

INTEGRATED SAFEGUARDS DATA SHEET CONCEPT STAGE

Report No.: ISDSC468

Date ISDS Prepared/Updated: 17-May-2012

I. BASIC INFORMATION

A. Basic Project Data

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|------------------------------------|---|------------------------------|--------------------------|
| Country: | Bolivia | Project ID: | P129640 |
| Project Name: | Bolivia Climate Resilience - Integrated Basin Management (P129640) | | |
| Task Team Leader: | Marie-Laure Lajaunie | | |
| Estimated Appraisal Date: | 01-Oct-2012 | Estimated Board Date: | 11-Feb-2013 |
| Managing Unit: | LCSEN | Lending Instrument: | Specific Investment Loan |
| Sector: | General water, sanitation and flood protection sector (60%), Irrigation and drainage (30%), Flood protection (10%) | | |
| Theme: | Climate change (50%), Water resource management (40%), Rural services and infrastructure (5%), Natural disaster management (5%) | | |
| Financing (In USD Million) | | | |
| Financing Source | | | Amount |
| Borrower | | | 9.00 |
| Strategic Climate Fund Grant | | | 41.00 |
| Total | | | 50.00 |
| Environmental Category: | B - Partial Assessment | | |
| Is this a Repeater project? | No | | |

B. Project Objectives

13. The Project Development Objective (PDO) is to strengthen Bolivia's capacity to adapt to climate change effects at the national level and set the foundations to improve the climate resilience of socioeconomic and natural systems' in two sub-basins of the Rio Grande by implementing a river basin management approach.

C. Project Description

Project concept.

The proposed project will support the implementation of Bolivia's strategy towards climate change adaptation, as defined in the SPCR. This strategy proposes the adoption of an integrated, multi-sectoral, participatory, basin-scale approach to climate change adaptation. This approach is justified because: (i) most climate change impacts will be channeled through modifications to the hydrological cycle which is defined at the basin level; (ii) these changes in the hydrological cycle will affect various economic sectors, people wellbeing and the environment, which calls for the adoption of a multi-sectoral, integrated approach and finally (iii) stakeholders participation, by increasing ownership and accountability, is related to more sustainable results, improved management outcomes and reduced conflicts.

The proposed project will support the implementation of Bolivia's strategy by strengthening institutional capacity to define and implement the new approach to CC adaptation. This would entail two types of actions: (i) actions to strengthen the institutional capacity at the central level to facilitate/support basin-scale planning and management and (ii) actions to pilot the new approach in priority basins.

The pilot sub-basins (of this project and the IADB project) have been chosen to span the three main eco-regions in Bolivia (highlands, valleys and lowlands) and cover the three main climate challenges (droughts, floods, and diminishing water supply from disappearing glaciers).

Project description.

The proposed Project includes the following components and activities:

Component A: Strengthening national capacity for adaptation to climate change.

This component would include three sub-components:

Sub-component A. 1. Strengthening of the National Climate and Water Information System

This sub-component aims at increasing access to more reliable hydro-meteorological and climate change related data and information by integrating the information system and developing the capacity of the National Service of Meteorology and Hydrology (SENAMHI) and the National Climate Change Program (PNCC) and possibly other organizations responsible for generating and disseminating hydro-meteorological and climate change related data and information. Proposed activities under this component include:

- (i) Digitalization, quality control and information treatment of historical data;
- (ii) Generation of a standard sets of hydro-meteorological information for the period 1980-2010 distributed in the eleven priority macro-basins of the country, using information captured by remote sensors and calibrated with local data collected by ground stations;
- (iii) Integration of the information generated from the country's main hydro-met observation networks within one single information system managed by SENAMHI
- (iv) Revamping SENAMHI' s website to improve access to hydro-meteorological data and information, including the information mentioned above;
- (v) Definition of climate change scenarios for the full country and for the pilot river basins, by using general models and downscaling and regionalization procedures; and additional field work in order to refine the results of the models in the priority sub-basins and specific small areas, as well as training of technicians in the analysis and use of the scenarios;
- (vi) Development of the current national water balance and projected national water balance using previously estimated climate change scenarios;
- (vii) Creation of a GIS platform to contain all relevant climate change adaptation, such as topographic, soil use, geology, and hydro-meteorological data.
- (viii) Creation of a user-friendly website to disseminate the final products of the GIS system through free downloading by professionals, academic, stakeholders and the general public without any limitations.

