

Project Name Argentina-Argentina Drainage Infrastructure...
Management

Region Latin America and Caribbean Region

Sector Urban Management; Urban Environment;
Other Water Supply & Sanitation

Project ID ARPE57453

Borrower(s) THE REPUBLIC OF ARGENTINA

Implementing Agency
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MINISTRY OF ECONOMY
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2012
Implementing Agency: UCPFE (SUCCE) + SUPCEs
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Environment Category A

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1. Country and Sector Background

2.1 Main sector issues: Increasing frequency and magnitude of urban flooding in large metropolitan areas: One of the most important sector-related issues affecting Argentina is the high cost related to the recurring flooding of important highly urbanized metropolitan areas throughout the country. The magnitude of these flood-incurred costs ranks Argentina 1st in Latin America and 14th worldwide. The number of urban areas affected by flooding and the frequency of flooding events is increasing year by year. This has prompted an urgent demand for technical and financial assistance from municipal and provincial governments. Although flooding affects the entire country, flood origin and characteristics vary according to four main geographic regions: (i) Capital Federal and surrounding municipalities of Gran Buenos Aires, a special case in terms of its high level of urbanization (12.6 million inhabitants or 42% of total population) and economic importance, and located on a very flat and low-lying area; (ii) Urban centers within the Paraná basin, a subtropical region with high annual rainfalls that often coincide with high river elevations; (iii) Andes foothill provinces (Cuyo and Northwestern provinces) with their intense, short-lived rains and rapid snowmelts that produce flashfloods; (iv) The recent convective rainfalls of high intensity over limited area that are responsible for floods in Patagonia and the southern provinces. High levels of

urbanization, lack of organized urban planning and uncontrolled settlement. Flood damages are exacerbated by high-density urbanization (69 % of the population resides in urban centers larger than 50,000 inhabitants, of which 51.4% reside in urban centers larger than 200,000), and the fact that the majority of these urban centers is located on flood-prone low lands or flood plains of major rivers. Urbanization reduces natural drainage through "impermeabilization" from paving, construction and other activities that cover the soil, thus increasing peak flows. In addition, lack of urban planning regulation or its enforcement has led to uncontrolled settlement of predominantly low-income dwellers in the more flood-prone locations, resulting in the poor being disproportionately affected. Lack of institutional capacity: Another issue of great importance influencing the sector is the lack of institutional capacity at all government levels. This weakness has resulted in confused responsibilities and accountabilities, and has severely inhibited the necessary cross-jurisdictional investments and cooperation required for adequate drainage management, planning, operation and maintenance. The current situation is characterized by under-funding and deterioration of Argentina's drainage infrastructure, the use of obsolete stormwater drainage practices and a severe lack of technical information, standards and best practices. Although revenue-generating utilities have been restructured or privatized over the past few years to improve performance and quality of services, these changes have not been extended to non-revenue generating infrastructure services, such as flood protection and drainage management. Consequently, a sustainable financial policy for cost recovery of drainage management, operation and maintenance, emergency response, and capital investments needs to be developed. Increased urban pollution associated with urban flooding: A fourth important aspect is the poorly defined environmental and water resources management framework, and associated regulation, monitoring and enforcement. The environmental impact from flooding is severely affecting surface- and ground-water quality due to uncontrolled run-off, illegal residential and industrial connections into stormwater drains, and combined sewer overflows. Inappropriate handling of solid waste: Lastly and importantly, lack of solid waste collection, inadequate disposal practices and uncontrolled dumping have resulted in blockages and operations and maintenance problems of storm-water drains, pollution of the environment and social risks in terms of health and quality of life.

2.2 Government Strategy:

Although no specific urban drainage and flood prevention strategy is yet in place, the government has acknowledged the need to intervene in the sector in order to reverse the current situation in which floods continue to paralyze important metropolitan areas in the country for considerable periods of time. Federal and provincial governments view this program as the culmination of past flood prevention and drainage activities in Argentina. Projects executed in the 1990s include the rehabilitation of public infrastructure damaged by river flooding in the littoral region and other areas, and prevention of recurrent flooding in the Paraná river basin. During the execution of these projects, which were successfully rated, the urgent need to solve serious urban flooding became evident. As a result, a number of micro-drainage improvement projects, encompassing significant investments (US \$57.7 million) were financed under IDB and IBRD municipal operations. However, the macro-level drainage issues which constitute the underlying root causes are not yet being addressed in a structured way. The proposed project is designed to address these overarching issues and complement the micro-drainage initiatives already underway (funded by

