# INTEGRATED SAFEGUARDS DATA SHEET

## RESTRUCTURING STAGE

Note: This ISDS will be considered effective only upon approval of the project restructuring.

**Report No.: ISDSR15783**

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**Date ISDS Prepared/Updated:** 24-Nov-2015  
**Date ISDS Approved/Disclosed:** 04-Dec-2015

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## I. BASIC INFORMATION

### 1. Basic Project Data

<table>
<thead>
<tr>
<th><strong>Country:</strong></th>
<th>Argentina</th>
<th><strong>Project ID:</strong></th>
<th>P105680</th>
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<tbody>
<tr>
<td><strong>Project Name:</strong></td>
<td>Matanza-Riachuelo Basin (MRB) Sustainable Development Adaptable Lending Program (P105680)</td>
<td></td>
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<tr>
<td><strong>Task Team Leader(s):</strong></td>
<td>Christophe Prevost</td>
<td></td>
<td></td>
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<td><strong>Estimated Appraisal Date:</strong></td>
<td>02-Feb-2009</td>
<td></td>
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<td><strong>Estimated Board Date:</strong></td>
<td>09-Jun-2009</td>
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<td><strong>Managing Unit:</strong></td>
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<td><strong>Lending Instrument:</strong></td>
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<tr>
<td><strong>Sector:</strong></td>
<td>Wastewater Treatment and Disposal (84%), Public administration- Water, sanitation and flood protection (12%), Flood protection (2%), General water, sanitation and flood protection sector (1%), Water supply (1%)</td>
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<td><strong>Theme:</strong></td>
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<td><strong>Is this project processed under OP 8.50 (Emergency Recovery) or OP 8.00 (Rapid Response to Crises and Emergencies)?</strong></td>
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<tr>
<td><strong>Financing (in USD Million):</strong></td>
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<td></td>
<td></td>
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<tr>
<td><strong>Total Project Cost:</strong></td>
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<tr>
<td><strong>Total Bank Financing:</strong></td>
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<td><strong>Financing Gap:</strong></td>
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<td><strong>Total</strong></td>
<td>1487.00</td>
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**Environmental Category:** A - Full Assessment  
**Is this a Repeater project?** No

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### 2. Current Project Development Objectives
The objective of the project (APL-1) is to (i) improve sewerage services in the M-R Basin and other parts of the Province and City of Buenos Aires by expanding capacity; (ii) support the reduction of industrial discharges to the M-R River, through the provision of industrial conversion grants to small and medium enterprises; (iii) promote a participative approach to environmentally-sustainable land use and drainage planning and to pilot urban drainage and land use investments in the M-R Basin; and (iv) strengthen ACUMAR’s institutional framework for ongoing and sustainable cleanup of the M-R Basin.

Proposed New PDO (from Restructuring Paper)

The objective of the project (APL-1) is to (i) improve sewerage services in the M-R Basin and other parts of the Province and City of Buenos Aires by expanding capacity; (ii) support the reduction of industrial discharges to the M-R River, through the provision of industrial conversion grants to small and medium enterprises; (iii) promote a participative approach to environmentally-sustainable land use and drainage planning and to pilot urban drainage and land use investments in the M-R Basin; and (iv) strengthen ACUMAR’s institutional framework for ongoing and sustainable cleanup of the M-R Basin.

3. Project Description

The GoA and the Bank have been working to restructure the Project, in this context the ISDS is being updated. The main changes being (i) extension of one year of the loan closing date (ii) change the description of Component 2, (iii) reallocation of proceeds across disbursement categories, and (iv) adjustment of the project’s monitoring framework.

The main drivers for said changes are: (i) Project has experienced extraordinary delays justifying an extension, (ii) reallocation of funds among disbursement categories is necessary to finance the proposed activities, (iii) there is a need to better monitor and manage the progress of the Project using the experience gained from implementation. Finally, as part of the Industrial Pollution Abatement Component, it is proposed to include the construction of an industrial wastewater treatment plant that will treat the liquid discharges from Tannery Industrial Park in the Municipality of Lanús, Province of Buenos Aires, under the responsibility of ACUMAR. The description of the Component in the Loan Agreement will be updated to reflect said change.

The government’s medium to long term objective under the PISA is the progressive elimination of point source discharges to the M-R River, which would result in water quality improvements in a 15 to 20 year time frame. The Bank’s financed project is a building block towards this goal; according to the original proposal, it would support the following integrated activities: (i) the construction of the “Riachuelo System”, which comprises a collector along the left bank of the M-R River (Colector Margen Izquierdo or CMI, Lot 1), diversion of the wastewater collected by this collector to the Riachuelo preliminary treatment plant (Lot 2) and discharging its effluent to the La Plata River via an effective sub-aquatic outfall (Lot 3), (ii) the construction of a collector from the upper M-R Basin along the right bank of the M-R River (Colector Margen Derecha or CMD) which will convey the wastewater collected by this collector and that collected in the southern part of the city (the right bank of the M-R River) to the Third Trunk Sewage Pipe (Tercera Cloaca Troncal Maxima), (iii) technical assistance for designing an industrial control program reducing industrial (both organic and toxic) discharges to the M-R River by connecting these industries to the AySA sewerage network after pre-treatment of toxic effluents, i.e. by means of an industrial collector, and (iv) design and implementation of a comprehensive inter-jurisdictional land use plan including the provision of basic
However, during the negotiations of the loan between the Government and the World Bank, it was agreed that prior to the construction of the right bank collector, the Government would carry out a prefeasibility study of alternatives through the water and sanitation utility of the Metropolitan Area of Buenos Aires (AySA). The prefeasibility study was carried out in 2010 and, instead of the construction of the CMD, it favored the alternative of advanced secondary treatment in four wastewater treatment plants from which effluents will be discharged into the M-R River to meet the water quality standards set by ACUMAR (“Decentralized Alternative”). This alternative also proposed the construction of aeration systems (Sidestream Elevated Pool Aeration, SEPAs) along the banks of the river.

