve the ability of the Government to manage water levels behind the EDWC dam during heavy rains by improving internal water flows in the EDWC and increasing EDWC drainage relief capacity to the Demerara River and eventually the Atlantic Ocean. By the end of project, activities under this component should result in an increased drainage capacity of the EDWC to the Demerara River by roughly 35 percent (the exact figure will be finalized during the first year of implementation). The GoG, through the NDIA, will direct additional investment in the strengthening of drainage and irrigation infrastructure based on the engineering foundation to be developed under Component 1. Under the proposed co-financing, physical works will be undertaken to rehabilitate the Cunha Canal. This component will include the widening of the canal, the construction of a new outlet structure, rerouting the canal to re-establish its original alignment, and construction of a bridge on the EBD Public Road where the canal intercepts the road.

Component 3 - Institutional Strengthening and Project Management (Total US\$0.35 mil / GEF portion US\$0.3 mil): The objective of this component is to strengthen the institutional framework for flood control within the context of the national emergency management sector headed by the Civil Defense Commission. The project will finance activities to better assess the current needs of the actors involved in the flood control and emergency management and will

work together with the concerned parties to develop a national framework for a more streamlined approach to hazard and risk management in the country. The project will also support consultations with civil society and the donor community to create consensus around a medium and long term intervention strategy to help the country adapt to sea level rise. The key outcome of the analysis and project management component will be improved Government effectiveness in managing floods and other emergencies. With clear lines of responsibility in times of urgent need as well as times of calm, the GoG will be better equipped to manage flood control policy.

Cunha Canal Rehabilitation in the broader context of the CAP program will finance the following physical works to rehabilitate the Cunha Canal (US\$ 1.91 M from GRIF):

- a. Rehabilitation of the drainage channel. The channel will be re-routed, widened and excavated to remove the build-up of sediments and weeds and allow for a straight flow into the Demerara River that eliminates hydraulic restrictions. The canal will be widened to 66.6 ft with a total right of way of 101.2 ft including embankments.
- b. Building of a new sluice to prevent inflow of river water during high tides. This sluice will be used to control the discharge of water and to prevent river water from entering the canal during high tide.
- 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.

D. 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. This is the area downstream of the EDWC dam and EDWC system. Mapping and system analysis will be conducted under the CAP program - and outside the scope of the Cunha Canal Rehabilitation Project - in coastal regions 3, 4 and 5 to provide the analytical basis for managing coastal hydraulology.

E. Borrower's Institutional Capacity for Safeguard Policies:

The ASDU has managed the preparation of a draft environmental assessment (EA) of the Cunha Canal project. The initial development of the Abbreviated Resettlement Plan (ARP) was delayed due to limited progress, at that time, on the issue of land acquisition from Barama Lumber Company. With proper guidance from the Bank and safeguards consultants, it is anticipated that this resettlement plan will be developed as part of preparation. The arrangements for supervision of safeguards will be reviewed as part of updating of the EA and resettlement plan to ensure adequate capacity is in place.

F. Environmental and Social Safeguards Specialists on the Team:

Mr Gerald E. Meier (LCSUW); Mr Jason Paiement (LCSUW)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies Triggered <i>(please explain why)</i>	Yes	No	TBD
Environmental Assessment (OP/BP 4.01)	X		
<p>An environmental management framework for the CAP program has been developed and publicly disclosed through the Infoshop in Washington and within Guyana. This framework includes: a) a description of the project; b) a description of the safeguards triggered and project mechanisms to ensure compliance with each; c) Terms of Reference for analytical work that will result in an engineering tool that is to be used as a foundation for determining the environmental impacts of follow-on interventions; d) procedures and requirements for sub-project specific EAs to be conducted during project implementation; and e) a description of the project's strategy for public consultation, during both project preparation and implementation. This framework will be updated as part of the Cunha Canal Rehabilitation Project preparation and publicly disclosed through the Infoshop and within Guyana.</p> <p>Through the proposed Project, civil works funded under this project include the widening of the Cunha outlet structure. This activity will require the construction of a bridge along a major north-south thoroughfare. Environmental impacts will be limited to the construction sites and will result in a temporary impact to local traffic. An Environmental Assessment has been conducted under the CAP program to address these issues, and will be updated during Project preparation. This structure leads directly to the Demerara River. The only function of the Cunha canal 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. While not expected to have an adverse impact on conservancy, an additional site-specific EA has been completed for the improvement of water flow systems within the EDWC. The risks involved are essentially environmental, relating 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 project area. These works will be contracted using appropriate environmental management clauses to assure contractor compliance with accepted environmental practices.</p> <p>A key output of the analytical work under the CAP program will be an engineering tool that is to be used to as a foundation for determining the environmental impacts of follow-on interventions. With the development and use of a detailed digital elevation model, local watershed characteristics and drainage regimes will be mapped and modeled, creating the basis for future engineering interventions. A separate report will be developed, based on the analytical work undertaken in the project, which will specifically addresses the likely environmental impacts of future interventions. Expected hydraulic impacts, as well as changes in water quality, natural habitats, land use, livelihoods and analysis of alternative strategies will be considered. Based on this information, an intervention strategy will be developed.</p>			
Natural Habitats (OP/BP 4.04)	X		
<p>The project 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, the project aims to ensure that this natural habitat remains intact.</p>			