others). Federal and provincial governments have actively participated in the preparatory activities for this program, which included field trips and research on best practices, workshops in Argentina and abroad, and the acquisition of project preparation funds. Based on these activities, the government's strategy focuses on prioritization of investments in macro-drainage infrastructure based on cost-benefit analysis, as well as a significant institutional strengthening component, incorporating the conclusions from recent sector work on water resources management. Considering the urgency of the problems encountered and the overall investments required to adequately alleviate and prevent flood and drainage problems (estimated to total US \$3-4 billion), the government expects the project to play a crucial role in prioritizing, optimizing and leveraging the required financial and technical resources envisaged.

2. Objectives

The project development objective for APL 1 is to develop sustainable institutional and physical capacity to reduce the high economic, financial, environmental and social costs associated with urban flooding, by supporting the government in its efforts to solve flooding and urban drainage problems in 3 large, flood-prone metropolitan areas through: (1) Institutional strengthening of federal, provincial and municipal government agencies. (2) Implementing priority infrastructure investments.

3. Rationale for Bank's Involvement

The unique combination of expertise in institutional reform, technical and financial assistance in the sector, mainly determines the value added of Bank support in this project. Extensive understanding of the problems related to urban flooding and drainage is available within the Bank, due to long-term involvement through a number of flood prevention and other sector related projects both within Argentina as well as on a global scale. Considering the complexity of the project, - encompassing such areas as drainage infrastructure, natural resource management, environmental improvement, pollution prevention and control, urban planning and infrastructure, institutional reform, consultation and participation of local communities-, experts on all of these areas are available within the World Bank Group for project preparation, and can be consulted throughout project life. The availability of this expertise in-house ensures a common, integrated and team-based approach which will significantly contribute to the success of the project. Bank funding will bring credibility and management discipline to the project through established procedures and guidelines, as well as regular supervision, evaluation, progress and audit reports. Bank financing will constitute a huge leverage mechanism to access sufficient funding for the overall investments required in the sector (estimated to total US \$ 3-4 billion) and will likely attract co-financing. This leverage will also permeate down to local level in allowing small scale local micro-level drainage projects to piggy-back onto the institutional and infrastructural reforms envisaged through this program.

4. Description

- (1) Institutional strengthening.
- (2) Investments.
- (3) Project management.

5. Financing

	Total (US\$m)
BORROWER	0.00
IBRD	250.00
Total Project Cost	500

6. Implementation

The total time frame of the three-phase APL program will extend over ten years from 2002-2012. The first phase of the program will last 5 years, from initiation of the loan in 2002 to 2006. The borrower will be the Republic of Argentina for sub-lending to the Government of the City of Buenos Aires and two other Provincial Governments of the main metropolitan areas covered by the program, following currently prevailing lending arrangements between federal and provincial governments. Although the main metropolitan areas to benefit from the program have already been identified, prioritization will be finalized with the federal government during project preparation, based on seriousness and frequency of flooding problems, commitment to institutional reforms, credit worthiness, and other eligibility criteria. The responsible agency will be the Secretariat of Public Works of the Ministry of Economy of the Federal Government. The current Coordinating Unit for Projects Financed by Multilateral Organizations, UCPFE (formerly SUCCE), and its decentralized Provincial Flood Emergency Coordination Units (SUPCE), will be thoroughly reviewed during project preparation to identify any improvements necessary and possible alternatives for project implementation. Additional Sub-Project Management Units (PMU's) may need to be established in metropolitan areas to benefit by the project. In that case, these local project management units would be established in close coordination with the sub-borrower, provincial and municipal authorities. Extensive consultation, participation and public awareness activities are being envisaged as part of the project, requiring the need for close collaboration with local community groups, regulatory authorities and NGOs. Execution and supervision of the construction and implementation of the drainage infrastructure investment program will be conducted through general contractors and project management consulting services. The feasibility and design studies (including alternatives) for some of the project's main infrastructure investments, such as the Arroyo Maldonado Drainage System in the City of Buenos Aires, are presently being prepared as part of on-going operations. Detailed designs for some of these investment components will be completed during project preparation, allowing a well prepared rapid start up of construction activities and loan disbursement. Detailed designs for physical infrastructure investments and institutional strengthening activities to be carried out under APL2 will be prepared during the execution of APL1 and for APL3 during execution of APL2. A sector wide Environmental Impact Assessment of the project will be prepared and reviewed by the Bank prior to appraisal. Financial management, accounting, financial reporting and auditing arrangements: Disbursement arrangements will be finalized during project preparation but will most likely follow present practices, with the central PIU serving as overall coordinator for the provincial executing PMUs. The central PIU will be responsible for the preparation of all project reports (financial and non-financial), and management of project bank accounts in accordance with international accounting standards and World Bank procedures. Independent auditing of project accounts will be performed according to procedures agreed with the government of the Republic of Argentina. The coordinating

