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Report No: PAD2765

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT PAPER

ON A

PROPOSED RESTRUCTURING AND ADDITIONAL CREDIT

IN THE AMOUNT OF  
SDR 22.1 MILLION  
(US\$31 MILLION EQUIVALENT)

TO THE

COMMONWEALTH OF DOMINICA

FOR THE

DISASTER VULNERABILITY REDUCTION PROJECT  
August 31, 2018

Social, Urban, Rural and Resilience Global Practice  
Latin America and Caribbean Region

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective July 26, 2018)

Currency Unit = Eastern Caribbean Dollar (EC\$)

EC\$2.7 = US\$1

US\$1.41 = SDR 1

FISCAL YEAR

January 1–December 31

## ABBREVIATIONS AND ACRONYMS

ADT	Average Daily Traffic
AF	Additional Financing
ARAP	Abbreviated Resettlement Action Plan
CDB	Caribbean Development Bank
CERC	Contingent Emergency Response Component
CREAD	Climate Resilience Execution Agency of Dominica
DVRP	Disaster Vulnerability Reduction Project
EA	Environmental Assessment
EMF	Environmental Management Framework
EMF-EA	Environmental Management Framework and Environmental Assessment
EMP	Environmental Management Plan
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
EU	European Union
FM	Financial Management
FMA	Financial Management Assessment
GRM	Grievance Redress Mechanism
GDP	Gross Domestic Product
GoCD	Government of the Commonwealth of Dominica
GRS	Grievance Redress Service
ICC	Information and Communication Campaign
IFR	Interim Financial Report
LIDAR	Light Detection and Ranging
IPF	Investment Project Financing
IPP	Indigenous People Plan
IST	Implementation Support Team
MoE	Ministry of Environment, Climate Resilience, Disaster Management and Urban Renewal

MoF	Ministry of Finance
PCU	Project Coordination Unit
PDNA	Post Disaster Needs Assessment
PDO	Project Development Objective
PPCR	Pilot Program for Climate Resilience
RPF	Resettlement Policy Framework
RPS	Regional Partnership Strategy
SAP	Safeguard Action Plan
SORT	Systematic Operations Risk-rating Tool
SPCR	Strategic Program for Climate Resilience
UNESCO	United Nations Educational, Scientific and Cultural Organization
VOC	Vehicle Operating Cost
VOT	Value of Time

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**BASIC INFORMATION – PARENT (Third Phase Disaster Vuln.Reduction APL for Dominica - P129992)**

Country Dominica	Product Line IBRD/IDA	Team Leader(s) Yohannes Yemane Kesete		
Project ID P129992	Financing Instrument Investment Project Financing	Resp CC GSU10 (9351)	Req CC LCC3C (451)	Practice Area (Lead) Social, Urban, Rural and Resilience Global Practice

Implementing Agency: Ministry of Environment

Is this a regionally tagged project?  No	
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Bank/IFC Collaboration  No	
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Approval Date 01-May-2014	Closing Date 01-Jul-2020	Original Environmental Assessment Category Partial Assessment (B)	Current EA Category Partial Assessment (B)
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**Financing & Implementation Modalities**

<input type="checkbox"/> Multiphase Programmatic Approach [MPA]	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input checked="" type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Disbursement-Linked Indicators (DLIs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a Non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	



Development Objective(s)

The objective of the Project is to reduce vulnerability to natural hazards and climate change impacts in Dominica through: (i) investment in resilient infrastructure, and (ii) improved hazard data collection and monitoring systems.

Ratings (from Parent ISR)

	Implementation					Latest ISR
	03-Mar-2016	29-Sep-2016	06-Apr-2017	16-Oct-2017	28-Jan-2018	26-Jul-2018
Progress towards achievement of PDO	S	S	S	S	S	S
Overall Implementation Progress (IP)	MS	MS	MS	MS	MS	MS
Overall Safeguards Rating	S	S	S	S	S	MS
Overall Risk	S	S	S	S	S	S

BASIC INFORMATION – ADDITIONAL FINANCING (Additional Financing Dominica Disaster Vulnerability Reduction Project - P166540)

Project ID P166540	Project Name Additional Financing Dominica Disaster Vulnerability Reduction Project	Additional Financing Type Restructuring, Scale Up	Urgent Need or Capacity Constraints Yes
Financing instrument Investment Project Financing	Product line IBRD/IDA	Approval Date 28-Sep-2018	
Projected Date of Full Disbursement	Bank/IFC Collaboration		



30-Oct-2023	No	
Is this a regionally tagged project?		
No		

**Financing & Implementation Modalities**

<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Disbursement-Linked Indicators (DLIs)	<input checked="" type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a Non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input checked="" type="checkbox"/> Responding to Natural or Man-made disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	
<input checked="" type="checkbox"/> Contingent Emergency Response Component (CERC)	

**Disbursement Summary (from Parent ISR)**

Source of Funds	Net Commitments	Total Disbursed	Remaining Balance	Disbursed
IBRD				%
IDA	17.00	12.87	2.74	82 %
Grants	21.00	4.27	16.73	20 %

**PROJECT FINANCING DATA – ADDITIONAL FINANCING (Additional Financing Dominica Disaster Vulnerability Reduction Project - P166540)**

**FINANCING DATA (US\$, Millions)**

**SUMMARY (Total Financing)**

	Current Financing	Proposed Additional Financing	Total Proposed Financing
<b>Total Project Cost</b>	39.50	31.00	70.50
<b>Total Financing</b>	39.50	31.00	70.50



<b>of which IBRD/IDA</b>	17.00	31.00	48.00
<b>Financing Gap</b>	0.00	0.00	0.00

**DETAILS - Additional Financing**

**World Bank Group Financing**

International Development Association (IDA)	31.00
IDA Credit	31.00

**IDA Resources (in US\$, Millions)**

	Credit Amount	Grant Amount	Total Amount
National PBA	31.00	0.00	31.00
<b>Total</b>	<b>31.00</b>	<b>0.00</b>	<b>31.00</b>

**COMPLIANCE**

**Policy**

Does the project depart from the CPF in content or in other significant respects?

Yes  No

Does the project require any other Policy waiver(s)?

Yes  No

**INSTITUTIONAL DATA**

**Practice Area (Lead)**

Social, Urban, Rural and Resilience Global Practice

**Contributing Practice Areas**

Transport & Digital Development

**Climate Change and Disaster Screening**

This operation has been screened for short and long-term climate change and disaster risks

**Gender Tag**

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

Yes

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

Yes

**PROJECT TEAM****Bank Staff**

Name	Role	Specialization	Unit
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Kavita Sethi	Team Leader	Transport	GTR04
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William D. O. Paterson	Team Member	Transport	GSU10





**Extended Team**

Name	Title	Organization	Location
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COMMONWEALTH OF DOMINICA

ADDITIONAL FINANCING TO THE DISASTER VULNERABILITY REDUCTION PROJECT

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## I. BACKGROUND AND RATIONALE FOR ADDITIONAL FINANCING

1. This Project Paper seeks the approval of the Executive Directors to provide an additional IDA Credit in the amount of US\$31 million to the Disaster Vulnerability Reduction Project (DVRP, P129992). The proposed Additional Financing (AF) will scale up activities initiated under the original credit following Tropical Storm Erika in August 2015 and Hurricane Maria in September 2017. Concurrently, it is also proposed to restructure the DVRP to support activities prioritized by the Government of the Commonwealth of Dominica (GoCD) as part of its recovery and reconstruction strategy post Hurricane Maria and to extend the closing date of the DVRP by three years to June 30, 2023, which is the proposed closing date of the AF.

2. **Background.** The Commonwealth of Dominica is a small upper-middle-income country in the Caribbean Sea, with a population of 73,543.<sup>1</sup> With a gross domestic product (GDP) of US\$581.48 million (2016),<sup>2</sup> Dominica's economy depends predominantly on agriculture and tourism. Poverty remains a pervasive development issue, with a poverty headcount of 28.8 percent at the time of the last Country Poverty Assessment conducted in 2009.<sup>3</sup> Dominica is affected by fiscal sustainability challenges, with public debt levels as high as over 82.7 percent of GDP,<sup>4</sup> because of the country's exposure to natural disasters and external shocks.

3. Dominica is particularly vulnerable to natural disasters from meteorological and geophysical events. Due to its location within the Atlantic hurricane belt, high-intensity weather events such as high wind, excess rainfall, and hurricanes, continue to have adverse effects on vulnerable populations and the productive sectors of the country's economy. Moreover, the island's mountainous, rugged landscape creates significant engineering challenges in reducing infrastructure vulnerability to natural disasters and climate change. The steep topographic conditions and rugged interior mean human settlements and physical development are concentrated along narrow coastal areas (particularly in the south and west), with almost 62 percent of the island's population living along the coast.

4. Recurrent meteorological events have significantly affected the country's economic and fiscal stability and the population's socioeconomic well-being. Average annual losses from weather-related events between 1996 and 2015 are estimated at 7.9 percent of GDP, making Dominica the second most affected country globally in terms of average GDP loss during this period. Fiscal losses arising from these events and the ongoing challenges of climate change threaten to set back hard-earned development gains and restrain economic growth. As a result, the GoCD has made disaster risk management and climate change adaptation its utmost priorities.

5. **DVRP.** An IDA Credit of US\$17 million and a Pilot Program for Climate Resilience (PPCR) Grant of US\$12 million and Credit of US\$9 million for the DVRP were approved by the World Bank Board on May

<sup>1</sup> World Bank, World Development Indicators. Statistics are for 2016 (latest available).

<sup>2</sup> Dominica | Drupal. <https://www.gfdr.org/dominica>.