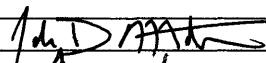
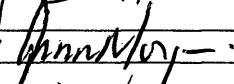
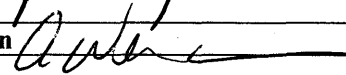
Safeguard Policies Triggered <i>(please explain why)</i>	Yes	No	TBD
Forests (OP/BP 4.36)		X	
The southern portion of the East Demerara Water Conservancy is bordered by a forest. No physical work is envisioned within 10 miles of this forest and no adverse impacts to the forest are envisioned under the project. Moreover, improvements in water flows within the EDWC is expected to have no impact on the bordering forest.			
Pest Management (OP 4.09)		X	
No pesticides will be procured under the project or be used in the maintenance of the canal.			
Physical Cultural Resources (OP/BP 4.11)		X	
While activities to be carried out under the project are not expected to impact any known cultural heritage sites, technical specifications for works and the Operation Manual for the CAP program will include "chance find procedures" to be followed in the event that culturally significant materials are discovered during the execution of civil works.			
Indigenous Peoples (OP/BP 4.10)		X	
Involuntary Resettlement (OP/BP 4.12)	X		
The rehabilitation of the Cunha Canal under the proposed Project triggers one additional safeguard with respect to the initial project, namely Involuntary Resettlement (OP/BP 4.12), and the safeguards framework will be revised accordingly. Some land acquisition from a lumber company will be necessary to expand the right of way for the Cunha Canal rehabilitation and the arrangements for the transfer and any impacts will be reviewed as part of the due diligence under the project. The alignment of the Canal is being adjusted to minimize use of the lumber company's land, and should minimize the amount of land required. An MoU has been signed with the Barama Lumber Company giving their support for implementation of the project. This will entail the preparation of an Abbreviated Resettlement Plan (ARP) consistent with OP 4.12 policy requirements 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 RP, compensation to be provided, and a timetable and budget. This Resettlement Plan consistent with OP 4.12 policy requirements will be implemented before commencing any civil works that require acquisition of land and/or associated assets.			
Safety of Dams (OP/BP 4.37)	X		
The EDWC is bordered to the north by a 30 mile long earthen dam constructed some 150 years ago. The dam has been heavily stressed particularly during the past two flood events (2004-5, 2005-6). While no civil works are to be conducted on the dam, a detailed engineering assessment of the dam and its associated drainage structures is to be completed under the CAP Program, and outside the scope of the Cunha Canal Rehabilitation Project. This will provide the engineering and safety guidance to the GoG for the design and development of any dam strengthening programs.			
The engineering analysis developed under the CAP program will provide the technical basis for the Government to fulfill the requirements for an expert assessment of the weakened portion of the EDWC Dam provided under this safeguard. Upon receipt of the dam safety assessment, and			

Safeguard Policies Triggered <i>(please explain why)</i>	Yes	No	TBD
as part of implementation of the CAP program, the World Bank will contract independent experts to assess and to validate the quality of the report.			
Projects on International Waterways (OP/BP 7.50)		X	
Projects in Disputed Areas (OP/BP 7.60)		X	
Piloting the Use of Borrower Systems to Address Environmental and Social Safeguard Issues in Bank-Supported Projects (OP/BP 4.00)		X	

III. SAFEGUARD PREPARATION PLAN

- A. Target date for the Quality Enhancement Review (QER), at which time the PAD-stage ISDS would be prepared: Not applicable.
- B. For simple projects that will not require a QER, the target date for preparing the PAD-stage ISDS: June 25, 2012
- C. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing¹ should be specified in the PAD-stage ISDS: January 1, 2012

IV. APPROVALS

<i>Signed and submitted by:</i>		
Task Team Leader:	John Morton 	07/11/2012
<i>Approved by:</i>		
Regional Safeguards Coordinator:	Glenn Morgan 	07/11/2012
Comments:		
Sector Manager:	Anna Wellenstein 	07/11/2012
Comments:		

¹ Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in-country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.