

## PROGRAM INFORMATION DOCUMENT (PID)

### APPRAISAL STAGE

August 31, 2017

Report No.: 119486

<b>Operation Name</b>	Dominican Republic—Development Policy Loan with a Catastrophe Deferred Drawdown Option (CAT-DDO)
<b>Region</b>	LATIN AMERICA AND CARIBBEAN
<b>Country</b>	Dominican Republic
<b>Sector</b>	Other Public Administration (46%); Other Water Supply, Sanitation and Waste Management (28%); Other Non-bank Financial Institutions (20%); Other Transportation (6%)
<b>Operation ID</b>	P159351
<b>Lending Instrument</b>	Development Policy Lending with a Catastrophe Deferred Drawdown Option
<b>Borrower(s)</b>	Dominican Republic
<b>Implementing Agency</b>	Ministry of Finance
<b>Date PID Prepared</b>	August 31, 2017
<b>Estimated Date of Appraisal</b>	July 25, 2017
<b>Estimated Date of Board Approval</b>	October 24, 2017
<b>Corporate Review Decision</b>	Following the corporate review, the decision was taken to proceed with the preparation of the operation.

### I. Country and Sector Background

**1. Geological and climate-related disasters pose major challenges for the sustainable growth and resilient development of the Dominican Republic (DR).** The DR is highly exposed to a wide range of hydrometeorological hazards (for example, hurricanes, tropical storms, flooding, and drought) and geophysical hazards (for example, earthquakes and landslides). The country faces high vulnerability to adverse natural events exacerbated by unplanned urban growth, land degradation, and weak enforcement of building codes and zoning regulations. The DR is ranked 21 out of 171 countries in the United Nations' World Risk Index (<http://weltrisikobericht.de/english/>). This high level of exposure and vulnerability to disasters materializes in frequent impacts to the most vulnerable population. Hurricane Georges in 1998 resulted in large economic losses equivalent to 14 percent of gross domestic product (GDP). A recent publication from the World Bank and the Ministry of Economy, Planning and Development (MEPyD) estimates the historical economic impact of disasters over 1961–2014 at about 0.69 percent of GDP or US\$420 million per year.<sup>1</sup> Based on the Country Disaster Risk Profile (CDRP) for the DR developed by the World Bank in collaboration with the MH, during

<sup>1</sup> U.S. dollar 2010. This figure is considered a very conservative assessment as no significant earthquake has occurred during that period. MEPyD y Banco Mundial. 2015. *Gestión Financiera y Aseguramiento del Riesgo de desastres en la Republica Dominicana*.

the potential 15-year deferral drawdown period of the CAT-DDO, there is about a 55 percent likelihood of direct economic losses comparable to the level of losses of Hurricane Georges in 1998.<sup>2</sup>

**2. Public health-related shocks caused by endemic, epidemic, and emerging diseases also constitute a significant threat to the Dominican Republic.** In 2009, the H1N1 influenza outbreak killed 23 persons in DR causing economic and social disruption. The Hispaniola had not experienced one single case of cholera during 100 years until the 2010 cholera epidemic that started in Haiti. While the first cases in DR were limited to marginal rural areas, the 2011 rainy season prompted an increase in cases. In 2014, the Chikungunya outbreak affected a significant share of the population in the country and around 60% of the population in Santo Domingo. An assessment conducted by MEPyD after the Chikungunya epidemic concluded that the upsurge in health services coupled with the absenteeism in the workplace implied a cost equivalent to 0.2% of GDP. More recently, the Zika virus had a limited impact in the population, while still having a short-term economic impact of around 0.57% of GDP mainly due to income and fiscal revenues foregone. In response to those different diseases outbreaks, the authorities have developed specific protocols to prevent, identify, control, and reduce the associated impact of public health-related events while following international standards.

