

## TC Document

### I. Basic Information for TC

▪ Country/Region:	DOMINICAN REPUBLIC
▪ TC Name:	Support for the implementation of DR-L1161 (Yuna)
▪ TC Number:	DR-T1284
▪ Team Leader/Members:	Gonzalez Flores, Mario (CSD/RND) Team Leader; Suarez Vazquez, Gines (CSD/RND) Alternate Team Leader; Encarnacion Encarnacion, Yonaida M. (CID/CDR); Hori, Tsuneki (CSD/RND); Porta Garcia, Raimon (VPS/ESG); Nolasco, Elizabeth (CID/CDR); Lefevre, Benoit Jean Marie (CSD/CCS); Luis De Los Santos (CSD/RND); Salazar, Lina Piedad (CSD/RND); Garza Cortina, Miriam (VPC/FMP); De Dobrzynski, Esteban (LEG/SGO); Langstroth, Robert Peter (VPS/ESG); Romero Villamizar, Laura (VPS/ESG); Marthe Denise Archambault, Aude Gabrielle (VPS/ESG) Hori, Tsuneki (CSD/RND); Lefevre, Benoit Jean Marie (CSD/CCS); Luis De Los Santos (CSD/RND); Salazar, Lina Piedad (CSD/RND); Garza Cortina, Miriam (VPC/FMP); De Dobrzynski, Esteban (LEG/SGO); Langstroth, Robert Peter (VPS/ESG); Romero Villamizar, Laura (VPS/ESG); Marthe Denise Archambault, Aude Gabrielle (VPS/ESG)
▪ Taxonomy:	Operational Support
▪ Operation Supported by the TC:	DR-L1161.
▪ Date of TC Abstract authorization:	26 Jul 2024.
▪ Beneficiary:	Instituto Nacional de Recurso Hidráulicos (INDRHI)
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	Japan Special Fund(JSF)
▪ IDB Funding Requested:	US\$950,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period (which includes Execution period):	36 months
▪ Required start date:	January 2025
▪ Types of consultants:	Firm / individual consulting
▪ Prepared by Unit:	CSD/RND-Env, Rural Dev & Disaster Risk
▪ Unit of Disbursement Responsibility:	CID/CDR-Country Off Dominican Republic
▪ TC included in Country Strategy (y/n):	Yes
▪ TC included in CPD (y/n):	Yes
▪ Alignment to the Update to the Institutional Strategy 2024-2030:	Diversity; Environmental sustainability; Gender equality; Institutional capacity and rule of law; Persons with Disabilities; Productivity and innovation; Social inclusion and equality

### II. Description of the Associated Loan

2.1 The Yuna River basin is an important territory that significantly contributes to the Dominican Republic's food security. It occupies 11% of the national territory (5,498 km<sup>2</sup>), and has 16% of the country's irrigated area, which produces 60% of rice for local consumption, with rice representing the main economic activity of rural households with 150,000 people involved in production and 100,000 in processing and marketing. The Yuna watershed faces four inter-related challenges. First, there is an increase in the frequency and intensity of floods, in part due to climate change, with a particular

negative impact on the lower part of the watershed (3 events in the past three years). Second, the area faces high levels of food insecurity, with nine out of ten provinces facing a food crisis and a food emergency (Monte Plata) (IPC, 2023). Third, Yuna has been affected by a significant reduction in permanent vegetation cover, due primarily to an expansion of the agricultural frontier and to unsustainable agricultural practices. This reduction in permanent tree cover induces a decrease in ecosystem services, including water regulation, biodiversity, carbon capture, and agricultural production, among others. Finally, the watershed lacks a governance structure that can sustainably manage its use. For instance, protected areas in the upper watershed are locally invaded by small farmers, and the water management infrastructures built in the mid-20th century to provide multiple services to several users (irrigation, drinking water, hydroelectric production) lacks proper maintenance, which lead to difficulties in controlling floods and meeting water demand from all users. Using the results of simulations from the HidroBid model, which considers the effects of climate change, show that, without investments in the next years in the water regulation infrastructures, by the year 2060 it will not be possible to meet the existing water demand in the basin (ITAC, 2021).

