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Environmental and Social
Safeguards Issues Paper:**

**Upstreaming
Environmental and Social Risk
Management**

John Redwood

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Dominican Republic Environmental and Social Safeguards Issues Paper:

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This Technical Note was prepared by the Environmental and Social Safeguards Unit (VPS/ESG) of the Inter-American Development Bank (IDB). ESG works to promote the environmental and social sustainability of Bank operations. It collaborates with project teams to execute the IDB's commitment of ensuring that each project is assessed, approved and monitored with due regard to environmental, social, health and safety aspects, and that all project – related impacts and risks are adequately mitigated or controlled. ESG also helps the Bank respond to emerging sustainability issues and opportunities.

This paper provides information and analysis on the environmental issues facing the Dominican Republic so that the Bank can take into account potentially significant environmental risks and opportunities that aim at supporting economic growth, while at the same time encouraging long-term environmental sustainability.

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Contents

Introduction.....	1
The 2009 CEA	2
The 2010-2013 Country Strategy.....	3
Bank Environment-related Support from 2010 to the Present.....	5
Current Priorities as Seen By INE/RND.....	8
Transboundary Environmental Concerns	10
Shared Aquifer	10
Coastal Environment and the Caribbean Biodiversity Corridor	11
Bi-national Watershed Management.....	12
Other Cross-border Pressures on Natural Resources	12
Other Concerns from an Environmental Safeguards and Sustainability Perspective	13
Impacts of Mining Activities.....	13
Impacts of Tourism Development.....	15
Road Improvements	16
Impacts of Climate Change.....	17
Further Potential for Wind Energy Development	18
Environmental Management and Institutional Capacity.....	18
Priority Areas for Bank Support in Next Country Strategy	19
Annex: The 2009 Country Environmental Analysis.....	21
Environmental Actions Matrix	27

Introduction

The purpose of this technical note is to identify key environment and safeguard-related risks and opportunities that should be taken into account in the new Country Strategy for the Dominican Republic (DR) as required by the IDB's Environment and Safeguard Policy approved in January 2006. Section A.6 of this document affirms that "the Bank will seek to identify early on potentially highly sensitive programs/projects considered for possible Bank financing in its operational programming documents, including Country Strategies, in order to plan for possible courses of action to manage risks." It goes on to state that "the Bank will take into account the country environmental analysis...or other assessments from environmental due diligence processes at the stage of project/program identification, to assess early on potentially significant environmental risks and opportunities."¹

In December 2009, a Country Environmental Analysis (CEA) for the DR was issued by Bank staff and consultants. This analysis was to serve as an input for the Bank's country programming process, including its Country Strategy for 2010-2013, by identifying the principal environmental challenges and opportunities faced by the country in order to establish strategic action priorities. It is also a key background document and input for the current environmental and safeguards issues paper. The CEA examined the country's principal environment-related risks—loss of biodiversity, deforestation and forest cover, loss of water quality and quantity and environmental quality more generally, increasing vulnerability to extreme weather events and climate change, increasing pollution, and coastal zone degradation—assessed the current state of environmental management and associated action priorities, focusing on the tourism and mining sectors, and public expenditures for the environment.²

The findings and recommendations of the CEA continue to be largely valid, particularly in terms of the country's principal environmental risks and its persisting institutional capacity challenges. The present paper will also summarize the (very limited) environmental content in

¹Inter-American Development Bank, *Environment and Safeguards Compliance Policy*, Washington, DC, March 2006, Section A.6, pg. 7.

² See Inter-American Development Bank (IDB), Environment, Rural Development, and Disaster Risk Management Division (INE/RND) and Environmental Safeguards Group (VPS/ESG), *Estudio Ambiental de País*, RG-K1066, Washington DC, December 2009. Hereafter, "the CEA."

the existing Country Strategy and examine the portfolio of pertinent Bank lending and Technical Cooperation operations approved from the beginning of 2010 to the present in order to gauge the extent to which the Bank has followed up on the recommendations of the CEA to date, together with the main points of a presentation on Natural Resources and the Environment by the Bank's Rural Development and Environment Division on "Dominican Day" (July 24, 2012) with respect to the current state of the environment and priority areas for intervention, also prepared as an input for the new Country Strategy.³ And it will briefly identify a number of transboundary considerations in view of the fact that the Dominican Republic shares the same island (Hispaniola) with Haiti. Finally, it will consider additional concerns from an environmental and social safeguards perspective, including the aforementioned transboundary ones, and make recommendations for priority actions regarding the environment for the Bank's new Country Strategy with the DR which is currently under preparation.

The 2009 CEA

The CEA concluded that the Dominican Republic possessed most of the legal instruments needed to comply with IDB environment and safeguard policies, but still lacked the national and local capacity to apply them in an acceptable way. The CEA characterized the major environment-related concerns faced by the country as including: (i) contamination by solid wastes; (ii) contamination of water resources and the lack of effective schemes for their management; (iii) environmental pressures associated with unplanned settlements in urban areas and tourism development; (iv) increased activities in high-impact sectors such as mining, including territorial conflicts with Protected Areas; (v) weak management of Protected Areas; (vi) degradation of coastal and marine ecosystems; and (vii) vulnerability to natural disasters and the need for adaptation to climate change.

General recommendations for Bank actions were to provide: (i) non-reimbursable technical assistance to support definition of policy reforms in relation to environmental management with concrete implementation measures and institutional strengthening; (ii) technical and financial support to local governments and through specialized sources (specifically the Sustainable Energy and Climate Change Initiative, or SECCI); and (iii)

³ See, IDB, INE/RND, *República Dominicana – Recursos Naturales y Medio Ambiente*, Powerpoint presentation, July 2012.

technical and financial support in the priority areas of the CEA. Specific recommendations for the Country Strategy period, in turn, were: (i) undertaking a CEA for definition of strategic priorities, presumably referring to the study that had already recently been completed; (ii) programming exercises with the country considering the CEA and Government priorities as identified in the National Development Plan; (iii) undertaking a sectoral dialogue on country systems in relation to the environment; and (iv) formulation of an action plan for implementation of the recommendations of the CEA in coordination with other donors. Additional details in relation to the 2009 CEA are presented in the Annex.

