



**The World Bank**

Integrated productive landscapes through land use planning; restoration; and sustainable intensification of rice in Yaque and Yuna (P170848)

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# Concept Environmental and Social Review Summary

## Concept Stage

### **(ESRS Concept Stage)**

Date Prepared/Updated: 07/08/2019 | Report No: ESRSC00419



# The World Bank

Integrated productive landscapes through land use planning; restoration; and sustainable intensification of rice in Yaque and Yuna (P170848)

## BASIC INFORMATION

### A. Basic Project Data

Country	Region	Project ID	Parent Project ID (if any)
Dominican Republic	LATIN AMERICA AND CARIBBEAN	P170848	
Project Name	Integrated productive landscapes through land use planning; restoration; and sustainable intensification of rice in Yaque and Yuna		
Practice Area (Lead)	Financing Instrument	Estimated Appraisal Date	Estimated Board Date
Environment & Natural Resources	Investment Project Financing	12/12/2019	8/3/2020
Borrower(s)	Implementing Agency(ies)		

### Proposed Development Objective(s)

The objective of the proposed GEF project is to strengthen integrated landscape management in targeted watersheds in the Dominican Republic.

Financing (in USD Million)	Amount
<b>Total Project Cost</b>	<b>4.06</b>

### B. Is the project being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?

No

### C. Summary Description of Proposed Project [including overview of Country, Sectoral & Institutional Contexts and Relationship to CPF]

The project intervention is based on a multisector and integrated spatial approach to the sustainable management of natural resources, considering upstream/downstream impacts in the Yaque del Norte and the Yuna Basins. Strong cooperation between the MARN; the Ministry of Agriculture; and multi-stakeholder engagement is sought to execute the project. The project objective will be achieved through three main interventions strategies: (i) Strengthening land use zoning and planning capacities at the national and local levels; (ii) Promoting the adoption of sustainable rice

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production at the farm level in lower watersheds; and (iii) Restoration of key ecosystems in terms of water services provision, mainly in agroforestry systems.

**D. Environmental and Social Overview**

D.1. Project location(s) and salient characteristics relevant to the ES assessment [geographic, environmental, social]  
The project will operate in the Dominican Republic (DR) and will specifically focus on a multisector and integrated spatial approach to the sustainable management of natural resources, considering upstream/downstream impacts in the Yaque del Norte and the Yuna basins. Yaque Norte and Yuna basins constitute the Cibao Valley, the major agricultural production region in the Dominican Republic. Both basins are critical for delivering water to residents, to the economy, and in terms of the biodiversity they host. Given the wide altitudinal range (from 2800 to 0 meters), multiple ecosystems are present in the landscape hosting important biodiversity of the Caribbean region. Moreover, the Yuna river flows into the Samana Bay, the largest semi-enclosed bay in the Caribbean, which contains the most extensive mangrove and shrimp fisheries in the country, and the most important sanctuary for humpback whales in the North Atlantic. Yaque Norte Basin (YNB) and Yuna basins face severe land degradation and soil erosion, overexploitation of water resources and overuse of fertilizers and pesticides. In addition, it is vulnerable to weather events (floods and droughts) whose severity is likely to increase soon due to climate change. Water balance in the YNB is projected to be in deficit by 2025. The decline in water available is practically driven by deforestation and soil degradation, from the expansion of unsustainable agricultural practices, and reduced precipitations. On the other hand, Yuna faces recurrent flooding on the lower section of the watershed. In the lower sections of both basins, inefficient rice production system demand increasing water resources, generating GHG emissions (methane), and contributing to soil and water contamination through fertilizer and pesticide runoff. Rice is the main contributor to agricultural production value added in the country and represents 14 percent of agriculture GDP. It constitutes an important source of jobs and is considered a strategic crop in terms of food security, as represent the main staple of Dominican diet. Approximately 30,000 farmers are dedicated to rice production, of which about 50 percent are small producers with less than 3 hectares, and in total about 300.000 people are directly employed by the sector. Additionally, small rice producers do not seem to be organized in robust associations such as the cocoa or coffee sectors, which increases their vulnerability to potential productive and socioeconomic changes.