**3. Climate change is anticipated to increase the frequency and severity of hydrometeorological hazards in the DR, reinforcing the need to actively strengthen climate and disaster risk management policies to ensure a sustainable development.** Temperature variability in the tropical regions is highly correlated with the occurrence of cyclonic and associated events such as floods and landslides. Between 1984 and 2013, in the DR an observed 1°C to 3°C increase in maximum temperatures has given rise to more frequent occurrence of flash floods. Consequently, over the last decade extreme rainfall events in the period between May and October have increased by 20 percent to 30 percent. Based on recent climate simulations, while the dry season will likely further intensify with up to a 50 percent decrease in rainfall in provinces such as Independencia, Puerto Plata, San Juan, and Santiago, the rainy season could see a 100 percent increase in accumulated rainfall. Crop production is expected to decrease by half during 2020–2050 because of climate variability, and in some coastal areas climate change models predict a sea level rise of over 100 cm by 2100. Likewise, climate change is expected to increase the incidence and reproduction of the ‘aedes mosquito’-related diseases responsible for diseases such as dengue, chikungunya and Zika.

**4. Over the past fifteen years, the Government of the DR (the Government) has laid a strong foundation for the national disaster risk management system (DRM) system and taken critical actions to ensure effective response and management of emergency and disaster situations.** The DRM Law 147-02 of 2002 established the National System for Prevention and Mitigation of Disaster Risk integrating the general principles of risk reduction in the country’s development planning. Adopting a forward-looking approach, the Government reaffirmed its commitment to reduce vulnerability to climate and disasters risks through the prioritization of DRM and climate change adaptation (CCA) in the 2030 National Development Strategy (END<sup>3</sup>) approved by Law 01-12 in 2012. The 2013 National Plan for Comprehensive

---

<sup>2</sup> In 2015 U.S. dollar. In the CDRP those losses have a return period of about 27 years.

<sup>3</sup> The END is a policy planning document resulting of an inclusive and broad-based consultative process aimed at defining the long-term development strategy of the country. It is structured around the following four strategic priorities: (a) a social

Disaster Risk Management (PNGIRD) operationalized selected aspects of the END and facilitated substantial progress in disaster preparedness, implementation of early warning systems and response, and management of emergency situations. More recently, through the adoption of the 2015 National Climate Change Policy, the Government called for strengthening the National Planning System and the National Multi-Year Public Sector Plan to increase the capacity of the Government to promote a ‘low-emission and climate-resilient development’. However, in spite of the progress already made, establishing a robust DRM system still requires additional critical policy measures and reforms, particularly in the area of mainstreaming climate and disaster risk reduction and management across different sectors.

**5. Since early 2000 the institutional and regulatory framework for the response to public health-related events has been put in place.** The Government has progressively modernized the country’s epidemiologic surveillance system and rapid response mechanism to swiftly detect and manage outbreaks and public health-related events caused by endemic, epidemic, and emerging diseases. The Ministry of Public Health (MSP) has developed regulations to provide operative guidelines for public health-related emergency management. Through Decree 309-07, the National Epidemiologic Surveillance System was created with the objective of “regulating the management of diseases and other important events for the Dominican public health”. Decree 309-07 establishes the mechanisms to prevent and control diseases and set the basis of the epidemiologic surveillance information system. Additionally, Decree 213-09 also establishes the sanitary actions the MSP has to take in case of an emergency caused by a natural disaster.

**6. Building on the strong legal framework, the Government is now undertaking ‘second generation’ reforms, which seek to mainstream DRM and CCA at the sectoral level and effectively reduce climate and disaster risks through two key sets of policy measures: creating the required sectoral institutional structures and establishing and enforcing mandatory disaster and climate resilience regulations.** Mainstreaming DRM and CCA requires establishing an adequate institutional framework at the sectoral level to ensure risk analysis is integrated as a core element in the design and implementation of public policies. A robust institutional framework is also needed to develop a risk-informed decision-making process and ensure that disaster and climate-resilient technical regulation standards are an integral part of mandatory regulations specific to each sector. These second-generation reforms are thus essential to translate the overall objectives of the DRM legal framework into concrete disaster and climate risk reduction measures for each individual sector. Altogether, these actions make a critical contribution to strengthening climate and disaster resilience of assets and livelihoods and, improving business continuity of essential public services as well as the sustainability of public spending and investments.