The 2010-2013 Country Strategy

Despite the CEA and its recommendations (and the fact that the Strategy paper provided an electronic link to this document, among others), environment was not among the nine priority areas identified in the Country Strategy with the Dominican Republic for 2010-2013 presented to the Bank's Board of Directors in September 2010.⁴ These areas were: public finance, social protection, education, workforce integration, energy, transportation, water and sanitation, agriculture, and tourism, several of which are clearly of environmental and/or safeguards relevance (e.g., agriculture, energy, transport, tourism, and water and sanitation). In this context, the Strategy affirmed that the Bank would support the priorities of the Dominican government “as set out in the National Development Strategy for these areas.”⁵ However, in doing so, it essentially ignores one of the four “strategy areas” of the National Development Strategy, summarized in an annex to the Country Strategy, more specifically its focus on “sustainable management of the environment and effective adaptation to climate change” and which identified the following three general and four specific objectives:

- Environmental sustainability: (i) to protect and use natural resources in a sustainable way and improve the quality of the environment; and (ii) to manage water resources efficiently and sustainably.
- Effective risk management: to develop a comprehensive system for natural risk management with active community participation.

⁴ See IDB, *Country Strategy with the Dominican Republic (2010-2013)*, Report GN-2581, September 13, 2010.

⁵ *Ibid.*, Executive Summary, pg. i.

- Adaptation to climate change: to make progress in adapting to climate change and mitigating its causes.⁶

There is no explanation as to why this part of the National Development Strategy was not picked up as one of the priority areas in its own Country Strategy, and appears to represent a significant missed opportunity by the Bank to provide valuable assistance in this area. This lapse is puzzling in view of the fact that the CEA, containing both general and specific recommendations, had recently been completed. This oversight is also curious in view of the fact that a stronger focus on the environment was one of OVE's nine key recommendations based on its Country Program Evaluation of January 2010 which are summarized in another annex to the Country Strategy.⁷

The Bank's response to OVE (as contained in the aforementioned annex), however, was limited to "natural disaster risks" and did not refer to the country's environmental vulnerability more generally.⁸ Together with macroeconomic and fiscal risks, natural disasters were also identified as among the main risks to implementation of the Country Strategy, but climate change as such was not mentioned in this context.⁹ And the only reference with respect to the environment more generally came in the section on "Strategy Implementation" with the subheading of "Country Systems" and entailed the following comment referring to the recently concluded CEA: "For environmental systems, as part of the Country Environmental Study, the Bank completed an initial evaluation in late 2009 on the state and effectiveness of the legal and institutional framework for national environmental management. This study noted progress in

⁶ *Ibid.*, Annex II, pg. 3. The other priority areas in the National Development Strategy: (i) a State with efficient and transparent institutions at the service of a responsible, participatory citizenry which ensures security and promotes development and peaceful coexistence; (ii) a cohesive society with equal opportunity and low levels of poverty and inequality; and (iii) a coordinated, innovative and sustainable economy with a productive structure that generates solid, sustained growth with decent jobs, and which positions itself competitively in the global economy.

⁷ *Ibid.*, Annex V, pg. 2. More specifically, OVE recommended that "the Bank should advance the environmental vulnerability prevention and reduction agenda for the island with various instruments based on the needs and interests of the stakeholders, including technical assistance, knowledge transfers, and grants. Specifically, in order to prompt the adoption of prevention oriented policies, efforts should be made to identify the political economic factors that have led to the government's de facto adoption of rehabilitation-oriented policies. In addition, the Bank should continue to invest in knowledge by building on the studies conducted in 2005 to identify policy options."

⁸ According to the same annex, "as the new [Bank Country Strategy] begins, conditions are very favorable for progress in disaster prevention. Startup of the financial strategy for disaster risk management has been the framework to align the various government players and create a technical committee of staff from the finance and planning ministries. Thus, as part of the country's eligibility for the contingent facility for disaster risks, in the short term a comprehensive plan to manage natural disaster risks, focused mainly on prevention, will be prepared and kept up-to-date."

⁹ *Ibid.*, pg. 11.

environmental legislation as well as weaknesses in enforcing the legislation and complying with its provisions. It also noted weaknesses in institutional capacity at sector agencies, and identified priority action areas for strengthening environmental management.”¹⁰ However, it did not specifically indicate what these “priority action areas” were.

Bank Environment-related Support from 2010 to the Present

In short, the Bank’s Country Strategy for 2010-13 gives very limited attention to the environment and did not adequately respond to OVE’s specific recommendation in this regard. Based on a review of the active portfolio, this is also reflected in the limited amount of environment-related support that the Bank has given to the Dominican Republic in its lending and technical assistance operations for the country since the beginning of 2010. The two main exceptions to this are in the areas of disaster risk management and renewable energy.

In terms of lending operations, the Bank approved a US\$24.0 million loan (DR-L1045) in May 2011 to finance the launch of insurance coverage up to US\$100 million to cover the incremental extraordinary public expenditures that could be incurred during emergencies caused by seismic activity and/or tropical cyclones of catastrophic intensity. Two loans for US\$50.7 million and US\$27.6 million were approved on July 13, 2011, for the PECASA and Bani Wind Power Projects, respectively. The first of these was to support construction, operation and maintenance of a 50 MW wind farm in the town of Guanillo in the northern province of Montecristi, whose total cost was estimated to be US\$ 128.0 million and the second to build a 34 MW wind farm (composed of 17 wind turbines) in the region of Bani with a total estimated cost of US\$76 million. Both of these were private sector investments.

In addition, three relevant non-reimbursable Technical Cooperation operations were approved, two of which—a US\$300,000 TC for an energy efficiency analysis approved in June 2010 and a US\$750,000 one to support renewable energy and bioenergy programs approved in September 2011—were also energy-related. Both of these operations were developed under the auspices of the Bank’s Sustainable Energy and Climate Change Initiative (SECCI). In addition, a US\$539,835 Multilateral Investment Fund (MIF) operation was approved in December 2011 for a project to support coral reef conservation. According to the Bank’s external website, the general objective of this project is to “impart a heightened awareness by the tourism industry and

¹⁰ *Ibid.*, pp. 10-11. It then refers in a footnote to the Environmental Action Plan contained in the CEA.

associated communities in tourism areas as to the value of healthy coral reefs, with the implementation of economically viable strategies for direct involvement by the industry in the conservation and restoration of coral reefs,” and its specific objectives are “the establishment of coral gardening as a resort-oriented profession and the establishment of coral gardening destinations whereby guests come to the DR to participate in coral planning and coral reef restoration, translating coral reef restoration and conservation into revenue streams with a high level of local population involvement.”

Thus, with the exception of the work carried out in connection with SECCI (e.g., renewable energy and energy efficiency) and natural disaster risk management, the Bank has not followed through on most of the recommendations of the 2009 CEA, especially those regarding the need to strengthen SEMARENA—now MARENA—and institutional capacity for environmental management in the DR, at both the national and local levels. And even its climate change-related support has mainly involved mitigation (again in the form of assistance for energy efficiency and renewable energy) rather than adaptation concerns, with the exception of the MIF operation regarding coral reef conservation and restoration. This also appears to be the only new tourism-related activity supported by the Bank since 2009, and there has been no Bank intervention in the mining sector over this period.