The Expert Panel convened by the Bank finalized the review of the Prefeasibility Study of the Alternative to the Right Bank Collector and issued its Final Report in October 2011. The panel concluded that the decentralized alternative was a well thought proposal that could be supported by the Bank. In the technical opinion of the panel: a) the selection of the alternative should consider the experience of AySA, and the consistency with its master plan; b) AySA is technically capable for managing a distributed wastewater management system for the M-R River basin; c) the water quality objectives set for the M-R River by ACUMAR can be achieved under both alternatives; d) the decentralized alternative has more operational and investment flexibility for adapting to an uncertain development in the M-R River Basin over the next 50 years; e) the decentralized alternative allows a gradual-faster connection of 1.3 million inhabitants of the M-R Basin to the new sewage system, according to AySA’s master plan.

Phase 1 (APL-1): Phase 1 of the program includes four components under two macro-components which finance a subset of activities set out under the PISA

Macro-component 1:
(i) Investments in sanitation infrastructure and technical assistance for the supervision of works prioritized by the GoA, including the Industrial collector, the “Riachuelo System” (Left Bank collector, Baja Costanera bypass collector, Riachuelo preliminary treatment plant, inflow and effluent pumping stations at the Riachuelo preliminary treatment plant, and Riachuelo outfall) as well as a sludge treatment plant in the Sudoeste wastewater treatment plant and two Sidestream Elevated Aeration Pools, as part of the selected alternative for the Right Bank collector.

Macro-component 2:
(ii) Technical assistance to improve environmental monitoring and enforcement of environmental targets for selected industrial activities, as well as financing of cleaner production investments to enhance and support environmental compliance among polluting small and medium size enterprises, including investments in industrial effluents treatment plant for tanneries.
(iii) Technical assistance for land use and urban planning and financing for pilot urban and drainage works; and
(iv) Financing for technical studies to support project implementation (components 1, 2 and 3); a communication strategy to inform key stakeholders; project management activities; and support for the institutional strengthening of ACUMAR.

Macro-component 1: Sanitation
Component 1: Sanitation (US$ 1,309 million total, US$694 million in loan proceeds)

This component aims to progressively collect, convey, treat, and dispose of wastewater from the M-
R Basin along with wastewater from the AySA concession area. Sewage works included in this component are essential to improving the coverage and quality of sanitation services in the M-R Basin and the entire AySA service area, to enhancing water quality, and to expanding the potential uses of the water bodies in the M-R Basin and southern coastal strip of La Plata River. The infrastructure system selected is based on the principle of intercepting most of the domestic and industrial wastewater in the AySA concession area (except wastewater that is diverted to the North treatment plant, which discharges its effluent to the Reconquista River), as well as the wastewater of the municipalities in the upper-middle M-R Basin. This entire wastewater flow will be diverted to La Plata River through two new sub-aquatic outfalls, (the Riachuelo and Berazategui outfalls) after preliminary treatment. Specific sub components financed under this project are detailed further below.

The new wastewater collection system and its conveyance to the two preliminary treatment plants will consist of (i) the Left Bank collector, with a total length of approximately 12 km, in the lower part of the basin (the diameter varies between 0.8 m and 2.9 m); (ii) the Baja Costanera bypass collector with a length of 5 km and a diameter of 4.5 m; (iii) the Baja Costanera expansion collector (Radio Antiguo section); (iv) the Baja Costanera expansion collector (Capital Federal-Vicente Lopez section); (v) the SEPAs infrastructure to improve the dissolved oxygen on the M-R river and the sludge treatment plant at the Sudoeste wastewater treatment plant (part of the selected alternative to the right Bank collector); and (vi) an industrial waste conveyance pipe and pumping station on the right bank of the M-R River to collect the treated industrial effluents from the tanneries industrial park and discharge them to the existing Wilde pumping station and from there to Berazategui. The project is supporting the first phase of said system.

Treatment plants and pumping stations. Prior to its discharge through each outfall to the La Plata River, the wastewater will be subjected to preliminary treatment in two plants namely the Riachuelo preliminary treatment plant located on the right bank of the M-R River at its confluence with La Plata River at Dock Sud, and the Berazategui preliminary treatment plant at Berazategui on the banks of La Plata River near the location of the current Berazategui outfall, the latter was constructed with GoAs own funds and is in operation. The Berazategui preliminary treatment plant was financed by the government using its own funds complemented by a loan from Brazil's BNDES.

Construction of new sub-aquatic outfalls. This project will also finance the construction of two new sub-aquatic outfalls over the two APL phases. The Riachuelo outfall, financed during APL-1, will be located in the Dock Sud area. This outfall will measure about 3.8 meters in internal diameter, and is expected to be 11.5 km long, of which the final 2.3 km are the diffuser section. The Berazategui outfall, expected to be financed under a second stage, will be located near the existing short outfall, measuring 3.8 meters in internal diameter and 7.5 km in length, of which the final 3.5 km will be the diffuser section (The dimensions presented are indicative. AySA is in the process of finalizing bidding-stage designs. Final designs will be prepared by construction contractors).

These infrastructure works, as well as other sewerage expansion investments executed by AySA under its master plan, will directly benefit approximately 2.4 million people in the 14 municipalities of the M-R Basin, and about 1.2 million who live along the banks of La Plata River. Indirect beneficiaries include about 10 million people who will benefit from an improved and secure collection, conveyance and wastewater disposal system.