- 2.2 To address these challenges, the Government of the Dominican Republic (GoDR) has requested an investment loan of US\$150 million from the Bank to finance the “Yuna River Basin Management Plan Project,” DR-L1161, which is expected to be co-financed with a loan of US\$100 million from the Japan International Cooperation Agency (JICA) under the Cooperation for Economic Recovery and Social Inclusion (CORE) program and US\$15.5 million from the Climate Investment Fund (CIF) under Nature, People and Climate (NPC) Program. The general objective of this loan is to contribute to food security and resilience to climate change in the Yuna River basin. The specific objectives are: (i) strengthen governance for resilient water resource management; (ii) increase environmental sustainability; and (iii) promote the adoption of more competitive, environmentally sustainable and climate change-resilient agricultural technologies and practices. The project will be executed by the National Institute of Hydraulic Resources (INDRHI). Approval of the loan is scheduled for March 2025 and execution is expected to start in the first quarter of 2026. It is important to note that the TC DR-T1260, approved in 2023, has supported the design of DR-L1161, with 98% of funds disbursed and with expected results already achieved.
- 2.3 The operation DR-L1161 had an Eligibility Review Meeting on November 13, 2023, and the Project Profile was approved on December 5<sup>th</sup>, 2023. The Project team held an Analisis Mission on March 14, 2024, where new needs for infrastructure for flood control and early warning systems were identified with Government counterparts. Additional studies and consultancies are underway to finalize project design and to determine if these additional infrastructures will classify this operation as Category A or B, based on ESG’s evaluation. Project team plans a final Special Mission in November and to distribute the documentation for Quality Control Review (QRR) in early January of February and to bring the operation for Board approval in the first or second quarter of 2025.

### **III. Objectives and Justification of the TC**

- 3.1 While INDRHI has experience implementing an IDB financed Technical Cooperation, it does not have experience implementing an investment loan, which can pose a challenge during execution, particularly for an operation that includes sizable

investments in infrastructure that require lengthy technical pre-investment designs and the ability to supervise, monitor, and sustainably operate and maintain the new infrastructures. During the Analysis Mission, new needs were identified for investments in infrastructure for flood control in the lower part of the watershed and early warning systems. These new requests require additional support to INDRHI to successfully execute the new operation by producing high-quality designs and tender the works as early as possible, since these types of investments from beginning to end are complex and lengthy.

- 3.2 The objective of this TC is to support the execution of the Yuna Watershed Management Plan Project with technical assistance to undertake final design studies of key infrastructures to ensure delivery of key outputs of top quality and in a timely manner. Key areas to be financed are: (i) the completion of quality designs of sustainable, resilient, and inclusive infrastructure, such as flood control infrastructure; (ii) the inclusion of key designs for green infrastructure and governance of the existing flood early warning systems; and (iii) the institutional strengthening of INDRHI to successfully implement the Yuna project and to sustainably operate, maintain, and manage the new investments made once the operation is closed. The TC is needed given the complexity of the operation and given the new needs identified during the Analysis Mission; support to INDRHI with this TC will expedite execution of investments in infrastructure, which have been known to pose several challenges during execution.
- 3.3 This TC requires clearance outside of the QRR of the operation it will support, because it is intended to support execution. The execution of the associated loan is expected to start the last quarter of 2025 or the first quarter of 2026. Therefore, the resources of this TC are needed in early 2025 to begin working on the design of key infrastructure investments and the strengthening of INDRHI to successfully begin execution of the new operation. This support will help the new operation keep its intended Pluriannual Execution Plan and deliver its expected results.
- 3.4 This TC is consistent with the IDB Group's Institutional Strategy: Transformation for Greater Scale and Impact 2024-2030 (CA-631) and is aligned with the objectives of: (i) reducing poverty and inequality; (ii) addressing climate change; and (iii) promoting sustainable growth. Operationally, this TC is aligned with the promotion of (i) Biodiversity, natural capital, and climate action; (ii) gender equality and inclusion of diverse population groups; and (ii) institutional capacity, rule of law and citizen security. This alignment is given, due to the operation contributing to the efficient and effective execution of the operation DR-L1161. The TC is also aligned with the Bank's Country Strategy 2021-2024 (GN-3084), with the Strategic Objective of Improve support services for the productive sector, with an emphasis on strengthening linkages, competitiveness, and resilience.