Sub-component A. 2. Integration of climate change resilience and adaptive capacity topics in national planning and investment tools.

This sub-component aims at further including climate change adaptation considerations in the national planning and public investments tools. Proposed activities under this component include:

- (i) The development of a methodological guide for integrated, participatory, basin-scale planning for increasing the resilience to climate change, based upon a review of international experiences and the lessons learned from pilot activities in the sub-basins.
- (ii) The integration of climate change adaptation in the next economic and social development plan;
- (iii) The development of methodologies, indicators and variables for the integration of climate change adaptation in the Integrated Public Investment Planning System
- (iv) The revision of the guidelines of the National Public Investment System for the preparation of pre-investment studies of large and small scale irrigation projects to incorporate climate change dimension.

Sub-component A.3. Project Management Support, SPCR coordination and Knowledge Management.

This sub-component would finance the administration, monitoring and evaluation and auditing of the Project. It would also finance mechanisms for the coordination of the overall SPCR program, such as an integrated M&E system for the projects implemented by different donors and organization of annual meetings to review the achieved progress in the different activities financed through the PPCR. Finally, it would support the collection, compilation and dissemination of knowledge generated in the program by financing the establishment and operation of a central communication and public relation unit within the Implementing Agency.

Component B: Strengthening resilience to climate change in the Rio Grande basin.

The main objective of this Component is to increase resilience of socioeconomic and natural systems to climate change effects in two pilot sub-basins of the Rio Grande basin: the sub-basin of the Mizque River in the valleys and the sub-basin of the Pirai River in the lower basin. A second objective is to generate concrete experiences in the planning, design and implementation of integrated investments that are resilient to climate change effects, whose results and lessons learned will be the basis for setting or adjusting national standards for public planning (i.e. River Basin Planning) and investments (e.g. large and small scale irrigation projects), for possible replication in other regions.

This component would include the following sub-components and activities:

Sub-component B.1. Strengthening institutions responsible for Integrated, Participatory, Basin-scale, Climate Change Adaptation Planning and Management.

This will include:

- (i) Strengthening of the Water Department from Cochabamba region (PROMIC) and SEARPI as the institutions responsible for basin management respectively in the Departments of Cochabamba and Santa Cruz, including the capacity to formulate and implement a monitoring and evaluation framework;
- (ii) The establishment or strengthening of institutions facilitating basin stakeholders and decision makers' participation in basin planning and management, such as the Commonwealth of the Southern Cone in Cochabamba.

Sub-component B.2. Integrated, Participatory, Basin-scale, Climate Change Adaptation Planning.

This would include financing and facilitating the formulation of a participatory, integrated, climate resilient, river basin management plan in each of the selected sub-basins in light of the methodological guide developed in Component A.

Sub-component B.3. Basin Water and Climate Information System.

This sub-component would finance the strengthening of sub-basins' water and climate information systems to inform basin planning, management and investments. This would include:

- (i) Improvement of hydro-meteorological observation networks through, the rehabilitation/upgrading of existing stations and/or the installation of new ones, including improvement of the data transmission systems as well as training of technicians;
- (ii) Creation/strengthening Watershed Data Processing Centers in each sub-basin to treat and analyze hydro-meteorological information;
- (iii) Elaboration of scenarios of future water resources avail ability and water demand at the sub-basin level, including a baseline scenario and climate-change impacted scenarios, as part of the planning activity.
- (iv) Establishment of natural hazard risk scenarios (both for drought and flood) running hydrological models with treated hydro-meteorological data.

Calculation of flood routing by the rivers and definition of flood risk areas for some hazard scenarios, to be crossed with socio-economic data such as the type of public and private infrastructure in the sub-basins as well as populated (urban and rural) and agricultural areas that would be affected.

Component C: Structural and non Structural Subprojects.

The implementation of structural and non structural measures (sub-projects) to enhance socioeconomic and natural systems' resilience to climate change in the sub-basins, by supporting priority actions of the plans once those are completed or eligible climate adaptation measures identified by targeted beneficiaries before the plans are adopted. The project will finance pre-investment studies; works, goods and services for the implementation of the subprojects, as well as the technical assistance required for its proper operation and maintenance.

Project cost and Financing. Total project cost is estimated at US\$50 million, including US\$ 41 million from the CIF (of which US\$5 million grant and US\$36 million concessional loan) and US\$9 million from national, local government and beneficiaries' counterparts funds.