**D. 2. Borrower’s Institutional Capacity**

The project will be implemented by the Ministry of Environment and Natural Resources (MARN), which has led the project preparation process. MARN has successfully executed a total of 40 GEF projects, such as Biodiversity Conservation and Management in the Coastal Zone of the Dominican Republic; Re-engineering the National Protected Area System in Order to Achieve Financial Sustainability; Demonstrating Sustainable Land Management in the Upper Sabana Yegua Watershed System, and other smaller projects. Likewise, MARN has worked on other projects financed by the WB under the OP, such as "Resilient Agriculture and Integral Management of Natural Resources in the River Basins of Yaque del Norte and Ozama-Isabela" (P163260; under preparation), and "National Strategy for Reducing Emissions for Deforestation and Degradation" (P151752). Furthermore, they are preparing the "FCPF Carbon Fund Dominican Republic Emissions Reduction Program" (P161182), developing studies and environmental and social instruments. WB due diligence will assess the Borrowers’ capacity to implement environmental and social risks and define capacity building needs, and a strong focus will be put to ensure effective outreach to communities; implementation of multicultural dimensions; and a robust and accessible grievance redress system.

**II. SCREENING OF POTENTIAL ENVIRONMENTAL AND SOCIAL (ES) RISKS AND IMPACTS**

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**A. Environmental and Social Risk Classification (ESRC)**

Substantial

**Environmental Risk Rating**

Moderate

The environmental proposed risk classification is Moderate under the World Bank ESF, because the environmental impacts expected are mostly positive and oriented to strengthen the governance on land use, improve capacity building, avoid deforestation and forest and soil degradation, control erosion processes through forest restoration, encouraging the recharge of aquifers and water supply at the mid and lower parts of the basin, improving the land planning and rearranging the productive sectors with a landscape view. The project is expected to have limited and manageable adverse environmental impacts.

The project includes technical assistance activities as well as investments to finance small interventions. Technical assistance will be oriented at strengthening landscape governance through inter-institutional coordination and improve technical capacities (at different sectors including rural extensionist systems), promote the development of land use planning, strengthening participatory round tables, promote technical workshops related to land use planning, landscape management, and seeking inter-institutional alliances. Through technical assistance, the project will develop studies related to water balance, use of agrochemicals in the basin, methodologies to estimate the value of environmental services and biodiversity. Investments will be associated to other existent projects developed in the basin related to reforestation, emission reductions, soil degradation, climate-smart agriculture, and will also develop System Rice Intensification (SRI) demonstrative pilots in the lower part of the basins.

For Component 2 and 3, there is a need to carry out an environmental and social assessment (ESA) and establish mitigation measures specifically related to SRI pilots, water demand, GHG emissions (methane), and water contamination through fertilizer and pesticide runoff. The project shall formulate an ESMF including pest management plan, and an ESMP for the SIR demonstrative pilots in compliance with ESF.

**Social Risk Rating**

Substantial

The social proposed risk classification for the Project is Substantial under the World Bank ESF. Based on the analysis of the activities planned so far, it is not expected that they will involve significant adverse social risks and impacts on human populations and/or the environment. Impacts on physical, cultural, and/or archeological sites; economic displacement, land acquisition or resettlement are not expected. The project is expected to have social benefits as well as manageable adverse social impacts. However, given the sensitive social context in the region, the competing interests and demands of different land and water users (in light of water scarcity), and the need to consider trade-offs between different stakeholder interests and warrant off elite capture, the social risk rating is Substantial. There will be the need for an in-depth stakeholder involvement during project planning and implementation.

Furthermore, project restoration activities developed in the upper basins could cause restrictions of access to natural resources. In that case, especially vulnerable and resource-dependent groups could be negatively affected. On the other hand, these activities could be an opportunity for producers and other stakeholders, especially those vulnerable to water scarcity, if managed inclusively. The project will therefore include elements to minimize exclusion risks and put a strong focus on inclusive stakeholder management and the SEP.

**B. Environment and Social Standards (ESSs) that Apply to the Activities Being Considered**

**B.1. General Assessment**

**ESS1 Assessment and Management of Environmental and Social Risks and Impacts**

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**Overview of the relevance of the Standard for the Project:**

The Environmental and Social Screening during CN stage identified that the project will generate mostly positive impacts related with landscape restoration and promote sustainable and resilient land use practices. However, there is a substantial social risk due to the need for strong social inclusion, a strong focus on the poor and vulnerable and stakeholder risk. The project will also support pilots of SRI in the lower part of the basin that reduce the main adverse impacts of the traditional rice production such as inefficient irrigation systems, drainage and salinity problems, and anaerobic decomposition in flooded lands that generate methane emissions. It will also aim at reducing agrochemicals use, including: herbicides, pesticides and fertilizers, that contribute to water pollution and loss of biodiversity. An Environmental and Social assessment (ESA) and draft ESMF will be prepared prior to appraisal to identify and analyze the potential social and environmental risks and impacts of sub-component activities, and to propose mitigation measures aligned with the ESF environmental and social standards. The ESMF will include a draft Labor Management Plan (LMP) and a draft Integrated pest Management Plan (IPMP).