Macro-Component 2: Industrial Pollution Abatement, Territorial Management and Institutional Strengthening
Component 2: Industrial Pollution Abatement (US$ 75.4 million total, US$ 60.3 million in loan proceeds)

Activities under Component 2 will complement those under Component 1, thereby contributing to the cleanup of the M-R River. Technical assistance activities will be front-loaded in APL-1 to support ACUMAR in developing and signing PRIs, and in improving overall monitoring, control, and enforcement. These include (i) supporting pollution diagnostics and policy analysis; (ii) improving the monitoring system for industrial wastes by supporting pollution control institutional infrastructure; (iii) support for adjustments to the strategy for industrial discharges; (iv) designing and implementing a program for encouraging corporate environmental responsibility; and (v) investments for industrial pollution treatment, particularly the Industrial Wastewater treatment Plant for Tanneries in the municipality of Lanus.

Component 3: Territorial Management (US$81.9 million total, US$65.5 million loan)

This component's main objective is to improve public policies on territorial management within the M-R Basin. Towards this end, the component seeks to improve territorial planning and develop pilots of integrated investments in basic infrastructure services and flood control to improve urban living conditions in selected low-income areas of the basin.

The component includes the following four sub-components: (i) Institutional development for territorial planning, supporting technical assistance for ACUMAR to promote territorial planning with a comprehensive development perspective for the M-R Basin and to incorporate social and environmental dimensions of planning efforts; (ii) Institutional development for flood control, supporting technical assistance to improve and update hydrological studies and management tools to control flooding events; (iii) Investments in basic infrastructure for territorial development, financing pilot interventions to improve infrastructure in low-income urban areas in both the lower and middle sections of the basin and additionally to manage sustainable urban expansion in the middle and upper sections of the basin. Basic infrastructure includes (a) secondary networks for water and sanitation and the connection of those networks to the main existing water and sanitation systems, (b) micro drainage and the section of macro drainage required to operate the micro drainage system, (c) secondary streets, and (d) recreational areas); (iv) Investments in infrastructure for flood control and management, financing: a) micro-drainage systems and specific macro-drainage works associated with the selected micro system. Areas that will receive investments in drainage systems will be selected through a comprehensive socio-economic cost-benefit analysis in consultation with provincial and municipal governments. It is anticipated that at least two low-income neighborhoods and one low-income settlement encompassing approximately 5,000 people will benefit from this sub-component. After construction, these systems will be operated by the respective municipal governments; b) flood control systems, comprising some other infrastructure such as temporal retention areas, green infrastructure, and porous pavement, among others.

Component 4: Institutional Strengthening and Project Management (US$18.2 million total, US$18.2 million loan)

In line with the development objectives, a separate TA component has been prepared to support the design and implementation of measures required in both the short and long term to establish the necessary institutional capacity for the new basin authority.
The component has been divided into five sub-components: (i) Institutional Strengthening of ACUMAR to adapt its current organizational structure to better respond to its institutional responsibilities. A new structure will be designed through a participatory process and using proved methodologies and strategies. This subcomponent will support the necessary activities such as workshops, consultants, and infrastructure investments to support the new institutional structure; (ii) Communication Strategy to inform key actors and stakeholder groups in the basin about the project in a transparent manner; to strengthen the credibility of and support for the project; and to contribute to the overall consultation and participation framework of the project; (iii) Establishment of a public information office in ACUMAR supporting the necessary investments for the proper functioning of a public information office such as human resources, office equipment, infrastructure and logistic tools; (iv) Technical and monitoring studies financing for additional studies required during the course of project implementation, providing expert support (including a panel of experts recognized in such fields as environment, engineering, biodiversity, modeling etc.), supporting impact and water quality monitoring, implementing a groundwater study to gain knowledge on the control of the high level of the groundwater table in the basin area, identifying additional and complementary infrastructure works, auditing for monitoring indicators and updating engineering designs. Finally, (v) Project management, supporting human resources, physical space and equipment within SAyDS/UCOFI to strengthen purchasing, contracting and procurement processes.

4. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The project's area of influence is quite large, with most of the proposed investments and programs to be located within the M-R basin, the AySA concession area and the La Plata River, all within the City and Province of Buenos Aires. The project's area of influence involves the following (often overlapping) areas: (i) the entire Matanza-Riachuelo Basin; (ii) the entire AySA concession area; (iii) the reaches of the Lujan River, from the mouth of the Reconquista River to its confluence with the La Plata River; (iv) the reaches of the La Plata River between the coast and the outer limit of the so-called "Parana de las Palmas Flow Corridor"; and (v) the coastal section between the coast of the La Plata River, the neighborhood access road to the river at approximately 14,000 m southeast of the boundary of the General Belgrano plant site, the Boca railroad, and the boundary between the districts of Quilmes and Berazategui.

Key considerations relating to the physical location and characteristics of the project area include the large number of poor and vulnerable communities that live in close proximity to the M-R Basin and who are most exposed to the uncontrolled and untreated discharges; the specific water quality characteristics of the M-R Basin and the La Plata River; and the international riparian issues relating to the La Plata River.

5. Environmental and Social Safeguards Specialists

Carlos Alberto Molina Prieto (GSURR)
Elba Lydia Gaggero (GENDR)
Robert H. Montgomery (GENDR)

6. Safeguard Policies

| Environmental Assessment OP/BP 4.01 | Yes | The proposed project is classified as Category A according to World Bank Environmental Assessment OP/BP 4.01 based upon the large-scale sanitation civil works investments under component 1, for which long-term |
effects as well as some potential significant socio-environmental adverse impacts are expected, although they are not considered irreversible or non-mitigable. Works to be carried out under components 2 and 3 are expected to have impacts that are mostly positive and where adverse impacts may occur they are expected to be small scale, temporary, local in nature, and can be addressed with known mitigation measures. (Note 1: details on potential impacts associated with the project are presented below, in Section II - Key Safeguard Policy Issues and Their Management).