unit will prepare and submit quarterly project management reports (PMRs) which will summarize project progress in terms of financial activity, key performance indicators and procurement, while also serving as disbursement requests.

7. Sustainability

Long term sustainability is incorporated into the project design through a substantial institutional strengthening component. This component is described in more detail above and includes the following main issues: Institutional and regulatory reform to ensure adequate long-term storm drainage management and flood prevention regulatory frameworks. Capacity building of responsible government agencies and institutions through institutional reform, training and active participation in the decision making processes. Design and implementation of sustainable cost recovery mechanisms for drainage infrastructure management, operation, maintenance and investment. Stakeholder participation and beneficiary involvement throughout project life, to ensure awareness of drainage and solid waste handling best practices and promote a sense of ownership. In addition, the triggers for each program phases are designed to ensure that conditions critical to the sustainability of the project are met before each phase of the program becomes effective (section B4). One of the main issues to be addressed is the continuing government and beneficiary support for the project. This will be achieved by stimulating all stakeholders to take an active part in the decision making process with respect to project execution, through a well designed participation program.

8. Lessons learned from past operations in the country/sector

Slow disbursement: One lesson learnt from the past is that Bank financed projects in Argentina are generally slow to meet disbursement projections. A significant part of the observed delays is related to required engineering design and preparatory activities before infrastructure works can begin. The phased Adjustable Program Loan will be one of the main instruments to minimize these delays, by ensuring that the necessary institutional strengthening and preparatory studies are completed before entering the next phase of the program. For the first phase of the APL, preparatory engineering design studies are financed under separate and ongoing operations during project preparation and will hence be completed before the project becomes effective. Furthermore, it is hoped that this phased approach will resolve the dichotomy that exists between the rapid disbursement of funds to meet current Bank indicators of project progress and success, and the adequate assurance that basic institutional and regulatory conditions are met, to prevent important compromises being made regarding the quality of the project. Unjustified and costly emphasis on new infrastructure investments: A review of recently completed urban drainage projects and proposed capital improvement projects in several urban areas, reveals a tendency to still rely on the construction and expansion of infrastructure to rapidly convey peak flows downstream. Not only is this strategy very costly in terms of capital investments and operation and maintenance costs, it also exacerbates flooding problems downstream, often affecting neighboring communities. Prevailing drainage best practices as presented in recent workshops and sector work, have prompted the rejection and reconsideration of proposed investments by their own former proponents and their interest in alternative low cost strategies. Therefore, the proposed project strategy contains the

following hierarchy of priorities: (i) Maximize existing infrastructure capacity through rehabilitation and emergency repairs, the development and implementation of adequate operation and maintenance strategies, enforcement of non-structural practices related to land zoning, urban planning, adequate solid waste disposal and increase in public awareness to guarantee their enforcement. (ii) Identification of priority drainage bottlenecks and remedial measures, focusing on minimizing investments through establishment of acceptable levels of flood duration and intensity and cost-benefit analysis according to pre-determined criteria. Technical assistance will also be provided for preparation of integral master plans for drainage basins with emphasis in the retention of run-off. This will minimize design peak flows, and hence infrastructure costs, and abate pollution to downstream water bodies. (iii) Extension of storm water drainage basin coverage through new infrastructure assets where necessary, with the provision that any infrastructure investment financed by this project will have to be justified by a comprehensive master plan or an appropriate study.

