

STRENGTHENING OF RURAL COMMUNITIES

(VE-0126)

EXECUTIVE SUMMARY

Borrower:	Bolivarian Republic of Venezuela	
Executing agency:	Agriculture and Food Branch (VMAA), through its Rural Development Directorate (DGDR)	
Amount and source:	IDB: (OC)	US\$10 million
	Local:	<u>US\$10 million</u>
	Total:	US\$20 million
Financial terms and conditions:	Amortization period:	20 years
	Grace period:	30 months
	Disbursement period:	30 months
	Interest rate:	variable
	Inspection and supervision:	1%
	Credit fee:	0.75% on undisbursed balance
	Currency:	U.S. dollars chargeable to the Single Currency Facility of the Ordinary Capital
Objectives:	The program will develop an innovative approach for rehabilitating and completing the privatization of small irrigation systems in the states of Mérida, Táchira and Trujillo. This will help strengthen rural communities with economies that rely on those systems.	
Description:	<p>The beneficiaries are middle-income producers with an average of 2.36 hectares of land each, which they hold in private ownership. The rehabilitation and completion of transfer of ownership will benefit: (i) 1,960 of the 25,178 families who operate these systems; (ii) 70 of the 896 systems, and (iii) 4,620 of the 60,000 hectares covered by the small irrigation systems.</p> <p>Seventy percent of the funds will be allocated to rehabilitate small irrigation systems that were constructed 25 years ago. The irrigators, organized in associations, will contribute the labor and will be able to access on a one-time and reimbursable basis to the capital financing facility offered under this program for purchasing the equipment. The irrigators will also perform installation work, thereby reducing the</p>	

high costs commonly incurred by the public sector for these rehabilitation efforts.

Demonstration projects and studies on predefined topics would be available to support actions in microwatersheds in which a number of systems are to be rehabilitated, with the aim of achieving synergy in marketing actions or in environmental management, protection or recovery activities that present clear externalities and cannot be effectively implemented in isolated small systems.

The executing agency will use the technical and administrative services of the Inter-American Institute for Cooperation on Agriculture (IICA), a specialized multilateral organization, to avoid creating institutional structures to address a temporary matter involving rehabilitation and full transfer to the irrigators. The rehabilitation component will be carried out with support from a commercial bank, which will manage a facility on behalf of the executing agency for irrigation infrastructure capital investments.

Three components are included:

1. **Sustainable rehabilitation of irrigation systems (US\$14 million).** Under this component, which is designed to secure the privatization of the systems, the capital for materials and small equipment items for rehabilitation will be financed for the producers. The financing will be on a one-time basis and subject to repayment and maintenance of the value of the principal. In order to ration the limited funds available and ensure achievement of the program's objectives, a competitive mechanism will be used that includes *eligibility* conditions in conjunction with criteria for assigning *preferences* according to a rating system. The *eligibility* requirements include certification of the existence of sufficient water for irrigation, compliance with environmental legislation, confirmation of the private ownership of the land, regularization of the ownership of the systems, and contribution of labor; provision of a joint and several guarantee for repayment of the principal; and organization of the irrigators into registered associations. The *preference* criteria include contribution of capital in cash, proposals for environmental protection, mitigation or recovery actions at farm level, and degree of participation in processing and marketing projects. The rating mechanism will encourage joint proposals from more than one association, if such proposals facilitate studies or small demonstration, environmental or marketing projects at microwatershed or watershed level.

2. **Demonstration projects and studies (US\$2 million).** To strengthen its innovative aspects and take care of externalities that will facilitate future expansion of the approach, the program includes a mechanism for financing, on a nonreimbursable basis, studies and small demonstration projects. The *eligibility* criteria for this component require that the work be done in support of municipalities in which various irrigation systems are being rehabilitated, and that the studies or projects generate knowledge for building consensus on solutions to constraints on marketing, postharvest processing or natural resource management. The component will be executed through municipalities, thereby strengthening the local sustainability of the program's objectives.
3. **Monitoring and evaluation for learning (US\$450,000).** Because of its innovational nature the program requires special monitoring and evaluation of the lessons it generates. Monitoring by third parties unconnected with the executing agency will be financed in order to establish baselines and evaluate experience gained in: (i) technical and economic analysis of projects in components 1 and 2; (ii) compliance and consistency with environmental objectives and regulations; and (iii) follow-up on opinions and views expressed by a panel of social actors in the program area. The external monitoring includes a midterm evaluation and will facilitate adjustments during execution.

The monitoring and evaluation process will make it possible to assess the success of the innovative aspects, verify whether the program environmental guidelines were adopted, whether the social actors are satisfied with the experiment, whether the associations benefited have begun to repay the principal satisfactorily, and whether different national sources have made contributions not included in the program budget. In addition, the evaluation should provide evidence concerning aspects that are not innovative but important for a possible expansion of the approach, such as the effective rate of return of the investments, cost-benefit of environmental management practices, and adverse distribution effects that might have unduly delayed participation by low-income producers.

When the execution of the program is completed, a final evaluation will make it possible to decide on such benefits and modifications as may be necessary for expanding the approach to Venezuela's entire Andean irrigation zone.

Justification for an innovation loan:

The rehabilitation approach that the program will demonstrate has not been tried out in Venezuela. While the government has shown interest and interest on the part of producers has also been detected, there is no guarantee of demand that would warrant undertaking rehabilitation of all systems in the Andean area without a prior pilot experiment.

The justification for an innovation loan program is based on the fact that the program will make it possible to gain experience in the sustainable management of irrigation, thereby demonstrating the potential of an approach for overcoming problems in Venezuela's Andean region.

Situation without program	Program approach
Designs made by the public sector, with high costs of installation by contractors.	Irrigator participation in design and procurement will bring costs down below those commonly incurred by the public sector.
Capital equipment/materials donated by the State.	Will recover 100% of the investment cost.
State responsible for system maintenance and rehabilitation.	Will ensure private ownership, registering the systems and making operation and maintenance the irrigators' responsibility.
Environmental programs separate from agricultural development.	Will facilitate integration of productive systems with environmental protection, mitigation or recovery actions.
Actions carried out in isolation or hard to coordinate among public agencies. Municipalities with environmental responsibilities and projects lacking a framework for implementation.	Will coordinate agencies at local level around specific projects that are simple to implement.
Isolated grants of equipment and materials.	Will ensure transparency by announcing in advance the conditions for access to the competitive financing and by guaranteeing the public nature of the financing decisions.

The rehabilitations only need simple designs and can be implemented in less than two months, which will make it possible to obtain the

results sought within the implementation period set for innovative programs.

