

**CARIBBEAN DEVELOPMENT BANK**



**EXECUTIVE SUMMARY WITH MANAGEMENT RESPONSE**

**PROJECT COMPLETION VALIDATION REPORT**

**DISASTER MITIGATION AND RESTORATION - ROCKFALL AND LANDSLIP  
GRENADA**

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**OFFICE OF INDEPENDENT EVALUATION**

**APRIL 2014**

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## EXECUTIVE SUMMARY

### 1. BASIC PROJECT DATA

<b>Project Title:</b>	Disaster Mitigation and Restoration – Rockfall and Landslip
<b>Country:</b>	Grenada
<b>Sector:</b>	Disaster Rehabilitation
<b>Loan No.:</b>	43/SFR-GRN and 43/SFR-GRN (Add. Loan)
<b>Borrower:</b>	Government of Grenada (GOGR)
<b>Implementing/Executing Agency (EA):</b>	Ministry of Communications, Works and Transport (MCWT)

### CARIBBEAN DEVELOPMENT BANK (CDB) LOAN (\$'000)

<u>Disbursements [\$ million (mn)]</u>	<u>Ordinary Capital Resources (OCR)</u>	<u>Special Funds Resources (SFR)</u>	<u>Total</u>
Original Loan Amount	-	5.20	5.20
Additional Loan	-	3.70	3.70
Total Loan Amount	-	8.90	8.90
Disbursed		8.90	8.90
Cancelled	-	-	-
			<u>Variance (months)</u>
<u>Project Milestones</u>	<u>At Appraisal</u>	<u>Actual</u>	
Board Approval (Original Loan)	December 9, 2005	December 9, 2005	-
Loan Agreement signed	March 28, 2006	February 21, 2006	1
Loan Effectiveness <sup>1</sup>	April 23, 2006	December 12, 2007	(20)
Board Approval (Add. Loan)	May 26, 2008	May 26, 2008	-
Loan Agreement signed	September 16, 2008	September 16, 2008	-
Loan Effectiveness	November 15, 2008	November 05, 2008	-
			<u>Variance (months)</u>
<u>CDB Loan</u>	<u>At Appraisal</u>	<u>Actual</u>	
First Disbursement Date	March 31, 2006	December 21, 2007	21.0
Terminal Disbursement Date (TDD)	September 30, 2008	October 31, 2011	37.0
TDD Extensions (number)	-	5	-
			<u>Variance</u>
<u>Project Cost and Financing (\$mn)</u>	<u>At Appraisal</u>	<u>Actual</u>	
CDB Loan	8.90	8.87	0.03
Counterpart (GOGR)	1.24	1.17	0.07
<b>Total</b>	<b>10.14</b>	<b>10.04</b>	<b>0.10</b>
			<u>Variance</u>
<u>Terms</u>	<u>Interest Rate</u>	<u>Repayment</u>	<u>Grace Period</u>
CDB Loan [Special Funds Resources (SFR)]	2.5%	26 years	6 years
			<u>Variance (months)</u>
<u>Implementation</u>	<u>At Appraisal</u>	<u>Actual</u>	
Start Date	March 28, 2006	February 21, 2006	1
Completion Date	April 30, 2009	June 6, 2010	(13)
Implementation Period (years)	3.1	4.3	(1.2)
			<u>Variance</u>
<u>Economic Rate of Return (%)</u>			
At Appraisal	Not Applicable		
Project Completion Report	Not Applicable		

<sup>1</sup> Date conditions to First Disbursement satisfied.

## **2. PROJECT DESCRIPTION**

2.01 Since the early 1970s, landslides have presented a direct safety hazard to persons living in affected areas or using the major roads along Grenada's coasts and have posed a threat to the coastal road infrastructure. Three of the major roads in Grenada that form the arteries of the Strategic Highway Network are the Western Main Road; the Eastern Main Road; and the Grand Etang Road. Damage on these roads resulting from hurricanes Ivan and Emily had increased the risk factor (to medium and high) for many of the vulnerable sites where road collapse from landslides and erosion was imminent and posed considerable risk to human life, private and public property, natural assets, economic production, and communication and transportation infrastructure. Given the vital role of the road network and the major impact and disruption caused to the economy and society, GOCR decided to assess and address the risks and vulnerability of 42 sites.