#### **IV. Description of components and budget**

- 4.1 **Component I: Complementary studies for the design of climate-resilient quality infrastructures.** This component will finance the designs of key infrastructure investments planned in the loan operation. The TC will prioritize the designs of more complex and time-consuming infrastructures, such as flood control systems and water regulation infrastructures. The consultancies will prioritize, when possible, a combination of standard/classic and nature-based solutions based on green infrastructure with community-based maintenance. Community participatory

infrastructure maintenance (especially green infrastructure) by the irrigation associations is important because it can be achieved more cheaply and sustainably than if it were done by a contractor. However, this requires advance preparation, including awareness raising through formal education, workshops, seminars, and training with experts. Through these approaches, irrigation associations will effectively maintain green infrastructure and create a sustainable territorial environment. There are several examples of community-participatory green infrastructure maintenance in Japan, such as "Green Curtain Project" in Meguro Ward, Tokyo; "Minato no Mori Park" in Kobe City, Hyogo Prefecture; "Setagaya Green Partners" in Setagaya Ward, Tokyo; DR-T1284 will analyze the good practices and lessons learned from these cases and seek ways to adapt them to the socio-economic and cultural environment of the Dominican Republic. INDRHI will prioritize three irrigation canals, and the study will carry out advanced research to make the interventions envisaged in the lending operation more sustainable and effective. In particular, the effectiveness of nature-based solutions (or hybrid measures with concrete infrastructure) to replace conventional concrete-based infrastructures will be tested and proposals will be made with reference to examples from Japan and other countries. In this case, a framework for participatory community construction and post-construction maintenance will also be proposed, so that local people can benefit economically, rather than construction work being outsourced entirely to the operator. Likewise, these design studies will consider the potential impacts of climate change through the incorporation of currently available scenarios. The deliverables of these studies will result on the final reports that support the entire proposed design, including a green infrastructure approach, and for standard or classic infrastructure, hydraulic flow calculations, wall designs, section, and pieces calculations, as well as the necessary technical specifications to hire the corresponding construction firm with the loan resources.

#### **4.2 Component II: Diagnosis of the existing national flood early warning system for a better resilience against natural disasters**

This component will finance consulting services for the review, assessment and improvement needs of the existing early warning systems at the national level. The consultancies will focus on institutional and governance analysis, community participation mechanism and the estimation of the required equipment to strengthen the capacity of authorities to manage floods. This component will propose measures to address flooding problems in the country's watersheds. It will specifically examine the feasibility of strengthening the existing early warning system for the Yuna watershed to improve the resilience of the communities against natural disasters. To this end, full reference will be made to advanced practices and lessons learned from other countries, especially from Japan, a country prone to natural disasters, and as such, where many lessons have been learned in the operation of early warning systems: the importance of multilayered information dissemination means, the importance of disaster drills, accurate installation of observation equipment such as rain gauges, weather satellites and radar, cooperation with communities, feedback and improvement. By using these findings, it will be possible to propose an effective and operational early warning system in the Yuna Watershed consistent with a national approach, which will help protect many lives and properties.

#### **4.3 Component III: Support to INDRHI's capacities for infrastructure projects planning and implementation.** This component will finance technical assistance to INDRHI to strengthen their capacity to plan, execute, and monitor the implementation

of the project; it includes consultancies to support INDRHI in the set-up of the management and technical aspects needed to structure and execute projects, as well as technical assistance to complete the required governmental and environmental processes. The main outcome of this component will be a strong and functional project execution unit in place.