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

The proposed project will support the implementation of Bolivia's strategy by strengthening institutional capacity to define and implement the new approach to CC adaptation. This would entail two types of actions: (i) actions to strengthen the institutional capacity at the central level to facilitate support basin-scale planning and management and (ii) actions to pilot the new approach in two priority sub-basins of the Rio Grande river basin. This basin concentrates 30% of the national population in an area of about 100,000 km² (10% of the national territory) at altitudes ranging from 400 to 3500 m and includes two of the nation's largest cities (Santa Cruz and Cochabamba). It was chosen because of its importance for the country's food security and the high potential socio-economic costs generated by flooding, particularly in its lowlands, and droughts.

The first priority sub-basin is the largely rural Mizque sub-basin in the Department of Cochabamba, in the mid altitude valleys, covering 10,400 km² and concentrating less than 200,000 inhabitants. It is targeted at predominantly rural areas where water availability may constrain agriculture. The second priority sub-basin is the Pirai sub-basin in the Department of Santa Cruz, in the lowlands, covering 13,400 km² and concentrating 1.5 million inhabitants as it includes parts of the city of Santa Cruz and its suburbs. It is targeted at an area with both important agricultural production and an important urban conglomeration, where flooding problems are increasingly significant.

In the case of the Pirai River sub-basin, it harbors part of the Amboró National Park. This protected area is considered a biological diversity hotspot that presents a high level of endemism. The Amboró National Park is one of the critical natural habitats that comprise the Amboró-Madidi Corridor, a priority area for national and global conservation. Considering its ecological and biogeographic characteristics, Amboró National Park is one of Bolivia's most important protected areas. This area is comprised of diverse ecosystems of great scenic beauty that harbor an immense and unique biological richness. Another important regional protected area partially contained by the Pirai River sub-basin is the Rio Grande – Valles Cruceños Integrated Management Natural Area. This regional protected area is the only one that still protects cloud forests with very important hydrological services in term of water provision. With regard to the Pirai River Sub-basin, it has been determined that the Pirai River significantly contributes to the recharge of the aquifer underneath the city of Santa Cruz de la Sierra. Therefore, the Pirai River sub-basin's area within the Rio Grande -Valles Cruceños Integrated Management Natural Area deserves special consideration. In the case of the Mizque River sub-basin, it is considered one of the most important areas for bird conservation in Bolivia (among the 45 priority areas for bird conservation in Bolivia). Also, the Mizque River's valley, in its proximity to the confluence with the Rio Grande River, harbors a forest known as bosque interandino espinoso freático-halófilo, currently classified as an endangered habitat.

The area covered by the two sub-basins of Mizque and Pirai includes 22 municipalities. Some of the municipalities have been created recently, following their separation from existing municipalities. As a consequence, socio-economic data from the most recent national census do not incorporate these new municipalities. The 22 municipalities have significant differences in terms of poverty, population, migration, levels of human development and productive potential. A review of the National Population and Housing census reveals that 73% of the Mizque population and a third of the Pirai population auto-identify themselves as indigenous. In the Mizque sub-basin, most indigenous people are Quechua. While there is a high level of self-identification as Quechua, there remain significant differences in terms of tenure and land access, related to the presence or not of the haciendas system and of the process of agricultural reform that distributed the land to individuals. The above situation also leads to the existence of a variety of organizational forms, especially related to the structure of the farmer syndicate originated with the process of the 1952 revolution. According to an initial review there seems to be only one group with a strong self-identification and a collective attachment to their land, the Raqaypampa community, apparently a TCO (Tierra Comunitaria de Origen).

In the Pirai sub-basin, the largest and most representative municipality is the city of Santa Cruz, with a high proportion of urban population. In the remaining municipalities, there are significant numbers of immigrants from the high lands, which is why the census shows that there that a significant proportion of the population self-identifies as Quechua, followed by some smaller groups including Aymara, Guarani, and Mojeños Chiquitanos. The presence of immigrants from the high lands leads to distinct organizations, whether the residents are part of a planned or spontaneous colonization process. Also, the process of organizing into syndicates, cooperatives, etc. is linked to the anteriority of the colonization process. There are also many differences in land access depending on the municipality, the expansion of agriculture, the type of production and level of wastewater treatment.