Among the most relevant positive impacts expected for the project, are the increase in forest biomass and carbon removals, and the aquifer recharge and water availability for productive uses. Restoration activities developed in the upper basins are expected to reduce excessive sediment loading on water bodies, improve quality of water rivers, and recover biodiversity and productivity in mangrove areas. By applying erosion control activities and integrated pest management techniques, runoff of pesticides will be reduced. Additional positive impacts include: sustainable land use planning according to suitability of land to certain uses and availability of resources, promotion of smart agricultural activities such as SRI, and sustainable agroforestry and silvo-pastoral systems, among others. Cumulative impacts would also be expected to be positive and will be considered in the environmental assessment process and overall monitoring of the project. Notwithstanding the benefits of the project, planning activities should consider that the reorganization of land use and restriction of activities could generate economic displacements that must be evaluated with the ESA and for which mitigation measures and alternatives should be identified. To ensure adequate staffing and funding, potential social risks and impacts will be addressed in ESMF approaches as well as in a Stakeholder Engagement Plan (SEP), to be prepared prior to appraisal.

**Areas where “Use of Borrower Framework” is being considered:**

Given the characteristics of the activities that will be financed by the Technical Assistance, reliance on the Borrower's Environmental and Social Framework may be considered for ESS2 (Labor and Working Conditions). DR's legal framework is in line with the principles of this Standard and the Project will be mainly implemented by Staff from the MARN (Government Civil Servants and other Direct Workers). In relation to ESS3 (Resource Efficiency and Pollution Prevention and Management) and ESS4 (Community Health and Safety), a diligent borrower's assessment will be undertaken in the next weeks and a reliance on the Borrower's Environmental and Social Framework assessed. In relation to ESS5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement), Law 5879 of 1962 on agrarian reform establishes a baseline for the ESS 5. Further assessment will be undertaken. On ESS6 (Biodiversity Conservation and Sustainable Management of Living Natural Resources), legal and compliant frameworks are the Law 202-04 Sectoral Law on Protected Areas, where protected areas are defined and delimited in the Dominican Republic. Further assessment will be undertaken. On ESS8 (Cultural Heritage), if considered relevant for this project, a diligent borrower's assessment will be undertaken in the next weeks and a reliance on the Borrower's Environmental and Social Framework assessed. ESS7 (Indigenous Peoples) and ESS9 (Financial Intermediaries) are not currently relevant for this Project.



### ESS10 Stakeholder Engagement and Information Disclosure

Technical assistance seeks to strengthen participation of the sectors involved from the project start, through specific interinstitutional workshops to align policies, objectives and incentives related to land use planning, multisector workshops for integrated landscape management, sustainability indexes, improve capacities for land use reconversion based on water balances, and the creation of multi-stakeholder roundtables. The main stakeholders are private and public sector governance institutions and organizations: small- and medium-sized producers; landscape committees; National Water Board (Mesa de Agua); Interinstitutional Technical Group of Ministry of Environment and Natural Resources (MARN-GTI); local water committees (comités locales de agua); Extension and Capacity Building Service from the Ministry of Agriculture, MEPyD; and INDRHI. MARN will develop and implement a Stakeholder Engagement Plan (SEP) with a particular focus on landscape planning, outlining a) who the key stakeholders are; b) how will they engage with them; c) how often the engagement will occur throughout the project; d) how feedback will be solicited, recorded and monitored over the project; e) who will be responsible for this engagement; f) timeline for this engagement; g) budget and human resources, among other details. To avoid or minimize the risk of leaving certain vulnerable groups behind, the SEP will describe the measures that will be used to remove obstacles to participation, and how the views of differently affected groups will be captured. Where applicable, the SEP will include differentiated measures to allow the effective participation of those identified as disadvantaged or vulnerable, focusing on small farmers without linkages with formal organizations. Dedicated approaches and an increased level of resources may be required for communication with such differently affected groups so that they can obtain the information they need regarding the issues that will potentially affect them (positively or negatively). The stakeholder engagement process will begin as early as possible during project preparation and will provide a framework for engagement over the lifecycle of the project. Prior to appraisal, the Stakeholder Engagement Plan (SEP) will be disclosed, and the following elements of the SEP will be implemented: i) stakeholder identification and analysis, ii) planning how the engagement with stakeholders will happen, (iii) disclosure of information, and iv) consultation with stakeholders and other relevant groups. The Borrower will propose and implement a Grievance Mechanism to receive and facilitate resolution of concerns and grievances.