Quality and retention of key personnel: Another lesson learnt is the benefit of having well trained and experienced professional staff which have extensive experience in dealing with both central and provincial coordination units. Given the considerable institutional strengthening envisaged, personnel should be selected based on their capacity to coordinate a range of government and provincial agencies at different levels and to lead the reform agenda. The project will aim to institutionalize these coordination units so that the skills developed during project execution remain at the service of the entire country once the project is completed.

Participation in institutional strengthening on voluntary basis: Lessons learnt from previous projects have identified the problems associated with a more or less voluntary participation of different government authorities in the institutional strengthening component of a project, without economic consequences in case of non-compliance of the participants. Considering the complex nature of the institutional and regulatory reform required, a phased approach as provided by the APL is thought to mitigate against this risk through thorough incorporation of this provision into the triggers between each consecutive APL phase. Furthermore, political coherence between different levels of government should constitute a basic condition to effectively implement institutional reform and technical assistance programs. In the same context, local government's explicit commitment to institutional strengthening should be established in order to participate in the project. One way to obtain this commitment is to stimulate provincial and local authorities to take an active part in the decision making process with respect to project execution, through a well designed participation program.

Cost recovery: In addition to the previous point and based on lessons learnt from municipal development projects in Argentina, sustainability of the investments made can only be ensured through a financial mechanism for cost recovery to provide for adequate operation and maintenance. Cost recovery of a certain percentage of investments made, should be a condition to funding and incorporated into the agreements made with provincial and municipal borrowers.

Competitive allocation of resources: To prevent delays in disbursement as mentioned earlier, competitive allocation of resources based on actual disbursement (first request received, first disbursement made) should be promoted. This can be incorporated into the project disbursement design by avoiding a rigid allocation of funds per provincial government or metropolitan center and consequent re-allocation during project life.

Well designed performance

indicators. Indicators should be realistically designed to capture the impact of the project, especially with respect to quality of life and environment. To this extent, baseline studies should be conducted before commencement of the project, to compare these less identifiable indicators before and after project intervention. Of course the value of measuring these indicators should be weighed against the cost of such activities. Counterpart fund shortage and financial risk: The performance of even the best prepared project will turn out unsatisfactory if there is lack of local counterpart funding. Given the levels of funding required, solid agreements need to be in place with the borrower and sub-borrowers regarding the availability of counterpart funding. Also, active co-financing will be sought during project preparation to lower the levels of counter-part funding from the borrower. Another option to mitigate against the risk of counterpart fund shortage is the request for an exclusive, independently audited counterpart funding account. Financial capacity of the borrower and sub-borrowers should be assessed thoroughly before project effectiveness to mitigate against financial risk. However, the phased approach of the APL will help to match the financial capacity of the borrower.

9. Program of Targeted Intervention (PTI) N

10. Environment Aspects (including any public consultation)

Issues : Major issues to be addressed: A key characteristic of this project is the wide variety of sub-projects to be financed, their geographic dispersion and their different preparation requirements. Proposed financing through an APL implies that the environmental aspects of all specific projects in the Program cannot be analyzed in detail prior to project appraisal. Analysis of the preliminary proposals considered by individual provinces indicates that: (i) Some of the sub-projects likely to be financed could have significant environmental impact, including the possibility of relocations, which would automatically label this project as Category A (as per Operational Policy 4.01). (ii) Extensive and sometimes overlapping environmental legislation exists at different jurisdictional levels (federal, provincial and municipal), which could lead to inconsistencies when applied to the sub-projects. (iii) Institutional weakness in handling environmental issues still exists, although great progress has been made as part of the execution of the Flood Prevention Project. (iv) Adequate methodologies or criteria for sector-wide environmental analysis during project design, construction and operation are not yet available. Other issues: Other issues associated particularly with drainage works are: (i) Direct impact of construction works in urban settings. (ii) The balance to be struck between the protection of the river basin's natural resources and that of adequate urban development. (iii) The effects of drainage infrastructure improvements on surface water quality (including run-off), groundwater quality and industrial/commercial basin areas (pre-treatment requirements). (iv) Development of mitigating strategies against erosion and sedimentation problems. Interventions proposed for the first phase of the APL are unlikely to entail population resettlement. However, in any case a social assessment will be conducted for this project, including a thorough resettlement issues evaluation in order to propose, prior to appraisal, the appropriate policy, methodology and tools to address resettlement needs in all phases of the project.

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Note: This is information on an evolving project. Certain components may not be necessarily included in the final project.

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