## **II. Operation Objectives**

**7. The development objective of the proposed operation is to support the Government of the DR in (a) strengthening institutions for improved climate and disaster resilience in priority sectors and (b) establishing mandatory regulations for climate and disaster risk**

---

democratic state based on the law; (b) a society with equal rights and opportunities; (c) a sustainable, inclusive, and competitive economy; and (d) a society of environmentally sustainable production and consumption that is adapted to climate change.

**reduction in public investment and construction works.** The proposed operation has been designed to support the efforts of the Government of the Dominican Republic (the Government) to quickly mobilize resources in the aftermath of a natural catastrophe including public health-related events and to strengthen the disaster risk management (DRM) and climate change adaptation (CCA) systems in the country. It will support the Government's "second generation" reforms of its DRM and CCA systems to mainstream and enable risk reduction across the programs at the sector level. The policy reforms supported by the proposed operation ensure the sustainability of the Government's efforts and commitment to a holistic approach to disaster risk reduction based on accountability and international best practices adapted to the context of the DR. The Government has demonstrated continuous dedication to expanding and strengthening the DRM and CCA agenda in the country. **The overall risk for the proposed operation is Moderate.**

**8. Climate co-benefits for the proposed operation are expected to be high.** CCA considerations are explicitly integrated in Prior Actions 1 to 5, which represent 83 percent of the total prior actions. More generally, climate change is anticipated to increase the frequency and severity of hydrometeorological hazards in the DR (flooding, drought and cyclones—see paragraph 2). Therefore, policy actions included in this operation will directly contribute to enhancing the country's capacities to adapt to climate change.

**9. Through the reforms included in Pillar A, the Government is establishing the necessary institutional structures to mainstream DRM and CCA in three high-priority sectors.** To ensure risk-informed public decision-making and enhance risk analysis as an integral part of the design of public policies, it is critical to set up the right institutional structures that have the mandates, competences, and accountabilities to oversee risk assessments and coordinate the different entities within and outside each sector. Such an institutional framework is essential for mainstreaming DRM and climate resilience into the decision-making process. The proposed operation will support fiscal management, school infrastructure and water resource management in these aspects.

**10. Under Pillar B, the Government is taking crucial steps to implement mandatory regulations for disaster and climate resilient infrastructure, with the objective of increasing its capacity to reduce disaster and climate risks and protect the most vulnerable populations.** Reducing disaster and climate risks in essential public infrastructure and private constructions can substantially reduce the human and economic impact of disasters over the long term. Costs are much lower than repairing, retrofitting and reconstructing buildings and infrastructure in the aftermath of a disaster. Disaster-resilient infrastructure is also key to ensure business and services continuity and enable a quick recovery in the aftermath of a disaster, protecting the most vulnerable population that relies heavily on public infrastructure. Policy reforms under this pillar represent a crucial step toward improving compliance to safety technical standards and regulations.

**11. The expected results of Pillar A and B will be clear indications that the Government has sustainably and responsibly incorporated DRM and CCA into its priority sectors, public investment projects and fiscal risk management.** Sectoral policy reforms will be measured on i) an increased number of existing schools being assessed for climate and disaster risks and included in a rehabilitation and retrofitting program; ii) increased assessments of risk-prone areas in watersheds that are prioritized for improvements; and iii) health facilities receiving operating permits and a Hospital Safety index assessment. And across the Government,

overarching yet targeted reforms will result in i) public investment projects adhering to resilience-building technical standards; ii) updated technical regulations for new construction works and compulsory building permits; and iii) contingent liabilities associated with disasters and climate-related risks being integrated into the national medium-term debt strategy.

**12. The proposed operation provides a critical line of contingency financing and is part of the Government’s fiscal strategy to address contingent liabilities associated with natural catastrophes including public health-related events and climate-related shocks.** Disasters from adverse natural events represent significant explicit and implicit contingent liabilities to the Government. Based on the results from the World Bank Country Disaster Risk Profile, the DR could experience an annual average loss from earthquake and hurricanes equivalent to about 4.3 percent of the 2017 budget.<sup>4</sup> In response, the Government has adopted a twofold approach aiming at (a) strengthening the resilience of infrastructure and assets to reduce potential future economic losses and (b) contracting specific contingent lines of credit to ensure timely financial response capacity in the aftermath of a disaster.