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### B.2. Specific Risks and Impacts

**A brief description of the potential environmental and social risks and impacts relevant to the Project.**

#### ESS2 Labor and Working Conditions

The standard is relevant given some potential need for direct, contracted, community, or primary supply workers associated with project activities and investments. Labor influx related impacts are not expected. The number of workers is not known at this time. Prior to appraisal, the Borrower will develop a draft Labor Management Plan and a standalone draft Grievance Redress Mechanism. The Borrower will provide TORs for workers to be hired as well as the expected number of workers that will be employed by the project. The project will promote transparency in terms and conditions of employment, nondiscrimination and equal opportunity. The WBG team will review the specific HR processes and practices for the project in line with due requirements. Relevance of this ESS will be further assessed during the appraisal stage when a more detailed project description is available or if the initial project design changes. The national legal framework will be considered regarding the standard requirements and may be applied. Also, it is expected that government civil servant personnel will be associated with the project; the team will



ensure that provisions on protecting the workforce (whether full-time or part-time) and occupational health and safety are in line with the ESS2.

### **ESS3 Resource Efficiency and Pollution Prevention and Management**

ESS3 is relevant because it involves studies related to valuation of environmental services, water management at the basin level with a landscape approach; degradation of soils; and biodiversity to which the aspects required by the ESS3 must be integrated. Technical assistance actions included in the project should integrate environmental and social considerations in the Terms of Reference, in accordance with the WB ESF, to avoid environmental and social impacts in the future. MARN should formulate an ESMF for all the activities and an ESMP for the SRI demonstrative pilots. A GHG study and a water balance study shall be developed before appraisal to better align the ESMF to mitigation measures and create a baseline. These instruments will align with the ESF and particularly with the ESS3, including the use and management of agrochemicals in the rice production. An integrated pest management plan (IPMP) will be developed as well as studies about water balance, agri-chemical usage, and GHG emissions to support the planning and pilot production activities. Substantial measures on training and potentially equipment should be considered in the budgeting of the project and for ESMF/IPMP implementation.

### **ESS4 Community Health and Safety**

This ESS is relevant considering that DR is vulnerable to climate events. Emergency plans that the Government has developed for the country have to be considered, for example regarding fires, floods, landslides and their effects on communities. There will be a need to guide the Borrower in the required assessments for ESS 4, as well as planning and management of existing and new instruments, as well as capacity building measures. This analysis must be carried out during the due diligence process. Use and management of agrochemicals are relevant for this ESS4, and core principles of the ESS4 shall be considered in the Integrated Pest Management Plan. Relevance of this ESS will be further assessed prior the appraisal stage when a more detailed project description is available or if the initial project design changes. Emergencies, exposure to pesticides, and climate vulnerabilities are to be considered in the process of implementation of sub-component activities.

### **ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement**

The standard is currently relevant. The project will not involve the taking of land, although the Project restoration activities developed in the upper basins could imply restriction on resources access. Components 2 and 3 of the Project include investments to support interventions with co-financing through other projects. Land planning activities included in Component 1 could imply the changes in land use planning. ESS 5 does not apply in such cases of land use planning or the regulation of natural resource use (paragraph 8). Therefore, impacts associated with planning measures will be addressed through the ESA in relation to ESS1. It is expected that the planning process and methodologies will fully integrate the consideration of social impacts regarding relocation of rice production activities that would be displaced. Relevance of this ESS will be further assessed as more details of the Project are available or if the initial project design changes. A Process Framework (PF) will be developed in the event that watershed protection activities to be financed imply economic displacement impacts.



### **ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources**

This ESS is relevant given that the core project objectives are aligned with the ESS6 standard. The project is expected to have positive benefits for biodiversity conservation and sustainable management of living natural resources. To develop these activities in accordance with the requirements of the ESS6, a draft ESMF will be prepared prior appraisal stage.

