

INTEGRATED SAFEGUARDS DATA SHEET
APPRAISAL STAGE

Report No.: 95537

Date ISDS Prepared/Updated: 4/2/2015

I. BASIC INFORMATION

1. Basic Project Data

Country:	Guyana	Project ID:	P132408
Project Name:	Cunha Canal Rehabilitation Project		
Task Team Leader(s):	Armando Guzman		
Estimated Board Date:	April 2015		
Managing Unit:	GSURR		
Sector(s):	Flood protection (100%)		
Theme(s):	Natural disaster management		
Is this project processed under OP 8.50 (Emergency Recovery) or OP 8.00 (Rapid Response to Crises and Emergencies)?			No
Project Financing Data (in USD Million)			
Total Project Cost:	US\$3.27M	Total GRIF Financing:	US\$3.00
Financing Gap:	US\$0.27		
Financing Source			Amount
Recipient			0.27
Guyana REDD+ Investment Fund (GRIF)			3.00
Total			3.27
Environmental Category:	B		
Is this a Repeater project?	No		
Is this a Transferred project?	Yes		

2. Project Development Objective(s)

The Project Development Objective is to increase the capacity of the Cunha Canal to drain the East Demerara Water Conservancy and local agricultural areas in the Recipient's territory.

3. Project Description

The proposed project is composed of three components including carrying out civil works to rehabilitate the Cunha Canal, compensation under the resettlement plan and project management.

Component 1. Cunha Canal Rehabilitation Works (US\$ 1.91 million from GRIF; US\$ 0.27 million in parallel co-financing from GoG, total US\$ 2.18 million).

This consists of three main activities:

- (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. This will be undertaken by the GoG through parallel co-financing.
- (b) *Rehabilitation of sluices.* This would cover rehabilitation of: (i) sluice at the outlet of the EDWC to fix the gate and upgrade the sluice; and (ii) the rehabilitation of the sluice at the outlet of the Cunha Canal at the Demerara. The first sluice will serve as a regulator for water releases from the conservancy and the second will control the discharge of water and to prevent water from the Demerara River 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.

Component 2. Resettlement (US\$ 0.57 million from GRIF). The proposed civil works require the use of a portion of land currently occupied by the Barama Company Limited (BCL) and the relocation of certain assets. Compensation will be paid to Barama for the fair market value of: (i) Relocation of assets. Assets to be relocated include a log bridge, a steel bridge, a moulding shed, a dust silo, equipment, a fence and guard hut. To ensure it does not affect construction schedules, BCL will be responsible for resettlement of their displaced assets within an agreed period of three months. (ii) Provision of other resettlement assistance. During the relocation period operations will be affected. Compensation for this cost will be provided by the Project under this Component.

Component 3. Project Management (US\$ 0.52 million from GRIF). The Project will finance consultancies and operational costs to manage the project including procurement, financial management and technical staff. It will also fund consultancies for supervision of the project works including safeguards related supervision. It will also fund monitoring equipment to better understand the impacts of the works on the water flows in the Badarima Creek, Cunha Canal and Sarah Johanna Canal and drainage of the Conservancy and the nearby agricultural areas.

4. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

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 Company Limited (BCL). 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 BCL, 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

Noreen Beg, Senior Environmental Specialist (GENDR)

M. Yaa Pokua Afriyie Oppong, Senior Social Development Specialist (GSURR)

6. Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	<p>The Project is a category B - Partial Assessment -assigned to projects that are likely to have localized, limited and reversible environmental impacts. Overall the Project will have a largely positive social and environmental (health and safety) impact through its role in reducing vulnerability to flooding.</p> <p>Physical interventions resulting from the implementation of investments could have low to moderate negative environmental impacts.</p> <p>Impacts to the biophysical and socio-economic environments are expected to be limited in nature, as the Cunha Canal is located in an area that has been subjected to significant human interventions. The embankment along the canal after widening will be rehabilitated and re-vegetated with native shrubs and trees after works are completed.</p> <p>Given that Component 1(c) may affect the road</p>

		during construction, road safety measures and traffic diversion plans will be adopted, and any construction waste will be disposed of appropriately
Natural Habitats OP/BP 4.04	Yes	<p>A portion of the Project activities takes place within the East Demerara Water Conservancy. Although the EDWC is not a Protected Area, nor a critical natural habitat, it serves as habitat to caiman, giant otters, and bats. Numerous species of birds also nest in or migrate through the EDWC, including Muscovy Ducks, Blue-winged Teal, Pied-billed Grebes, Cormorants, Stripe-backed Bitterns, Egrets, Vultures, Snail Kites, and Great Kiskadees. Nevertheless, given the vast area of the uninhabited EDWC, the localized and short – term works proposed will not significantly affect fauna and avi-fauna, as there is adequate refuge for these species away from project works.</p> <p>Moreover, the proposed project will not result in significant degradation or conversion of natural habitats, given that the works are limited to the upgrade and rehabilitation of existing structures. The Guyana Amazon Tropical Birds Society and the Environmental Protection Agency confirmed during preparation that, in their opinion, the EDWC has been sustainably managed. 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.</p>
Forests OP/BP 4.36	No	This policy is not triggered given that the project will not finance activities that affect forests. 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.
Pest Management OP 4.09	No	This policy is not triggered given that the project will not finance the purchase or use of pesticides. Pesticides will not be used under the Project, as NDIA - the agency in charge of maintaining the canal- uses mechanical means of weed control.
Physical Cultural Resources OP/BP 4.11	Yes	The policy was triggered as a precautionary