**13. In response to health-related shocks, the Government has also strengthened its institutional and regulatory framework for health related emergency management and preparedness.** Since the early 2000, the Government has put in place and gradually modernized its epidemiologic surveillance system and its rapid response mechanism to swiftly detect and manage outbreaks and public health-related events. This systems now comply with the International Health Regulations.<sup>5</sup> Additionally, a new World Bank investment project currently under preparation will complement this operation and will focus on Improving the Quality and Efficiency of Health Services in the Dominican Republic (P163031) to enhance preparedness and increase the capacity of the country to respond to public health-related events.

**14. The proposed CAT-DDO will contribute to the World Bank Group’s twin goals of ending extreme poverty and promoting shared prosperity.** The policy reforms included in the proposed operation are aimed at increasing long-term resilience to and the ability to recover from the adverse impacts of disasters, thereby helping support the sustainability of development programs and the Government’s efforts to eliminate extreme poverty and boost shared prosperity. In the context of a changing climate, policy actions included in this operation are also aimed at building resilience to disasters and strengthening climate and disaster risk reduction policies, which will directly contribute to enhancing the country’s capacities to adapt to climate change.

### **III. Rationale for Bank Involvement**

**15. Economic losses triggered by disasters in the DR can hamper poverty reduction efforts and threaten advances in shared prosperity.** The DR is one of the countries in the Latin America and the Caribbean region (LCR) that has experienced the highest average economic growth in the past 20 years. In 1990, the country’s gross national income per capita was only 58 percent of the regional average, climbing to 97 percent in 2016. During the period

---

<sup>4</sup> Estimations based on probabilistic risk assessment that take into account a very comprehensive catalogue of possible events to provide a more robust quantification of disaster risk in comparison to short-term historical records.

<sup>5</sup> The International Health Regulations is a set of agreed international principles and procedures that govern how PAHO and WHO member countries report and respond to health events of potential international concern.

2005-2015, per capita income for individuals in the bottom 40 percent grew at an annual rate of 4.7 percent, compared to 2.6 percent for the richest 60 percent. In the same period, the DR's poverty reduction rates were higher and growth of the middle class was slower compared to the LCR. Poverty decreased by 13.8 percentage points (pp) in the LCR and by 15.5 pp in the DR, while the size of the middle class increased by 10.7 pp in the LCR and only by 9.7 pp in the DR. Consequently, the vulnerable population in the DR increased at a faster rate than in the LCR (6.1 pp in the DR compared to 2.5 pp in the LCR). Although many people have moved out of poverty in the DR, they remain at risk of slipping back into poverty if affected by adverse natural events against which they cannot protect or insure themselves. Adverse events can also push people further back into poverty. Shocks created by adverse natural events have regressive distributional effects as vulnerability to climate shocks is higher for the poorest households. At the global scale, it is estimated that the impacts of disasters are more than twice as significant for poor people than anyone else. At the national scale, the climate shocks vulnerability index (IVACC by its Spanish acronym), which measures the likelihood that a household is vulnerable to the occurrence of hurricanes, storms, and flooding given certain socioeconomic and geographical characteristics, is more than double for the poorest households and decreases as the standard of living increases. When Tropical Cyclone Noel hit the country in 2007, 90 percent of the directly affected persons were below the national poverty line. In the context of changing climate, the anticipated increase in the frequency and severity of hydrometeorological hazards could threaten to reverse the hard-won development gains of the past years. The policy reforms included in the proposed operation are aimed at increasing long-term resilience to and ability to recover from the adverse impacts of disasters, thereby helping the Government's efforts to eliminate extreme poverty and boost shared prosperity. The proposed operation will therefore contribute to the World Bank Group's twin goals of ending extreme poverty and promoting shared prosperity.

**16. The proposed operation is fully consistent with the World Bank's Country Partnership Strategy (CPS) for FY2015–18 (Report No. 89551-DO), which acknowledges that the high vulnerability to climate-related shocks is a key factor limiting further improvement in shared prosperity.** Under Results Area 3, 'supporting the government in building resilience to external shocks', the CPS has included the CAT-DDO instrument as a potential option to be presented to the Government. This DPL will contribute to the achievement of the outcomes included in Results Area 3, in particular regarding activities related to 'mainstreaming DRM in territorial planning and public finances' and increasing the resilience of infrastructure. Through the proposed operation, the World Bank will continue supporting the Government to enhance its legal, technical, and institutional capacity to build resilience against climate and disaster risks.