**The Bank's
country and
sector strategy:**

The program contributes in two of the four major thrusts around which the Bank's action in Venezuela is concentrated. By promoting sustainable projects and improving resource use, the productivity and competitiveness of nonpetroleum resources will be increased. In institutional cooperation, a better way of coordinating government actions will be demonstrated, by organizing it on the basis of specific projects proposed by the community. At the same time, the producers will take full ownership of the systems, thus relieving the State of responsibility for periodic rehabilitation.

**Environmental
and social
review:**

On 20 October 2000, the Technical Review Group of the Committee on Environment and Social Impact (TRG/CESI) reviewed the project report and made recommendations that have been incorporated in this report and in the Operating Regulations.

The projects that will be financed by Component 1 will not generate significant environmental impacts. The actions consist in replacing pipes, work that does not generate significant negative impacts on the biophysical environment. The program's environmental guidelines will be laid down in an Environmental Manual that will be prepared by the executing agency. The eligibility and preference requirements for these projects are set forth in paragraph 3.12.

The implementation of Component 2 will generate positive environmental and social impacts by supporting the execution of studies and projects that will help improve the environment and marketing and contribute toward understanding of variables important for management of the natural resources in the watersheds.

The implementation of Component 3 will contribute to the evaluation of the rehabilitation experiment by means of external and independent audits for evaluating fulfillment of the environmental objectives and standards. Environmental and social problems detected during implementation, together with any others brought to light by the monitoring and evaluation process will be fed back to the executing agency.

The program will also favor rehabilitation projects involving other agencies, as regards environmental sustainability at farm level.

Benefits:

The program will foster accomplishment of long-term objectives by helping to build social consensus for better water and soil management in the watersheds. The methodology that will be tried out will be evaluated and, if need be, adjusted as indicated by the

continuous evaluation process. The main achievement expected is for sustainable programs to be launched for rehabilitating the small-scale irrigation systems throughout Venezuela's entire Andean zone. This will make it possible to strengthen the rural communities that depend on the small irrigation systems.

The main benefits are long-term in nature and they will only be generated if the usual way of handling the urgent problem of small irrigation system rehabilitation is changed, because the usual way is not sustainable, in particular since it reinforces a tendency for the producers to depend on the State instead of consolidating sustainable development of irrigation and of the communities dependent on it.

Risks:

Risk connected with institutional innovation. The program faces risks due to the solution it proposes at the national level consisting in deconcentrating its implementation and using temporary services for rehabilitating and completing the privatization of irrigation systems. The implementation is simplified by utilizing a contract providing for administrative and technical support for the executing agency, and a trust contract with a commercial bank.

Loss of interest. While the program will start with government interest and coordination of public agencies, there is always the risk that this interest might fade, especially in light of the pressing urgency of rehabilitating many irrigation systems. If the government loses interest in the new approach and donates the materials for rehabilitation, the irrigators will not participate in this program. In order to lessen this risk, the program will coordinate the ministries having central responsibility in national, regional, agricultural and environmental planning. The state and local governments have also been leading actors since the design phase.

Lack of interest in the studies and demonstration projects. If the studies and demonstration projects are not carried out (Component 2), the program will lack information, additional useful experience and consensus on some topics crucial to its expansion, as could be the case with a projection of water supply and demand. These studies and projects will only be performed if they are requested by the communities, something which might conceivably not happen. The program will assign funds and responsibilities for promoting execution of these studies and projects.

Special contractual conditions precedent to the first disbursement:

In addition to compliance with the requirements specified in the General Conditions (Article 4.01 of the Loan Contract), before the first disbursement can be made the executing agency will be required to submit: **(i) evidence that the program Operating Regulations have entered into force (see 2.8); (ii) the contract with the Inter-American Institute for Cooperation on Agriculture (IICA), duly signed (see 3.2); (iii) the contract, duly signed, with a commercial bank for the administration of a trust to be used by the program (see 3.26); and (iv) the implementation plan for the first semester (see 3.9).**

Poverty-targeting and social sector classification:

The proposed program does not qualify as a poverty targeted investment either geographically or as regards its beneficiaries.

Exceptions to Bank policy:

See the section on Procurement, below.

Procurement:

As an exception to the procedure of selecting consultants by open calls for proposals, direct contracting of the IICA is recommended. This agency will perform any type of procurement, contracting of consultants or other activities required, pursuant Bank procedures. This contracting is consistent with the provisions of Chapter GS-403 of the Procurement Manual (see paragraphs 3.2-3.7).

The cost of services to be contracted for with the IICA is estimated at not more than US\$350,000, with the respective contract being for the 30-month execution period.

The ceiling amounts above which procurement for this project will be by international competitive public bidding are: US\$350,000 for goods, US\$3 million for works and US\$200,000 for consultancy services.

I. BACKGROUND

A. Innovative experiment

- 1.1 The program stems from the valuable experience gained during years of cooperation with Venezuela's agriculture sector and with the country's rural areas. The experience gathered in this way hectares made it possible to identify topics and programs in areas on which there is sufficient technical and operating consensus to warrant defining relatively substantial operations. At the same time, there are other areas in which possible investments of some magnitude have been identified, without there being a consensus as to the best approach for implementing those investments. The topics for approaches have to be determined before ambitious operations can be launched relate primarily to rural development and the strengthening of rural communities that have already moved through the first stages of rural development.
- 1.2 The fact that the government wishes to ensure private ownership of the small Andean irrigation systems, after rehabilitation of these systems, will make it possible to try out methodologies that are less conventional and, therefore, less likely to face a significant challenge. The experiment that is to be undertaken by means of an innovative program will make it possible to validate a methodology or define an alternative that can be used for extending the results to Venezuela's entire Andean zone.
- 1.3 The innovative mechanisms will be demonstrated in areas where small irrigation systems are currently in use and which are in process of consolidating the economic and social progress achieved since such irrigation was first introduced on an extensive scale.¹ The irrigation systems applied made it possible to achieve profitable and diversified production, which is now jeopardized by the deterioration of the systems, combined with the fact that the usual methods employed for rehabilitating them minimize the users' commitment and do not contribute toward resolving environmental problems in the zone, while also involving continuation of a grant-based approach that is no longer essential.

B. The Andean zone and small-scale irrigation

- 1.4 The innovative program will be implemented in the Andean zone where small-scale irrigation² is used in the states of Trujillo, Mérida and Táchira. This zone offers a high probability of completing the implementation of the program in a couple of

¹ Small irrigation systems were first introduced on a widespread scale 25 to 30 years ago, when the public sector began to construct such systems on farmers' land, raising the irrigable area in three states from 10,000 hectares to 60,000 hectares and bringing about a radical change in the traditional agriculture practices then followed.

² No system covering more than 223 hectares has been inventoried in the zone. Depending on the state, the average system area ranges between 50 and 70 hectares.

years, since it combines very good agricultural productivity with investments in infrastructure and is not affected by land-tenure problems. The relatively low cost of rehabilitating an irrigation system in this zone, the simplicity of the required designs and the fact that each rehabilitation will require no longer than a couple of months, will all help to ensure completion of the program within 30 months.

