

Kiyu Wind Power Project – Uruguay

ENVIRONMENTAL AND SOCIAL STRATEGY – FINAL

I. SUMMARY

| | |
|--|---|
| Project Name: | Kiyu Wind Power Project |
| Project Number: | UR-L1091 |
| Country: | Uruguay |
| Project Team: | Ana Maria Vidaurre-Roche, Project Team Leader (SCF/INF); Joana Pascual (SCF/INF); Juan Paredes (INE/ENE); Steven Collins (VPS/ESG); Jose Luis De la Bastida (VPS/ESG); Leif Weizman (LEG/NSG); Andre Averbug (SCF/PMU), Jan Weiss (SCF/SYN) |
| Borrower: | Cobra Ingenieria Uruguay S.A. |
| Sponsor: | Cobra Instalaciones y Servicios S.A. |
| Funding: | IDB: US\$ 46.4 million Co-Financing: US\$ 37.5 million Total Project Cost: up to US\$ 116.0 million |
| Safeguards Policies Identified: | OP-102, OP-703 (B.1, B.2, B.3, B.4, B.5, B.6, B.7, B.9, B.10, B.11, B.15) |
| Environmental Category: | B |

II. PROJECT DESCRIPTION

- 2.1** Cobra Ingenieria Uruguay S.A., the Borrowers, are seeking financing from the IDB for the construction, operation and maintenance of a 49.2 MW wind farm (Parque Eolico Kiyu) and its associated facilities to be constructed in Paraje Barrancas de San Gregorio, a zone of high wind potential, approximately 5 km north of Kiyu and 10 km southwest of Puntas de Valdez, in the Departamento de San Jose, Uruguay (see Figure 1, which includes existing roads to be used to transport material to the project site). Several other cities are located within 15 km of the project area including: Libertad and Rafael Perazza. The wind concession area lies south of Route 1, approximately 60 km northwest of Montevideo.
- 2.2** Cobra Ingenieria Uruguay S.A, is a special purpose company incorporated under Uruguayan law to develop, build and operate the Project. It is ultimately owned by Cobra Gestion de Infraestructura S.A.U. (“Cobra”) and will enter into a turn-key EPC contract with a Cobra subsidiary.

- 2.3** The Project encompasses the installation or construction of the following components: i) installation of 16 wind turbines (Vestas V112) with a nominal capacity of 3.075 MW each; ii) construction of a substation (Punta de Tigre); iii) construction of a 150 kV transmission line, length and alignment to be verified during due diligence, to connect the wind farm to the national grid; iv) several smaller underground medium tension 30 kV or 31.5 kV transmission lines within the wind concession area; v) construction of support buildings; vi) construction of a temporary batching plant; and vii) construction of approximately 17 km of maintenance and service roads (total length to be determined during due diligence) within the wind concession (see Figure 2, which includes the location of the substation).
- 2.4** Construction activities have an expected duration of 12 to 14 months. The required workforce needed to meet the construction schedule is estimated to be an average of 50 workers. The wind farm will maintain two shifts during operations, a day shift and a night shift. The day shift will consist of four operators while the night shift will only require two. An on-call maintenance crew will also be available to address maintenance and repair issues. The construction timeframe and required workforce will be verified during Due Diligence.