2.02 In December 2005 at its Two Hundred and Nineteenth Meeting, the Board of Directors of CDB approved a loan of an amount not exceeding the equivalent of five million, two hundred thousand United States dollars (USD5.2 mn) from CDB's SFR to assist GOCR to finance the implementation of remedial measures.

2.03 The project was intended to contribute to GOCR's efforts at accelerating the implementation of its reconstruction programme; returning the country to sustainable long-term growth and debt sustainability; and reducing poverty. The level of poverty had deteriorated as a result of the effects of Hurricane Ivan which damaged approximately 90 per cent (%) of the housing stock and made approximately 30,000 people homeless. Ivan disrupted the livelihood of residents, in particular farmers, who constitute a substantial part of the labour force and are significant contributors to Grenada's economy.

### **PROJECT OBJECTIVES OR EXPECTED OUTCOMES**

2.04 The primary objective of this project was the preservation of the road communications network in Grenada by reducing the risks associated with rockfall and landslip events along three major roads in the national network. The project was intended to reduce the potential loss of life and damage to private property and road infrastructure from landslides through the mitigation of rockfall hazards to the road network; and restoration of damaged retaining structures along the road network.

### **EVALUATION OF PERFORMANCE AND OVERALL ASSESSMENT**

#### **Overall Assessment**

2.05 The Project Completion Report (PCR) rates the overall performance of the project as *Highly Satisfactory*. The Evaluator rates overall performance as *Satisfactory*. This difference is due to the Evaluator's lower performance ratings under the Efficiency and Sustainability criteria.

#### **Relevance**

2.06 The PCR rated the project's relevance as *Highly Satisfactory*. The PCR indicates that project design contributed to the satisfactory achievement of all planned project outputs. The design was informed by: (i) a study which was commissioned by GOCR to assess the risks posed by several sites across the country which presented rockfall hazards to the public; (ii) analysis to identify the least-cost options for reducing the risks to the road network; and (iii) lessons learned from previous efforts at reducing the potential for disaster from rockfalls and landslips in Grenada. The project was also designed in accordance with the criteria of CDB's Natural Disaster Management Strategy and Guidelines. In addition, the project remained a high priority for GOCR; was consistent CDB's strategic objectives and key corporate

priorities; reduced fear and anxiety among the vulnerable population in the rockfall project areas, in particular, among approximately 100 rural households; and reduced the risk of disruption to socio-economic activity and productivity. Based on this justification, the Evaluator concurs with the PCR rating of *Highly Satisfactory*.

### **Efficiency**

2.07 The PCR performance summary rated this criterion as *Highly Satisfactory*. The justification for this rating was that the risk reduction and mitigation measures proposed at appraisal were based on least cost approaches. The Evaluation, however, rates this criterion as *Satisfactory* given the delays incurred during implementation, particularly in meeting conditions precedent to first disbursement; and the higher actual cost of implementation, when compared to planned cost, which led to a reduction in cost efficiency.

### **Effectiveness**

2.08 The PCR rated effectiveness as *Highly Satisfactory*. The justification given for this assessment stated that the remedial measures implemented had reduced the potential for damage from landslides and rockfalls; vulnerability to a targeted group of approximately 100 rural households located below potential rockfall hazards; and preserved access for road users. On the basis of the foregoing, the Evaluator concurs with the *Highly Satisfactory* rating of the PCR for this criterion.

### **Sustainability**

2.09 The PCR rated sustainability as *Satisfactory* based on an assessment that there was only a moderate risk that the infrastructure will not be adequately maintained given ongoing capacity building efforts by MCWT. The Evaluator, however, rates this criterion as *Marginally Unsatisfactory* given the inadequate maintenance of roads and drains by MCWT in the past; GOGR's continued fiscal difficulties which could result in reduced allocations to maintenance; the risk that human activities near to the remedied sites could compromise the stability of slopes and the drainage system. GOGR had not complied with the maintenance covenant of the Loan Agreement; and there was already evidence of inadequate maintenance of the works implemented under the project.