Activities under component 4 such as institutional development and capacity building are not likely to generate adverse impacts. In fact, they are designed to enhance the positive outcomes, long-term benefits and sustainability of the project. Environmental assessments have been prepared for the project at two levels of analysis. At the overall project and river basin level, an Integrated Environmental Assessment has been prepared which describes the regional environmental issues facing the M-R River Basin, the baseline environmental situation, the applicable legal and institutional framework guiding the management of the basin, the principal management strategies considered, and alternatives evaluated for different basin management approaches. In addition, the Integrated Environmental Assessment (IEA) provides a comprehensive description of the overall project components, their main environmental risks and benefits, and the measures to be employed during project implementation to ensure management of adverse environmental risks.

Complementarily to the IEA, and given that different works and interventions, with different levels of definition, in different areas of the Basin are envisioned under the project, specific Environmental Assessment instruments have been developed for each one of them in accordance with the World Bank's Environmental and Social Safeguards Policies.

a) Component 1 (Sanitation): A seven-volume Environmental Impact Assessment (EIA) describes AySA’s strategic corporate vision, the Integrated Plan developed for its concession area, baseline environmental conditions in the project’s area of influence, and the applicable legal and institutional framework guiding AySA’S sanitation works. The EIA report from AySA considers realistic alternatives to each proposed work and
evaluates the proposed works in the context of AySA’s five year investment plan (“Plan Director”). A comprehensive EMP has been developed, spelling out institutional responsibilities for implementation of mitigation actions as well as supervision and monitoring of compliance with agreed mitigation measures. For example, all construction contractors will be required to follow site-specific management plans agreed on and incorporated into all construction contracts. At the site-specific level, a detailed EIA report was prepared for each of the major civil works -agreed at appraisal- that will be constructed under the APL 1. After the alternative to the CMD was approved by the Bank in 2011 (“Descentralized Alternative”) AySA prepared an EIA for each of the investments in sanitation infrastructure prioritized by the GoA as part of such alternative: i) sludge treatment plant in the Sudoeste Wastewater treatment plant site; ii) SEPA 4; and iii) SEPA 7. This included a previous screen of the works at each site that demonstrated that no potential land acquisition or resettlement was associated with the proposed works. AySA also prepared an EIA of the Industrial Collector; although it will be implemented under Component 1, it formally will complement the activities to be carried out under Component 2. The EIAs establish detailed environmental and social baseline conditions; identify and assess potential environmental and social adverse impacts and risks based on the type and scope of physical interventions and site characteristics, as well as expected benefits; design appropriate mitigation, management, and monitoring measures; and present an Environmental and Social Management Plan (ESMP) for the proper management of works during construction and operation stages.

b) Component 2 (Industrial Pollution Abatement) and Component 3 (Territorial Management): Because most of the specific works investments to be made under these components were not identified by the time of the project’s appraisal, it was not possible to ascertain with absolute certainty the nature or extent of the associated risks. Thus, for each one of these components an Environmental Management Framework (EMF) has been developed. The EMFs describe, among other issues (i) the eligibility criteria for works to be funded under the project; and, (ii) procedures for screening and scoping potential issues for all proposed investments and, where
appropriate, developing management instruments and/or mitigation measures. At present, in the frame of the project’s restructuring, both EMFs have been reviewed, updated and improved according to the definitions reached for these components. As part of the project preparation process, extensive stakeholder consultation has been undertaken using formal as well as informal methodologies. The project EIAs have been made available through the ACUMAR and AySA websites as well as through the Bank’s Infoshop. Information on the project has been made publically available through public disclosure events and workshops. Informal focus group discussions have been conducted with NGOs, local governments, affected people and beneficiaries at various points during preparation and appraisal. The consultation process continued during project implementation. (Note 2: details on the consultation process as well as social assessments associated with the Project are presented below, in Section II - Key Safeguard Policy Issues and Their Management).

<p>| Natural Habitats OP/BP 4.04 | Yes | Within the project’s area of influence there are five known terrestrial ecological reserves and no existing aquatic reserves. Based on studies conducted by the GEF funded project “Proyecto de Protección Ambiental del Río de la Plata y su Frente Maritimo” commonly known as FREPLATA), priority areas for protection of aquatic biodiversity have been identified but these areas are far from the immediate impact zone and not likely to be affected by the project. Due to the project aims to contribute to the significant improvement of water quality conditions in the M-R River Basin and in the coastal areas of the Río de la Plata, it is expected to have significant positive impacts on the natural riverine habitats found in the project area. An area of the receiving waters in La Plata River will be degraded as a result of the pollution discharge from the wastewater treatment plant via the outfall. Models developed for the outfalls indicate, however, that the discharge plume is expected to be fully contained within a relatively small area of the receiving waters. The pollution is not expected to affect downstream coastal areas designated as conservation areas. |
| Forests OP/BP 4.36 | No | This policy is not triggered since the Project will affect |</p>
<table>
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<th>Action</th>
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<tr>
<td>Pest Management OP 4.09</td>
<td>No</td>
<td>The project will not procure nor will it lead to increased use of pesticides. Therefore no action is required under this policy.</td>
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<td>Physical Cultural Resources OP/BP 4.11</td>
<td>Yes</td>
<td>Preliminary site evaluations for proposed civil works construction do not show any evidence of cultural property that will require mitigation or management measures. However, since many of the proposed works entail excavations and soil movement, a potential exists for the accidental discovery of physical cultural resources. Thus the policy is triggered. The necessary mitigation measures have been considered within OP/BP 4.01 and the specific EA instruments (e.g., ESMPs with “chance finds” procedures; all construction contracts will include a chance finds clause that will require contractors to halt construction if any underground cultural property sites are encountered during construction. Site specific management plans for any cultural property identified by chance finds procedures will be developed before construction can start up again.).</td>
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<tr>
<td>Indigenous Peoples OP/BP 4.10</td>
<td>No</td>
<td>In the project area, they have not been identified indigenous territories, therefore, this policy is not triggered since Project activities will not affect indigenous peoples as defined in the policy.</td>
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<tr>
<td>Involuntary Resettlement OP/BP 4.12</td>
<td>Yes</td>
<td>Resettlement is not expected for the project. However: a) works under component 1 are of high complexity (technical and location issues); and, b) civil works involved in certain possible sub-projects under component 2 and 3 (sanitation and flood risk management) may affect, respectively, a small number of houses in informal settlements, or potentially restrict the use of private land; the exact potential resettlement related impacts (if any) and zone of influence of such impacts are not confirmed/identify yet. Therefore, a Resettlement Policy Framework (RPF) has been prepared for the project. Among other things, the RPF spells out eligibility criteria, forms of compensation, and dispute resolution mechanisms that will be available to potentially affected people. If any civil works causes resettlement, a Resettlement Action Plan will be prepared prior to the start of the works. At present, in the frame of the project’s restructuring, the RPF have been reviewed by the Bank team and considered still appropriate; no modification was incorporated into the original document.</td>
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| Safety of Dams OP/BP                         | No     | The project will not support the construction or
rehabilitation of dams nor will it support other investments which rely on the services of existing dams. Therefore, the policy is not triggered.