- 1.5 Production in the three states is diversified, covering more than 43 fruit and vegetable items, with incipient aquaculture and growing agrotourism; intensive irrigated agriculture is practiced and the infrastructure and systems giving access to markets are in place. The sources of the rivers and other watercourses that supply the irrigation systems are for the most part located in the park zones. The agricultural lands used are in ravines with steep slopes and few flat valleys. In the majority of cases the crops are grown on land with slopes between 20° and 30°, although there are instances where land with slopes in excess of 45° is used.
- 1.6 In the Andean valleys there are 896 small irrigation systems aggregating 59,442 hectares with 25,178 users, an average of 66 hectares per system and 2.36 irrigable hectares per user. The deterioration of the infrastructure and the consequent limited water security for irrigating 60% of the land means that 1.42 hectares per producer is effectively irrigated, with an average of 2.5 annual harvests per hectare.

C. Irrigation policy and system ownership

- 1.7 The irrigation systems were designed and constructed by the public sector, on land belonging to low-income farmers who were then practicing traditional agriculture. The construction work was done by contractors, although in many cases the farmers contributed labor.³ The private ownership of these systems, constructed as they were on the irrigators' land, was never registered. The initial maintenance for which the public agencies were responsible was gradually abandoned. The users assumed de facto responsibility for operation and maintenance, although traditionally the public sector has provided the materials for maintenance or major rehabilitations free of charge.
- 1.8 The national irrigation policy assigns priority to the rehabilitation and restoration to full operating capacity of irrigation systems of differing sizes. The national policy also aims at ensuring the future sustainability of the systems by increasing the participation of the organized communities and implementing measures to protect the environment.
- 1.9 In the case of the small irrigation systems there is evidence that the users have capacity to pay, so the policy is to promote registration of the ownership of these

³ The tradition that the farmers contribute labor for construction and assume responsibility for maintenance also applies with regard to road access to the systems and housing and school construction plans. It is interesting to note that as public funding has become less readily available, the farmers have begun financing small priority works such as school expansions themselves.

systems, thereby formalizing the principle that the State is not responsible for maintenance or rehabilitation. This formalization of ownership is proceeding slowly, due to essentially bureaucratic reasons, but also because of lack of interest on the farmers' part when they interpret it as a formality that does not produce any change of substance for them.

- 1.10 During the meetings to discuss the logical framework and environmental review in the field,⁴ the irrigators have shown a readiness to regularize system ownership when an approach that would involve them right from the design stage was discussed with them. They would also like to be able to adjust the original design to make it consistent with their needs (subject only to technical and environmental approval), and to obtain financing and perform the rehabilitation work directly, without participation by contractors who raise the cost unnecessarily. Moreover, they frequently require regularization of the ownership of the systems⁵ because they understand that the new operating arrangements will not include any more supplies of materials free of charge. Full and formalized ownership of the irrigation systems accordingly plays a significant role in regard to sustainability, as was to be expected. The public sector has not been able to explore this way of linking the rehabilitation with full assumption of ownership, because it does not have sufficient resources and has not been able to devise a process for coordinated decision-making on prioritizing rehabilitation in light of the funds available at the municipal, state and national level.

D. Institutional situation

- 1.11 The systems include intakes in upland zones, frequently located in national parks. At various times the works have been headed up and executed by the Ministry of Agriculture and Stockraising (today part of the Ministry of Production and Trade – MPC); by state governments; by the former National Agrarian Institute; and by regional development corporations. Since its establishment in 1977, a permit from the Ministry of the Environment and Renewable Natural Resources (MARNR) has been required for constructing irrigation systems. The MARNR has responsibility for administering natural resources and makes the assessments that determine how much water each system can extract. The extraction limits set in the pertinent

⁴ See report of the participatory logical framework and environmental review mission, of 27 August – 8 September 2000, during which representatives of over 100 irrigation associations were interviewed.

⁵ Private land ownership is the norm in the Andean zone. In any event, confirmation of this ownership will be a requirement for access to financing for the rehabilitation work.

permit are normally respected by the irrigators, who set their own use and control rules.⁶

- 1.12 The chief institutional constraints arise from operating methods based on large subsidies and little beneficiary participation; these methods have been in effect since the construction of the systems, but changes are now being introduced to adjust to a new stage of development. There are a large number of national and state governmental agencies in the area. The municipalities have recently been added to the mix. They have new responsibilities resulting from the decentralization process and are also assuming environmental and rural development functions (collection and final disposal of solid waste, watershed protection, health and education). Some municipalities have joined forces in order to take care of matters of common interest, the efficient handling of which requires taking advantage of economies of scale, thereby creating a valuable precedent for dealing with priorities for consolidating the development of irrigation systems that cannot be handled effectively or efficiently on an individual basis.
- 1.13 At the central level there is little capacity for promoting a mechanism that will rehabilitate the irrigation systems and ensure their full transfer to the producers within a framework that will facilitate the systems' sustainability. What is more, since the object is to completely terminate all the responsibilities that the central government has historically assumed in the systems, it is neither necessary nor desirable to create institutional capacity to take care of the matter. At the local level, on the other hand, the municipalities have to play an integral part in the consolidation of a new stage in the development of the rural communities that depend on irrigation.
- 1.14 For the program's purposes, an important role is also played by the National Parks Institute (INPARQUES), an agency of the Ministry of the Environment and Renewable Natural Resources (MARNR), with responsibility for the national parks; the state units of the Ministry of Production and Trade (UEMPC), executing agencies in each state for the national policy in the sector; and CORPOANDES, a regional agency of the Ministry of Planning and Development which used to construct systems and is responsible for development projects in the region. In addition, the state governments have mechanisms for project preparation and financing and have at times constructed systems and donated materials for rehabilitation.

⁶ The effectiveness of the controls varies. There are numerous cases of satisfactory control by the irrigators themselves, including local checks of water extracted by other systems. The mechanisms are informal, with little possibility of effective public control. The producers recognize there are competing demands, but neither they nor the authorities seem prepared to discuss a payment for water rights. The emphasis is on reducing losses and maintenance costs, increasing volumes held in storage, achieving more efficient irrigation systems and protecting source recharging areas in the watersheds. There is therefore ample scope for generating and consolidating information, and for opening a debate on sustainability.

- 1.15 The institutional situation makes it advisable to explore alternatives that will not unnecessarily swell the staffs of national agencies at the central level for the sole purpose of accomplishing the temporary task of rehabilitating the irrigation systems and registering their private ownership. The new alternatives should facilitate coordination at the local level of the producers and the agencies with responsibilities in community development and Andean irrigation.