Bank operational staff confirms that IDB support for the environment has been limited over the past several years. According to these sources, the main reason for this was that neither the Secretariat of Planning (SEEPyD) nor SEMARENA/MARENA agreed with the Bank for it to direct technical cooperation resources to support the actions proposed in the CEA. Thus, with the specific exceptions indicated above and below, any progress that has been made since December 2009 is primarily due to actions taken by the Dominican government with its own resources or with the assistance of other external agencies. This notwithstanding, according to Bank staff based in the field, the following relevant actions have been taken by the IDB or other actors over the past several years in relation to the actions recommended by the CEA:

- Definition of a group of policy reforms in the environmental areas with concrete implementation measures and institutional strengthening actions – the Bank contributed to the preparation of the Potable Water and Sanitation Law (Ley APS), which is presently being considered by the Congress.

- Non-reimbursable assistance to define policy reforms and institutional strengthening actions – a consultancy was financed to support the Ley APS process through Technical Cooperation DR-T1056 (for support for the preparation of a Rural Water and Sanitation Project, approved in December 2009).
- Technical and financial support through specialized sources (SECCI) – during this period a regional Technical Cooperation Project for the Development of Energy Efficiency in the Water and Sanitation Sector in Latin America and the Caribbean (ATN/OC-11218-RG) was concluded, benefiting the water utility of Santo Domingo.
- At least three sectors of operational importance for the country (tourism, agriculture, and mining) have a revised environmental policy framework, with approved sector guidelines and environmental quality standards – the Ministries of Tourism and Agriculture and the Direction of Mining have their own standards of environmental quality (but the IDB does not appear to have provided any specific assistance in this regard).
- SEMARENA strengthened in terms of budget, qualified staff and management effectiveness indicators – it is not known whether it has advanced in terms of budgetary resources and staffing quality, but since 2011, MARENA (i.e., the Ministry of Environment and Natural Resources) has been in the process of implementing some management results indicators.
- At least three of the principal municipalities have established coherent environmental management programs with allocated budgets – certain municipalities have Environmental Management Units, but there is a lack of information about their budget execution.
- National Climate Change Strategy approved – while it does not appear that such a strategy has yet been approved, UNDP is undertaking a consultancy to elaborate a National Climate Change Policy, which is understood to include an implementation strategy. There is a climate change “pillar” in the National Development Strategy and a National Development Plan Compatible with Climate Change also exists.

More generally, however, it is unlikely that other actions recommended in the CEA’s associated Action Plan will be carried out by the end of 2013, in part because of the change in administrations on August 16, 2012, when the new authorities at MARENA and elsewhere in the

national government took office. After this date the Bank plans to initiate a dialogue with the incoming officials in order to become aware of their agenda and work plans for the next few years.

Current Priorities as Seen By INE/RND¹¹

In a recent (July 2012) presentation on Natural Resources and the Environment in the Dominican Republic, INE/RND made the following pertinent observations about the current situation in the country, reiterating many of the findings of the earlier CEA:

- The availability of water resources, 76 percent of which are consumed by agriculture, is sufficient even though there are some “tensions” at the local level.
 - There is room for the development of forest resources, and adequate forest management in the high and middle basins reduces destruction of soil structure, contributes to the infiltration of water, and avoids desertification.¹²
 - Land use changes and urbanization are the principal threats in the coastal and marine zone, which is also the most vulnerable to climate change and of critical importance for the tourism sector.
 - Biodiversity and the Protected Areas, which are likewise important tourist attractions, face serious management problems, reflecting both inadequate resources and insufficient institutional capacity (which is also the case for management of the environment more generally)
 - There is a complex institutional structure without adequate legal backing.
 - The planning and allocation of public resources for the environment is deficient.
- Interventions exist where public resources generate greater value, specifically in the management of water resources and of protected areas.

¹¹ This section is drawn directly from the Power Point presentation cited in footnote 2 above. There is also a more detailed policy note on which this presentation was based, see IDB, *República Dominicana – Nota de Política: Medio Ambiente y Recursos Naturales*, June 2012.

¹² According to the World Bank’s *Little Green Data Book* for 2010 (pp. 78 and 92), there was a zero average deforestation rate in the DR between 1990 and 2007, compared with one of 0.7 percent a year over this same period for Haiti, and 0.5 percent for Latin America and the Caribbean as a whole, while 28.5 percent of the country’s land area was under some form of national protection, compared with just 0.3 percent in Haiti and 22.8 percent in the LAC region as a whole.

Based on this assessment, the challenges for a more sustainable management of natural resources were the needs for legal and institutional strengthening and greater involvement of the productive sectors and civil society in environmental management and adaptation to climate change, as well as the integrated management of water basins, which form the basis for the more sustainable management of territorial, including forest, soil, water, and coastal and marine resources. The principal “axes” for incorporating the environment in national development policies, in turn, would be: (i) improvement of the normative and institutional framework by approving pending legislation, regulating the system of environmental management, inter-institutional coordination, and elaborating a National Land Use Plan (*Plan Nacional de Ordenamiento Territorial*); (ii) better conservation of biodiversity and management of Protected Areas by effectively protecting these areas, preserving ecological corridors, maintaining the functionality of the ecosystems, and preserving natural habitats; and (iii) enhanced organization and management of water basins by improving the management of forest and water resources, combating erosion and deforestation, promoting sustainable use of coastal and marine resources, and integrating measures for adaptation to climate change.

Finally, the following actions were recommended:

- Ordering land use based on the integrated management of water basins by: (i) managing forest and water resources to combat the effects of climate change and erosion; and (ii) improving the distribution, sanitation, and treatment of water and promoting its reutilization.
- Sustainable use of the coastal-marine zones by: (i) developing coastal use and management plans; and (ii) providing the means and management resources to harmonize their environmental preservation with tourism.
- Promoting anticipation and adaptation to climate change by: (i) improving institutional coordination and the integration of productive sectors into these activities; (ii) reducing the vulnerability of the coastal-marine zones through the integrated management of the water basins; and (iii) reduce the vulnerability of agro-ranching activities and human settlements, as well as their infrastructure.

Transboundary Environmental Concerns

In assessing environmental risks and opportunities for the new Country Strategy, it is also important to keep in mind that the Dominican Republic shares the same island with the much poorer and natural resource-depleted Haiti,¹³ which was also the victim of a catastrophic earthquake in January 2010 in which more than 300,000 people were estimated to have been killed. As a result, a number of the already existing transboundary pressures on the DR's natural resources and environment have increased and should also be considered in determining the priority areas for potential Bank assistance to the country in its new Strategy. The most important of these, some of which overlap with areas of concern already mentioned above, are summarized in the following paragraphs.