<sup>3</sup> Kairi Consultants Ltd. *Country Poverty Assessment: Dominica*. 2010. <http://www.caribank.org/uploads/publications-reports/economics-statistics/country-poverty-assessment-reports/Dominica+CPA+-+Main+Report+Final+%28Submitted%29.pdf>

<sup>4</sup> International Monetary Fund World Economic Outlook and World Bank staff calculations. Public sector debt includes estimated commitments under the Petrocaribe arrangement with Venezuela.



1, 2014 and became effective on September 8, 2014; the IDA Credit and the PPCR Credit and Grant have a closing date of July 1, 2020. The DVRP's project development objective (PDO) is to reduce vulnerability to natural hazards and climate change impacts in Dominica through (a) investment in resilient infrastructure and (b) improved hazard data collection and monitoring systems. Project implementation is making reasonable advancement with the Progress toward achievement of the PDO rated Satisfactory and the Overall Implementation Progress rated Moderately Satisfactory. The PDO is likely to be achieved by the current closing date. At the time of the midterm review in December 2017, a total of US\$17.14 million had been disbursed (45 percent). The project is in compliance with the World Bank fiduciary and safeguard policies as well as covenants under the Financing Agreement. There are no overdue audit reports and no unaddressed audit observations.

6. The project comprises four components: (i) prevention and adaptation investments; (ii) capacity building and data development, hazard risk management and evaluation; (iii) natural disaster response investments; and (iv) project management and implementation support. The status of implementation of each component is summarized in the following paragraphs.

7. **Component 1: Prevention and Adaptation Investments.** This component comprises the rehabilitation of the East Coast Roads and the construction of the West Coast Water Tanks. Both Tropical Storm Erika and Hurricane Maria caused some delays in the implementation of these sub-projects. The preliminary engineering and design services for rehabilitation and improvement of the East Coast Roads is under way. According to the work plan, detailed design and bidding documents would be available by November 2018. Contracts for the West Coast Water Tanks have all been signed, and five of the eight water tanks have been constructed. No tanks were damaged by Hurricane Maria, but some access roads were eroded and some pipes were exposed. As a result of the changes proposed to the East Coast Roads works under the AF (see paragraph 13), this component can only be completed with an extension of the closing date to June 30, 2023, that is, concurrent with that of the AF.

8. **Component 2: Capacity Building and Data Development, Hazard Risk Management and Evaluation.** This component focuses on the development of data and information to better manage disaster risks and climate change in Dominica. The bathymetric component of the Light Detection and Ranging (LiDAR) survey was completed in July 2017, and the LiDAR Topographic survey is currently under way. The hydrometeorological network analysis and necessary specifications have been completed. The installation of the network is expected to be completed by the end of 2018. The design of the meteorological office building has been completed. Other related activities such as soil survey mapping and the geo-spatial management platform are progressing satisfactorily.

9. **Component 3: Natural Disaster Response Investments.** Following Hurricane Maria in September 2017, the Contingent Emergency Response Component (CERC) was triggered. In line with the Government request to provide urgent assistance to farmers, a cash transfer program was developed. A total of US\$7 million was reallocated from Component 1 to Component 3 of the project to support these activities and the total amount was disbursed in December 2017.

10. **Component 4: Project Management and Implementation Support.** The Project Coordination Unit (PCU) is staffed with a Project Coordinator, Financial Management (FM) Specialist, Procurement Specialist, Environmental Specialist, Social Specialist, Project Engineer, Monitoring and Evaluation/Communications Officer, and an Administrative Assistant. The PCU is performing satisfactorily given the fact that this was



a newly established PCU. However, it would benefit from additional support in key functions such as procurement, especially after Hurricane Maria, to accelerate implementation.

11. **Rationale for the AF.** On September 18, 2017, Hurricane Maria hit the island of Dominica with catastrophic effect. Hurricane Maria made landfall as a Category 5 storm (Saffir-Simpson scale), with sustained winds of 170 mph. As the storm passed over the center of the island, Dominica was exposed to extraordinary winds for more than three hours, accompanied by intense rainfall, which triggered flash floods and landslides. Hurricane Maria was one of the most rapidly intensifying storms in recent memory, strengthening from a Category 2 to Category 5 hurricane in less than 12 hours. When Hurricane Maria hit Dominica, it was still recovering from the damages caused by Tropical Storm Erika (2015), which significantly affected the country's transportation, housing, and agriculture sectors, with losses of about 90 percent of Dominica's GDP. The DVRP was the only active Project that was able to support the emergency recovery efforts.

12. A Post Disaster Needs Assessment (PDNA) led by the World Bank in collaboration with the United Nations, the Eastern Caribbean Central Bank, the Caribbean Development Bank (CDB), and the European Union (EU) estimated total damages at US\$931 million and losses at US\$382 million, amounting to 226 percent of 2016 GDP. The identified needs for reconstruction and resilience interventions to 'build back better' amount to US\$1.37 billion. The storm significantly affected the transport and water sectors with combined damages and losses of approximately US\$299 million and recovery needs of approximately US\$358 million.

13. **The proposed AF and restructuring of the DVRP.** The devastating losses and damages in the infrastructure and road sectors following Tropical Storm Erika in 2015 and Hurricane Maria in 2017 highlighted the critical need to upgrade the East Coast Roads (instead of spot improvements) and strengthen the water distribution system and access roads for the West Coast Water Tanks to a standard that will ensure long-term vulnerability reduction to natural hazards and climate change impacts. Further, an additional US\$7 million is proposed to be provided to Component 1 to make up for the amount transferred to Component 3 (see paragraph 9). Unspent project preparation advance is also proposed to formally be reflected under Component 1. In addition, it is proposed to provide additional funds to Component 4 to continue project management and implementation support for an additional period of three years and to partially finance the establishment of an Implementation Support Team (IST) within the Ministry of Finance (MoF). The Dubique Cliff Stabilization and the storm drains sub-projects are proposed to be removed to consolidate activities and improve impact. Finally, the financing percentages are proposed to be changed to reflect these reallocations and restructuring (see table 2)

14. This AF to the DVRP is being prepared as part of an overall development partner initiative to support medium- and long-term recovery in Dominica. It is part of a broader World Bank recovery portfolio, comprising an Emergency Agricultural Livelihoods and Climate Resilience Project (P166328) and Housing Recovery Project (P166537). These investments in housing, agriculture, and resilient infrastructure were informed by the outcomes of the PDNA, are aligned with other development partner initiatives, and fill critical gaps. The CDB has pledged to contribute US\$90 million for infrastructure and water, while the United Kingdom has provided US\$25 million for hurricane shelters, smart health centers, and the development of water infrastructure. China has provided US\$15 million for making schools safer, and the EU has provided about US\$14 million for investments in energy and social infrastructure.



15. Activities proposed under the AF are in line with the DVRP PDO and will scale up the impact of the DVRP. The proposed rehabilitation of the entire 43.3 km of the East Coast Roads, rather than selected sections of it under the DVRP, and strengthening of the water distribution system of the West Coast Water Tanks are essential to achieving the PDO in the context of Hurricane Maria and Tropical Storm Erika. The proposed AF is the optimal World Bank operational vehicle, as the proposed activities are within the scope of Component 1 of the DVRP and will benefit from the existing satisfactory implementation arrangements of the DVRP. The AF is economically satisfactory (see section IV and annex 1) and will maximize potential synergies, particularly from fiduciary, safeguards, and technical support already provided under the DVRP. In the context of the overall macroeconomic situation in Dominica and the commitment of donors to support other emergency activities (see paragraph 14), the World Bank AF under the DVRP is the appropriate vehicle.

16. An IST will support the implementation of the three World Bank-funded post-Hurricane Maria projects and will be housed within the MoF. It will serve as a shared resource for specialist procurement, safeguards, and fiduciary support to the respective PCUs. The IST will be staffed by two International Procurement Specialists, an FM Manager, Safeguards Specialists, and a Portfolio Manager. The International Procurement Staff within the IST will manage and be responsible for the procurement processes related to all works, goods, and consulting and non-consulting services under the project, with support from the PCU staff. The Portfolio Manager will be responsible for providing policy guidance, coordination, and oversight of project activities as well as broader functions in overseeing the reconstruction process. The PCUs will coordinate and work closely with the IST, drawing on the resources and expertise housed there, as needed. The IST will mentor and train the PCU staff to build capacity within the ministries, which aligns with the Government's directive of strengthening in-house capacity for project implementation and execution.

17. On March 9, 2018, the Government established the Climate Resilience Execution Agency of Dominica (CREAD) that will help rebuild Dominica as the first climate-resilient nation. The mission of the agency is to coordinate all reconstruction work to avoid duplication, maximize economies of scale, spot and fill critical gaps, and ensure all reconstruction activities are focused on a single Climate-resilient Recovery Plan developed by Dominica and its partners. The current implementation arrangements using the PCUs and the IST for all three World Bank post-Hurricane Maria projects have been designed to be flexible and in harmony with the objectives of CREAD, while mobilizing a combination of national and international staff to advance implementation while the CREAD recruitment and operationalization is being finalized. The IST support will be cost-shared across the World Bank portfolio of investment projects and will work closely with CREAD on the coordination of reconstruction efforts.

18. **Sectorial and institutional context.** The transportation network in the Commonwealth of Dominica comprises 320 km of main roads and 119 km of secondary roads. A 2009 road condition assessment showed that 24 percent of the main roads and 90 percent of the secondary roads were categorized as being in poor or bad condition. Water supply is provided in 41 water areas, and before Hurricane Maria, the water intakes, production, and distribution pipelines needed upgrading. Following the passage of Tropical Storm Erika in 2015 and Hurricane Maria in 2017, floods and landslides triggered by the events destroyed and damaged extensive parts of the transportation network and water supply systems in the country. Given the emergency needs, the GoCD has been focused on clearing debris, constructing temporary Bailey bridges, and stabilizing selected sites to ensure safety, enhance connectivity, and provide access to clean water.