E. Marketing conditions

- 1.16 The uncertainty of product prices and similar marketing problems constitute a constraint to which all social actors assign a level of priority on a par with that of irrigation system rehabilitation. The commercial risk problem is common in production of perishables, especially when little postharvest processing is done. However, the marketing picture in the Andean zone is already changing with the presence of enterprises that both handle marketing and, in general, increase value added, generating nonagricultural employment.
- 1.17 The current efforts aimed at improving marketing and postharvest processing include simple organization of the producers themselves and their families for the purpose of essentially nonindustrial-scale processing and tapping of small market niches. The activities with the most impact, however, stem from external enterprises that have recently set up operations in the area that incorporate technical assistance and crop financing. These enterprises are forcing changes in varieties and technological improvements by imposing quality standards. Actions of this type should be promoted even more energetically at a stage in which development of the communities is being strengthened, thereby fostering the accomplishment of important externalities for the irrigation systems and the sustainability of the watersheds and microwatersheds. For instance, meetings with investors could be organized in order to identify priorities and constraints, so as to give added momentum to production chain projects of the type already under way in the zone.

F. Environmental situation and social capital

- 1.18 The environmental assessment findings indicate that the Andean zone has environmental problems but also has social capital that can enable it to seek more sustainable production alternatives. The development of programs to retain conservationist services, organized since the introduction of irrigation, has created the beginnings of community organization and an environmental awareness, particularly with regard to soil conservation and protection of water-source recharge areas. The organization of irrigators has been enhanced by the experience they have gained in administering and maintaining the systems.
- 1.19 Over the past 25 to 30 years, the expansion of the irrigation systems has made it possible to improve adverse environmental situations left by traditional agriculture; terracing has been introduced together with windbreaks, run-off controls, slope

reforestation and soil recovery by means of stone removal and intensive organic fertilizer use. At the same time, the research and extension services are achieving results in integrated pest and disease control and in rational soil and water use.

- 1.20 The environmental impact assessments did not identify environmental liabilities, but challenges still remain, although they are not always due to problems caused by irrigation or by the resulting intensification of production. On the contrary, the existence of the irrigation systems and the effort being put into rehabilitating them help to spur the search for solutions to problems such as: (i) loss of woods that protect water-source recharge areas; (ii) competition for water between agriculture and the urbanized areas; (iii) deterioration of water quality; (iv) persistence of certain inappropriate farming practices, such as excessive water use; (v) inappropriate use of agricultural chemicals, with negative impacts on human health and contamination of products sent to market; and (vi) incipient and insufficient organization for collecting and disposing of solid and agroindustrial wastes.
- 1.21 The challenges that remain proved resistant to earlier attempts to deal with them, largely because no means was found for sharing an overall perception of the future of the watersheds, objectively measuring costs and benefits, and allocating the unavoidable costs so as to ensure sustainability. Part of the problem is due to the fact that no economic analysis exists that would help to determine the benefits and cost of alternative sustainable management practices at farm and watershed level. This makes it hard to propose significant financing of large-scale programs in areas that could be crucial for the environmental sustainability of watersheds and microwatersheds, such as the retaining of conservationist services, which has been done on occasion with apparent success in Venezuela.
- 1.22 Utilizing the strategic support of the municipalities, which would facilitate urban/rural coordination and coordination with various rehabilitated irrigation systems, a new approach should facilitate the execution of small demonstration projects while also helping to clarify and disseminate information on key sustainability issues. In this way, the issues identified during the preparation of the program could be covered if the mayors so request, and in support of rehabilitation projects jointly submitted by associations of irrigators located in the same microwatershed.

G. Justification for considering this an innovation program

- 1.23 The justification for treating this as an innovative program lies in the fact that it makes it possible to validate the potential of an approach for resolving problems of the Andean irrigation zone in Venezuela on the basis of a pilot experiment. Execution is simple enough to make it possible to achieve results within less than 30 months.

- 1.24 The program methodology will complete the privatization process and renew the irrigation capital within a framework that assigns priority to producer participation through a transparent competitive financing system⁷ for the materials and small equipment items. The producers, organized in irrigation associations, will receive priority according to their contribution to sustainable development.⁸
- 1.25 The approach includes attention to sustainability problems that are external to the irrigation systems, by involving the municipalities, which have responsibility for dealing with such problems, and having them participate in an arrangement that finances studies and small demonstration projects. These studies and projects are intended to facilitate agricultural production being integrated into production chains (by adding value and stabilizing producer prices), and to generate economic and technical information that will facilitate sustainable soil and water management.
- 1.26 The table below summarizes the main innovative features proposed with the program's approach:

Table 1.1
Summary of Innovative Features of the Program

SITUATION WITHOUT PROGRAM	PROGRAM APPROACH
Designs made by the public sector, and high cost of installation by contractors.	The irrigators' participation in design and procurement will reduce costs that used to be borne by the public sector.
Capital equipment/materials donated by the State.	100% of the investment costs will be recovered.
System maintenance and rehabilitation a State responsibility.	Will complete private ownership, registering the systems and making the irrigators permanently responsible for operation and maintenance.
Environmental programs separate from agricultural development.	Will facilitate integration of production systems with environmental protection, mitigation or recovery actions.
Actions carried out in isolation or hard to coordinate among public agencies. Municipalities with environmental responsibilities and projects lacking a framework in which they can be implemented.	Will coordinate agencies at local level around specific projects that are simple to implement.
Isolated grants of equipment and materials.	Will ensure transparency by announcing in advance the conditions for access to the competitive financing and by guaranteeing the public nature of the financing decisions.

⁷ There have been cases in which local governments have required recovery of 50% of the value of materials, applying an agreed payment plan with a six-month grace period followed by six semiannual installments, at the agricultural interest rate (80% of market rate). The recovery rate exceeded 90%.

⁸ See paragraph 3.12.

H. Connection with the Bank's action in Venezuela

- 1.27 The Bank's action in Venezuela in the medium term will concentrate on four interrelated thrusts: (i) *Social* (helping to mitigate poverty and to develop human capital by means of better education and training and greater access to basic social services); (ii) *Economic* (collaborating in increasing the productivity and competitiveness of nonpetroleum resources, with the aim of reducing macroeconomic volatility and diversifying the economy); (iii) *Institutional* (fostering better performance by the government and in the use of public funds); and (iv) *Science and technology* (supporting the generation and use of knowledge for the purpose of collaborating in the development of human capital and working to increase the productivity of the economy).
- 1.28 The program will contribute to the second and third of these thrusts. The productivity and competitiveness of nonpetroleum resources will be increased by the program's promotion of sustainable projects and the improvement of natural resource use in zones with diversified agriculture. The main contribution will be in connection with cooperation in the institutional sphere, since within the limits of what can be accomplished with a pilot experiment, the aim is to demonstrate a better way of coordinating government actions, by organizing them on the basis of specific projects proposed by the community. At the same time, the ownership of the small irrigation systems will be registered, thus relieving the state of a periodic responsibility to fund rehabilitation.