**17. The objectives of the proposed operation are aligned with the ongoing World Bank Group operations in the country, as well as the World Bank Group's strategic goals of ending extreme poverty and promoting shared prosperity.** The policy reforms included in the proposed operation include inputs from different sectors and complement the overall World Bank lending and TA program in the country. The following ongoing operations have contributed to the design of the proposed operation: Support to the National Education Pact Project (P146831), Strengthening the Capacity to Produce and Use Quality Education Statistics (P163049) Dominican Republic Municipal Development Project (PRODEM - P095863), DO Emergency Recovery & Disaster Management (P109932), and Dominican Republic Strengthening Management of Public Finances DPL (P155425). The proposed operation could

also indirectly contribute to enable policy reform to promote the use of agricultural index insurance as an effective way of managing risk, contributing to TA provided by the Global Insurance Index Facility (IFC-00600785). The proposed operation will also directly complement the following WB investment projects under preparation: Improving the Quality and Efficiency of Health Services in the Dominican Republic (P163031) and DR Resilient Agriculture and Integrated Water Resources Management (P163260).

**18. The World Bank Group maintains active dialogue and collaboration with various multilateral and bilateral donors engaged in supporting the Government in the area of DRM and CCA.** The proposed operation also complements and builds upon past and ongoing work from these other agencies also prioritizing DRM and CCA. The United Nations Development Assistance Framework 2012–2016 includes DRM as one of the four result areas and specialized agencies such as the Pan American Health Organization (PAHO) are supporting government efforts in the health sector. The European Union (EU) has also integrated disaster risk reduction in its strategic framework and is supporting the strengthening of DRM policies with a €2.2 million program. Also through the EU, the Disaster Preparedness Program is promoting disaster preparedness and, as part of these efforts, four country documents have been elaborated and endorsed by the National Emergency Commission (CNE). The Japan International Cooperation Agency (JICA) has also been supporting efforts to strengthen government capacity to analyze seismic risk and design building codes accordingly. Finally, in August 2017, this operation will be presented at the local DRM forum, which includes a broad range of actors related to DRM (nongovernmental and civil society organizations, academia, private sector, government, and donors) and constitutes the most inclusive platform for DRM-related issues in the country.

**19. The DR's macroeconomic policy framework is adequate for the proposed DPF.** Nonetheless, the macroeconomic outlook may be vulnerable to downside risks. While the external environment has broadly supported the DR's growth in recent years, uncertainty in global market conditions place downside risks to the region and the country's economic performance. A faster than expected hike in the United States (US) Federal Reserve policy rates together with a reassessment of investors' portfolio allocation may increase borrowing costs, prompting the need for much tighter monetary and fiscal policies. Drastic changes in US immigration policies may affect the large inflow of remittances. Finally, global uncertainty may also have an impact on FDI. The materialization of these downside risks could place pressures on the exchange rate and have an impact on growth, external accounts, and public debt. The country has significant exposure to shocks from natural disasters, which can materialize and generate large fiscal costs and need for additional external financing access. These risks are mitigated by the authorities' commitment to prudent macroeconomic management. Further efforts in implementing fiscal and structural reforms would help the economy's resilience to shocks. The authorities have been also securing contingent lines of financing as a buffer to face some of these risks. The contracting of this CAT DDO is part of a broader strategy to increase fiscal resilience and mobilize emergency financing (and preparedness) to ease the impact of potential natural disasters. In particular, this operation includes the establishment of new institutional arrangements for estimating, pricing and managing fiscal contingent liabilities associated with climate and disaster risks, which can play a pivotal role in addressing the country's vulnerability to these shocks.