Figure 1. General Location Map

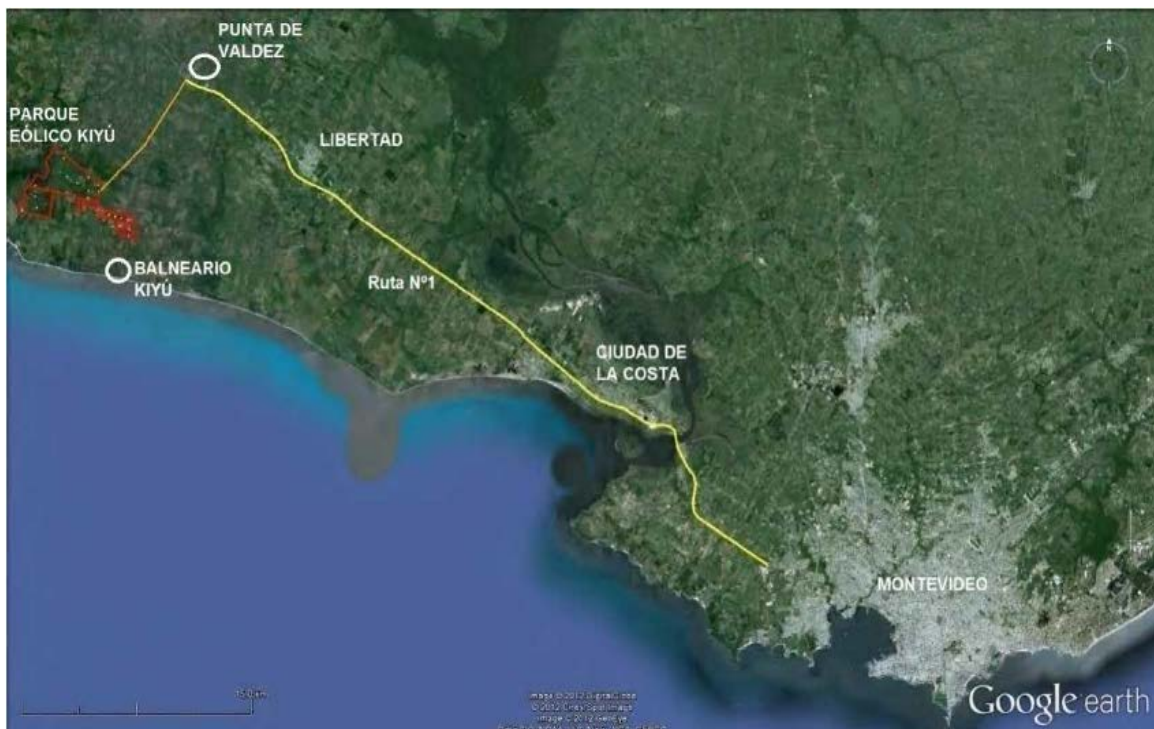


Figure 2. Project Layout



III. INSTITUTIONAL AND REGULATORY CONTEXT

- 3.1** Uruguay Law 16.466/94 Law of Environmental Impact Evaluation and Decree 345/2005 classify projects and define the degree of environmental impact evaluation required by projects. Under these regulations, the Kiyu project has been classified as a Category B project and requires an Environmental Impact Assessment (EIA). The Dirección Nacional de Medio Ambiente (DINAMA) in Montevideo, granted the Viabilidad Ambiental de Localización (VAL) for the Kiyu Project on 07 February 2011 following a review of the required environmental documentation. The Project was classified as a Category B project by DINAMA. The environmental licenses for the project are pending. The EIA for Kiyu project, prepared in May 2013, has been provided to the Bank for review. The compliance with national regulations will be verified during the due diligence.
- 3.2** The Project triggers the following directives of IDB's OP-703 Environmental and Safeguards Policy: B.1, Bank Policies; B.2, Country Laws and Regulations; B.3, Screening and Classification; B.5, Environmental Assessment; B.6., Consultation;

B.7, Supervision and Compliance; B.9 Natural Habitat; B.10, Hazardous Materials; B.11, Pollution Prevention; and B.15 Co-Financing Operations. The OP-702, Disclosure of Information Policy also applies for this Project. Based on available documentation, it is not expected that OP-710 on Involuntary Resettlement will be triggered for this Project. However, the Due Diligence will examine if land acquisition is required for the right-of-way of the transmission line, if some houses will need to be resettled and, if economic displacement will be caused by the Project. Any land lease / land use agreements or negotiations with land owners will be reviewed to determine if the OP-710 should be applied. Based on available information, the Project had been classified by the Bank as a Category B operation.

IV. ENVIRONMENTAL AND SOCIAL SETTING

- 4.1** According to the EIA, the Parque Eolico Kiyu wind concession covers an area of approximately 1,100 ha, of which, a total of approximately 17.0 ha (1.5%) will be permanently affected by the erection of the wind turbines, maintenance roads and the substation. Much of the wind concession area has already been impacted by human activities such as agriculture, as well as cattle and sheep grazing. The previously impacted landscape appears to be mostly composed of agricultural fields, pasture lands for dairy farming and citrus orchards with many eucalyptus borders scattered throughout the area. Several areas considered as natural habitats exist within and bordering the wind concession area, consisting of various biomes including: wetlands, forested areas, quebradas, arroyos, riparian areas and grassland prairies. There is also a large Important Bird Area (IBA), Playa Penino y Humedales de Santa Lucia, approximately 40 km to the east of the Project area. The Humedales de Santa Lucia is also a SNAP protected area in Uruguay. Due Diligence will investigate the potential impacts to these areas from the placement of any nearby turbines.
- 4.2** Initial bird surveys conducted at the Project site registered a total of 83 species, representing 19% of all bird species registered in Uruguay. Of the 83 species encountered, 20% were migratory species. None of the species encountered are listed on the IUCN Red List; however, 15 of these species are considered to be priority species of economic or cultural value within Uruguay. These species include: *Nothura maculosa*, *Amazonetta brasiliensis*, *Anas flavirostris*, *Zenaida auriculata*, *Columba picazuro*, *Calumba maculosa*, *Dendrocygna viduata*, *A. georgica*, *A. versicolor*, *Netta peposaca*, *Myiopsitta monachus*, *Aramus guarauna*, and *Rostrhamus sociabilis*; the last seven species are also protected under