19. However, managing and constructing infrastructure with a focus on resilience to natural disaster and climate change risks remains a challenge. There is limited actionable and well-integrated information on hazards, vulnerabilities, and risks, which could be used for the planning and design of infrastructure. There is also an urgent need to strengthen the institutional capacity to better respond to natural disaster emergencies. The DVRP and this AF have been designed to address these needs and specifically to develop infrastructure with extra emphasis on resilience to natural disasters and climate change risks.

20. **Higher-level objectives to which the project contributes.** Dominica has taken significant steps to strengthen climate change adaptation and mitigation as well as disaster risk management. The country is part of the PPCR, a targeted program of the Climate Investment Fund. Under the PPCR, Dominica has developed the Low-Carbon Climate-Resilient Development Strategy, including the Strategic Program for Climate Resilience (SPCR),<sup>5</sup> a five-year strategy to build resilience to climate change impacts, and set itself on a climate-resilient development path. The National Disaster Plan,<sup>6</sup> which includes policy guidance on prevention, mitigation, and response, was developed in 1988 and revised in 2006. These legislative and policy efforts are complemented by the National Climate Change Adaptation Policy (2002) and the Disaster Preparedness Plan for the Agriculture Sector (2006). In addition, Dominica, with support from the World Bank, is currently developing a risk-based infrastructure asset management system to enable improved prioritization of infrastructure investments and ensure sustainability.

21. The project focuses on building resilience and increasing capacity in the infrastructure sector to manage risks from natural hazards and climate change. It is aligned with the World Bank Group's FY2015–19 Organisation of Eastern Caribbean States Regional Partnership Strategy (RPS) discussed by the Board on October 14, 2014 and will contribute to Outcome 9 of the resilience area of engagement under the RPS, which seeks to increase the country's capacity to manage natural hazards. Specifically, the project will contribute to risk reduction efforts through a combination of resilience investments and institutional capacity building in the infrastructure sector. The project has been screened for climate co-benefits, which served to inform the narrative and design of the project.

22. The project will contribute to the World Bank's twin goals of ending extreme poverty and boosting shared prosperity. It will provide access to the eastern part of the country, a region that has been lagging in economic development and is home to the indigenous Kalinago people. Further, the East Coast Roads are an alternative road to the Airport Road that connects Melville Airport to the capital city and hence is critical for connectivity. Strengthening the West Coast Water Tanks distribution system will ensure access to water for up to 3,000 households. Both the sub-projects will be built to withstand future high-intensity events.

## II. DESCRIPTION OF ADDITIONAL FINANCING AND RESTRUCTURING

23. As indicated previously, the AF will support Components 1 and 4.

<sup>5</sup> GoCD. Dominica SPCR 2012–2017. [https://www.climateinvestmentfunds.org/sites/default/files/meeting-documents/dominica\\_spcr\\_final\\_october2012\\_0.pdf](https://www.climateinvestmentfunds.org/sites/default/files/meeting-documents/dominica_spcr_final_october2012_0.pdf).

<sup>6</sup> The National Emergency Planning Organization. 2001. "National Disaster Plan." [http://odm.gov.dm/images/docs/national\\_disaster\\_plan.pdf](http://odm.gov.dm/images/docs/national_disaster_plan.pdf).



24. **Component 1: Prevention and Adaptation Investments (increase of US\$28.1 million).** The proposed activities under the AF are already covered by the description of Component 1. The expanded scope of the East Coast Roads works will fully rehabilitate, widen, and resurface the entire 43.3 km of the road to resilient standards, instead of only strengthening works at selected sites as envisaged under the DVRP. Works will include substantial slope and landslide stabilization, flood mitigation activities along the entire corridor, bridge protection and replacement, expansion of road width, and mitigation of river erosion along the road embankments. The proposed strengthening of the water distribution systems and access roads for West Coast Water Tanks under the AF will be based on improved construction techniques and material to ensure that water pipes are resilient to recurrent natural disasters. The AF will also replenish funds allocated to Component 1 that had been redirected to Component 3 under the CERC to support the agriculture sector.

25. **Changes to Component 1 due to the proposed restructuring.** Following the damage from Tropical Storm Erika, the Government decided that investments in the village of Dubique at the southeast side of the island were no longer cost-effective nor suitable for further development due to the severe landslide risk. In addition, the national storm drains sub-project is proposed to be removed from the project as the Government has determined that the widespread nature of the project and the limited fund allocation will not lead to a comprehensive drainage solution to any particular area.

26. **Component 4: Project Management and Implementation Support (increase of US\$2.9 million).** The proposed AF will provide funds for Component 4: Project management and Implementation Support for the three-year extension that will be required to complete the project and to provide further support for strengthening and developing institutional capacity through technical advisory services, training, operating costs, and acquisition of goods. In addition, this component will partially finance the establishment and operation of an IST, which will serve as a shared resource for all World Bank-funded projects.

**Table 1. Project Cost and Reallocation of Resources from Sub-projects (US\$, millions)**

Activities <sup>a</sup>	Allocation Before Tropical Storm Erika (Spot Rehab)	Total Needs Post Tropical Storm Erika and Hurricane Maria (Full Rehab)
East Coast Roads including immediate works	17.1 <sup>b</sup>	43.9
West Coast Water Tanks	1.7	2.6
Dubique Cliff Stabilization	4.4	—
National Storm Drains	2.1	—
CERC - cash transfers to farmers	—	7.0
Operations cost for PCU and IST	—	2.9
Total cost	25.4	56.4
<b>Funding gap</b>		<b>31</b>

Note: a. Cost includes design and supervision when applicable; b. There was no allocation for immediate works before Tropical Storm Erika





Table 2. Revised Project Financing Percentages with the AF

Category	Amount of the Credit Allocated (US\$)	Percentage of Component Expenditures to Be Financed by Funding Source	Funding Source
Component 1 (Part A)	8,997,995	18%	IDA-5495 (World Bank IDA)
	3,000,000	6%	TF16955 (PPCR Grant)
	9,000,000	19%	TF16912 (PPCR Loan)
	28,054,299	57%	IDA Additional Finance
Component 2 (Part B)	7,000,000	100%	TF16955 (PPCR Grant)
Component 3 (Part C)	7,999,909	100%	IDA-5495 (World Bank IDA)
Component 4 (Part D)	2,000,000	40%	TF16955 (PPCR Loan)
	2,945,701	60%	IDA Additional Finance

27. **Safeguards.** The proposed AF will not trigger any new World Bank safeguard policies and the Environmental Assessment (EA) Category will remain unchanged as Category B. For more details, see section IV. F.

28. **Closing date.** The closing date for the proposed AF Credit is June 30, 2023, that is, less than 10 years from the June 10, 2014, approval date of the DVRP Credit and Grant. As indicated earlier, to enable activities under the DVRP to be completed, it is also proposed to concurrently amend the closing date of the DVRP Credit and Grant to June 30, 2023.

### III. KEY RISKS

29. **The overall risk is rated High, as shown in the Systematic Operations Risk-rating Tool (SORT) table in the Data Sheet, because of the high risks associated with political and governance, macroeconomic environment, institutional capacity for implementation and sustainability, and climate change and extreme weather risk.** Risks and mitigation measures relating to risk categories rated High and Substantial are discussed in the following paragraphs.

30. **Political and governance.** After Hurricane Maria, there is strong political momentum and strong Government ownership. However, governance capacity is low, and there are a number of competing priorities. The World Bank will work with the PCU and the Ministry of Environment, Climate Resilience, Disaster Management and Urban Renewal

31. (MoE) to ensure that all project documentation is accurately developed.

32. **Macroeconomic.** Substantial damages and losses were incurred following the passage of Hurricane Maria, which led to deficits of up to 13 percent of GDP in FY2018/19. Vulnerability to external shocks remains high. These risks will be partly mitigated by the allocation of resources for contingencies and by incurring most project expenditures in U.S. dollars.



33. **Institutional capacity for implementation and sustainability.** The country has limited capacity and lacks adequate systems to manage large-scale projects. The PCU will play a key role in complementing the technical and project management capacity of the relevant ministries. Further, the World Bank will provide the necessary implementation support through the IST, which will be established to support all World Bank projects. The implementation support plan includes adequate resources to support project implementation.

34. **Fiduciary.** The project requires strong FM and procurement support as the parent project has several activities across many ministries. In addition to the current FM and Procurement Specialists, the project will engage the services of a highly qualified and experienced FM Manager and Procurement Specialist through the IST.

35. **Environment and social.** The nature of potential environmental impacts includes those typically associated with road rehabilitation or major maintenance, mainly landslides, soil stabilization and erosion control, and debris management. Because the project aims to reduce disaster risk vulnerability, there will be a particular emphasis to manage these risks. The project might require land acquisition for road widening in some locations. However, the size of land to be acquired will be very small due to the nature of the road expansion. The DVRP has already established a working group from various ministries to streamline the acquisition of small pieces of land. Any labor influx impacts associated with the civil works will be assessed under the Environmental and Social Impact Assessment (ESIA), and appropriate mitigation measures will be put in place.

36. **Stakeholders.** The project will need to involve multiple ministries during design and implementation. However, the various line ministries may have difficulty in cohesively coordinating their work under one implementing agency. All replacement of utility lines and other services will need to be coordinated for an optimal outcome. To mitigate this risk, the project has actively involved the water utility company and will continue to coordinate with other utility companies. In addition, the project will continue its community engagement outreach and training to ensure that all stakeholders are well informed and are involved in the project.