Shared Aquifer

The Dominican Republic shares four transboundary aquifers with Haiti: Massacre, Artibonito, Los Lagos and Pedernales. The Massacre Transboundary Aquifer, a coastal aquifer that extends 2,280 km² and is shared almost equally by both countries, is central to the Bank's activities in northern Haiti (HA-L1055 and HA-L1076). Though predominantly relied upon to meet agricultural and domestic demands in both countries, the potential for industrial use, particularly in the Dominican Republic, has been previously noted¹⁴ and recent developments on the Haitian side, e.g. Caracol Industrial Park and Roi Henri Cristophe University, would suggest that significant growth should be expected, increasing demands on groundwater availability and quality.

Limited data exist for all four transboundary aquifers, but are particularly scarce on the Haitian side. Given the importance of this shared resource to both countries, additional studies are critical to their long-term sustainability. In 2002, a Binational Agreement was signed by both

¹³ This situation has occurred over several centuries and reflects both the greater income poverty and degradation of the natural environment in Haiti relative to the DR. Indicative of the latter, as of 2010, just 3.8 percent of Haiti's land area remained in forest, as compared with 28.5 percent of that in the DR and 44.9 percent of that in the LAC region as a whole, according to the World Bank's *Little Green Data Book*, op. cit., pp. 98 and 72. For an instructive discussion of the historical record in relation to environmental governance in and the current differences between these two countries, including along the border region between them, see Jared Diamond, *Collapse: How Societies Choose to Fail or Succeed*, Viking, New York, 2005, Chapter 11, "One Island, Two Peoples, Two Histories: The Dominican Republic and Haiti," pp. 329-357.

¹⁴ *Sistemas Acuiferos Transfronterizos en las Américas, Evaluación Preliminar*, UNESCO/OAS ISARM Americas Programme Transboundary Aquifers of the Americas, UNESCO, 2007.

countries “for the sustainable joint management of the Artibonito Transboundary Basin,” and a further commitment to collaborate on the management of the Artibonite and Massacre Transboundary Aquifers was “officially agreed” two years later.¹⁵

According to the draft EMSR for a Productive Infrastructure Program (HA-L1076), currently under preparation, the so-called “Northern Corridor” in Haiti is underlain by the Massacre Aquifer. Previous analysis suggests that there is sufficient groundwater available to meet present and future water demands, but this study did not consider potential transboundary impacts, including abstraction in other areas, which is expected to increase due to the proposed project. In short, according to this source, “the influx of people expected as a result of the [Program] could increase the demands on this shared resource thereby impacting other users. Likewise, developments—i.e., abstractions and effluent discharges outside the [Program]—could impact the overall availability and quality of groundwater.” As a consequence, the ESMR affirmed that potential transboundary impacts “must” be assessed as part of the hydro-geological assessment.

Coastal Environment and the Caribbean Biodiversity Corridor

From the same source, it is observed that the Haitian Ministry of Environment has proposed a marine protected area along the country’s northern coast that includes the bays, mangroves, and coral reefs of Limonade, Caracol, and Fort Liberte. While the boundaries of this protected area had not yet been defined, it was expected to include the Important Bird Area (IBA) of Lagon-aux-Bouefs and to be a component of the Caribbean Biological Corridor running from Cuba to the DR (see Box 1 below) under the protocol concerning specially protected areas and wildlife (SPAW). The establishment of this proposed protected area is expected to be supported by the National Protected Areas System financed by a UNDP-administered GEF grant and an existing Bank operation in Haiti (HA-L1055). This support notwithstanding, there is a need for improved coordination of coastal zone management activities along the shared northern coast of Haiti and the DR together with respect to the Caribbean Biological Corridor as a whole, and the Bank could play a useful role in this regard.

¹⁵ UNESCO/OAS ISARM Americas Programme Transboundary Aquifers of the Americas, 2nd Coordination Workshop, UNESCO, 2005.

Box 1. The Caribbean Biological Corridor (CBC)

Formally established in August 2007, the CBC involves Cuba, Haiti, the Dominican Republic, and their representatives and is coordinated by UNEP's regional office in Panama. Jamaica and Puerto Rico are currently observers. The Corridor is financed by GEF and the World Food Program and its declared objective is "preserving biodiversity and integrating communities into a harmonious development with nature." Its main actions have included: (i) a reforestation program for adaptation to climate change and decreased poverty; (ii) managing the main ecosystems along the CBC coastal area; (iii) rapid ecological assessments of the CBC's main coastal ecosystems; (iv) managing sea turtle nests along the southeast coast of Cuba, the northeast and southeast coasts of Haiti, and the southeast coast of the DR; and (v) studying invasive alien species on the island of Hispaniola.

Source: CBC Website

Bi-national Watershed Management

In addition to the aquifer mentioned above, the DR also shares several watersheds with Haiti. As a result, there are a number of proposals and ongoing projects for cooperative watershed management involving the two countries. One such initiative was announced by UNDP in June 2011 and refers to a four-year project called "Green Border," which, according to this agency, is intended "to reduce high levels of natural disaster risk for local inhabitants along the border that runs through several rivers and watersheds" by increasing vegetation cover and improving living conditions for both sides of the shared border. As UNDP's note also points out "centuries of man-made deforestation have reduced forest cover to 2 percent in Haiti and 21 percent in the Dominican Republic," and the project would "restore areas in shared watersheds, such as the Massacre River, part of a Haiti-Dominican Republic natural boundary where approximately 134,000 live on the Haitian side and 9,000 on the Dominican side."¹⁶

Other Cross-border Pressures on Natural Resources

As noted above, the population on the Haitian side of the border is much larger than that on the Dominican side, and its natural, especially forest, resources are considerably more depleted. Moreover, the population density in Haiti—at more than 350 persons per square kilometer—is also considerably greater than that in the DR (roughly 210 per km²), while its current population

¹⁶ UNDP Newsroom, *Haiti and Dominican Republic Launch Effort to Create Green Border*, June, 1, 2011. This US\$3.5 million project was expected to be jointly implemented by the two governments and funded primarily by Norway's development agency in coordination with UNDP, UNEP, and the World Food Program.

growth rate even with significant outmigration (1.8 percent a year in the former compared with 1.7 percent in the latter) is slightly higher. As a result, there is also increasing pressure on forest and other natural resources on the DR side, including illegal exploitation of fuel wood for charcoal production, in addition to the growing flow of low-wage agricultural labor from Haiti to the DR, directly associated with the poor living conditions and depletion of forest and other natural resources in the former country. These pressures, which were already substantial, have further increased since early 2010 following the earthquake which devastated much of Port-au-Prince and its surroundings and inducing many of the survivors to move inland, including to areas closer to (and across) the border with the DR. These demographic and environmental pressures need to be carefully managed, and the Bank's potential role in helping both countries to do so should be explicitly considered in the respective Country Strategies.