international treaties. Bat surveys were also conducted in the Project area; four species of bats were encountered in the Project area inside abandoned buildings. None of the species encountered are protected or considered sensitive.

- 4.3** The Project area lies within an Archaeological Zone as defined by an agreement between the Museo Nacional de Antropología (MEC) and the Intendencia de San Jose, among other groups. The Project site is believed to have a high potential to contain archaeological items of potential value to cultural heritage. The potential loss of archaeological artifacts is described as a potentially significant impact in the EIA. An Archaeological Impact Study was prepared and submitted to the Comisión del Patrimonio Arqueología del Ministerio de Educación y Cultura for their approval. Approval of the Archaeological Impact Study by the appropriate authority will be required on the Project site and a Chance Find Procedure will be required to be implemented during construction.
- 4.4** The project lies about 5 km north of the city of Kiyu, the closest city with a population of about 332 inhabitants. Puntas de Valdez, with a population of approximately 1,267 people lies 10 km to the northeast and the largest nearby city, Libertad with a population of over 9,000 lies approximately 12 km to the east. There are several existing households within the Project area. Preliminary studies indicate that noise levels during construction and potentially during operation may be a concern at several of the households. It also appears that several households and a school may also be impacted by the Blinking Effect during operation of the wind farm over what is generally considered acceptable in Uruguay (established by DINAMA): more than 30 minutes per day and more than 30 hours per year. These issues will require attention during the Due Diligence and mitigation measures will be developed to address these impacts.
- 4.5** According to the EIA, the primary economic activities occurring within the wind concession area include agricultural activities and dairy farming followed by ranching (cattle, sheep and pigs). A few other economic activities occur in the area on a much smaller scale such as forest plantations and the raising of avian species.
- 4.6** The existing environmental documentation does not identify any sensitive or protected species of flora or fauna; however, the baseline studies did identify several species of locally protected birds and an IBA (Playa Penino y Humedales Santa Lucia) approximately 40 km to the east of the project area as well as a locally protected wetland area (Arroyo San Gregorio) bordering the project area to the west. These areas will be qualified as Critical Natural Habitat under the

Bank's policies as they are considered to be protected areas. The IBA is home to four, IUCN red list bird species including *Larus atlanticus* (VU), *Polystictus pectoralis* (NT), *Sparotoonica maluroides* (NT), and *Limnocites rectirostris* (NT). It appears that, under the current siting plan, the three westernmost turbines would be constructed within one kilometer of the Arroyo San Gregorio and potential impacts to the protected area or its inhabitants should be assessed. The EIA did not provide baseline data on reptiles and it is unclear if bird surveys were conducted during the migratory season. For these reasons, the Bank has requested the client to conduct more detailed baseline surveys of the project location. The Due Diligence will verify that no sensitive (IUCN red list) species exist in the Project area and that the Project will not have a significant impact on the bird species of importance for the IBA, the bordering wetland, or any IUCN red list species which may inhabit or frequent these areas.

V. KEY POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS

- 5.1** Potential environmental impacts and risks associated with wind farms during the construction phase are mainly linked with the erection of the wind turbines, the installation of the transmission line, the substation and access roads. Main construction impacts are: (i) habitat disturbance; (ii) soil erosion; (iii) dust generation; (iv) increased heavy traffic; (v) noise; (vi) loss of vegetation and; (vii) occupational health and safety hazards for the workforce. Potential impacts of specific importance for the Kiyu project include: creating potential impacts to the bordering aquatic environment (Arroyo San Gregorio) considered to be an area of ecological value, the risk of flooding near the Arroyo San Gregorio), the risk of encountering archeological artifacts during construction, the risk of temporarily affecting the livelihoods of communities and the risk of impacting important habitat for endangered species.
- 5.2** Once in operation, main impacts and risk associated with wind farms are: (i) birds collision; (ii) bats collisions and barotraumas incidents; (iii) loss of vegetation; (iv) accidental discharges of hazardous materials; (v) community health and safety hazards; (vi) the risk of flooding near the Arroyo San Gregorio; (vii) noise impacts caused by the wind turbines; and (viii) the blinking effect caused by sunlight passing through the rotating blades.
- 5.3** The due diligence will determine with more certainty the extent of anticipated impacts of the Project. Based on available documentation, the significance of impacts should be minor to moderate. It is expected that the Borrower will apply mitigation measures that corresponds to best industry practices for the wind power sector.