Projects on International Waterways OP/BP 7.50

| Yes | Since both proposed sub-aquatic outfalls (the Riachuelo outfall at Dock-Sud during APL-1 and the Berazategui outfall in APL-2), will discharge to the Rio de la Plata, a bi-national waterway shared with Uruguay, OP 7.50 is triggered. Notification to Uruguay has been made through the bi-national “Comision Administradora del Rio de la Plata” (CARP). On 13 Aug, 2001, Argentina’s then Ministry of Infrastructure and Housing submitted a request to CARP to authorize construction of an outfall at Dock Sud. CARP replied on 23 May, 2002, that it had “no objections” to the works, as long as several conditions were met (analysis of possible algae blooms in the diffuser area, establishment of an environmental monitoring & control program, determination of the types of wastewater that would be discharged and definition of pre-treatment standards for industries, etc.). On Sept 11, 2008, AySA (through the Sub-secretariat of Water Resources in the Ministry of Planning, Public Works and Services) presented an updated submission to CARP. Subsequently, on 28 January, 2009, Argentine representatives gave a presentation of the project before CARP and answered questions from Uruguayan representatives. After that, the Argentine government received a reply from CARP that it did not express an objection to the proposed project. |

Projects in Disputed Areas OP/BP 7.60

| No | The policy is not triggered because the project will not be implemented in areas known to involve disputed areas. |

II. Key Safeguard Policy Issues and Their Management

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the Restructured project. Identify and describe any potential large scale, significant and/or irreversible impacts:

   Overall, the environmental benefits of the project are expected to outweigh the environmental costs of the project. The expected benefits include: (i) improved quality of life for the 3.5 million inhabitants of the M-R Basin; (ii) improved sewerage and drainage services in the M-R Basin and other parts of Buenos Aires by expanding the coverage of the sewerage network to 1.7 million people in the basin (from 35 percent to about 75 percent), especially in poor marginal areas; (iii) improved environmental quality for rivers and tributaries crossing the urban area and the Rio de La Plata through investments in industrial pollution control and management; and (iv) improved urban living conditions associated with territorial development and reduced flooding in the M-R Basin.

   The project poses potential environmental risks during both the construction and the operational...
phases. During the construction phase, the main environmental risks are associated with the management and control of temporary risks of the construction of the various large scale civil works to be carried out under component 1 (Sanitation). These risks include the usual potential impacts associated with large scale construction such as dust and noise emission; handling and disposal of hazardous materials at construction sites; potential of erosion and sedimentation near sensitive water bodies; handling and disposal of tunnels’ excavation materials; large soil movement; local disruption of traffic flows; and occupational health and safety issues. During construction there will also be risks associated with the re-suspension of river sediments during potential dredging operations.

Works under component 1 do not anticipate any significant negative impact on physical cultural resources; however, the ESMPs includes (and, accordingly, related future contract will include) procedures and requirements associated to chance find management.

During the operational phase, potential environmental risks will include those associated with the increased contamination of the Rio de la Plata due to the operation of the sub-aquatic outfalls; nuisance noise and odor associated with the wastewater treatment plant operations; and disposal of the solid wastes generated by the treatment plant. A summary of all potential environmental impacts, risks, mitigation and management measures is presented in Annex 10 of the PAD.

Environmental risks associated with components 2 (Industrial Pollution Abatement) and 3 (Territorial Management) are, by their nature, much less significant. Any adverse impacts will mostly be associated with small-to medium-scale construction of civil works. The main anticipated potential adverse impacts related to activities of these components they include noise; vibration; exhaust emissions from machinery; dust emission and dispersion from excavation activities; disruptions in normal urban movement (traffic and pedestrian); and safety issues. None of these potential impacts is anticipated to be significant. In addition, civil works involved in certain sub-projects (sanitation and flood risk management) may affect, respectively, a small number of houses in informal settlements, or potentially restrict the use of private land. The exact potential resettlement related impacts (if any) and zone of influence of such impacts are not identify yet. Therefore, a Resettlement Policy Framework has been prepared. If any of the civil works causes resettlement, a Resettlement Action Plan (RAP) will be prepared prior to the start of the works.

Foreseen works and complementary interventions in components 2 and 3 do not anticipate any significant negative impact on physical cultural resources; however, any environmental analyses, as part of the ESMF, will specifically include consideration of physical cultural resources. As part of the restructuring, the Industrial Waste Water Treatment Plant for tanneries is being included in the Project. After the screening criteria, the proposed IWWTP part of Component 2 resulted in an Environmental and Social Impact Evaluation and its corresponding Environmental Management Plan that was given the Bank’s No Objection on September 2015 and was published in country on October 21st 2015. All sub-project’s ESMP and related construction contracts will include procedures and requirements related to chance find management.