37. **Climate change and extreme weather events (classified as 'Other' in the SORT).** The project has been screened for climate and disaster risk. Dominica is highly exposed to several natural hazards, including extreme precipitation and flooding, strong winds, and landslides. It is estimated that a potential increase in the severity and frequency of such events is likely. The project will provide structural and nonstructural solutions to better manage future climate and disaster risks related to civil infrastructure.

## IV. APPRAISAL SUMMARY

### A. Economic and Financial (if applicable) Analysis

38. The project is expected to have high development impact as the East Coast Roads provide access to the eastern part of the country, a region that has been lagging in economic development and is home to the indigenous Kalinago people. In addition, the East Coast Roads are an alternative road to the Airport Road, a critical road connecting Melville Hall Airport to the capital city. Investments under this project will



avert future transport disruptions on the East Coast Roads and ensure that they can serve as an alternative road when critical sections of the Airport Road get damaged.

39. An economic analysis was performed to assess the rate of return of the capital investments to fully rehabilitate the East Coast Roads. Project benefits are measured primarily in the form of Vehicle Operating Cost (VOC) and Value of Time (VOT) losses that are averted by building infrastructure that is more resilient to natural hazards. The project costs are estimated based on detailed identified interventions.

40. A Monte Carlo simulation analysis was performed to account for the uncertainty in determining the travel speed in existing and alternative routes, vehicle occupancy rate, and the number of days it takes to open roads to the public. The economic analysis was for a period of 20 years, using a discounting rate of 5 percent. The results of the analysis range from a benefit-to-cost ratio of 1.13 to 2.24, with an average of 1.64, which is satisfactory.

## **B. Technical**

41. The proposed works, institutional strengthening activities, and capacity building have been evaluated and were found consistent with the short- and long-term objectives of the project and the PDO. The specific works were identified based on the priorities of the Government's recovery and reconstruction strategy following Tropical Storm Erika and Hurricane Maria. Engineering and safeguard activities are being prepared under the original project. The proposed civil works can be reasonably completed within the increased lifespan of the project, and the newly established IST will play a critical role in expediting implementation.

42. The increase in the scope of works and cost estimates for the East Coast Roads subcomponent was based on a detailed analysis of the rehabilitation of the Airport Road completed in 2013. The increased scope was based on major outputs for pavement reconstruction and surfacing, earthworks for road widening, slope stabilization, and retaining walls and lined surface drainage. These were applied appropriately to each of the four East Coast Roads sections. The increase in cost for strengthening the water distribution system and access roads for the West Coast Water Tanks was assessed after Hurricane Maria.

43. The design of the East Coast Roads, which commenced in February 2018, will pay particular attention to flood and landslide risks, and provisions have been made for appropriate geotechnical studies. The project will ensure that road and all related infrastructure are constructed to a standard that can withstand recurrent natural disaster risks and climate change by using appropriate hydrological and geophysical information. The project will include substantial slope and landslide stabilization, flood mitigation activities along the entire corridor, bridge protection and replacement, expansion of road width, and mitigation of river erosion along the road embankments. These interventions will minimize the risk of culvert/bridge failures, road subsidence, shoulder erosions, abutment scour, and overall structural and surface deterioration of pavements. The strengthening of the water distribution system will entail using concrete covers and ensuring proper compaction, drainage, and surfacing of adjoining access roads.



### **C. Financial Management**

44. A simplified Financial Management Assessment (FMA) was carried<sup>7</sup> out to evaluate the adequacy of FM arrangements for the proposed AF. The FM Specialist in the PCU will be supported by an FM Manager at the IST. The PCU, with oversight from the MoF, will continue to be directly responsible for all operational FM activities related to the project, as follows: (a) preparation and execution of all financial transactions (within the Integrated Financial Management System—SmartStream), (b) preparation of interim financial reports (IFRs)—for FM Manager’s review and submission to the World Bank, and (c) filing of all documentation (invoices, contracts, and so on). The December 2017 Midterm Review of the DVRP assessed the performance of the project FM to be Moderately Satisfactory.

45. FM arrangements under the AF will be enhanced through the hiring of an FM Manager at the IST, who has the necessary knowledge of all GoCD finance systems and seniority in financial procedures (budget, accounting, and reporting). The FM Manager will be in charge of the arrangements under the DVRP for (a) budgeting, accounting, and FM systems; (b) internal controls; (c) financial reporting; (d) funds flow and disbursement arrangements; and (e) external audit. The FM Manager will be the main focal point for the submission of IFRs to the World Bank. The project should retain the current PCU FM staff to carry out the day-to-day work as the FM Manager will be overseeing multiple projects. The FMA confirmed that with the proposed enhancement, the FM arrangements for the AF meet the World Bank’s fiduciary requirements. FM risk is maintained as Substantial.

### **D. Procurement**

46. A Procurement Assessment was carried out to evaluate the adequacy of existing procurement arrangements for project implementation. Procurement under the AF will be carried out in accordance with the World Bank’s “Procurement Regulations for IPF Borrowers” (July 2016, revised November 2017) (hereafter referred to as Regulations). The DVRP will therefore migrate to the Regulations to ensure consistent implementation of procurement under the Regulations for the entire project.

47. The December 2017 Midterm Review of the DVRP assessed the performance of project procurement to be Moderately Satisfactory. The AF will benefit from additional procurement support that would be available through the IST. Procurement risk is maintained as Substantial, with the following actions being taken to ensure effective implementation:

- (a) Procurement implementation arrangements for the AF in the existing PCU will be enhanced by hiring a Procurement Specialist to staff the IST.
- (b) The current Procurement Specialist in the PCU will continue to provide the necessary capacity for procurement, with close support from the IST.
- (c) Institutional arrangements will be well defined between the MoF, MoE, and PCU, including clear roles and responsibilities.

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<sup>7</sup> In accordance with OP/BP 10.00 and the Financial Management Practice Manual.



(d) External consultants will be engaged by the PCU to develop Terms of Reference and Technical Specifications, as well as to provide support during bid evaluations.

(e) Procurement arrangements will be included in the Project Operational Manual.

48. Under the AF, the works package to fully rehabilitate, widen, and resurface the entire 43.3 km of the East Coast Roads (which was previously envisaged as two separate packages) will be combined into one.

### **E. Social (including Safeguards)**

49. The social benefits of the DVRP are expected to be positive and will remain so under the AF. The significantly reduced risk of road failure along the proposed 43.3 km of roads will further enhance resilience to recurrent climatic events. The reduced risk of key infrastructure failure and the increased capacity of the Government to quickly rehabilitate damaged public infrastructure following an adverse natural event will benefit the entire population of Dominica. The intervention along the East Coast Roads is in particular critical as these road links service the connection between the capital city and the east coast, as well as the connection to the main airport.

50. The parent project continues to engage the people in the Kalinago territory and has supported the training of women in food preparation. There has been a challenge in identifying absentee owners for the processing of the acquisition of small pieces of land. A Social Safeguards Technical Working Group for the East Coast Roads has been established to develop strategies to effectively execute property registration, hold community consultations, and fast-track land and asset compensation along the route. The Midterm Review of the DVRP in December 2017 rated the implementation of safeguards relating to OP 4.10 and OP 4.12 to be Satisfactory. Social and environmental risk is maintained as Substantial.

51. The size and scope of investments under Component 1: Prevention and Adaptation Investments will increase significantly. The AF triggers the same social safeguards policies as the DVRP, that is, the Involuntary Resettlement safeguard policy (OP/BP 4.12), and the Indigenous Peoples safeguard policy (OP/BP 4.10). Revisions to the instruments will be deferred until implementation, in accordance with Bank Policy on IPF, Paragraph 12 (Situations of Urgent need or Capacity Constraints). The Safeguards Action Plan (SAP) is presented in annex 2. The SAP is referenced in the disclosed Integrated Safeguards Datasheet (ISDS).

52. The DVRP Resettlement Policy Framework (RPF) prepared in 2014 will be updated to reflect any new developments in policy and practice by the Government. The DVRP Indigenous People Plan (IPP) will be revalidated. Consultations with the Kalinago people will be coordinated with other World Bank-financed post-Hurricane Maria projects to avoid consultation fatigue. Activities under the Kalinago Road Training Program will be revisited and revalidated.

53. The DVRP Grievance Redress Mechanism (GRM) will be reviewed to make it consistent with the other World Bank-financed post-Hurricane Maria emergency projects to ensure a common approach to intake, recording, feedback routes, and resolution timelines. The Social Safeguards Specialist in the IST will ensure that the GRM principles and procedures implemented under all post-Hurricane Maria projects



are consistent. The grievance redress mechanism for the CERC will also be evaluated, and lessons will be incorporated.

54. The project, through its safeguards and other instruments, will pay specific attention to disadvantaged and vulnerable groups. All safeguards instruments will take into consideration the risks and impacts on disadvantaged or vulnerable individuals or groups who by virtue of, for example, their age; gender; ethnicity; physical, mental, or other disability; social, civic, or health status; economic status; or other factors are maybe more likely to be adversely affected or limited in being able to benefit from the project.

55. **Gender.** Dominica has made significant strides toward social inclusion and gender equality, particularly in education and leadership. The DVRP has conducted gender analysis and community consultations to identify gaps between males and females and has developed several actions to mitigate gaps and empower both males and females. The DVRP has already trained and certified a group of Kalinago women in food safety and food preparation. The trainees have formed a catering/food preparation business that could provide services in the project area. The AF project will also incorporate an apprenticeship program to train men in road construction and provide job opportunities in road works.

56. **Citizen engagement.** The project's communication and outreach strategy will be the key tool for citizen engagement, with an emphasis on early outreach to key stakeholder groups before start-up activities and through ongoing communications around the selection of beneficiaries in a transparent manner. The strategy will include specific engagement with the Kalinago community through their council.