II. OBJECTIVE AND DESCRIPTION

A. Objective

- 2.1 The long-term objective is to find a way of integrating the rehabilitation of small irrigation systems within a sustainable rural development framework in Venezuela's Andean zone (see Annex II-1: Logical Framework).
- 2.2 The program will develop an innovative approach for rehabilitating small irrigation systems and completing their privatization in the states of Mérida, Táchira and Trujillo. This will help to strengthen rural communities whose economies depend on these systems.
- 2.3 The program's methodology will complete the privatization process and renew the irrigation capital within a context that assigns priority to producer participation. The approach used includes small demonstration projects and studies aimed at the incorporation of agricultural production into production chains (adding value and stabilizing producer prices), and also generating economic and technical information that will facilitate sustainable land and water management. The program will eliminate episodes of pronounced governmental intervention and discontinuity of public programs due to a sudden shortage of funds or a lack of sufficient community support and participation.
- 2.4 The beneficiaries are middle-income farmers with an average of 2.36 hectares of land that they hold in private ownership. Depending on how demand develops, the envisioned rehabilitation work is expected to benefit: (i) 1,960 families; (ii) 70 small-scale irrigation systems, and (iii) 4,620 hectares.

B. Description

- 2.5 The projects of irrigators organized in associations will be submitted to a transparent process set up for access to capital for materials and small equipment items and for hiring specialized firms (the latter only being applicable when technically complex works such as pressurized irrigation systems are involved). Projects put forward by associations of irrigators will be assigned priority based on their contribution to sustainable development,⁹ and will be complemented with studies and projects at the level of various municipalities, watersheds or microwatersheds aimed at seeking solutions to problems common to the entire Andean irrigation scene.
- 2.6 Seventy percent of the program's funds will be used to finance the rehabilitation of small irrigation systems, which will facilitate the transfer of systems to producers

⁹ See paragraph 3.12.

for them to operate at private-sector expense and risk. The irrigators, organized in associations, will contribute labor and will be able to access the capital facility to buy materials and equipment. They will also perform the installation work, thereby reducing the high costs that the public sector commonly has to pay for these rehabilitation schemes.

- 2.7 A limited number of studies and demonstration projects, on predefined topics, will be carried out to support actions external to the irrigation systems, at the level of microwatersheds in which various systems are rehabilitated, with the aim of seeking synergy in marketing actions, or in environmental management, protection or recovery activities that present clear externalities and cannot be effectively implemented in isolated small systems.

C. Components

- 2.8 Three components are involved:¹⁰ (i) sustainable rehabilitation of irrigation systems; (ii) studies and demonstration projects; and (iii) monitoring and evaluation for learning purposes. In addition, the outside accounting and financial audit will be financed, as will expenses connected with implementation in the field and technical and administrative support to the executing agency.

1. Component 1. Sustainable rehabilitation of irrigation systems (US\$14 million)

- 2.9 Under this component, which is designed to ensure the privatization of the systems, the materials and small equipment items needed by the producers for rehabilitation works will be financed. This financing will be on a one-time, reimbursable basis, with maintenance of the value of the capital. A competitive mechanism will be employed in order to ration the limited funds available and ensure the achievement of the program's objectives.
- 2.10 The component will finance the capital needed to cover up to 100% of the water intakes, lines, desanders, pipe, water storage tanks and similar materials, together with equipment for farm-level irrigation if the latter is part of a trial that all the members of the association want to carry out or for the modification of the method of irrigation in the entire system. In the case of projects requiring specialized installation, such as a pumping system for pressurized irrigation, the respective services may be financed. The projects can include modifications of or additions to the original design.

¹⁰ The components and how they will be implemented will be set out in the program Operating Regulations. The entry into effect of the Operating Regulations is a special condition precedent to the first disbursement.

2. Component 2. Studies and demonstration projects (US\$2 million)

- 2.11 The program will finance, without repayment being required, *studies and demonstration projects* pertaining to a limited number of topics that cannot be considered as part of the rehabilitation of individual irrigation systems.
- 2.12 The financing will cover the cost of the study or project, up to a ceiling of US\$100,000, which will make it possible to fund some 20 proposals from among the admissible topics. The eligible items include equipment, materials, transportation and consulting services for the performance of studies and works.

3. Component 3. Monitoring and evaluation for learning purposes (US\$450,000)

- 2.13 Because of its innovative nature the program will require special monitoring, by parties external to and independent of the executing agency, together with evaluation of the lessons generated. External monitoring services will be financed, which will establish baselines and monitoring and dissemination mechanisms in three areas: (i) technical and economic analysis of rehabilitation or general projects; (ii) compliance and consistency with environmental regulations and objectives; and (iii) follow-up on opinions and views in a panel of social actors in the program area.

D. Implementation costs (US\$1.35 million)

- 2.14 Incremental direct costs of the program are included for implementation purposes, such as short-term consulting services, procurement of vehicles, office supplies and equipment, and expenses for operation in the field. These include three legal professionals to assist with the registration of irrigator associations that have not yet been registered and, especially, the registration of ownership of the systems; and also the services of three high-level experts who will assume primary technical responsibility for training officials and ensuring proper promotion and technical execution of the program.¹¹ Another item included is the cost of the contract for administrative and technical support by the Inter-American Institute for Cooperation on Agriculture (IICA).¹² The largest components are the cost of short-term consulting services and expenses for operating in the field, which include everything necessary for the program promotion efforts and the training of officials.

¹¹ The environmental consultant will also be responsible for the preparation of the Environmental Manual, within three months of the start of execution, in accordance with the guidelines laid down in the Operating Regulations.

¹² See paragraph 3.2. The IICA will charge a percentage of the total implementation costs, excluding those of the outside accounting and financial audit, representing a maximum amount of US\$350,000. The contract signed by the executing agency and the IICA will be a special condition precedent to the first disbursement.