- 4.4 **Component IV: Knowledge dissemination and TC execution support.** This component will finance knowledge dissemination events (workshops) to communicate the key results of the TC and particularly of component 2, and it will provide complementary support for the execution of the TC.

#### Indicative Budget

- 4.5 The total budget of this CT is US\$950,000, financed by the Japan Enhanced Initiative for Quality Infrastructure, Resilience against Disaster and Health (JEI). There is no local counterpart.

Component	Description	IDB/JSF	Total Funding
C.1. Complementary studies for the design of climate-resilient quality infrastructures	Study of the entire proposed design, including green infrastructure approach	US\$640,000.00	US\$640,000.00
C.2. Diagnosis of the current national flood early warning system for a better resilience against natural disasters	Study of the existing flood early warning systems	US\$126,000.00	US\$126,000.00
C.3. Support to INDRHI's capacities for infrastructure projects planning and implementation	Technical assistance in project management	US\$54,000.00	US\$54,000.00
	Technical assistance in environmental and social safeguards management	US\$54,000.00	US\$54,000.00
C.4. Knowledge dissemination and TC execution support	Workshop Early Warning Systems	US\$40,000.00	US\$40,000.00
	Early Warning Systems consultant	US\$36,000.00	US\$36,000.00
<b>Total</b>		<b>US\$950,000.00</b>	<b>US\$950,000.00</b>

## V. Executing agency and execution structure

- 5.1 At the request of the Government, the executing agency for the TC will be the Bank and the activities will be implemented in close dialogue with the National Institute of Hydraulic Resources - INDRHI. INDRHI: (i) will provide the necessary information; (ii) will support the technical review of the studies and reports; and (iii) it will support coordination with the different actors.
- 5.2 The activities to be carried out under this operation have been included in the Procurement Plan (Annex IV) and will be carried out in accordance with the Bank's

established procurement methods, namely: (a) Contracting of individual consultants, as established in the regulations AM-650; (b) Hiring of consulting firms for intellectual services and (c) Hiring of logistics services and other services other than consulting, will be carried out in accordance with the institutional acquisition policy GN-2303-33 and its Guidelines.

- 5.3 The government requested the Bank's support for the execution of this TC, considering it relevant given the still limited operational capacities of the Execution Unit and the need to provide external technical assistance to strengthen capabilities for the execution of the operation, which requires knowledge and efficiency in contracting processes. In addition, the proposed activities are consistent with the Bank's country program and strategy.

## **VI. Project Risks and issues**

- 6.1 Some of the risks identified are: (i) the lack of information and data from secondary sources to carry out the study of the entire proposed designs, including the green infrastructure approach, if relevant; to mitigate this risk, a dialogue will be maintained with the different entities likely to have information to share, and information from primary sources will be collected to complete the missing information; and (ii) that once the detailed designs and tender documents have been approved, the tender will be delayed due to the new operation DR-L1161 not being ready to execute; to this end, a permanent dialogue will be promoted with the Government with a special focus on speeding up the ratification of the loan and to the fulfillment of special conditions needed to execute.

## **VII. Exceptions to Bank policy**

- 7.1 No exceptions to Bank policies are provided.

## **VIII. Environmental and Social Aspects**

- 8.1 This Technical Cooperation is intended to finance pre-feasibility or feasibility studies of specific investment projects, and the environmental and social studies associated with them; therefore, the terms of reference and products of this TC will be consistent with the applicable requirements of the Bank's Environmental and Social Policy Framework (ESPF).

### **Required Annexes:**

[Request from the Client\\_16581.pdf](#)

[Results Matrix\\_19233.pdf](#)

[Terms of Reference\\_99525.pdf](#)

[Procurement Plan\\_39145.pdf](#)