57. **Labor influx.** The ESIA to be conducted for the East Coast Roads will determine the impacts of labor influx, including the need for housing, food supply, merchandise, transport, health care, entertainment, and social interaction as well as gender-based violence and any related mitigation actions. Training of the workforce for East Coast Roads, as well as a Worker Code of Conduct together with sanctions for noncompliance, will be included in the contract. The PCU will ensure effective management of these aspects of the contract through careful supervision throughout construction.

## F. Environment (including Safeguards)

58. The AF triggers the same environmental safeguard policies as the DVRP, that is, Environmental Assessment (OP 4.01), Natural Habitats (OP 4.04), Forests (OP/BP 4.36), Physical Cultural Resources (OP/BP 4.11), and Pest Management Policy (OP/BP 4.09). An Environmental Management Framework and Environmental Assessment (EMF-EA), acceptable to the World Bank, will be prepared and disclosed. The Midterm Review of the DVRP in December 2017 rated the implementation of safeguards relating to OP 4.01 to be Highly Satisfactory and rated implementation of safeguards relating to OP 4.04, OP 4.36, OP 4.09, and OP 4.11 to be Satisfactory.

59. The type and location of investments proposed under the AF are similar to those under the DVRP. Works on the East Coast Roads are already included under the DVRP. The nature of potential environmental impacts has not changed significantly and includes those typically associated with road rehabilitation or major maintenance, mainly landslides; soil stabilization and erosion control; debris management; and health and safety for workers, traffic, and communities. The existing East Coast Roads network is already paved, but it passes through forest areas and rough terrain. So, the sub-project is



considered complex from the environmental standpoint. However, no change to the EA Category (B) is proposed.

60. The DVRP EMF-EA will be updated to reflect the AF activities. Revisions to the EMF-EA will be deferred until implementation, in accordance with Bank policy on IPF, Paragraph 12 and the Safeguards Action Plan (SAP) presented in annex 2.

61. The DVRP EMF-EA provides for the additional assessment of sub-projects that are complex or sensitive, such as major road works. Accordingly, an ESIA has been included in the scope of work for the 43.3 km East Coast Roads, and will provide an Environmental and Social Management Plan (ESMP) to minimize and mitigate the impacts of works. The ESIA will pay special attention to sensitive areas near the Central Forest Reserve, to drainage near the Emerald Pool (a United Nations Educational, Scientific and Cultural Organization [UNESCO] World Heritage site), and in the Kalinago territory. Bioengineering has excellent potential in Dominica given the steep slopes and abundant vegetation; so, the ESIA will evaluate bioengineering methods for slope stabilization. In addition, specific controlled areas will be identified for the disposal of cut-and-fill material and for products for earthmoving operations, as well as to reduce erosion and sediment input to rivers and streams. A first draft of the ESIA will be developed based on the preliminary design and will be finalized along with design completion and disclosed for public comment and consultation before it is finalized.

## **V. WORLD BANK GRIEVANCE REDRESS**

62. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit [www.inspectionpanel.org](http://www.inspectionpanel.org).





**VI. SUMMARY TABLE OF CHANGES**

	Changed	Not Changed
Implementing Agency	✓	
Results Framework	✓	
Components and Cost	✓	
Loan Closing Date(s)	✓	
Reallocation between Disbursement Categories	✓	
Legal Covenants	✓	
Procurement	✓	
Project's Development Objectives		✓
Cancellations Proposed		✓
Disbursements Arrangements		✓
Safeguard Policies Triggered		✓
EA category		✓
APA Reliance		✓
Other Change(s)		✓

**VII. DETAILED CHANGE(S)**

**IMPLEMENTING AGENCY**

Implementing Agency Name	Type	Action
Ministry of Environment		Marked for Deletion
Ministry of Environment, Climate Resilience, Disaster Management and Urban Renewal	Line Ministry/Ministerial Department	New



**COMPONENTS**

Current Component Name	Current Cost (US\$, millions)	Action	Proposed Component Name	Proposed Cost (US\$, millions)
Prevention and Adaptation Investments	29.12		Prevention and Adaptation Investments	50.13
Capacity Building and Data Development, Hazard Risk Management and Evaluation	7.37		Capacity Building and Data Development, Hazard Risk Management and Evaluation	7.37
Natural Disaster Response Investments	1.00		Natural Disaster Response Investments	8.00
Project Management and Implementation Support	2.00		Project Management and Implementation Support	5.00
<b>TOTAL</b>	<b>39.50</b>			<b>70.50</b>

**LOAN CLOSING DATE(S)**

Ln/Cr/Tf	Status	Original Closing	Current Closing(s)	Proposed Closing	Proposed Deadline for Withdrawal Applications
IDA-54950	Effective	01-Jul-2020	01-Jul-2020	30-Jun-2023	30-Oct-2023
TF-16912	Effective	01-Jul-2020	01-Jul-2020	30-Jun-2023	30-Oct-2023
TF-16955	Effective	01-Jul-2020	01-Jul-2020	30-Jun-2023	30-Oct-2023

**REALLOCATION BETWEEN DISBURSEMENT CATEGORIES**

Current Allocation	Actuals + Committed	Proposed Allocation	Financing % (Type Total)	
			Current	Proposed

IDA-54950-001 | Currency: XDR

iLap Category Sequence No: 1		Current Expenditure Category: GO, CW, NON-CS, CS, TRG & OP-Part A			
9,058,880.00	453,539.92	9,058,880.00	57.00	57.00	
iLap Category Sequence No: 2		Current Expenditure Category: GO, CW, NON-CS, CS, TRG & OP-Part B			
0.00	0.00	0.00	100.00	100.00	



iLap Category Sequence No: 3		Current Expenditure Category: Emerg.Recovery & Recons.Subprojects		
647,000.00	315,826.38	647,000.00	100.00	100.00
iLap Category Sequence No: 4		Current Expenditure Category: GO, CW, NON-CS, CS, TRG & OP-Part D		
0.00	0.00	0.00	100.00	100.00
iLap Category Sequence No: 5		Current Expenditure Category: PPF REFINANCING		
1,294,120.00	1,355.50	1,294,120.00		
<b>Total</b>	<b>11,000,000.00</b>	<b>770,721.80</b>	<b>11,000,000.00</b>	

TF-16912-001 | Currency: USD

iLap Category Sequence No: 1		Current Expenditure Category: GO, CW, NON-CS, CS, TRG & OP-Part A		
9,000,000.00	362,071.35	9,000,000.00	32.00	32.00
iLap Category Sequence No: 2		Current Expenditure Category: GO, CW, NON-CS, CS, TRG & OP-Part B		
0.00	0.00	0.00	100.00	100.00
iLap Category Sequence No: 3		Current Expenditure Category: GO, CW, NON-CS, CS, TRG & OP-Part C		
0.00	0.00	0.00	100.00	100.00
iLap Category Sequence No: 4		Current Expenditure Category: GO, CW, NON-CS, CS, TRG & OP-Part D		
0.00	0.00	0.00	100.00	100.00
<b>Total</b>	<b>9,000,000.00</b>	<b>362,071.35</b>	<b>9,000,000.00</b>	

TF-16955-001 | Currency: USD

iLap Category Sequence No: 1		Current Expenditure Category: GO, CW, NON-CS, CS, TRG & OP-Part A		
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3,000,000.00	124,623.79	3,000,000.00	11.00	11.00
iLap Category Sequence No: 2		Current Expenditure Category: GO, CW, NON-CS, CS, TRG & OP-Part B		
7,000,000.00	1,217,332.80	7,000,000.00	100.00	100.00
iLap Category Sequence No: 3		Current Expenditure Category: GO, CW, NON-CS, CS, TRG & OP-Part C		
0.00	0.00	0.00	100.00	100.00
iLap Category Sequence No: 4		Current Expenditure Category: GO, CW, NON-CS, CS, TRG & OP-Part D		
2,000,000.00	1,230,610.61	2,000,000.00	100.00	100.00
<b>Total</b>	<b>12,000,000.00</b>	<b>2,572,567.20</b>	<b>12,000,000.00</b>	

**Expected Disbursements (in US\$)**

Fiscal Year	Annual	Cumulative
2014	0.00	0.00
2015	0.00	0.00
2016	0.00	0.00
2017	0.00	0.00
2018	10,000.00	10,000.00
2019	490,000.00	500,000.00
2020	8,500,000.00	9,000,000.00
2021	9,000,000.00	18,000,000.00
2022	10,000,000.00	28,000,000.00
2023	3,000,000.00	31,000,000.00

**SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)**

Risk Category	Latest ISR Rating	Current Rating
Political and Governance	● High	● High



Macroeconomic	● Moderate	● High
Sector Strategies and Policies	● Moderate	● Moderate
Technical Design of Project or Program	● High	● Moderate
Institutional Capacity for Implementation and Sustainability	● High	● High
Fiduciary	● Substantial	● Substantial
Environment and Social	● Substantial	● Substantial
Stakeholders	● Moderate	● Substantial
Other		● High
Overall	● Substantial	● High

**LEGAL COVENANTS – Third Phase Disaster Vuln.Reduction APL for Dominica (P129992)**

Loan/Credit/TF	Description	Status	Action
IDA-54950	Finance Agreement :Establishment of a Project Steering Committee   Description :The Recipient shall ensure that the Project Steering Committee is maintained at all times during the implementation of the Project,with a composition, mandate, and in form and substance satisfactory to the Association.   Due Date :30-Jun-2014	Complied with	No Change
IDA-54950	Finance Agreement :Establishment of the Project Coordination Unit   Description :The Recipient shall operate and maintain, at all times during the implementation of the Project, the Project Coordination Unit within the Recipient’s Ministry of Environment, with functions, staffing and resources satisfactory to the Association.   Due Date :30-Jun-2014	Complied with	Revised
Proposed	Finance Agreement :Establishment of the Project Coordination Unit   Description :The Recipient shall operate and maintain, at all times during the implementation of the Project, the Project Coordination Unit within the Recipient’s Ministry of Environment,	Complied with	



Climate Resilience, Disaster Management and Urban Renewal, with functions, staffing and resources satisfactory to the Association

**LEGAL COVENANTS – Additional Financing Dominica Disaster Vulnerability Reduction Project (P166540)**

**Sections and Description**

No information available

**Conditions**

Type	Description
Effectiveness	Legal Agreements: The amended and restated Legal Agreements have been executed and delivered and all conditions precedent to their effectiveness have been fulfilled (Article IV, 4.01. (a))
Effectiveness	Project Operations Manual: The Recipient has updated the Project Operations Manual for Parts A, B and D of the Project, in form and substance satisfactory to the Association (Article IV, 4.01. (b))



VIII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Dominica

Additional Financing Dominica Disaster Vulnerability Reduction Project

Project Development Objective(s)

The objective of the Project is to reduce vulnerability to natural hazards and climate change impacts in Dominica through: (i) investment in resilient infrastructure, and (ii) improved hazard data collection and monitoring systems.