Other Concerns from an Environmental Safeguards and Sustainability Perspective

There are also a number of additional concerns from an environmental sustainability and safeguards standpoint, especially in growth sectors such as mining and tourism and others, such as energy and agriculture, in which the IDB plans to step up its lending and/or technical assistance in the years ahead. In this regard, it would be important to update the 2009 CEA, not only in terms of public expenditures for the environment, which is currently being done, but particularly with respect to the country's current institutional capacity, which continues to require considerable strengthening. Continued Bank environment-related concern with the critical mining and tourism sectors from an environmental and social sustainability perspective also appears justified, as does a stronger effort to help the country integrate climate change concerns in its national development strategies and interventions.

Impacts of Mining Activities

Even though mining was identified, together with tourism, in the 2009 CEA as one of the two main dynamic economic sectors in the Dominican Republic that were of particular concern from an environmental management and sustainability perspective, for reasons that will be explained below, the Bank was not able to follow up on any of the assessment's specific recommendations in this regard. This notwithstanding, the CEA identified seven principal environmental and social risks associated with the mining sector in the country that continue to be relevant: (i) environmental

management of the proposed Pueblo Viejo gold, silver, and copper project, which was identified by this source as “the largest foreign investment in the country’s history;” (ii) management of existing environmental liabilities by SEMARENA (now MARENA); (iii) social management and resettlement of the families affected by the Pueblo Viejo project; (iv) distribution, management, and investment of local benefits; (v) the need to strengthen national environmental management capacity in the sector; (vi) as well as the management of informal mining; and (vii) the need to achieve a national consensus over a Sustainable Mining Development Strategy.¹⁷

More concretely, the CEA identified the following potential negative environmental and social impacts associated with existing and potential future mining activities in the DR: soil degradation, deforestation, water and soil contamination, inadequate disposal and leaks of toxic or hazardous wastes, conflicts of use with Protected Areas, landscape destruction, destruction of river beds and banks, and displacement of families, communities, and agricultural activities. It likewise observed that, even though environmental and social management in the sector had been improving in recent years at least in terms of new legislation, “the lack of specialized technical personnel and resources had overwhelmed the capacity of SEMARENA and the General Mining Direction (DGM) at both the national and local levels,” while at the local level, “the institutional capacity to respond to the social pressures created by mining is minimal.”¹⁸ It concluded that the current situation “presents a series of risks for the IDB should it decide to participate in financing the sector.” In response, the CEA recommended that the Bank develop a strategy to strengthen the mining sector which not only concentrates on addressing the potential environmental and social risks associated with its potential participation in the Pueblo Viejo Project, but supports a broader public-private effort oriented toward creating the basis for sustainable development of the sector in the country. It also made several specific recommendations, which are summarized in Box 2 below.¹⁹

Although the Bank later decided not to participate in the Pueblo Viejo project, reportedly in good measure because of the potential environmental and social impacts involved, and does not, at present, have any public or private sector activities in the pipeline in relation to mining in the DR, the risks and challenges summarized above continue to be relevant and would need to be

¹⁷ IDB, CEA, *op. cit.*, pp. 58-60.

¹⁸ *Ibid.*, pg. 61.

¹⁹ *Ibid.*, pp. 62-63.

addressed should the Bank become engaged in this sector in the years ahead. Independently of its eventual financing of new mining investments, however, the Bank could play a very helpful role from an environmental sustainability perspective by supporting the strategic and institutional strengthening needs, as well as helping the country to address existing liabilities, in the mining sector as identified in the CEA.

Impacts of Tourism Development

Tourism likewise continues to be a major source of income generation and employment, as well as foreign exchange earnings, in the Dominican Republic. Its future sustainability is highly dependent on the quality of the country's natural resource base and ecosystems, especially in coastal and marine areas,

Box 2. CEA Recommendations for Bank Environmental Assistance in the Mining Sector

- Pueblo Viejo Project – create an expert consultative and working group to implement the monitoring work plan regarding the commitments between the Bank and the Project and that supports the Dominican government and the private mining sector to promote other aspects of the strategy to strengthen the sector.
- Local management capacity – support a coordinated program of local strengthening for development planning and investment project management as a strategic response to the impact of mining development; such a program could include the strengthening of the affected municipalities together with other pertinent institutions and should be coordinated with other decentralization and reform initiatives.
- National management capacity – support a program with DGM and SEMARENA jointly to deepen their technical capacities with respect to environmental and social management of the sector, including financing for technical courses, preparations of guidelines and manuals, resettlement procedures, interchanges, etc.
- National Mineral Development Strategy – promote a participatory public-private process of dialogue and negotiation to formulate a mining sector development strategy which is incorporated in the national sustainable development strategy.

which, as noted above, are also among the most vulnerable parts of the country in terms of the impacts of extreme weather events such as hurricanes and the adverse effects of climate change more generally. From a safeguards perspective, however, what is of particular importance is the impact of the construction of additional tourism-related infrastructure by both the private and public sectors, including new hotels and other facilities, especially in coastal areas, and the need for improved solid and liquid waste collection, disposal and management, and the potential harmful impact of both types of investments on sensitive local biodiversity, including nearby offshore coral reefs.

This was also a key focus of the Bank's 2009 CEA, which, as in the case of the mining sector, contained a number of key recommendations that continue to be valid. Without going into detail, the main "strategic lines" identified by the CEA that would appear to be key to strengthening environmental management capacity in the Dominican tourism sector were: (i) improved environmental policies for the sector; (ii) conservation of protected areas and sustainable tourism; (iii) modernization of environmental analysis capacity in relation both to new projects and existing installations; (iv) improved compliance capacity with existing environmental laws and regulations; and (v) development of environmental investments for the recuperation of environmental sustainability, including infrastructure for the decontamination of waters from sewage in critical zones and the construction of sanitary landfills.²⁰ The Bank should continue to consider providing specific technical and financial support in these areas.

Road Improvements

The Bank is currently supporting three private sector road improvement projects in the DR, at least one of which—the Boulevard Turistico del Atlantico Toll Road (also known as BTA), approved in September 2009—is intended to help induce new tourism activities in the Samana Peninsula. The project includes the concession for a 123 kilometer highway with two components: (i) rehabilitation of 99 kilometers of existing highway that connects Nagua, Sanchez, Samana, El Limon, and Las Terrenas; and (ii) construction of a new 24 kilometer segment that will connect Las Terrenas and Majagual on the Samana Peninsula. Together with improvements to other road segments, the project is expected to cut travel time between Santo Domingo and Samana from five hours to less than two, thereby greatly enhancing its accessibility, according to the Bank's external website. The major risks from an environmental and social standpoint are that the new tourism and associated development activities induced by the improved road will not be accompanied by adequate measures to protect the environment and/or existing small farmers and ranchers in the area from displacement by other economic interests, including as a result of increased land values and prices. Thus, careful monitoring of its indirect and induced development impacts on the environment and local populations is essential and appropriate mitigation measures may also be required.