VI. ENVIRONMENTAL AND SOCIAL DUE DILIGENCE STRATEGY

- 6.1** Based on the requirements outlined in IDB's OP-703 Environmental and Safeguards Compliance Policy, the Team proposes that the Kiyu Wind Power Project be classified as a Category B.
- 6.2** The Bank will perform an Environmental and Social Due Diligence ("ESDD") in order to confirm that all of the Project's relevant impacts and risks have been, or will be, properly and adequately evaluated, and mitigated.
- 6.3** The ESDD will specifically address the following aspects:
- a.** Review of the final layout of the wind farm and land acquisition needs to determine potential impacts on households present in the wind concession area;
 - b.** Determine if additional baseline studies are required;
 - c.** Determine if bird population present in the bordering aquatic environment will be impacted by the Project activities;
 - d.** Determine the significance of impacts of the project on semi-aquatic and terrestrial fauna and their respective habitats (with a specific attention to those with a conservation status of interest per the IUCN Red List);
 - e.** Evaluate any potential adverse impacts on terrestrial ecosystems as a result of construction activities i.e. transmission line, wind turbines; and maintenance and service roads;
 - f.** Assess potential adverse socio-economic impacts of construction activities such as temporary loss of access or use of lands for cattle herders and farmers and impacts of the right of way for the transmission line;
 - g.** Assess on the adequacy and timely consultation and information dissemination process with affected parties of the current project;
 - h.** Evaluate the implementation of a chance-find procedure;
 - i.** Review of the Environmental and Social Management Plan (ESMP), to avoid, minimize, and mitigate any potential impacts especially on terrestrial areas that could be considered a natural habitat for endangered species;
 - j.** Determine if the Project has been designed and carried out in compliance with environmental law and regulations of Uruguay. Written evidence of the acceptance of the EIA and issuance of the environmental license will be sought;

- k.** An evaluation, and further development as necessary, of Project execution monitoring and supervision procedures to ensure proper implementation of environmental, social, health, safety and labor actions and requirements;
- l.** Assessment of the Project's compliance with all relevant safeguards directives of the IDB's Environment and Safeguards Compliance Policy, and development of an Action Plan for the timely resolution of non-compliances;

6.4 An Environmental and Social Management Report (ESMR) will be prepared by the Project Team as part of the environmental and social due diligence to analyze the management of the environmental and social aspects of the project.

ANNEX IV: SAFEGUARDS POLICY FILTER AND SAFEGUARD SCREENING FORM FOR CLASSIFICATION OF PROJECTS

SAFEGUARD POLICY FILTER REPORT

This Report provides guidance for project teams on safeguard policy triggers and should be attached as an annex to the PP (or equivalent) together with the Safeguard Screening Form, and sent to ESR.

1. Save as a Word document. 2. Enter additional information in the spaces provided, where applicable. 3. Save new changes.

| | | |
|----------------------------|--|--|
| PROJECT DETAILS | IDB Sector | [Not Set] |
| | Type of Operation | Other Lending or Financing Instrument |
| | Additional Operation Details | |
| | Investment Checklist | Power Wind |
| | Team Leader | [Not Set] |
| | Project Title | Toolkit: UR-Lxxxx Kiyu Wind |
| | Project Number | [Temporary Project] |
| | Safeguard Screening Assessor(s) | Collins, Steven Charles (STEVENC@iadb.org) |
| | Assessment Date | 2013-07-08 |
| | Additional Comments | |

| | | | |
|--|--|--|--|
| SAFEGUARD POLICY FILTER RESULTS | Type of Operation | [Not Set] | |
| | Safeguard Policy Items Identified (Yes) | The Bank will make available to the public the relevant Project documents. | (B.01) Access to Information Policy– OP-102 |
| | | The operation is in compliance with environmental, specific women's rights, gender, and indigenous laws and regulations of the country where the operation is being implemented (including national obligations established under ratified Multilateral Environmental Agreements). | (B.02) |
| | | The operation (including associated facilities) is screened and classified according to their potential environmental impacts. | (B.03) |