**20. On March 24, 2017, the Executive Board of the IMF successfully concluded the Article IV consultation with the DR.** The IMF Executive Directors welcomed the authorities' commitment to fiscal discipline and encouraged them to take early action to prevent a further buildup in debt, given the strong cyclical position of the economy. The IMF Executive Board also emphasized that far-reaching structural reforms are needed to secure better longer-term growth and social outcomes. In July 2016, the DR repaid its outstanding debt with the IMF in full, and the authorities formally acknowledged their openness to potentially use this type of lending facility again in the future. The World Bank team continues to coordinate closely with IMF counterparts, and the staff regularly exchange views regarding the adequacy of the macroeconomic policy framework and the Government's progress on the structural reform agenda.

#### **IV. Tentative financing**

<b>Source:</b>	<b>(\$USm.)</b>
Borrower	0.00
International Bank for Reconstruction and Development (IBRD)	150.00
<b>Total</b>	<b>150.00</b>

#### **V. Institutional and Implementation Arrangements**

**21. The MH is the main agency counterpart of the World Bank for the proposed CAT-DDO.** The MEPyD is also involved in the coordination and monitoring of the proposed operation for its key role in the CAT-DDO program and its position as Governor of the World Bank. The implementation of the program is a shared responsibility with the MH, the MEPyD, and other agencies involved.

**22. The results indicators selected to monitor and evaluate implementation progress and the achievement of program outcomes stem from the institutional reform agenda of the institution that takes the coordination lead for that prior action.** In all cases, the indicators are already being tracked by the associated institution and are used as results indicator in their institutional progress reports. In this context, the operation builds on the existing monitoring and evaluation systems of the Government, which should ensure that program performance is monitored at no additional burden to the institutions. The General Directorate of Public Credit within the MH will be the main counterpart with the primary responsibility to monitor program progress and to ensure the accountability of relevant institutions to the commitments made.

**23. A comprehensive and significant TA program has been mobilized to support the Government in the preparation and implementation of this operation.** The TA program is funded through the African, Caribbean, Pacific-European Union (ACP-EU) Natural Disaster Risk Reduction Program and the Japan Mainstreaming Disaster Risk Management in Developing Countries managed by the Global Facility for Disaster Reduction and Recovery (GFDRR). The activities under the TA program are being implemented jointly with the MH and the MEPyD. The objective of the TA program is to improve the government's capacity to build physical and fiscal resilience to disasters to ensure shared prosperity. The TA Program will also support MH and MEPyD in the implementation of policy reforms included under the proposed operation. Activities include the development of policy tools to support the strengthening of resilient public

investment (Pillar B), and strengthening the financial and fiscal resilience to climate and disaster risks in the country (Pillar A). In addition, in the framework of the preparation of this operation, the Ministry of Education (MINERD) requested the World Bank support to identify climate and disaster risk reduction needs in school infrastructure and to elaborate a strategy aimed at making schools safer and more inclusive. In response, jointly with the Global Safe Schools Program (GFDRR/World Bank) and the Education Global Practice, a second component of the TA program will be focused on Safer Schools and support the implementation of results indicators included under Pillar A of the proposed operation. This operation will also benefit from the implementation of the recently approved GFDRR Rapid Social Response grant on Strengthening Social Protection Interventions for Disaster Preparedness and Response in the Dominican Republic (P164854).

## **VI. Risks and Risk Mitigation**

**24. The overall risk of the operation to achieving the PDO is assessed as Moderate.** The most relevant risks to the achievement of the program development objective include institutional capacity for the implementation and sustainability of the proposed program over the medium and long-term which are assessed as Substantial. The Government has shown moderate to low capacity to design and implement public sector reform programs that span different institutions and a long-term implementation horizon. Risks pertaining to the limited capacity of the Government to implement reforms and sustain them in the medium-term would be mitigated by the commitment from the administration on building national and subnational capacity and allocating resources in specific sectors, including PFM, education, health, water resource management and DRM. The administration has also established coordination mechanisms and collaboration agreements among national ministries to mitigate these risks.