E. Cost and financing

2.15 The cost of the program is estimated at US\$20 million (see Table 2.1).

Table 2.1
Table of Costs
(in thousands of U.S. dollars)

COMPONENTS	IDB	LOCAL	TOTAL	%
1. Implementation Costs	575	775	1,350	6.75
2. Direct Costs	8,225	8,225	16,450	82.25
Rehabilitation projects	7,000	7,000	14,000	70
Studies and demonstration projects	1,000	1,000	2,000	10
Monitoring and evaluation	225	225	450	3
3. Inspection and Supervision Fund (1%)	100	---	100	.5
4. Outside Accounting and Financial Audit	200	---	200	1
5. Contingencies	900	1,000	1,900	9.5
TOTALS	10,000	10,000	20,000	
PERCENTAGES	50%	50%		100

- The finance charges are not payable by the program

F. Bank financing and local contribution

- 2.16 The Bank will finance US\$10 million (50% of the total, excluding finance charges), which will be disbursed in United States dollars from the Single Currency Facility of the Ordinary Capital. The loan conditions will be: 20-year amortization period, which includes a 30-month grace period; 30-month disbursement period; and a variable interest rate. The Bank will charge the Government of the Bolivarian Republic of Venezuela an inspection and supervision fee of 1% of the total of the loan, plus a credit fee of 0.75% on undisbursed balances as of the signature of the loan contract.
- 2.17 The budgeted national contribution consists of 100% of the periodic budget appropriations for the DGDR (of the MPC). The Table of Costs does not include a contribution of US\$700,000, which represents the estimated minimum labor contribution by the producers.

III. EXECUTION

A. Borrower and executing agency

- 3.1 The borrower will be the Bolivarian Republic of Venezuela. The executing agency for the program will be the Agriculture and Food Branch (VMAA), which is the sector organ of the Ministry of Production and Trade (MPC). The VMAA will act through its Rural Development Directorate (DGDR). The executing agency will act at the level of each of the three states, using the structure and personnel of the Ministry of Production and Trade's State Units (UEMPCs).¹³
- 3.2 The executing agency is in process of deconcentrating activities by turning them over to the local level and, in order to complete the rehabilitation and privatization of small-scale irrigation, wishes to use temporary services for carrying out tasks that are themselves temporary in nature. The executing agency has requested the support of the Inter-American Institute for Agricultural Cooperation (IICA) that will act on behalf of the executing agency. For these purposes the executing agency has requested that the Bank's Board of Executive Directors authorize direct contracting of the IICA. The contract between the executing agency and the IICA is a condition precedent to the first disbursement.
- 3.3 The IICA will in all cases act on behalf of the executing agency, being responsible for the procurement of vehicles and equipment and for contracting and payments to short- and long-term contractors, with the pertinent monitoring of contracts and of expenses for personnel travel in the field. It will also prepare such reports as the Bank requires, assign three high-level permanent advisors to work on the program, and ensure that proper accounting records are kept.
- 3.4 The IICA has an excellent working relationship with the executing agency, as a result of years of technical cooperation, including Bank-financed work. As a multilateral agency of the inter-American system, the IICA has shown itself capable of coordinating individual specialists and preparing consolidated reports, as it demonstrated recently when coordinating consultants from various countries who assisted the VMAA in its institutional reorganization. Because of its experience in contracts with the Bank throughout the region and over a number of years, this agency has the ability to assist the executing agency in the administration of and compliance with the requirements that will be set forth in the loan contract between the borrower and the Bank, and also to facilitate the execution of the program and the disbursement of the funds, on behalf of the executing agency. The IICA has access to qualified consultants, both national and international, who will be needed during the execution of the program and has demonstrated effectiveness and

¹³ There are UEMPCs in all the states, including a rural development unit that reports directly to the DGDR.

efficiency in contracting of this sort. Lastly, the IICA has an administrative support system that will ensure the quality of the consulting services.

- 3.5 Experience in working with the IICA has been good, according to the evaluation system that the Bank uses. This assessment is based on the experience generated by the IICA in administering consulting services retained for preparation of programs that the Bank is setting up with the government in agriculture. This administrative work includes the economic and environmental consultancies used at the start of the formulation of these rural communities strengthening program.
- 3.6 The IICA also offers technical benefits in its support of the execution of the program by being a specialized agency of the inter-American system. In particular, the IICA has supported the Bank and the MPC in the execution of loans in the Venezuelan agriculture sector during the last two years (692/OC-VE and 696/OC-VE).
- 3.7 The IICA will engage in procurement and hiring on behalf of the executing agency, in accordance with the program Operating Regulations and with the contract signed by the executing agency and the IICA and with the prior approval of the Bank. All procurement effected by the IICA shall be consistent with the Bank's procurement rules, which are incorporated in the loan contract and the program Operating Regulations.

B. General implementation methodology

- 3.8 The executing agency will channel the program technical support and funds to the end implementers and beneficiaries through a commercial bank and the IICA. In the case of the capital facility for irrigation equipment it will use the services of a commercial bank, while for implementing all the other components it will use the technical and administrative support of the IICA.
- 3.9 The executing agency will request disbursements in accordance with a semiannual execution plan¹⁴ agreed on with the Bank; it will be responsible for relations with the Bank and will ensure that the UEMPCs have the necessary funds.

C. Implementation of the three components of the program

1. Sustainable irrigation system rehabilitation projects

- 3.10 The intention of this component is to ensure the privatization of the systems, which will be completed with their proper registration in the name of the respective associations of irrigators. Under this component, capital equipment/materials will be financed for the producers for the rehabilitation work. The financing will be

¹⁴ The draft implementation plan for the first half-year period has been agreed on with the team and is a special condition precedent to the first disbursement.

done on a one-time basis, and will be subject to repayment and maintenance of the value of the capital. A competitive mechanism will be used in order to ration the limited funds available and to ensure achievement of the program's objectives.

- 3.11 The irrigator associations will prepare designs and financing requests by themselves or with technical assistance that the program will provide without charge. Also with support as needed from the program, they will register the ownership of the irrigation systems. If they are not duly organized and registered as associations, they will also be able to obtain program assistance for completing the requisite processes. Then, by completing the necessary documentation they will be able to apply for financing for the capital needed for rehabilitation.
- 3.12 The competitive financing for the materials and equipment for sustainable rehabilitation¹⁵ projects for irrigation systems will only be available to associations of irrigators.¹⁶ These projects will be given relative priority in accordance with their contribution to the sustainability of the system, with "sustainability" being defined as specifying *eligibility* conditions, and criteria that will make it possible to assign *preferences* in accordance with a rating system. The *eligibility* requirements include certification of the existence of sufficient water for irrigation, compliance with environmental legislation, confirmation that the land is privately owned, regularization of the ownership of the irrigation systems, contribution of labor; organization of the irrigators into registered associations; and provision of a joint and several guarantee for repayment of the capital received. The *preference* criteria for assignment of priorities include a cash contribution, proposals for environmental protection, mitigation or recovery actions at the farm level, and degree of integration with processing and marketing projects. The rating mechanism will also promote joint proposals by more than one association, if they will serve to facilitate environmental or marketing studies or actions at the microwatershed or watershed level.
- 3.13 To ensure inclusion of aspects of strategic importance for the program's objectives, the irrigator associations will be able to draw on program support, on a nonreimbursable basis, for hiring technical advisors. These advisors will have to be preregistered in the UEMPCs, and will prepare the respective rehabilitation project, including, if need be, new designs, environmental recovery or protection works, and irrigation technology innovations. The UEMPCs will also provide, on a nonreimbursable basis, such legal and administrative support as may be necessary for registering irrigator associations or system ownership.