| | | | |
|--|--|---|--------|
| | | There are Associated Facilities (see Policy definition) relating to the investments being financed by the Bank. | (B.04) |
| | | The operation is sensitive to slow onset changes in climatic variables, weather patterns and the consequences incl. sea level rise, glacier run off. (Type 1 Gradual Climate Change Risk Scenario). | (B.04) |
| | | An Environmental Assessment is required. | (B.05) |
| | | Consultations with affected parties will be performed equitably and inclusively with the views of all stakeholders taken into account, including in particular: (a) equal participation of women and men, (b) socio-culturally appropriate participation of indigenous peoples and (c) mechanisms for equitable participation by vulnerable groups. | (B.06) |
| | | The Bank will monitor the executing agency/borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations. | (B.07) |
| | | Environmental or culturally sensitive areas, defined in the Policy as critical natural habitats or critical cultural sites in project area of influence (please refer to the Decision Support System for more information). | (B.09) |
| | | Conversion of Natural Habitats in project area of influence (please refer to the Decision Support System for more information). | (B.09) |
| | | The operation has the potential to impact the environment and human health and safety from the production, procurement, use, and disposal of hazardous material, including organic and inorganic toxic substances, pesticides and Persistent Organic Pollutants (POPs). | (B.10) |
| | | The operation has the potential to pollute the environment (e.g. air, soil, water, greenhouse gases...). | (B.11) |

| | | | |
|--|--|---|--------|
| | | Any part of the investment or component(s) is being co-financed. | (B.15) |
| | | Suitable safeguard provisions for procurement of goods and services in Bank financed projects may be incorporated into project-specific loan agreements, operating regulations and bidding documents, as appropriate, to ensure environmentally responsible procurement. | (B.17) |
| | Potential Safeguard Policy Items(?) | No potential issues identified | |
| | Recommended Action: | <p>Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR.</p> <p>The project triggered the Disaster Risk Management policy (OP-704).</p> <p>A more limited and specific Disaster Risk Assessment (DRA) may be required (see Directive A-2 of the DRM Policy OP-704). Please contact a Natural Disaster Specialist in VPS/ESG or INE/RND for guidance.</p> <p>Also: if the project needs to be modified to increase resilience to climate change, consider the (i) possibility of classification as adaptation project and (ii) additional financing options. Please contact a INE/CCS adaptation specialist for guidance.</p> <p>The project triggered the Other Risks policy (B.04): climate risk. Please include sections on how climate risk will be dealt with in the ESS as well as client documents (EIA, EA, etc); Recommend addressing risks from gradual changes in climate for the project in cost/benefit and credit risk analyses as well as TORs for engineering studies.</p> | |
| | Additional Comments: | | |

| | | |
|-------------------------|--|--|
| ASSESSOR DETAILS | Name of person who completed screening: | Collins, Steven Charles (STEVENC@iadb.org) |
| | Title: | |
| | Date: | 2013-07-08 |

SAFEGUARD SCREENING FORM

This Report provides a summary of the project classification process and is consistent with Safeguard Screening Form requirements. The printed Report should be attached as an annex to the PP (or equivalent) and sent to ESR.

1. Save as a Word document. 2. Enter additional information in the spaces provided, where applicable. 3. Save new changes.

| | | |
|----------------------------|--|--|
| PROJECT DETAILS | IDB Sector | [Not Set] |
| | Type of Operation | Other Lending or Financing Instrument |
| | Additional Operation Details | |
| | Country | |
| | Project Status | |
| | Investment Checklist | Power Wind |
| | Team Leader | [Not Set] |
| | Project Title | Toolkit: UR-Lxxxx Kiyu Wind |
| | Project Number | [Temporary Project] |
| | Safeguard Screening Assessor(s) | Collins, Steven Charles (STEVENC@iadb.org) |
| | Assessment Date | 2013-07-08 |
| | Additional Comments | |