²⁰ *Ibid.*, pp. 47-49.

An even more recent project for the Viadom Toll Road will help finance the rehabilitation of 199 kilometers of existing as well as construction of 68 new kilometers of new roads. It links Santo Domingo to Santiago and to the touristic area of Puerto Plata and includes construction of a ring road around Santiago and a road access linking Santo Domingo to the southern cities of San Cristobal and Bani. As in the case of BTA, this road is expected to decrease travel times between the capital and prime tourism areas as well as to generate other benefits, including decreased traffic congestion and vehicle-related air pollution in the center of Santiago. This operation was approved by the Board in February 2012 but is not yet under implementation as the contract is still being negotiated. However, it also generates some of the same longer-term environmental and social risks and monitoring and mitigation needs mentioned above.

A third tourism-related road improvement project, known as the Autopistas del Coral, is included under a US\$200 million surety bond facility for Odebrecht, a large Brazilian private sector construction firm, approved in September 2007. While specific information about this Dominican subproject is not available in the Bank's external website, the possible longer-term issues of environmental and social concern are likely to be similar to those briefly outlined above for the other two such projects.

Impacts of Climate Change

Like other island nations and as indicated above, the Dominican Republic and especially its extensive coastal areas are highly vulnerable to certain types of extreme weather events, especially tropical storms and hurricanes. These are expected to become more frequent and intense in the years and decades ahead as the result of global climate change. The country's agricultural activities and water resources may also be adversely affected. There is, thus, a clear need to better integrate measures to anticipate and adapt to the likely effects of climate change in national and local development strategies and associated investments and institutional capacity building initiatives.

The Bank is already providing some relevant support in terms of natural disaster insurance and, with respect to climate change mitigation, financial assistance for private investments in the area of renewable (i.e., wind) energy. But it can and should do more, especially with regard to climate change adaptation, particularly in coastal areas and in the agriculture, water resource, and

infrastructure sectors. This should be a priority together with environmental management and sustainability more generally, in the next Country Strategy.

Further Potential for Wind Energy Development

Even though, as mentioned above, the Bank has supported several private sector wind energy investments in the Dominican Republic, considerable potential exists for further developments in this regard, particularly along the country's north coast. However, a comprehensive assessment of national wind energy potential is lacking and, if carried out, could prove to be a very useful tool for other prospective private investors. The Bank should consider supporting such an assessment through a future Technical Cooperation, which would also be fully consistent with its recently approved Integrated Strategy for Climate Change Adaptation and Mitigation and for Sustainable and Renewable Energy.

Environmental Management and Institutional Capacity

This refers to the DR's capacity to manage its environment and renewable natural resources, including water, soils, and forests, more generally, which, according to the 2009 CEA, remained weak and insufficient despite an improving national legal and regulatory framework. In particular, both the government's capacity to enforce the pertinent laws and environmental quality standards and the private sector's ability or willingness to comply with them were identified as weaknesses, according to this assessment. And in the absence of Bank technical assistance over the past two years in these areas, it is likely that the situation has not changed significantly. In addition, as noted above, the national institutional structure for environmental management, starting with MARENA, is complex and continues to require considerable strengthening. This is likely to include both the country's capacity in terms of environmental assessment, especially strategic environmental assessment (SEA), and licensing and monitoring of environmental impacts and quality, as well as enforcement of existing environmental legislation and standards. Private sector compliance likewise needs to substantially improve.

Thus, the need to strengthen capacity in this regard, both at the national and the local/municipal levels and in the private sector, continues to be significant. Accordingly, this is another area in which the Bank could make a useful contribution during the next Country Strategy period. In addition, as the CEA also found, there is likely to be a persisting need to increase

public expenditures for environmental sanitation and biodiversity conservation/Protected Area management investments, as well as to develop public-private partnerships, especially for the tourism-related infrastructure needs briefly mentioned in the preceding section. In short, given their relevance for the long-term sustainability of the Dominican economy and especially its vital foreign exchange-earning tourism sector, these should all be areas in which the Bank is increasingly proactive in its country dialogue and assistance program over the next few years.

Priority Areas for Bank Support in Next Country Strategy

Based on the discussion above, the Bank should give priority to the following areas in relation to the environmental risks and safeguards in its new Country Strategy with the Dominican Republic, which are summarized in the accompanying actions matrix:

1. Improved management of transboundary (i.e. cross-border with Haiti) aquifers and watersheds based on a spatially focused integrated approach that embraces the sustainable use and management of water, soil and forest resources. There is a strong need to coordinate efforts with existing international strategies (e.g., with UNESCO's International Hydrological Programme) designed to assess, manage and protect transboundary aquifers. The Artibonite and Massacre aquifers of Hispaniola (representing inter-mountainous and coastal zone transboundary aquifers) have been identified as being of significant scientific interest. Both aquifers are also located in regions targeted by the IDB for economic growth. More specifically, a comprehensive hydro-geological assessment, particularly of the Massacre aquifer, is required to understand the complex dynamics of each system and to address development impacts in the respective regions, as well as to better leverage international commitments to strengthen regional (DR-Haiti) cooperation initiatives.
2. Strengthened conservation and management of both terrestrial and aquatic/marine Protected Areas and of biodiversity in general, as well as in the transboundary zone and along the shared northern coast with Haiti and the Caribbean Biological Corridor (CBC). The national Protected Area (PA) system continues to be weak in financial and institutional terms and improved management and sustainability of both the individual PAs and of the system as a whole is required.
3. Improved coastal zone management more generally, especially in areas of existing or potential future urban, tourism, and infrastructure investments, and associated increasing environmental

sanitation needs, especially for sewerage collection and treatment and solid waste management. Possible indirect and induced development environmental and social pressures and risks, including the potential displacement of small farmers and ranchers as the result of increasing land values, associated with IDB private sector road improvement projects in the Samana Peninsula and elsewhere also need to be carefully monitored and, if necessary, mitigated.