Given that the Project will finance participatory planning processes and adaptation subprojects in river basins where Indigenous peoples are present, the Indigenous peoples Policy has been triggered and the procedures and instruments provided in this Policy will facilitate the participation of Indigenous peoples in Project processes and benefits. An Indigenous Peoples Planning Framework (IPPF) will be prepared for the Project as the specific subprojects will not be defined until project implementation. The IPPF will be informed by a social analysis to be carried out during project preparation. The social analysis will be inclusive of interviews and meetings with Indigenous organizations at a national level and a review of existing literature and experiences of Indigenous peoples and climate change specific to Bolivia and the basins to be supported by the Project.

The IPPF will establish an indigenous participation process to ensure that indigenous people have the opportunity to participate in Project planning processes and benefits. This will include a participatory strategy at three different levels: at the national level aimed at Sub-component A.2, at the regional level aimed at Sub-component B.2, and at the local level aimed at Component C. Regarding the implementation of component C comprised of structural and non structural subprojects, the IPPF will include lessons learned from previous operations carried out by the FPS in terms of (i) the identification of community demand established in Bolivian legislation through the Popular Participation Act, (ii) the prioritization

process for the preparation of the POAs and PDMs, (iii) the division of responsibilities among the various sub-national and local public investment agents, and (iv) the instruments applied in the project cycle and which are defined in the Operations Manual of the FPS, especially the social assessment. It will include specific procedures and institutional responsibilities to ensure that social assessment are carried out for all subprojects with Indigenous Peoples and that these assessments are inclusive of processes of free, prior and informed consultation and a documentation of broad community support for the subproject. Since the subprojects are demand driven, it is expected that in the majority of the cases the subprojects in themselves can be considered the IPPs. However, this will be assessed further through the social analysis and the IPPF will outline the criteria to determine if and when additional IPPs are necessary.

During project preparation the nature of the subprojects eligible for project financing will be defined. The nature of the subprojects considered at project identification stage are small reservoirs for water storage; small community-based irrigation projects (new ones and improvement of existing ones); measures to protect the watershed, such as reforestation and river defense measures to avoid flooding, that may require the use of land. The location of those subprojects will only be known during project implementation as a result of a demand-driven process. For these reasons, it was decided that a Resettlement Policy Framework will be prepared during project preparation.

The project will not finance any activities that create or enforce restrictions in access to Protected Areas and therefore a Resettlement Process Framework is not necessary.

E. Borrowers Institutional Capacity for Safeguard Policies

The Ministry of Environment and Water and the Departmental Governments of Santa Cruz and Cochabamba have the capacity to deal with implementation of environmental and social safeguard policies. However, an inception training event on safeguard policies would be useful to clarify concepts and the scope of each safeguard policy triggered for this project.

A full time experienced environmental specialist as well as a social specialist will be part of the team at the Project Implementation Unit within the Ministry of Environment and Water. These specialists will be responsible for supervising respectively environmental and social management and safeguards implementation, particularly during the formulation of the River Basin Plans and the design and implementation of structural measures in the sub-basins, with the support of two experienced and knowledgeable focal points on safeguards issues for this project, based in the Departmental Governments corresponding units. Detailed institutional arrangements for safeguards management and safeguards instruments preparation and implementation will be analyzed during preparation.

The borrower will prepare a social analysis to inform the design of the Indigenous People Planning Framework that will collate available information on social, cultural and political characteristics of the potentially affected indigenous communities. Given the significant presence of Quechua population in the basin of Mizque, during implementation processes of consultation and participation will be developed in their native language whenever it is possible, thereby also encouraging the participation of women.

F. Environmental and Social Safeguards Specialists on the Team

Raul Tolmos (LCSEN)

Alonso Zarzar Casis (LCSSO)