¹⁵ Rehabilitation includes changes in designs or additions of small equipment items when technically necessary to correct errors in the original design or to facilitate more efficient use of the water.

¹⁶ Irrigator associations can join together and propose combining irrigation rehabilitation work with environmental actions, or processing or marketing measures, at watershed or microwatershed level. Proposals of this type are, however, more likely to arise from actions promoted by municipalities and state governments, which will also be served by the program.

- 3.14 The final execution of the rehabilitation works and other components financed by the program in a rehabilitation project will be the responsibility of the irrigator associations receiving the financing. The program will finance without charge the support required by the irrigator associations, ensuring the participation of NGOs, individual advisors or enterprises capable of providing technical assistance, depending on whether this assistance is needed for preparing the projects to be submitted to the competitive financing mechanism, or else for final execution. The NGOs, individuals or enterprises that participate in the promotion, preparation or implementation of the projects will first have to be qualified by the UEMPC of the state concerned.

2. Studies and demonstration projects

- 3.15 Studies and demonstration projects will be financed without any repayment requirement, in support of rehabilitation of neighboring systems presented jointly, provided said studies and demonstration projects contribute new knowledge or experience. Studies and projects financed in support of rehabilitation of neighboring irrigation systems will focus on a limited number of predefined topics and be aimed at devising solutions to priority problems of watersheds and microwatersheds.
- 3.16 The *eligible studies* will make it possible to resolve doubts and build consensus among the social actors regarding the future development of the communities. The eligible topics are: (i) economic analysis of farm management options with respect to commercial risk, cost-benefit analysis for water-management practices, agrochemical use and conservation practices that are being tried out in the area; (ii) financing and marketing of output; (iii) water quality; and (iv) water supply and demand projections.
- 3.17 The *eligible small demonstration projects* for trying out new experiments and helping to build consensus on the future development of the communities are: (i) investments in postharvest processing, in particular if they generate employment opportunities for women and young people. These could include projects to promote and identify options for the establishment of production chains and programs for meetings to bring together the irrigation users, research centers and national and foreign entrepreneurs with the aim of identifying business opportunities; (ii) management and disposal of solid waste; (iii) storage of agricultural chemicals, training in their proper use and disposal; (iv) protection of water-source recharge zones; and (v) sustainable water and land management techniques at farm level, if these specific topics cannot be better taken care of by means of proposals for specific rehabilitation schemes. Consideration of the findings and results of such studies and small projects should contribute to formation of a consensus among the social actors regarding the future of the watersheds.

- 3.18 The municipal governments of the states of Trujillo, Mérida and Táchira may submit for competitive financing the studies and demonstration projects. The various social actors operating in the program area, including NGOs and research centers, will be able to act through the municipal governments.
- 3.19 The final execution of studies and projects will be the responsibility of the municipal government which has obtained financing for a project or else of the contractor who will conduct the study selected by the committee. The municipal governments will be able to execute projects with contractor support, if this modality and the contractor's qualifications have been justified in the submission of the proposal and the contractor is hired in accordance with the rules laid down in the Operating Regulations and the Bank's procurement policy.

3. Monitoring and evaluation

- 3.20 The executing agency will contract directly the services of the three independent outside evaluators, for execution of the third component of the program.¹⁷ The task of these evaluators includes establishing baselines for the periodic monitoring, semiannual reports, dissemination and publicizing of the findings as an evaluation report after twelve months, and a final evaluation report. The outside monitoring is intended to facilitate the making of adjustments by the executing agency as implementation of the program proceeds. The final evaluation report will make it possible to assess the results.
- 3.21 The evaluation will assess the success of the innovative aspects by verifying whether the program environmental guidelines have been adopted in the rehabilitated systems, whether the social actors are satisfied with what has been done, whether the associations that received financing have begun to pay off their loans satisfactorily, and whether different national sources have made contributions not included in the program budget. The evaluation must also provide evidence regarding aspects that are not innovative but important for a possible expansion of the approach, such as the return on the investments, the cost-benefit of sustainable management practices at farm level, results of small demonstration projects, and adverse distribution effects that may have unduly delayed participation by low-income producers.
- 3.22 The studies and monitoring data will be combined with dissemination and discussion in periodic seminars and workshops in the three states. The contractors external to the executing agency will hold all meetings that may be necessary with the executing agency for the timely correction of errors in design or implementation.

¹⁷ The executing agency will not use the IICA's services in these three hirings because, among other things, the evaluation produced will be the basis for assessing the quality of the IICA's technical and administrative support.

D. Assignment of priority to competing projects

- 3.23 The decision on costs in components 1 and 2 will be based on projects submitted to a selection committee. The requirements to be met when submitting projects of either type will be announced with appropriate advance publicity. The selection of projects will depend on their compliance with the eligibility rules and the extent of their contribution to sustainability, to be determined by means of a rating mechanism that will be explained in the requirements for access to the financing. In the case of rehabilitation projects, the irrigator associations organized in irrigation systems will submit projects which will be analyzed and forwarded to the committee with reports and technical recommendations from the respective UEMPC in the state concerned.
- 3.24 Once a project is selected by the committee on the basis of the technical reports prepared by the UEMPC, the executing agency will sign the respective contract and will instruct the administrator of the trust to pay the suppliers of the materials and equipment against invoices submitted by the association, in accordance with the disbursement plan approved with the rehabilitation project. In the case of general studies and projects, the committee's decisions will be notified to the executing agency, which will sign the respective contract.
- 3.25 In order to decide on the competitive financing of projects in components 1 and 2, the executing agency will form a project selection committee in which the MPC, INPARQUES and CORPOANDES will be represented. The executing agency, through the UEMPCs and with the support of its high-level advisors, is responsible for the prior dissemination of the conditions for participating in the two competitive financing schemes, and also for promotion of the program and of the guaranteed public nature of the selection committee's decisions. In its first year the committee will issue no fewer than three calls for submission of competitive requests, after which the number of such calls per year will be adjusted as indicated by experience.

E. Operation of the rehabilitation capital facility

- 3.26 The transfers of funds for the rehabilitation of irrigation systems will be made through a commercial bank,¹⁸ that will operate a trust on behalf of the executing agency, as specified in the contract between the executing agency and said bank, signed with the prior approval of the Bank and in accordance with the program Operating Regulations. The commercial bank in question will pay the suppliers of materials and equipment against submission of invoices. The invoices in respect of sales of materials or provision of services for installation will be submitted by the irrigator association to the commercial bank, with the pertinent approval. The bank will receive the irrigator associations' payments and forward the funds to the executing agency as laid down in the contract between the parties.

¹⁸ The trust contract with the commercial bank is a special condition precedent of the first disbursement.