Some of the identified potential impacts associated with the various components of the projects are of a social nature. For the sanitation component, some temporary social impacts are expected during the construction phase. These include restriction of access to some public areas, increased transit of trucks to the trenches and collector sites etc. However, the construction methods proposed (pipe jacking and tunneling) to be used for pipe installation have been explicitly
designed to minimize impacts, including any resettlement. Pipe routes have been selected to be located in public areas and will not impact private property.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

As mentioned above, the long term environmental impacts of the project are expected to be positive. There will be some adverse impacts associated with the operation of the treatment plant and subsequent discharges into the Rio de la Plata. The pollution loads are expected to affect a relatively small area of the Rio de la Plata, especially given the very high dilution factors of the river. As the project's area of influence is one of intense urbanization and industrial development, the overall success of the project will be determined, to a certain extent, by how successful governments are at encouraging the closure or relocation of highly polluting industries and the long term ability to control future growth and industrialization in the highest risk areas.

On the basis of these potential risks the project is being processed as an environmental risk category A project.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

A variety of technical alternatives were considered for the sanitation component (Component 1). These included the level of wastewater treatment, the length of outfalls, and the number and location of the wastewater treatment plants. A summary of the description of the alternatives and the reasons for rejection of those that were not selected is presented in Annex 12 of the PAD.

In addition, during the negotiations of the loan between the Government and the World Bank, it was agreed that prior to the construction of the right bank collector, the Government would carry out a prefeasibility study of alternatives through the water and sanitation utility of the Metropolitan Area of Buenos Aires (AySA). The prefeasibility study was carried out in 2010 and, instead of the construction of the CMD, it favored the alternative of advanced secondary treatment in four wastewater treatment plants from which effluents will be discharged into the M-R River to meet the water quality standards set by ACUMAR (“Decentralized Alternative”). This alternative also proposed the construction of aeration systems (Sidestream Elevated Pool Aeration, SEPs) along the banks of the river. An Expert Panel convened by the Bank reviewed the Prefeasibility Study of the Alternative to the Right Bank Collector and concluded that the decentralized alternative was a well thought proposal that could be supported by the Bank.

An issue of major importance for the project is the choice of preliminary treatment of the wastewater coupled with discharge of the effluent into the La Plata River through a long, effective outfall. The decision to choose a lower level of treatment over a higher level has been questioned in some stakeholder meetings. However, the choice of preliminary treatment is considered a meaningful strategy. Discharges from the preliminary treatment plants will be further processed by the oxygenation capacity of the La Plata River into which it drains. Choosing a higher level of treatment (secondary) and a shorter outfall would not be fully justifiable (or sustainable) as it would be significantly more expensive and probably unaffordable both in terms of capital investment as well as operation and maintenance costs. Furthermore, the alternative with secondary treatment and an effective outfall is equivalent, in terms of risks to humans and to the environment, to the selected alternative (preliminary treatment and a long, effective outfall).

These conclusions are partially based on the findings of mathematical modeling of the implications of the various alternatives on the water quality of the La Plata River. They are also
consistent with the recommendation from the World Health Organization (WHO) that, from the public health standpoint of human exposure to wastewater, additional treatment higher than preliminary prior to the discharge does not reduce health risks. That is to say, the health risk associated with a system comprised of preliminary treatment followed by an effective outfall is identical to that from a system comprised of secondary treatment followed by an effective outfall. The WHO report refers to risk related to human exposure through bathing, which is not exactly the risk in the case of discharge to the La Plata River; but as the main risk of effluent discharge is imposed by pathogenic organisms, the WHO exposure risk measure serves as a reasonable proxy.

For the industrial pollution component (Component 2), two alternatives were considered: (i) a high level of treatment of all industrial wastes and discharge of the effluents, except those which contain toxic matter, to the M-R river, and (ii) a lower level of treatment of all industrial wastes and discharge of the effluents, except those which contain toxic matter, to the municipal sewerage network for further processing with domestic wastewater. Alternative (i) was rejected since it was found, through mathematical modeling that even after a high level of treatment, the discharge of industrial effluents to the M-R River will still render it anaerobic. So that the only way to induce aerobic conditions in the river and recover its water quality is through Alternative (ii).

Following that strategy and in the frame of the restructuring of the project, the GoA prioritized the construction of an Industrial Effluents Treatment Plant in the Lanus Municipality (as part of component 2) that will enable treatment of 70 percent of tannery effluent in the basin. This plant will be complemented by the Industrial Collector to be built by AySA to conduct the treated industrial effluents to the Wilde Pump Station and from there to the Berazategui preliminary treatment plant.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

The environmental risks, impacts, and benefits of the project have been analyzed at two different levels using two closely related environmental assessment approaches. The environmental impacts (both positive and negative) have been assessed through: i) a detailed 7 volume EIA conducted for specific works proposed under Component 1; and, ii) separate Environmental Management Frameworks (EMF) prepared for activities to be carried out under Components 2 Industrial Pollution Abatement (Note: The Industrial Wastewater Treatment Plant for tanneries has been screened applying the EMF resulting in a EIA and its corresponding EMP, the subproject is being tendered) and 3 Territorial Management. In addition to the site-specific EIA and the EMFs, an Integrated Environmental Assessment (IEA) has been prepared which serves two purposes: first, it summarizes the main findings of the more detailed EIA reports; second, the IEA presents the overall regional context and strategic goals for the long term recovery and management of the Matanza-Riachuelo basin in its entirety.

At the site-specific level, a detailed EIA report was prepared for each of the major civil works that will be constructed under Component 1 (Sanitation) during the APL1, including those corresponding to the decentralized alternative prioritized by the GoA.