4. Better incorporation—or mainstreaming—of climate change considerations, especially for purposes of adaptation, renewable energy development, and reduced vulnerability to associated extreme weather events in national development strategies and associated action plans and interventions should likewise be a priority. In particular, the Bank should step up its efforts to support alternative energy development by supporting an assessment of wind energy potential along the northern coast together with the identification and implementation of stronger energy demand management and efficiency improvements.
5. Strengthened environmental management capacity at both the national (i.e., MARENA), sectoral (e.g., especially in the mining, tourism, and agriculture sectors), and municipal levels. This should include an emphasis on enhancing both public sector assessment—including Strategic Environmental Assessment (SEA)—monitoring and enforcement of and private sector compliance with existing environmental laws, regulations, and quality standards together with an increased allocation of public sector financial and other resources for these purposes. These needs were clearly identified in the 2009 CEA and continue to require proactive attention on the part of the Bank and other donors.

Annex: The 2009 Country Environmental Analysis

According to this document, in general, the Dominican Republic possesses the legal instruments that establish the basis for a country environmental system, which, in principle, is equivalent to the Bank's Environmental and Safeguards Policy. However, "institutional and capacity weaknesses at the national and local levels for the application and implementation of these instruments suggest that national environmental systems do not pass the test of acceptability for their use, above all in complex and high-impact projects, without significant strengthening and environmental investment." More specifically, by approving the Environmental Framework Law (64-00), the country "took a significant step in establishing the basis for an integrated system of environmental management" under the leadership of the then Secretariat of Environment and Natural Resources (SENARENA),²¹ which has subsequently been transformed into a Ministry (MARENA).

Since that time, according to the CEA, "SEMARENA has achieved significant progress, principally in the development of environmental regulations, procedures for the definition of environmental standards and impact evaluations for new projects and existing installations. In addition, SEMARENA has permitted the grouping of several existing public institutions that had environmental responsibilities under a single roof, seeking to give greater coherence to environmental management in an integral form through the National System of Environmental and Natural Resource Management. The Framework Law also resulted in the creation of relevant public entities such as the National Environmental Council and the National Environmental and Natural Resource Fund, important instances in the conception of the system even though they are not yet operational." These are all positive accomplishments.

It goes on to affirm, however, that "SEMARENA's real implementation capacities, and above all those with respect to enforcement of the laws, are low. This is due in part to a very low budget allocation for environmental management (0.5% of the total budget), which does not correspond to the mandates that the Law requires of SEMARENA and other environmental management agencies, including in mining and tourism...In addition, the lack of inter-institutional coordination mechanisms and the persisting existence of very weak or insufficiently

²¹ IDB, CEA, *op. cit.*, Executive Summary, page i. All quotations in the rest of this section are from this source, pp. i-iv and all translations from the original Spanish are mine. More specific analysis and recommendations, including those for the tourism and mining sectors, in addition to environmental management and institutional capacity more generally can be found in the main text of this report.

deployed environmental management structures and capacities is evident especially at the local and sectoral levels. In this sense, the legal and institutional framework for environmental management in the country is still not sufficient to stem the growing processes of environmental degradation that result from the pressures of economic growth of high impact sectors.” Thus, institutional weaknesses are seen as a major concern and limiting factor on the effectiveness of environmental management, both at the national and local levels.

With this in mind and echoing many of the environmental risks previously identified, the CEA characterizes the major environment-related concerns faced by the DR in the following terms: “the most important challenges that are manifested in a severe form and that impact the competitiveness of key sectors such as tourism and mining, among others, are: (i) contamination by solid wastes; (ii) contamination of water resources and the lack of effective schemes for their management; (iii) environmental pressures associated with unplanned settlements in urban areas and tourism development; (iv) upturn of extractive productive and high impact sectors such as mining, including the territorial conflicts with designated protected areas; (v) the weakness and deficiencies in the management of Protected Areas; (vi) degradation of coastal and marine ecosystems; and (vii) vulnerability to natural disasters and the need for adaptation to climate change.”

The “root causes” of these processes, in turn, were identified as being largely due to “shortcomings of environmental management,” particularly the following:

1. Implementation of sectoral policy instruments. The development of sectoral policy instruments to date is unequal and weak. Even though with respect to natural resources such as fisheries, forests, and energy, policy instruments that facilitate environmental management have been introduced, there exists an environmental policy lag associated with the management of key sectors such as tourism, mining, transport, industrial development, urban development and agriculture.
2. Strategic environmental planning. Environmental planning of the territorial space is practically non-existent, which impedes attention to significant priority environmental problems that require that this type of planning be adopted, especially in terms of critical national development and include, for example, integrated management of water resource and water basins, protected areas, solid waste, and territorial organization (“ordenamiento”) in coastal areas.

3. Environmental norms and standards. In spite of SEMARENA's efforts to develop and regulate environmental standards, its capacity to ensure compliance is still weak. SEMARENA has experimented with different levels of standards and has made adjustments to them, but the lack of credibility to impose compliance means that they are routinely ignored by the private sector.
4. Environmental Impact Evaluation (EIA) Permits. The application of EIAs and the system of environmental permits are developed regularly as part of SEMARENA's functions, including evaluation of strategic programs. However, there are two factors that keep the system from achieving its objective of guaranteeing the environmental quality of public and private investments. The first factor has to do with the existing professional capacity in the country to carry out EIAs with sufficient technical quality, especially in complex sectors. The second is related to the low levels of compliance with the norms issued by SEMARENA, which is correlated with its budgetary weaknesses as well as the deficiencies ("*vacíos*") of the national environmental system, especially at the level of local governments and sectoral institutions, including in the mining and tourism sectors.
5. Information instruments. Even though the country has advanced in the development of information systems, their applicability for strategic decision making for planning and policy making is very limited. This is principally evidenced in the low level of development of economic instruments to incentivize the achievement of environmental quality targets (e.g., effluent charges, payment for environmental services, water prices, environmental taxes, and subsidies) that require an excellent management of environmental information and economic analytical work.
6. Decentralization of environmental management. The decentralization of environmental management is a necessary requirement for the national environmental system to function effectively. However, this is a long-term process that requires systematic strengthening of the municipalities which are characterized by great institutional weakness.