## **VII. Poverty and Social Impacts and Environment Aspects**

**25. The overall poverty and social impacts of the policies supported by this CAT-DDO are expected to be positive, starting with policies in Pillar A.** The adoption of mechanisms to increase the Government's fiscal resilience and capacity to mobilize resources in the aftermath of a disaster is designed to have positive poverty and social impacts. Enhancing the ability of the Government to provide assistance and start reconstruction shortly after a disaster hits would shorten the transition back to the pre-disaster livelihoods and infrastructure levels. According to the IVACC, which measures the likelihood that a household is vulnerable to the occurrence of hurricanes, storms, and flooding given certain socioeconomic and geographical characteristics, the poorest households are more than twice as vulnerable than the richest households, and the vulnerability decreases as the standard of living increases. Strengthening the Government's capacity to quantify the socioeconomic and fiscal impacts of disasters will also enable the identification of the most vulnerable population and, consequently, the preparation of investment projects (for example, retrofitting works) to make these communities more resilient. Regarding Prior Action 2, schools are often used as emergency shelters, and incorporating risk analysis in the design and construction of school infrastructure will have dual benefits for the surrounding community.

**26. Under Pillar B, the reforms seeking to reduce disaster and climate risk in public investment, health infrastructure and construction works are expected to have positive social impacts.** Strengthening the capacity of the Government to ensure physical resilience to

disasters in PIPs will likely reduce the cost of damages caused by natural disasters, on average 0.69 percent of GDP per year between 1961 and 2014. About one-third of the total damages and losses caused by the four most severe hydrometeorological events in the country, were accrued in the four sectors covered in this operation: education, health, housing, and infrastructure. Reducing disaster risk in critical infrastructure not only reduces the recovery burden on the Government, but it also minimizes the human costs of disasters and promotes quick recovery for households. Disaster-resilient safe hospitals are designed to remain operational in the aftermath of disasters, increasing the ability to respond effectively to post-disaster health needs, and minimize interruptions in care for existing patients. Disaster-resilient public infrastructure also minimizes post-disaster business and livelihood interruptions.

**27. Overall, it is anticipated that policy reforms supported by the proposed operation will have positive indirect effects on the DR's environment, forests, and other natural resources.** Reforms included in this operation will not cause significant direct environmental effects as they are primarily aimed at strengthening the institutional framework and improving regulations for increased resilience and reduction of disaster and climate-related risks. In concrete terms, policy actions supported by this operation primarily seek to reduce the vulnerability of assets, infrastructure, and public finances. They are not directly geared to transform the environment or ecosystems but rather focused on reducing the vulnerability of the state and increasing its capacity to cope and respond to adverse natural events. Under Pillar A, the reforms seeking to strengthen the institutional structures for climate and disaster resilience in fiscal management, education infrastructure and watershed management are expected to have positive environmental effects. Under Pillar B, efforts to improve technical standards and regulations for climate and disaster risk reduction in public investment and construction works are expected to have positive effects on the environment.

**28. The DR has in place environmental systems to mitigate the potential negative effects of programs implemented as a result of the supported policy reforms.** The General Law on the Environment and Natural Resources (Law 64-00) is the legal framework that regulates the actions of the country's productive systems with respect to the environment and natural resources. The regulatory instruments developed under the legal framework of the law include environmental standards concerning protection against noise, air quality and emissions, environmental management of solid non-hazardous waste, water quality and a standardized procedure for environmental assessments. These instruments have been implemented effectively under the supervision of the Vice Minister for Environmental Management of the Ministry of Environment and Natural Resources, in coordination with the various ministries, public institutions and private sector. The DR has historically demonstrated a consistent track record in its capacity to enforce pertinent laws and environmental quality standards.

## **VIII. Contact point**

### **World Bank**

Contact: Oscar Anil Ishizawa Escudero  
Title: Senior Disaster Risk Management Specialist  
Tel: (202) 473-5693  
Email: [oishizawa@worldbank.org](mailto:oishizawa@worldbank.org)

**Borrower**

Contact: Athemayani Del Orbe

Title: Viceministra Interina de Crédito Público, Ministerio de Hacienda

Tel: Tel (809) 687-5131 ext. 2328/2030

Email: [adelorbe@creditopublico.gov.do](mailto:adelorbe@creditopublico.gov.do)

**IX. For more information contact:**

The InfoShop

The World Bank

1818 H Street, NW

Washington, D.C. 20433

Telephone: (202) 458-4500

Fax: (202) 522-1500

Web: <http://www.worldbank.org/infoshop>