The seven-volume EIA of component 1 was prepared under the general direction of the AySA Environmental Management Unit using independent environmental engineering consultants for key aspects of the analysis. These assessments, which were coordinated with associated modeling and other technical evaluations, indicate the overall environmental viability of the proposed project activities. The EIA provides a thorough assessment of the project’s environment impact
during the construction and operational stages for the project's main civil works. The EIA for
Component 1 includes specific volumes on the general conditions and background of the project; a
description of AySA’s corporate Master Plan (Plan Director); the proposed Riachuelo preliminary
treatment plant; the pumping stations; the Riachuelo sub-aquatic outfall; as well as the colector
margen izquierda and colector baja costenera. In addition, the site-specific EIA includes baseline
data, legal and institutional capacity assessments, an environmental management plan and site
specific management measures.

Furthermore, the government advanced the construction of the Berazategui preliminary treatment
plant (BPTP): In the 1970’s, Obras Sanitarias de la Nacion, the public water and sewerage
authority for the Buenos Aires Metropolitan area that preceded Aguas Argentinas, constructed a
2.5 km sub-aquatic outfall in the municipality of Berazategui to discharge sewage from its service
area to La Plata River. In 2004, the municipality of Berazategui and local residents initiated
judicial proceedings against Aguas Argentinas for discharging sewage to the La Plata River
without adequate treatment. In 2006, the case was elevated to Argentina’s Supreme Court, which
ruled in favor of the municipality and local residents and ordered the construction of a preliminary
treatment plant. After Aguas Argentinas’s concession was rescinded in March of 2006, AySA
assumed responsibility for complying with the Supreme Court ruling and, in 2008, awarded a
contract for construction of the Berazategui sewage preliminary treatment plant. While work on
the BPTP is expected to be carried out in parallel with APL-1, from a technical standpoint, the
plant complements a Bank-financed civil work under APL-2 (i.e. the Berazategui sub-aquatic
outfall) and has therefore been included as a counterpart work under APL-2, an EIA was prepared
in July 2007 and has been disclosed in-country by AySA (The executive summary of the EIA is on
AySA’s website; the complete report is available at AySA’s library in Buenos Aires). The Bank
team has assessed the EIA and found it to be broadly acceptable.

The Integrated Environmental Assessment was prepared under the overall guidance of ACUMAR
and corresponds to a regional, basin-wide assessment of environmental risks and benefits. The
IEA describes the baseline conditions of the Matanza-Riachuelo Basin, the legal and institutional
setting and the strategic challenges and options that underpin the choice of the specific project
components and investment activities. This IEA was used to evaluate the regional strategic
objectives of the project (including infrastructure works that belong to the PISA but that will not
be financed through the proposed Bank loans such as the Berazategui preliminary treatment plant)
and to provide a clear rationale for the project components that respond to these objectives. The
IEA also describes the structure of the project as a whole, including a detailed description of the
environmental risks and benefits of the three project components and the institutional
arrangements for implementing the Environmental Management Plan (EMP) for the project.

Social assessment process: Given the complexity of the Project, two complementary social
assessments were prepared for ACUMAR and AySA during project preparation. ACUMAR’s
social assessment was a basin-wide study, describing the social baseline conditions which exists
in the M-R Basin, identifying stakeholder perceptions, positions, and influence on the project,
highlighting the existing communication channels, pinpointing the overall social impacts of the
project, and assessing its various risks. AySA’s social assessment, on the other hand, explored the
opinion of stakeholders about the proposed infrastructure works to be carried out by the company.

Both SAs were developed based on available project information and consultations with relevant
stakeholders. The teams that conducted the SA carried out 45 meetings with stakeholders
including representatives of community organizations, NGO s, the industrial sector, provincial and
municipal officials, professional associations and members of academia. Stakeholders also participated in workshops, including those for the presentation of the TOR’s for the EIAs and the draft EIAs themselves.

At present (October 2015), AySA is reviewing, updating and improving the Social Assessment carried out by the time of the project preparation. AySA is actually preparing a Social Management Plan that comprises four components: i) Social participation; ii) Stakeholder Analysis; iii) Communication; and, iv) (Independent) Monitoring. The first two components are finalized; AySA is now completing the Communication Plan and the Terms of Reference for the contracting and independent entity to monitor the implementation of the new AySA’s Social Management Plan.

Assessment of Borrower Capacity to Implement EMP. Borrower capacity to implement and achieve a fully successful EMP will be considerably improved during project implementation. While ACUMAR has some staff with very strong environmental and water resource management credentials, they currently have no stand-alone environment unit responsible for the tasks expected under the EMP. A subcomponent under Component 4 has been specifically designed to support any key activities that emerge from ACUMAR’s institutional strengthening plan, and will be vital in the creation of needed capacities.

Within AySA, there currently exists a standalone environmental unit with staff appointed to carry out a variety of corporate environmental functions. So far, their work has been quite strong with respect to preparation aspects of the project. AySA will complete its team with a full range of skills necessary to carry out all the tasks related to project implementation.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

As part of the project preparation process, stakeholder consultation and information disclosure has been carried out using formal as well as informal methodologies. Information on the project and its components has been made publically available through stakeholder consultation and workshops. Informal focus groups discussions have been conducted with NGOs, local government, affected people and beneficiaries at various points during preparation and appraisal. In addition, household and individual surveys done by the economic evaluation team have been used to disseminate information and gather stakeholder perceptions.

ACUMAR and AySA are also establishing social expertise within their organizational structure. These teams have been established to lead efforts at stakeholder in constant contact with the local communities. ACUMAR, for example, has established a network of approximately 300 community and environmental NGOs that are part of its broader communications strategy relating to issues facing the M-R Basin. This network provides an opportunity for information disclosure not just on the project but on a wide array of development issues facing the basin. In addition to general public disclosure, several experts in the sanitation, engineering, environmental area have given advice and assessment to the project team.

As it was aforementioned, two social assessments have been also conducted for the project (details above).

The most important finding from the social assessments was that the project (as well as the sanitation component alone) will have a positive social impact on the population in the M-R Basin...
as well as in the Buenos Aires Metropolitan Area. The investments will contribute to improving
the quality of life of the basin population by improvements in the environmental conditions, as
well as by increasing the capacity of the sewerage systems.