Project Development Objective Indicators by Objectives/ Outcomes

Indicator Name	DLI	Baseline	Intermediate Targets									End Target
		2014	1	2	3	4	5	6	7	8	9	2023
<b>Reduce vulnerability to natural hazards and CC impacts through resilient infrastructure investment (Action: This Objective is New)</b>												
Direct project beneficiaries (Number)		0.00	0.00	1,000.00	6,000.00	19,690.00	30,000.00	40,000.00	50,000.00	60,000.00	71,860.00	71,860.00
<i>Action: This indicator has been Revised</i>												
Female beneficiaries (Percentage)		0.00	0.00	49.00	49.00	49.00	49.00	49.00	49.00	49.00	49.00	49.00



Indicator Name	DLI	Baseline	Intermediate Targets									End Target
		2014	1	2	3	4	5	6	7	8	9	2023
<i>Action: This indicator has been Revised</i>												
Indigenous Beneficiaries (Number)		0.00	0.00	0.00	0.00	20.00	45.00	500.00	1,000.00	1,500.00	2,145.00	2,145.00
<i>Action: This indicator has been Revised</i>												
Number of households with access to improved water distribution and supply in project area (Number)		0.00	0.00	0.00	0.00	0.00	1,500.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00
<i>Action: This indicator has been Revised</i>												
Percentage of East Coast Roads with a condition rating of good/excellent that is resilient to climate events (Percentage)		30.00	30.00	30.00	30.00	35.00	35.00	60.00	75.00	85.00	100.00	100.00
<i>Action: This indicator has been Revised</i>												
<b>Reduce vulnerability to natural hazards and CC impacts through data collection/monitoring systems (Action: This Objective is New)</b>												



Indicator Name	DLI	Baseline	Intermediate Targets									End Target
		2014	1	2	3	4	5	6	7	8	9	2023
Number of relevant agencies enabled to make climate risk informed decision-making to reduce vulnerability to climate change (Number)		0.00	0.00	0.00	5.00	8.00	8.00	10.00	10.00	10.00	10.00	10.00
<i>Action: This indicator has been Revised</i>												

**Intermediate Results Indicators by Components**

Indicator Name	DLI	Baseline	Intermediate Targets									End Target
		2014	1	2	3	4	5	6	7	8	9	2023
<b>Prevention and Adaptation Investments (Action: This Component is New)</b>												
Roads rehabilitated, Non-rural (Kilometers)		0.00	0.00	0.00	0.00	0.00	2.00	15.00	30.00	40.00	43.00	43.00
<i>Action: This indicator has been Revised</i>												
Increased water storage capacity in project areas (Liter)		0.00	0.00	0.00	0.00	0.00	1,100,000.00	1,600,000.00	1,600,000.00	1,600,000.00	1,600,000.00	1,600,000.00





Indicator Name	DLI	Baseline	Intermediate Targets									End Target
		2014	1	2	3	4	5	6	7	8	9	2023
<i>Action: This indicator has been Revised</i>												
Storm drains constructed under the project (Meter(m))		0.00	0.00	0.00	980.00	2,520.00	3,500.00					3,500.00
<i>Action: This indicator has been Marked for Deletion</i>												
<b>Capacity Building and Data Development, Hazard Risk Management and Evaluation (Action: This Component is New)</b>												
District climate adaptation plans prepared (Number)		0.00	0.00	0.00	2.00	4.00	6.00					6.00
<i>Action: This indicator has been Marked for Deletion</i>												
Number of Government officials trained in spatial data management and data analysis under the Project (Number)		0.00	0.00	10.00	15.00	22.00	25.00	28.00	30.00	30.00	30.00	30.00
<i>Action: This indicator has been Revised</i>												



Indicator Name	DLI	Baseline	Intermediate Targets									End Target	
		2014	1	2	3	4	5	6	7	8	9	2023	
Number of Government ministries/agencies connected to a spatial data sharing platform (Number)		0.00	3.00	6.00	8.00	8.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
<b>Action: This indicator has been Revised</b>													
LiDAR mapping of the entire country completed (Yes/No)		No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
<b>Action: This indicator has been Revised</b>													
<b>Natural Disaster Response Investments (Action: This Component is New)</b>													
Operations Manual for this component prepared to facilitate disbursement in the event of an emergency (Yes/No)		No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Action: This indicator has been Revised</b>													



**Monitoring & Evaluation Plan: PDO Indicators**

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Direct project beneficiaries	Direct beneficiaries are people or groups who directly derive benefits from an intervention (i.e., children who benefit from an immunization program; families that have a new piped water connection). Please note that this indicator requires supplemental information. Supplemental Value: Female beneficiaries (percentage). Based on the assessment and definition of direct project beneficiaries, specify what proportion of the direct project beneficiaries are female. This indicator is calculated as a percentage.	PCU; National Statistics Bureau	Semi-annual Project Progress Reports		Semi-Annual
Female beneficiaries	Based on the assessment and definition of direct project beneficiaries, specify what percentage of the beneficiaries are female.	PCU	National Statistics Bureau		Semi-annual



Indigenous Beneficiaries	Based on the assessment and definition of direct project beneficiaries, specify what percentage of the beneficiaries are indigenous.	PCU; Ministry of Carib Affairs	Semi Annual Progress Reports		Semi-Annual
Number of households with access to improved water distribution and supply in project area	Measure of an increased and reliable water supply within project areas and enhanced capacity for water storage This indicator aligns with PPCR Core Indicator 5: “Number of people supported by the PPCR to cope with effects of climate change.”	PCU; Dominica Water and Sewerage Authority; Ministry of Lands, Housing, Settlements & Water Resource Management	Semi-annual Project Progress Reports		Semi-Annual
Percentage of East Coast Roads with a condition rating of good/excellent that is resilient to climate events	Measure of decrease in road vulnerability due to climate hazards, landslips, flooding and other natural disaster events	PCU; MoPW	Semi-annual Project Progress Reports; MoPW Supervision Reports		
Number of relevant agencies enabled to make climate risk informed decision-making to reduce vulnerability to climate change	Measurements of increased Government/agency capacity to understand, capture, and manage	PCU; Ministry of Public Works	Semi-annual Project Progress Reports		Semi-Annual



	climate data as well as utilize hazard information for improved decision making and engineering analysis. Agencies will include MoPW, MoE, Planning, DOWASCO, and ODM This indicator aligns with PPCR Core Indicator 2: “Evidence of strengthened government capacity and coordination mechanism to mainstream climate resilience”				
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**Monitoring & Evaluation Plan: Intermediate Results Indicators**

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Roads rehabilitated, Non-rural	Kilometers of all non-rural roads reopened to motorized traffic, rehabilitated, or upgraded under the project. Non-rural roads are roads functionally classified in various countries as Trunk or Primary, Secondary or Link roads, or sometimes Tertiary roads. Typically,	PCU; Ministry of Public Works, Energy and Ports; Dominica Water and Sewerage Authority; Ministry of	Semi-annual Project Progress Reports; MoPW Supervision Reports		Semi-Annual



	non-rural roads connect urban centers/towns/settlements of more than 5,000 inhabitants to each other or to higher classes of road, market towns and urban centers. Urban roads are included in non-rural roads.	Lands, Housing, Settlements & Water Resource Management			
Increased water storage capacity in project areas	Measurement of the volume of water storage capacity in Project areas	PCU; Dominica Water and Sewerage Authority; Ministry of Lands, Housing, Settlements & Water Resource Management	Semi-annual Project Progress Reports; MoPW and DOWASCO Supervision Reports		Semi-Annual
Storm drains constructed under the project	Measurement of the length of drains constructed with improved design standards in the island’s most vulnerable areas This indicator aligns with PPCR Core Indicator 5: “Number of people supported by the PPCR to cope with effects	PCU; Physical Planning Department; ICT	Semi-annual Project Progress Reports		Semi-Annual