		measure in case cultural resources are encountered as part of the environmental assessment process or during construction. While activities to be carried out under the Project are not expected to impact any known cultural heritage sites, technical specifications for works will include "chance find procedures" to be followed in the event that culturally significant materials are discovered during the execution of civil works. Chance finds procedures will be incorporated into EMPs and construction contracts.
Indigenous Peoples OP/BP 4.10	No	This policy is not triggered given that given that there are no indigenous peoples present in the project areas.
Involuntary Resettlement OP/BP 4.12	Yes	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 (ARP) 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 ARP, compensation to be provided, and a timetable and budget. This ARP was disclosed by the Grantee and the World Bank before Appraisal and revised and re-disclosed in country and at the Bank on April 2, 2015. The ARP can be accessed on the GRIF website at the following address: http://guyanareddfund.org/images/stories/pdf/arp_cunha_canal_project.pdf The ARP will be implemented before commencing any civil works that require acquisition of land and/or associated assets.
Safety of Dams OP/BP 4.37	Yes	The Project triggers Safety of Dams (OPIBP 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 IDA-financed Project currently under implementation (Guyana Flood Risk Management P147250).

Projects on International Waterways OP/BP 7.50	No	This policy is not triggered given that the project will not affect international waterways as defined under the policy.
Projects in Disputed Areas OP/BP 7.60	No	This policy is not triggered given that the project will not affect disputed areas as defined under the policy.

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:

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 project 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 accordingly developed the draft design and an EMP was prepared specifically addressing the reconstruction of the Cunha Canal and associated bridge works. This document, which included a detailed evaluation of the impacts and mitigation measures was formalized in March 2010 under the Conservancy Adaptation Project (CAP - P103539), implemented from 2007 to 2014. The CAP initially included the Cunha Canal Rehabilitation works. However, following a 2011 restructuring, the Cunha Canal rehabilitation was withdrawn from the CAP and became a stand-alone project. The EA and EMP were disclosed in Infoshop and in Guyana through the Ministry of Agriculture's website before Appraisal in July 2012. A revised EA, including an EMP, was prepared and disclosed at the Bank on March 30, 2015 and in country on April 2, 2015.

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.

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

During engagements with BCL and other stakeholders various design alternatives were studied with the intention of minimizing adverse impacts. During this study three options for the project layout were identified and evaluated. The option agreed on allows for a more efficient conveyance as it provides a straight alignment. The other options consisted of curves in the alignment which reduces the hydraulic efficiency and would result in the erosion of the earthen embankments.

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.

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 and has the responsible for safeguards under the IDA-financed project currently under implementation. ASDU has also updated the Cunha Canal EA, which included the Environmental Management Plan (EMP). Involuntary Resettlement questions are being addressed by the MoA and World Bank safeguards teams as part of Project preparation. An Abbreviated Resettlement Plan (ARP) has been prepared that documents: (a) the assessment of impacts, (b) the consultation process and agreements reached with BCL, and (c) the amount, budget source, and time line for compensating BCL for the impacts on its assets, access to assets, and loss of income.

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 Company Limited (BCL) through whose property the canal will traverse, and the users of the public road that will experience delays during construction. As documented in the ARP, numerous consultations took place between 2010 and 2014 between the MoA and BCL. A workshop was also held in Georgetown on November 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 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.

B. Disclosure Requirements

Environmental Assessment/Audit/Management Plan/Other	
Date of receipt by the Bank	January 23, 2015
Date of submission to InfoShop	March 30, 2015
For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors	
"In country" Disclosure April 2, 2015 http://guyanareddfund.org/images/stories/pdf/files/cunha_eia_final_jan_23_2015.pdf	
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

OP/BP/GP 4.01 - Environment Assessment	
Does the project require a stand-alone EA (including EMP) report?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Are the cost and the accountabilities for the EMP incorporated in the credit/loan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
The World Bank Policy on Disclosure of Information	
Have relevant safeguard policies documents been sent to the World Bank's Infoshop?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
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?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
All Safeguard Policies	
Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Have costs related to safeguard policy measures been included in the project cost?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>

III. APPROVALS

Task Team Leader(s):	Name: Armando Guzman	
<i>Approved By:</i>		
Practice Manager/Manager:	Name: Anna Wellenstein	Date: 4/3/2015