### **Performance of the Borrower and Executing Agency**

2.10 The PCR rates the Borrower's performance as *Satisfactory*. The justification was that the Project Coordinator had executed the functions as required under the Loan Agreement and managed the successful completion of the project within the total projected project cost. There were, however, significant delays in meeting conditions precedent and in the overall completion of the project; and the Project Steering Committee, established to provide oversight, was not operationalised. The Evaluator rates Borrower Performance as *Marginally Unsatisfactory* given that the contract between GOGR and contactors was not managed proactively; the less than satisfactory quality of reporting by GOGR to CDB; and GOGR's non-compliance with the maintenance covenant within the Loan Agreement.

### **Performance of CDB**

2.11 The PCR rated CDB's performance as *Satisfactory*. The justification given for this rating includes CDB's timely response to GOGR's requests and claim submissions and its proactive stance in assisting GOGR in satisfying conditions precedent to first disbursement.

2.12 The Evaluator also rates the Bank's performance as *Satisfactory* as the evidence points to a satisfactory quality at entry and supervision by the Bank. Issues identified by CDB at appraisal proved

critical to successful project implementation and the Bank has adequately managed the operational and legal aspects of the Loan Agreement, including the timely processing of disbursement applications and issuing responses to enquiries.

**TABLE 1: SUMMARY RATINGS OF CORE EVALUATION CRITERIA AND OVERALL ASSESSMENT OF PROJECT**

Criteria	PCR		Office of Independent Evaluation Review		Reason, if any, For Disagreement/Comments
	Score	Rating	Score	Rating	
Relevance	4	Highly Satisfactory	4	Highly Satisfactory	-
Effectiveness	4	Highly Satisfactory	4	Highly Satisfactory	-
Efficiency	4	Highly Satisfactory	3	Satisfactory	Difficulties experienced by GOCR in recruiting the Project Coordinator resulted in significant delays in meeting conditions precedent to first disbursement. This contributed to a 13-month extended period of implementation.
Sustainability	3	Satisfactory	2	Marginally Unsatisfactory	Fiscal difficulties by GOCR and evidence of inadequate maintenance to the project are likely to threaten realisation of project benefits.
<b>Overall Assessment</b>	<b>3.75</b>	<b>Highly Satisfactory</b>	<b>3.25</b>	<b>Satisfactory</b>	Lower ratings by the Evaluator for the Efficiency and Sustainability criteria.
Borrower and EA Performance	-	Satisfactory	-	Marginally Unsatisfactory	Non-compliance with reporting requirements.
CDB Performance	-	Satisfactory	-	Satisfactory	-

## **LESSONS**

2.13 The PCR cited the following as important lessons learned:

- (i) Solutions to landslides and rockfalls should be designed to facilitate preventative maintenance. For example, the project had stipulated that culverts, to be constructed under the project, should be no less than one square metre in cross section to allow for easy access and maintenance. This approach to design should be institutionalised.
- (ii) Periodic inspections by experienced engineers of sites vulnerable to landslides and rockfalls may lead to the early identification of risks and implementation of remedial measures and may reduce the total cost to the society.
- (iii) GOCR and CDB should, in future projects, explore more innovative solutions/novel designs to mitigating landslides and rockfalls.

- (iv) Where justified by the Economic Rate of Return and fiscal conditions, similar projects should include a provision to strengthen maintenance capacity and cover maintenance cost for a minimum period, which is suggested as not less than three years.

2.14 The Evaluator agrees with the above lessons and also suggests that there should be a more in-depth assessment of the EA's capacity to implement a proposed project and maintain infrastructure works resulting from the project.

### **PCR QUALITY**

2.15 The Evaluator rates the quality of the PCR as *Satisfactory*. There were some inconsistencies between the evidence of performance and ratings but the PCR identified useful lessons learned and follow-up actions which can contribute to improving the sustainability of the project and the design and implementation of similar projects in the future.

### **RECOMMENDATIONS FOR FOLLOW-UP**

2.16 No follow-up for Office of Independent Evaluation is required. The Evaluator does not consider that a Project Performance Audit Report would provide significantly more information or identify other lessons to be learnt.



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**MANAGEMENT RESPONSE**

1.01 There was general congruence between the Project Completion Report and the Project Completion Validation Report (PCVR) and we find the conclusions of the PCVR to be reasonable and accept the Report. Both the PCR Team and the Evaluators agreed that there were some valuable lessons learned from the Project which will assist the Bank in maximising the impact of its interventions in its Borrowing Member Countries. Several of these lessons are already being incorporated into recent project designs.