Maria Ruth Llanos Vda De Navarro (LCSEN)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

| Safeguard Policies | Triggered? | Explanation (Optional) |
|-------------------------------------|-------------------|---|
| Environmental Assessment OP/BP 4.01 | Yes | <p>The team decided to trigger this safeguard given the potential impacts mainly related to structural and non structural subprojects under sub-component 3 in Component B (e.g. works, good and services and technical assistance). Given the project's main focus on adaptation to climate change and improved resilience capacity in two sub-basins of the Rio Grande (Mizque and Pirai), a category B is proposed. The project is expected to have significantly positive environmental outcomes as it will support implementation of an Integrated River Basin Management system in selected sub-basins, access to more integrated and reliable climate and water information and adoption of better practices in targeted production systems, natural habitats and settlements in the two pilot sub-basins. Possible negative impacts from these small-scale investments are expected to be low, localized and reversible. Given that location and type of structural measures (subprojects) are still unknown, project preparation will include an Environmental Management Framework (EMF), prepared by the client and reviewed by the Bank.</p> <p>The proposed EMF should provide for systematic supervision, technical assistance and strengthening of capacities to manage safeguards as appropriate.</p> <p>In particular, there is a lack of environmental baseline and incomplete understanding/knowledge of environmental degradation processes and interactions among them that should be addressed in the River Basin Management Plans to be prepared .</p> |
| Natural Habitats OP/BP 4.04 | Yes | <p>The team decided to trigger this policy given that critical natural habitats are comprised by the sub-basins (e.g. Amboró National Park and Valles Cruceños departmental protected area in Santa Cruz) where structural and non-structural subprojects under component 3 will be implemented. The EMF will ensure this policy is fully addressed and implemented appropriately. The EMF will identify and consider critical natural habitats in selected sub-basins.</p> |

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| Forests OP/BP 4.36 | Yes | The team decided to trigger this policy given the predominance of forest ecosystems in the Pirai River sub-basin in Santa Cruz. Some of these forest ecosystems harbor important biological resources (e.g. Amboró National Park). |
| Pest Management OP 4.09 | Yes | The team decided to trigger this policy given that sub-projects to be supported in the agriculture sector might involve the increased use of agricultural pesticides with the subsequent environmental impacts on human health and natural habitats. The proposed EMF will consider appropriate measures and include resources for institutional strengthening, training, and safety equipment within a pest management plan to be prepared. |
| Physical Cultural Resources OP/BP 4.11 | Yes | The team decided to trigger this policy given that it is likely that physical cultural resources may be found particularly in the Andean region where the Mizque River sub-basin is located. During project preparation the team will determine if project activities will impact any known physical cultural resource. The EMF will then describe the actions that will be taken to minimize and manage likely impacts. The EMF will include clear procedures for reviewing sub-projects for physical resources issues and to manage chance finds in accordance with Bank policy and the national legislation. |
| Indigenous Peoples OP/BP 4.10 | Yes | The team decided to trigger this safeguard because indigenous people are present in the project area. The borrower will prepare an IPPF under the team supervision, as explained above. This IPPF will outline procedures to ensure participation of Indigenous peoples in: (i) the design of participatory planning tools at a national level, (ii) basin level planning processes, and (iii) the design and implementation of subprojects that might have impacts that are expected to be positive, on some indigenous communities but that have not yet been identified. The IPPF will establish the consultation and disclosure mechanisms of IPPs (or subprojects that qualify as IPPs when they are designed by communities that are overwhelmingly Indigenous) that will eventually be prepared under the IPPF, as well as the appropriate mechanisms for monitoring and reporting. |
| Involuntary Resettlement OP/BP 4.12 | Yes | The team decided to trigger this safeguard because there might be need to use land for some infrastructure works. However, the nature of the subprojects to be financed under component C will only be known during implementation. For this reason a Resettlement Policy Framework will be prepared during project preparation. A Process Framework is not necessary as the project will not finance any activities that could introduce or enforce restrictions of access to protected areas. |
| Safety of Dams OP/BP 4.37 | Yes | The team decided to trigger this policy given that irrigation or flood control infrastructure, small dams, or water retention structures might be required within sub-projects identified in the integrated river basin management plans for selected two sub-basins. |
| Projects on International Waterways OP/BP 7.50 | No | |
| Projects in Disputed Areas OP/BP 7.60 | No | |

III. SAFEGUARD PREPARATION PLAN

A. Tentative target date for preparing the PAD Stage ISDS: 28-Jun-2012

B. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing¹ should be specified in the PAD-stage ISDS:

The safeguard-related studies should be initiated in May 2012 and completed by August 3rd 2012.

IV. APPROVALS

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| Task Team Leader: | Name: Marie-Laure Lajaunie | |
| Approved By: | | |
| Regional Safeguards Coordinator: | Name: Glenn S. Morgan (RSA) | Date: 22-May-2012 |
| Sector Manager: | Name: Karin Erika Kemper (SM) | Date: 08-Feb-2012 |

¹ Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.