On the basis of this assessment, the CEA reached the following general conclusion and recommendations: "There is a need for considerably greater investment, above all for control of water and solid waste contamination. On the other hand, it would be possible for the country to

reduce environmental damage and mitigation costs if it can develop an effective and efficient environmental management capacity. In a preliminary vision, the existing management framework system in the country can provide the basis for national sustainability and competitiveness, especially in aspects that have to do with: (i) the framework for the conservation of the natural capital base of its development (principally in its links with the tourism, mining, and other motors of competitiveness for the country); (ii) its insertion in international markets (including monitoring and enforcement and environmental quality commitments associated with DR-CAFTA,²² for example); and (iii) its capacity to respond to global problems (such as adaptation to climate change and natural disaster risks, for example). For this, the principal institutional capacity strengthening needs point to the following priority interventions:

- effective cross-cutting incorporation of sustainability and environmental management in the planning and execution of public institutional policies, strengthening principally monitoring and enforcement functions;
- effective management of protected areas;
- innovation in the use of EIA and SEA;
- implementation of policy reforms to improve the incentives for environmental sustainability in key sectors such as water supply and sanitation, tourism, mining, agriculture and transport, among others;
- strengthening of SEMARENA and the entire environmental management system, developing capacities and the local and sectoral levels;
- strengthening management capacities in the context of adaptation to climate change and the management of risks associated with natural disasters; and,
- development of financing mechanisms with increase environmental investment, principally in the sectors identified as being of greatest impact and with greatest relevance for the competitiveness of the country.”

The CEA also contained a proposed Action Plan for 2010-2013, which identified seven critical areas: (i) environmental management instruments applied to key sectors; (ii) institutional

²² DR-CAFTA refers to the Free Trade Agreement between the United States, on the one hand, and the Dominican Republic and Central America, on the other, signed in August 2004.

capacity of SEMARENA; (iii) monitoring and enforcement of and compliance with laws and norms; (iv) territorial/land use planning; (iv) decentralization of environmental management/strengthening of local governments; (vi) national climate change strategy; and,(vii) environmental investment in critical areas. It also summarized the results of the analysis in each of these areas, recommended both general and specific actions to be taken during the Country Strategy period, and associated results indicators.

General recommended actions were: (i) definition of a group of policy reforms in the environmental area with concrete implementation measures and institutional strengthening actions; (ii) non-reimbursable technical assistance to define the policy reforms and institutional strengthening actions; (iii) technical and financial support directed to local governments; (iv) technical and financial support through specialized sources (specifically the Sustainable Energy and Climate Change Initiative, or SECCI); and (v) technical and financial support in the priority areas of the CEA. Specific recommendations for the Country Strategy period, in turn, were: (i) CEA for definition of strategic priorities, presumably referring to the study that had recently been completed; (ii) programming exercises with the country considering the CEA and Government priorities in relation to the National Development Plan; (iii) undertaking an environmental sectoral dialogue on country systems; and (iv) formulation of an action plan for implementation of the recommendations of the CEA in coordination with other donors. Finally, the proposed results indicators were as follows for each of the seven “critical areas”:

- At least three operationally important sectors (tourism, mining, and agriculture) count with an environmental policy framework with approved sectoral guidelines and environmental quality standards.
- SEMARENA strengthened in terms of budget, qualified staff, and management effectiveness indicators.
- Evidence of improvements in the indices of monitoring, enforcement, and compliance on the basis of sample evaluations.
- Coordinated and inter-institutional application of territorial planning instruments.
- At least three of the principal municipalities in the country have established a coherent program of environmental management with an allocated budget.
- National Climate Change Strategy approved.

- Increase in the level and coverage of environmental investments.²³

In summary, the above cited Action Plan in effect identified a series of *instrumental* measures as the “critical areas” facing the country. An alternative—and perhaps preferable—way of doing this would have been to have described these areas in a *substantive* way in terms of the key environmental risks and challenges in the DR, also highlighted in the CEA and mentioned in this paper above (loss of biodiversity, increasing vulnerability to natural disasters and climate change, pollution, etc.).

²³ See, IDB, *República Dominicana: Estudio Ambiental de País -- Propuesta de Plan de Acción para la EPB-RD 2010-2013*, which is presented as an annex to the CEA.

Environmental Actions Matrix

Critical Areas	Evaluation/Analysis	Recommended Actions	Actions During EBP	Results Indicators
Transboundary Aquifers	There is a strong need to coordinate efforts with existing international strategies designed to assess, manage, and protect transboundary (e.g., the Artibonite and Massacre) aquifers, which underlie regions targeted by the Bank for economic growth.	A hydro-geological assessment is required to understand the complex dynamics and address development impacts in the respective regions. Leveraging international commitments, e.g. UNESCO and OAS, to strengthen DR-Haiti cooperation initiatives.	Technical cooperation and financing to support hydro-geological assessments, related studies and initiatives. Identification of existing IDB projects related to the proposed initiative.	Workshop in early 2013 to define international cooperation and develop mechanism for regional cooperation; long-term study designed and ToRs for comprehensive hydro-geological assessment developed; financing secured.
Management and Conservation of Terrestrial and Marine Protected Areas (PAs)	Similarly, there is a need to enhance both terrestrial and aquatic/marine biodiversity protection, including in the transboundary zone and along the shared northern coast with Haiti and the Caribbean Biological Corridor (CBC).	Means should be sought and supported to strengthen both the financing and management of existing national and transnational protected areas and establishment of new ones, as appropriate.	Technical cooperation to develop means of increasing financing for and improving management of Terrestrial and Marine Protected Areas.	No. of existing Protected Areas strengthened; No. of new PAs established; No. of PA management plans developed or updated and implemented; Total national budget allocation for and revenues from PAs.
Coastal Zone Management	Particularly in areas of existing or potential future urban and tourism development, associated Bank-supported road improvements and other infrastructure development.	Improved coastal zone land use planning and management and local infrastructure and public service, especially environmental sanitation (including solid waste collection and disposal) investments.	Technical cooperation to strengthen coastal zone planning and management and financing to support sustainable tourism and coastal environmental sanitation investments.	No. of Bank operations that provide support for improved coastal zone planning and management; No. of Bank projects including financing for environmental sanitation investments in coastal areas.
Mainstreaming Climate Change Considerations	Especially for purposes of adaptation, renewable (i.e., wind) energy development, and reduced vulnerability to associated extreme weather events.	Climate change adaptation and mitigation considerations should become central to national and sectoral development strategies and associated action plans and interventions.	Technical cooperation and financial support for actions to identify and implement climate change investments, including for renewable energy and natural disaster risk management.	No. of national, local and sectoral development plans that incorporate climate change concerns and actions; Total and Bank-supported investment in climate change adaptation and mitigation measures.
Environmental Management Capacity	Strengthening the capacity of environmental management continues to be an urgent need at the national (i.e. MARENA), sectoral (e.g. mining and tourism), and local/municipal levels.	Emphasis should be given to better public sector assessment, monitoring and enforcement of and private sector compliance with existing environmental laws, regulations, and quality standards and an increased allocation of public sector financial and other resources for these purposes.	Technical cooperation and financing to strengthen the capacity of MARENA and critical sectoral (especially mining, tourism, and agriculture) and local (with priority for larger urban areas) institutions responsible for environmental management and sustainability.	No. of Bank operations that support capacity building for environmental management and/or sustainability at the national, sectoral and/or local levels.