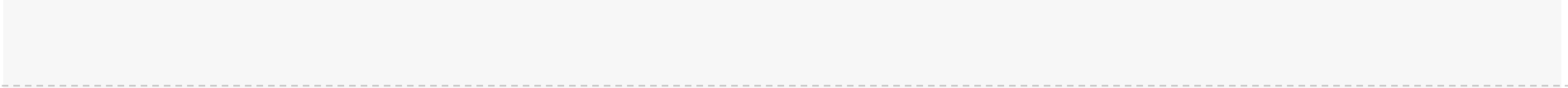


	of climate change.”				
District climate adaptation plans prepared	Measurement of increased national capacity to capture and manage hazard and climate risk data This indicator aligns with PPCR Core Indicators 1 and 2: “Evidence of strengthened government capacity and coordination mechanism to mainstream climate resilience” and “Degree of integration of climate change in national, including sector planning.”	PCU; Physical Planning Department;	Semi-annual Project Progress Reports		Semi-Annual
Number of Government officials trained in spatial data management and data analysis under the Project	Measurement of increased national capacity to capture, manage and analyze hazard and climate risk data This indicator aligns with PPCR Core Indicators 2: “Evidence of strengthened government capacity and coordination mechanism to mainstream climate resilience”	PCU; Physical Planning Department	Semi-annual Project Progress Reports; Inventory report of instrumentation/software installed		Semi-Annual
Number of Government ministries/agencies connected to a spatial data sharing platform	Measurement of increased national capacity to capture and manage hazard and climate risk	PCU; Physical Planning Department	Semi-annual Project Progress Reports		Semi-Annual



	data This indicator aligns with PPCR CoreIndicator 2: “Evidence of strengthened government capacity and coordination mechanism to mainstream climate resilience”	t; ICT			
LiDAR mapping of the entire country completed	Measure of the successful completion of a high resolution topographic and bathymetric LiDAR model to support data management and analysis systems under the project This indicator aligns with PPCR core indicator 2 “Evidence of strengthened government capacity and coordination mechanism to mainstream climate resilience”	PCU; Ministry of Agriculture and Forestry; Ministry of Public Works	Semi-annual Project Progress Reports		Semi-Annual
Operations Manual for this component prepared to facilitate disbursement in the event of an emergency	Measure of the Government’s preparation plan in the event of an emergency including a list of vetted contractors, critical imports and priced supplies	PCU; Ministry of Finance; ODM	Semi-annual Project Progress Reports		Semi-Annual







## ANNEX 1: ECONOMIC ANALYSIS

- The project's expected development impact.** The East Coast Roads provide access to the eastern part of the country, a region that has been lagging in economic development and is home to the indigenous Kalinago people. The poverty rate among indigenous people is 49.8 percent as compared to 28.6 percent and 26.4 percent for African and mixed decent people, respectively. In addition, the East Coast Roads are an alternative road to the Airport Road, a critical road that connects the Melville Airport to the capital city. In the past, the Airport Road has suffered major failures, and some sections continue to be highly vulnerable to landslides and flood risks. The West Coast Water Tanks provide access to water for up to 3,000 households. Strengthening the water distribution system is critical to ensure that disruptions are minimized during major disaster events.
- Rationale for public sector involvement.** Public sector intervention to rehabilitate the East Coast Roads and strengthen the West Coast Water Tanks distribution system is warranted because infrastructure development is critical to national development. Attracting the private sector to invest in public infrastructure is challenging, unless tolls, fees, and other revenue sources are incorporated in the management of the infrastructure. In small island states and in projects that are relatively small for financing arrangements such as Public-Private Partnership, the only viable option for financing infrastructure is the public sector involvement.
- World Bank's added value.** The World Bank brings its experience in supporting the implementation of public infrastructure and ensures that public procurements for large contracts such as road projects are carried out in a transparent and effective manner. Activities under this project will require strong procurement personnel; the World Bank, through the newly established IST, will ensure that hiring of contractors and supervision firms is done in an effective manner.
- Economic analysis.** An economic analysis was performed to assess the benefit of capital investments to fully rehabilitate the East Coast Roads. In this economic analysis, the benefit of these investments is measured by the decrease in operation costs and travel time. The analysis uses historical information of the number of days of closure of the East Coast Roads and the Airport Road due to natural hazards and estimates the traffic that is diverted to the East Coast Roads in the case of the latter. Using these numbers, the travel time and operating cost savings that would be realized by improving the road condition and ensuring connectivity are assessed. The analysis is based on traffic count data obtained from the Ministry of Public Works, which includes Average Daily Traffic (ADT) and percentage of ADT by vehicle type. The ADT data were projected to estimate current traffic by considering the growth of the total vehicle stock in the country.
- The benefits of the project are measured primarily in the form of VOC and VOT losses that are averted by building infrastructure that is more resilient to natural hazards. Given the lack of robust historical data and precise information on the number of days of road closure in a single year or the average vehicle speed on these roads, it is difficult to exactly determine the exact benefits. To account for these uncertainties, a range of values of input variables were probabilistically considered.
- A significant part of the island is affected from recurring transportation interruptions due to flooded bridges and slope failure accidents that block major roads for weeks. In the event of an



interruption due to flooded bridges and slope failures, it could take from several days to weeks to recover and open the road for the public. During this time, travelers take alternative secondary routes that are longer and of less quality. The combination of longer distance and lower travel speed leads to significant time and productivity losses. The economic analysis takes this alternative route information, the average speed on these routes, and the number of days of interruption to calculate the time and operation cost savings. However, the economic benefit of these roads is broader than the two matrices used in this analysis.

7. A Monte Carlo simulation analysis was performed to account for the uncertainty in determining travel speed in existing and alternative routes, vehicle occupancy rate, and the number of days it takes to open roads to the public. Uniform distributions of all the variables that are estimated based on anecdotal historical information, local knowledge, and assumptions were used to account for the uncertainty of the values and to ensure that a range of possible benefit-to-cost ratios are calculated. The economic analysis was made over 20 years using a discount rate of 5 percent. The results of the analysis show the benefit-to-cost ratio to range from 1.13 to 2.24, with an average of 1.64. Table 1.1 shows the benefit of the investments to be satisfactory, even when values of the variables that influence benefits are at their probable lower ends.

**Table 1.1: Benefit-to-cost Ratio for the Overall Project**

	<b>Benefit-to-cost Ratio</b>
Expected value	1.64
Standard deviation	0.18
Minimum	1.13
Maximum	2.24
Coefficient of variance	0.11



## ANNEX 2: SAFEGUARDS ACTION PLAN (SAP)

### I. Introduction

1. The AF for the DVRP is being prepared and implemented according to Paragraph 12 of the World Bank's Operational Policy 10.00, which allows for certain exceptions to the investment project financing policy requirements, including deferral of safeguards requirements, if the World Bank deems the recipient to be in urgent need of assistance because of a disaster or conflict. Following the passage of Tropical Storm Erika in 2015 and Hurricane Maria in 2017, both of which resulted in devastating losses and damages, particularly in the infrastructure and road sectors, the exception for the deferral of environmental and social requirements was granted for this AF. Accordingly, the World Bank has prepared an SAP that provides a time-bound plan setting forth the steps and the sequential planning and coordination for project activities and the preparation of relevant safeguard instruments by the GoCD to ensure compliance with the safeguards requirements.

### II. Project Locations and Some Salient Social and Environmental Characteristics

2. The East Coast Roads traverse the interior of the island through areas of well-preserved natural habitat, past the Central and Northern Forest Reserves, and along drainages leading to the Emerald Pool, a UNESCO World Heritage site. The existing road is paved throughout its length and crosses areas of steep topography where landslides have occurred repeatedly. Several areas near river valleys have presented recurring problems due to poor soil conditions and periodic flooding. Good management of cut-and-fill material, deposition of dredged and excavated soils in appropriate locations, and slope stability are therefore key environmental aspects of this sub-project.

3. The West Coast Water Tanks works are in several locations near population centers along the leeward side of the island. Works had already begun when Hurricane Maria struck and will be resumed with improvements to the water distribution system and access roads where necessary.

### III. Potential Environmental and Social Impacts and Risks

4. **Environmental impacts.** Works on the East Coast Roads were already included in the DVRP. The nature of the potential environmental impacts has not changed and includes those typically associated with road rehabilitation or major maintenance, mainly landslides; soil stabilization and erosion control; debris management; and health and safety of workers, traffic, and communities. The existing East Coast Roads network is already paved, but it passes through forest areas and rough terrain. So, the sub-project is considered complex from an environmental standpoint.

5. The road sub-project will need areas for the disposal of cut-and-fill material and products of earthmoving operations, to reduce erosion and sediment input to rivers and streams. In addition, there will be changes in traffic patterns and need for road safety management plans. The water works were already included under the DVRP and involve the construction of eight new storage tanks and associated pipe works. The impacts are similar to those associated with small civil works for which there are well-known procedures and technologies to manage them adequately.



6. **Social impacts.** The social benefits of the DVRP are expected to be positive and will remain so under the AF. The significantly reduced risk of road failure along the proposed 43.3 km of roads will further enhance resiliency to recurrent climatic events. The reduced risk of key infrastructure failure and the increased capacity of the Government to quickly rehabilitate damaged public infrastructure following an adverse natural event will benefit the entire population of Dominica. The intervention along the East Coast Roads is critical as these road links service the connection between the capital city and the east coast, as well as the connection to the main airport.

7. Positive benefits to beneficiaries, including the poor, women, and indigenous peoples<sup>8</sup> are the use of safer all-weather roads and transportation routes, reduced hazards and landslides due to slope stabilization, and improved drainage and household access to water through the West Coast Water Tanks investments.

8. Anticipated negative impacts include involuntary land take for road widening, drainage systems, and slope stabilization; change in traffic patterns and the temporary rerouting of roads; loss of trees and crops related to civil works; and temporary land take for work construction sites. There could also be cumulative impacts from labor influx, which if not well managed could cause conflict between the contractor's workers and local labor and communities. These impacts will be mitigated through the ESMPs, Abbreviated Resettlement Action Plans (ARAP), Grievance Redress Mechanism, and a robust Information Communication Campaign and Labor Influx management plan if required.

9. **Consultation and disclosure.** All documents will be finalized after consultation with the affected persons according to the World Bank requirements and disclosed in draft and final versions. Consultation for all World Bank-financed post-Hurricane Maria projects will be coordinated to reduce consultation fatigue.