During the project preparation stage, a first major consultation event was held in Buenos Aires on
July 10th 2008, for the scoping of the terms of reference for the EIA. A second round of formal
public disclosure of the advanced draft EIA report was conducted on November 7, 2008. The draft
EIA reports are already available to the public through the AySA and ACUMAR websites, by
posting of hard copies in ACUMAR as well as through the World Bank’s InfoShop. Most of the
identified stakeholders have taken part of these events.

During project implementation, the EIA reports that were prepared by AySA for each of the
different civil works of component 1 prioritized by the GoA that correspond to the decentralized
alternative, had a consultation meeting convened by AySA and targeted to relevant stakeholders.
Also, as it was mentioned above, AySA is preparing a comprehensive Communication Plan, as
part of a broader Social Management Plan, implementation of which will be monitoring by an
independent entity.

AySA is working together with ACUMAR to ensure articulation with the communication strategy
that is being preparing the Basin Authority, in order to foster participation and to bring more
information to stakeholders (one of the main finding of the social assessments).

In addition, ACUMAR and the relevant involved agencies are preparing, or even already
implementing, the communication plans developed as part of the Environmental Assessment of
other prioritized works under components 2 and 3, such as (i) the construction of an Industrial
Treatment Plant in the Lanus Municipality; ii) the improvement of the water & sanitation and
drainage infrastructure in a low income settlement in the City of Buenos Aires, according to the
provisions of the corresponding (and revised / updated) EMFs.

Other important event to highlight, is the presentation of the Final Report prepared by the Bank’s
Expert Panel on the Prefeasibility Study of the Alternative to the Right Bank Collector to the
Cuerpo Colegiado, which took place in October 2013.

B. Disclosure Requirements

<table>
<thead>
<tr>
<th>Environmental Assessment/Audit/Management Plan/Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was the document disclosed prior to appraisal?</td>
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<tr>
<td>Date of receipt by the Bank</td>
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<tr>
<td>Date of submission to InfoShop</td>
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<tr>
<td>For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors</td>
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</table>

"In country" Disclosure

| Argentina                                           | 18-Aug-2008        |

Comments:

<table>
<thead>
<tr>
<th>Resettlement Action Plan/Framework/Policy Process</th>
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<tbody>
<tr>
<td>Was the document disclosed prior to appraisal?</td>
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<tr>
<td>Date of receipt by the Bank</td>
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<tr>
<td>Date of submission to InfoShop</td>
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</tbody>
</table>
"In country" Disclosure

Argentina 18-Aug-2008

Comments:

If the project triggers the Pest Management and/or Physical Cultural Resources policies, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.

If in-country disclosure of any of the above documents is not expected, please explain why:

C. Compliance Monitoring Indicators at the Corporate Level

<table>
<thead>
<tr>
<th>OP/BP/GP 4.01 - Environment Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the project require a stand-alone EA (including EMP) report?</td>
</tr>
<tr>
<td>If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?</td>
</tr>
<tr>
<td>Are the cost and the accountabilities for the EMP incorporated in the credit/loan?</td>
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<table>
<thead>
<tr>
<th>OP/BP 4.04 - Natural Habitats</th>
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<tbody>
<tr>
<td>Would the project result in any significant conversion or degradation of critical natural habitats?</td>
</tr>
<tr>
<td>If the project would result in significant conversion or degradation of other (non-critical) natural habitats, does the project include mitigation measures acceptable to the Bank?</td>
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<tr>
<th>OP/BP 4.11 - Physical Cultural Resources</th>
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<tbody>
<tr>
<td>Does the EA include adequate measures related to cultural property?</td>
</tr>
<tr>
<td>Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?</td>
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<table>
<thead>
<tr>
<th>OP/BP 4.12 - Involuntary Resettlement</th>
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<tbody>
<tr>
<td>Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?</td>
</tr>
<tr>
<td>If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?</td>
</tr>
<tr>
<td>Is physical displacement/relocation expected?</td>
</tr>
<tr>
<td>Provided estimated number of people to be affected</td>
</tr>
<tr>
<td>Is economic displacement expected? (loss of assets or access to assets that leads to loss of income sources or other means of livelihoods)</td>
</tr>
<tr>
<td>Provided estimated number of people to be affected</td>
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<tr>
<th>OP 7.50 - Projects on International Waterways</th>
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<tr>
<td>Have the other riparians been notified of the project?</td>
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</table>
If the project falls under one of the exceptions to the notification requirement, has this been cleared with the Legal Department, and the memo to the RVP prepared and sent?  
Yes [ ]  No [ ]  NA [ x ]

Has the RVP approved such an exception?  
Yes [ ]  No [ ]  NA [ x ]

**The World Bank Policy on Disclosure of Information**

Have relevant safeguard policies documents been sent to the World Bank's Infoshop?  
Yes [ x ]  No [ ]  NA [ ]

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?  
Yes [ x ]  No [ ]  NA [ ]

**All Safeguard Policies**

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?  
Yes [ x ]  No [ ]  NA [ ]

Have costs related to safeguard policy measures been included in the project cost?  
Yes [ x ]  No [ ]  NA [ ]

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?  
Yes [ x ]  No [ ]  NA [ ]

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?  
Yes [ x ]  No [ ]  NA [ ]

### III. APPROVALS

<table>
<thead>
<tr>
<th>Task Team Leader(s):</th>
<th>Name: Christophe Prevost</th>
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<tbody>
<tr>
<td><strong>Approved By</strong></td>
<td></td>
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<tr>
<td>Safeguards Advisor:</td>
<td>Name: Francis V. Fragano (SA)</td>
</tr>
<tr>
<td>Practice Manager/ Manager:</td>
<td>Name: Raul Ivan Alfaro Pelico (PMGR)</td>
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