| | | | |
|---|--|---|--------------------------------|
| PROJECT CLASSIFICATION SUMMARY | Project Category: B | Override Rating: | Override Justification: |
| | | | Comments: |
| | Conditions/ Recommendations | <ul style="list-style-type: none"> • Category "B" operations require an environmental analysis (see Environment Policy Guideline: Directive B.5 for Environmental Analysis requirements). • The Project Team must send to ESR the PP (or equivalent) containing the Environmental and Social Strategy (the requirements for an ESS are described in the Environment Policy Guideline: Directive B.3) as well as the Safeguard Policy Filter and Safeguard Screening Form Reports. • These operations will normally require an environmental and/or social impact analysis, according to, and focusing on, the specific issues identified in the screening process, and an environmental and social management plan (ESMP). | |

| | | |
|--|--|--|
| | | However, these operations should also establish safeguard, or monitoring requirements to address environmental and other risks (social, disaster, cultural, health and safety etc.) where necessary. |
|--|--|--|

| SUMMARY OF IMPACTS/RISKS AND POTENTIAL SOLUTIONS | Identified Impacts/Risks | Potential Solutions |
|---|---|--|
| | Minor or moderate conversion or degradation impacts to natural habitats (such as seabed's, forests or traditional farms). | Ensure Proper Management and Monitoring of the Impacts of Natural Habitat Loss: A Biodiversity Management Plan (BMP) should be prepared that defines how impacts will be mitigated (roles and responsibilities, monitoring, budget, etc.) and could be incorporated in the ESMP. Depending on the financial product, the BMP should be referenced in appropriate legal documentation (covenants, conditions of disbursement, etc.). Confirmation should be obtained from competent experts that they are confident that the plan can mitigate impacts and also that the relevant authorities have approved the BMP. |
| | The project is likely to negatively change the use of the land but the related negative impacts will be minor to moderate in nature. | Land use: A Plan should be prepared that defines how land use change will be mitigated (roles and responsibilities, monitoring, budget, etc.) and could be incorporated in the ESMP. Proper consultation should be foreseen. Confirmation should be obtained from experts that the plan can mitigate impacts and also that relevant authorities have approved the Plan. Examples of mitigation include reforestation, GHG offsetting, nutrient fixation in soils, conservation of biodiversity. |
| | Generation of solid waste is moderate in volume, does not include hazardous materials and follows standards recognized by multilateral development banks. | Solid Waste Management: The borrower should monitor and report on waste reduction, management and disposal and may also need to develop a Waste Management Plan (which could be included in the ESMP). Effort should be placed on reducing and re-cycling solid wastes. Specifically (if applicable) in the case that national legislations have no provisions for the disposal and destruction of hazardous materials, the applicable procedures established within the Rotterdam Convention, the Stockholm Convention, the Basel Convention, the WHO List on Banned Pesticides, and the Pollution Prevention and Abatement Handbook (PPAH), should be taken into consideration. |
| Project construction activities | Construction: The borrower should | |

| | | |
|--|--|---|
| | are likely to lead to localized and temporary impacts (such as dust, noise, traffic etc) that will affect local communities and workers but these are minor to moderate in nature. | demonstrate how the construction impacts will be mitigated. Appropriate management plans and procedures should be incorporated into the ESMP. Review of implementation as well as reporting on the plan should be part of the legal documentation (covenants, conditions of disbursement, etc). |
|--|--|---|

| | | |
|-------------------------|---|---|
| DISASTER SUMMARY | Details | Actions |
| | <p>The Project should include the necessary measures to reduce disaster risk to acceptable levels as determined by the Bank on the basis of generally accepted standards and practices. Alternative prevention and mitigation measures that decrease vulnerability must be analyzed and included in project design and implementation as applicable. These measures should include safety and contingency planning to protect human health and economic assets. Expert opinion and adherence to international standards should be sought, where reasonably necessary.</p> | <p>A more limited and specific Disaster Risk Assessment (DRA) may be required (see Directive A-2 of the DRM Policy OP-704). Please contact a Natural Disaster Specialist in VPS/ESG or INE/RND for guidance.</p> <p>Also: if the project needs to be modified to increase resilience to climate change, consider the (i) possibility of classification as adaptation project and (ii) additional financing options. Please contact a INE/CCS adaptation specialist for guidance.</p> <p>The project triggered the Other Risks policy (B.04): climate risk. Please include sections on how climate risk will be dealt with in the ESS as well as client documents (EIA, EA, etc); Recommend addressing risks from gradual changes in climate for the project in cost/benefit and credit risk analyses as well as TORs for engineering studies.</p> |

| | | |
|-------------------------|--|--|
| ASSESSOR DETAILS | Name of person who completed screening: | Collins, Steven Charles (STEVENC@iadb.org) |
| | Title: | |
| | Date: | 2013-07-08 |