10. **Information and communication (ICC) mechanism.** The DVRP ICC will be reviewed to ensure consistency with the post-Hurricane Maria projects and enhanced to improve effectiveness. With much of the country still without electricity, reaching households in the project area will require strategic communication strategies in addition to television, web, and radio, including mobile public addresses; posters and billboards in schools, village council offices, and other community locations; and so on. Communications messaging will also need to be transmitted in Kwéyòl/Creole, bearing in mind specific communication needs of indigenous households.

#### IV. Safeguard Policies Triggered

##### *Environmental Safeguards*

11. **Environmental Assessment (OP/BP 4.01).** The Environmental Assessment Policy is triggered because civil works from sub-projects may create negative environmental effects. A project-level EA was prepared for the parent project to encompass and evaluate the potential environmental effects of the program as a whole, including an Environmental Management Framework (EMF) setting out the principles, rules, guidelines, and procedures for screening and assessment of environmental impacts of

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<sup>8</sup> There are communities in the Kalinago territory who meet the World Bank criteria of OP 4.10, Indigenous Peoples.



project activities. The East Coast Roads sub-project under the AF meets the criteria for a large, complex, and sensitive activity, and accordingly, an ESIA is being prepared under the parent project.

12. **Natural Habitats (OP 4.04).** This policy is triggered due to project activities that may occur in highland forest areas, river valleys, coastlines, and/or marine areas. The DVRP EA and EMF account for natural habitats when screening both known works and any undefined future activities. The EA identifies the East Coast Roads as subject to the policy and thus requires additional assessment and specialized mitigation measures. Accordingly, the ESIA for this sub-project will be conducted as detailed designs are known.

13. **Forests (OP/BP 4.36).** This policy is triggered because of possible limited forest resource harvesting, in the sense that incidental clearing of a very limited number of trees may be required, which would also include bioengineering solutions and planting of trees for slope stabilization and erosion prevention. In addition, some of the sub-projects have implications for changes in forest management, as any lessons learned may inform future national policy. However, this is not an expected output of the project. There are new land use policies being developed by the Government. Given that 60 percent of Dominica's territory is forested (and 20 percent is officially protected), the AF will also have effects on forested areas and their use, and hence, the Forest Policy is triggered.

14. **Physical Cultural Resources (OP/BP 4.11).** The EMF includes a 'chance-find' procedure, particularly during activities such as major excavations, road realignments, or similar works where such assets could be affected by clearing, blading, excavation, or trenching. Archaeological relics may also be encountered, and a robust chance-find procedure should be developed, for which interaction with the Kalinago community may be relevant, even for lands outside the designated Kalinago territory. There is no formal body in Dominica to screen for antiquities, except for historic buildings in Roseau; rather, the local practice is to consult the island's historian, if any items of interest are uncovered.

15. **Pest Management (OP/BP 4.09).** Works could involve the use of pesticides and herbicides (for example, terminate treatment of construction site offices and vector control). Simple management procedures could be developed, since the quantities stored and used would likely be small. Standard measures may be applied for the incidental use of pesticides, but the EMF will screen for any significant pesticide use and will require that a Pest Management Plan be developed if indicated by the policy.

### ***Social Safeguards***

16. **Involuntary Resettlement (OP/BP 4.12).** This policy is triggered as the proposed civil works may entail both temporary and permanent involuntary land acquisition. The scale of any acquisition has increased under the AF but will most likely comprise many small sections of land and the impacts will be relatively insignificant. The AF will avoid involuntary resettlement as much as possible when considering road expansion.

17. **Indigenous Peoples (OP/BP 4.10).** This policy is triggered as sub-projects will be implemented in the Kalinago territory. The Kalinago population were consulted during the preparation of the DVRP and IPP with associated Social Assessment and consultations prepared and disclosed in 2014 to guide implementation and ensure consultation with and involvement of the Kalinago community in the sub-



projects to be implemented in their territory. The plan will be revalidated. The impacts of the AF are likely to be positive, and significant/irreversible impacts are unlikely.

18. **The project, through its safeguards and other instruments, will pay specific attention to disadvantaged and vulnerable groups.** All safeguards instruments will take into consideration the risks and impacts on disadvantaged or vulnerable individuals or groups who may be more likely to be adversely affected or limited in being able to benefit from the project because of, for example, age; gender; ethnicity; physical, mental, or other disability; social, civic, health, or economic status; or other factors.

#### V. Safeguards Instruments, Mitigation Process, and Implementation Schedule

19. The size and scope of civil works investments under Component 1: Prevention and Adaptation Investments will increase significantly. OP 4.12 on Involuntary Resettlement was triggered under the parent project. An RPF and an IPP were prepared, consulted, and disclosed under the parent project. Given the time lag and scope and size of the proposed investments under the AF, the EMF-EA, RPF, and IPP will be updated within two months of effectiveness to reflect the AF activities and disclosed before the commencement of any works.

20. **ESIA for the East Coast Roads.** The ESIA to be conducted for the East Coast Roads will determine specific impacts and any related mitigation actions. It will include a Social Assessment to identify social impacts associated with the expanded works, related employment generation, project-induced migration, and community health and safety. The ESIA will include the preparation of an ESMP specific to the East Coast Roads sub-project and will provide guidance on the management of labor influx by contractors.

21. A traffic management plan will be prepared. Although there is no formal Road Traffic Safety Plan for Dominica, road safety will be improved by the expanded rehabilitation works along the 43.3 km length of the East Coast Roads in Component 1. The works will improve road width and alignment, as well as road condition and skid resistance, which are expected to reduce the risk of accidents. The works will further reduce the hazard risk to road users by reducing the risk of surface flooding through drainage improvements and the risk of landslides through slope stabilization. The mitigation of encroachment in the right-of-way will be handled on a case-by-case basis.

22. The existing EMF provides guidance for the West Coast Water Tanks sub-project. The works were already under way using an Environmental Management Plan (EMP) that was included in the EMF. A recent World Bank supervision mission found satisfactory implementation of the EMP for the sub-project. The EMF will be updated to provide any additional guidance to strengthen or refine the EMP as necessary.

23. The RPF prepared under the parent project in 2014 will be updated to reflect any new developments in the Government policy and practice.

24. The IPP prepared under the parent project will be revalidated. Consultations with the Kalinago people will be coordinated for all World Bank-financed post-Hurricane Maria projects through an Information Communication Campaign to avoid consultation fatigue. Members of the territory had earlier requested that they be trained and hired through an apprenticeship project to work on the road sub-project. Activities under the Kalinago Road Training Program will be revisited and revalidated. Activities



for women that focused on a catering and food preparation course have been completed. In light of the expanded works, the IPP will also review opportunities for women, including in nontraditional roles.

25. A simple and accessible GRM is already in place to receive and handle complaints relating to the civil works and delivery of project benefits. The process will be reviewed to make it consistent with other World Bank–financed projects to ensure that there is a common approach to intake, recording, feedback routes, and resolution timelines. The Government is instituting a shared IST in the MoF with Fiduciary Specialists. The Social Safeguards Specialist in the IST will ensure that the principles and procedures followed by the GRM are consistent across all projects.

**Table 2.1. Environmental and Social Action Plan**

No	Action	Responsibility	Due Date
<b>EMF-EA - DVRP</b>			
1.	The EMF-EA of the DVRP will be updated to adequately present the following AF activities: (a) Full rehabilitation of the entire 43.3 km of the East Coast Roads rather than spot improvements on weak or constricted sections as originally intended (b) Strengthening of water pipes and access roads for the West Coast Water Tanks	MoE/PCU	Two months after project effectiveness
2.	Disclosure of the updated EMF-EA in the webpage of the Ministry of Environment and the World Bank InfoShop	MoE/PCU	2½ months after project effectiveness
<b>East Coast ESIA - DVRP</b>			
3.	Preparation of the draft East Coast ESIA for the entire 43.3 km	MoE/PCU	Following the schedule of preparation of the ESIA under the Design Services for the East Coast Roads Works
4.	Disclosure and public consultation of the draft East Coast ESIA on the webpage of the Ministry of Environment and the World Bank InfoShop	MoE/PCU	Following the schedule of preparation of the ESIA under the Design Services for the East Coast Roads Works
5.	Preparation of the final ESIA, after incorporating comments from the disclosure and consultations	MoE/PCU	Following the schedule of preparation of the ESIA under the Design Services for the East Coast Roads Works
6.	Posting of the final ESIA on the Ministry of Environment webpage and the World Bank InfoShop	MoE/PCU	Once the final ESIA is available
<b>Updating of RPF</b>			
7.	Updating of RPF, consultations, and its disclosure to be done in coordination with other proposed projects	MoE/PCU	Two months after project effectiveness
<b>Updating of the IPP</b>			
8.	Undertake consultations and rapid social assessment as part of the ICC to include members of the Kalinago territory	MoE/PCU	Two months after project effectiveness





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No	Action	Responsibility	Due Date
<b>Complaint and Grievance Redress Mechanism</b>			
9.	Review and Streamline Grievance Redress Mechanism to be aligned with other ongoing and proposed post-Hurricane Maria projects. <ul style="list-style-type: none"><li>To be sent to the World Bank for review and approval</li><li>To be disclosed</li><li>To be incorporated in the Operations Manual</li></ul>	MoE/IST/PCU	By project effectiveness
<b>Labor Influx Screening</b>			
10.	An initial labor influx screening was conducted, and this will be updated through the procurement contracts for the civil works.	—	—
<b>ARAPs When Required</b>			
11.	ARAPs need to be prepared, finalized, and implemented before the start of civil works. All compensation must be paid before the start of works.	MoE/PCU	When designs are complete and before the start of works in areas requiring an ARAP



ANNEX 3: MAP OF THE COMMONWEALTH OF DOMINICA

IBRD 33397



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