The project has a multisectoral and integrated spatial approach for the upper and lower parts of the basins of the Yaque del Norte and Yuna rivers that constitute the Cibao Valley, the main agricultural region in the DR. Both basins are critical to provide water to the residents of the area, the economy, and the biodiversity they host. Given the wide altitudinal range in the basins (0 to 2800 meters), there are multiple ecosystems that host important biodiversity in the Caribbean region. The presence of mangroves in the Bay of Samana, an area known for its high diversity of fish and crustaceans, has been considered the most important sanctuary for humpback whales in the North Atlantic. The basins face severe forest degradation and soil erosion in the upper part affecting ecosystems services. They also face overexploitation of water resources and excessive use of agrochemicals in the middle and lower parts that compromise the productivity of the rice crops which require large amounts of water and is considered a strategic crop for food, and for the creation of jobs in the DR.

This project is expected to reverse these negative impacts through restoration programs in the upper watershed resulting in: forest growth and carbon sequestration, recovery of aquifer recharge and water availability. Through the application of control erosion measures and integrated pest management techniques, the project will contribute to the reduction of erosion and excessive load of sediments in water bodies, reduction of water pollution in rivers, biodiversity conservation and recovery of mangroves.

Biodiversity, GHG emission reduction, and climate change resilience, will all benefit from planning and reordering of the land uses according to: soil capacity and resource availability, productive diversification including climate-smart agriculture such as intensive rice cultivation, agroforestry and silvopastoral systems in the mid and lower section of the basins.

Despite the benefits of the project, the planning and reordering of land uses and restricting activities that demand water in abundance, could generate in the future economic displacements that must be assessed, quantified and for which mitigation measures must be identified.

### **ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities**

The standard is currently not relevant. Previous safeguards assessments for World Bank supported Projects: “Resilient Agriculture and Integral Management of Natural Resources in the River Basins of Yaque del Norte and Ozama-Isabela” (P163260), “National Strategy for Reducing Emissions for Deforestation and Degradation” (P151752), and the “FCPF Carbon Fund Dominican Republic Emissions Reduction Program” (P161182), concluded that there are no distinct Indigenous Peoples in the Dominican Republic that fulfill the four characteristics indicated under OP 4.12, which is covered by paragraph 8 of ESS7.

### **ESS8 Cultural Heritage**

Project activities are not expected to have negative impact on cultural heritage, whether in its tangible or intangible forms. However, considerations of landscape values such as the cultural importance of mountains, rivers, and





waterfalls etc. could be something to examine during the next stage of the Project preparation. Relevance of this ESS will be further assessed as more details of the project are available or if the initial project design changes.

**ESS9 Financial Intermediaries**

The standard is not relevant. FI's are not part of this project.

**C. Legal Operational Policies that Apply**

**OP 7.50 Projects on International Waterways** No

**OP 7.60 Projects in Disputed Areas** No

**III. WORLD BANK ENVIRONMENTAL AND SOCIAL DUE DILIGENCE**

**A. Is a common approach being considered?** No

**Financing Partners**

n/a

**B. Proposed Measures, Actions and Timing (Borrower's commitments)**

**Actions to be completed prior to Bank Board Approval:**

Actions to be completed prior to appraisal:

- a) WB due diligence of National Legal (environmental and social), Institutional Framework and the safeguards instruments of the related projects (FCPF and others).
- b) Stakeholder Engagement Plan (SEP)
- c) Environmental and Social Assessment
- d) Draft of an ESMF including:
  - GHG study, water study
  - Draft Labor Management Plan
  - Draft Integrated Pest Management Plan
  - Draft Training Plan
- e) Environmental and Social Commitment Plan
- f) Grievance Redress Mechanism, including a standalone GRM for workers

**Possible issues to be addressed in the Borrower Environmental and Social Commitment Plan (ESCP):**

- a) Consultation and validation process of safeguards instruments by stakeholders
- b) Timetable for disclosure of final safeguards instruments
- c) Development of ESMP's where applicable



- d) Implement the arrangements for the grievance mechanisms for any project-affected people and other stakeholders
- e) Regular Reporting: Prepare and submit regular monitoring reports on the implementation of the ESCP
- f) Safeguards trainings to be given

**C. Timing**

**Tentative target date for preparing the Appraisal Stage ESRS**

25-May-2020

**IV. CONTACT POINTS**

**World Bank**

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**Borrower/Client/Recipient**

**Implementing Agency(ies)**

**V. FOR MORE INFORMATION CONTACT**

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**VI. APPROVAL**

Task Team Leader(s): Remi Charles Andre Trier, Rodrigo Martinez Fernandez  
 Safeguards Advisor ESSA: Noreen Beg (SAESSA) Cleared on 08-Jul-2019 at 15:42:3 EDT