- 3.27 The funds that the program makes available to the irrigator associations for materials and equipment will have the joint and several guarantee of all beneficiaries who are members of the respective association. To return this capital to the facility, the association members will include an additional amount with the payments they currently make to their association for the operation and maintenance of the system. The capital funds for rehabilitation will be returned to the facility subject to the following conditions: (i) maintenance of the value of the capital, for which purpose the Venezuelan annual cost-of-living index will be used; (ii) a six-month grace period; (iii) six semiannual installments;¹⁹ and (iv) an annual fee of 2%, to cover the cost of administering the funds.

F. Procurement

- 3.28 The thresholds above which international competitive bidding will be required are US\$350,000 for goods and services; US\$3 million for works; and US\$200,000 for consulting services. By the nature of the program, no national or international competitive bidding for works is expected, since the only works execution envisaged in the program will be carried out by producers organized in associations who will operate on the basis of shopping. The procurement table includes purchase of materials and equipment by means of a local open call for proposals, in accordance with current Venezuelan legislation. The producers will purchase the irrigation material through the shopping procedure and the individual consultancy contracts will be awarded on the basis of invitations to submit statements of qualifications. As noted in paragraph 3.2, authorization will be requested to contract the IICA directly (see Annex III-1: Procurement Table).

G. Disbursements

- 3.29 In accordance with the innovative nature of the program, its implementation will include a time limit of 30 months for the last disbursement. It is estimated that the demand for rehabilitation funds will be concentrated in the second through fourth semesters. Whether the program is proceeding favorably should already be clear by the end of the first year, in terms of rehabilitation proposals submitted to the competitive financing mechanism. The execution of rehabilitation works is very simple, so the deadline for committing funds ought not to exceed 24 months.
- 3.30 It is recommended that the executing agency be provided with US\$500,000 (5% of the amount of the loan) in advance in the form of a revolving fund. However, the Bank's Country Office will have to decide on the adequate size of this revolving fund. Each system rehabilitation can cost between US\$200,000 and US\$300,00 in materials, on the basis of the executing agency's experience and a sample of projects reviewed during the preparation of the program. If additional funds are not contributed by the irrigators themselves, any delay in producing the national

¹⁹ The semiannual installments will be calculated in real terms on an equivalent basis.

contribution could create a severe constraint for the success of the program as well as an unnecessary operating complication for the Bank's Country Office in Venezuela. The executing agency will submit, within 60 days of the end of each calendar six-month period, consolidated balance sheets of the revolving fund's resources.

- 3.31 For purposes of hiring the external evaluators provided for under the program, initiating the establishment of baselines for evaluations, and beginning implementation tasks in the field, expenses incurred by the executing agency in the amount of up to US\$150,000, chargeable to the national contribution, may be recognized.
- 3.32 The tentative schedule of semiannual disbursements (in percentages of the total cost of the program) is as follows:

Table 3.1
Tentative Disbursement Schedule

SEMESTER 1	SEMESTER 2	SEMESTER 3	SEMESTER 4	SEMESTER 5
5%	25%	35%	25%	10%

- 3.33 The expected pace of the disbursements is based on the simplicity of the program and the great demand for and urgency of rehabilitating the systems, together with the existence of numerous projects only needing a small effort to reach completion. Failure of the innovative modality attempted with the program would be demonstrated by a lack of interest in disbursements, which would be evident no later than after the first 18 months.

H. Accounting and audit

- 3.34 The executing agency will establish and maintain, with IICA support, appropriate accounting and financial systems consistent with acceptable accounting practices and will ensure the existence of a structure of internal and independent controls that guarantees proper use of the funds. The executing agency will submit, throughout the implementation of the program, annual financial statements duly audited by independent auditors acceptable to the Bank. The first year of execution will also be the first year of submission of financial statements to the Bank.
- 3.35 The executing agency will also be responsible for: (i) requiring the pertinent account rendering from the municipal governments, irrigator associations and the commercial bank handling the trust; (ii) coordinating with the IICA, the municipal governments, the irrigator associations and the commercial bank handling the trust, the information requirements for preparing the program's consolidated financial statements in accordance with the Bank's methodology; and (iii) maintaining an adequate file of the documentation evidencing the expenditures effected with the

program funds in coordination with the IICA, the municipal governments, the irrigator associations and/or the commercial bank handling the trust.

I. Reports and supervision

- 3.36 The executing agency will submit semiannual reports the form, scope and content of which will be agreed on with the Country Office in Venezuela (COF/CVE), which will be responsible for supervision. The RE3/EN3 division will support COF/CVE in the technical aspects requiring special attention, which include: (i) establishment of baselines and work program of consultants responsible for monitoring and evaluation; (ii) progress in personnel training plans in the field and program dissemination; (iii) functioning of the technical support for the project selection committee, and transparency and dissemination of its decisions; (iv) the cost-benefit of environmental practices at farm level; and, most particularly, (v) adverse distribution effects that could unduly delay the rehabilitation of systems and low-income farmers' participation in the program.

IV. BENEFITS AND RISKS

A. Benefits of the program

- 4.1 The program contributes to long-term objectives by helping to build a social consensus for better water and soil management in the watersheds. The methodology that will be tried out will be evaluated and, if need be, adjusted as indicated by the ongoing evaluation process. The main performance indicator for the program will be verification that sustainable programs have been started for rehabilitating the small-scale irrigation systems throughout Venezuela's entire Andean zone. This would make it possible to strengthen the rural communities that depend on these small irrigation systems.
- 4.2 Some expected benefits of the program will be quickly apparent, in terms of better coordination between the agencies having central responsibility in matters connected with watershed management; greater participation by producers in the design and execution of their projects; in the actual formulation and execution of irrigation system rehabilitation projects prepared with a view to sustainability; and in the promotion of options for participation in production chains and better environmental management.
- 4.3 The main benefits will have to be obtained in the long term, if the program succeeds in changing what has been the customary way of taking care of the urgent problem of small irrigation system rehabilitation, since it is not sustainable, in particular because it reinforces a strong tendency on the producers' part to be dependent on the State instead of consolidating sustainable development of the rural communities whose economies are based on irrigation.
- 4.4 The strategic objective is rounded out with studies, research, workshops and discussions in the zone, exclusively on topics that were considered priorities by the stakeholders themselves and based on economic and environmental reports prepared by the program. The studies support the formulation of new approaches. Particularly important examples of this are the updating of information for projecting supply of and demand for water in at least one watershed, with the aim of gaining an understanding of competing uses, something that is still intuitive and in an incipient stage in the zone and which accordingly does not permit a debate on topics that can quickly lead to very serious conflicts. However, workshops, field research, and information campaigns on agricultural chemicals and on water quality should help to mitigate harmful impacts on health, which are already severe.

B. Economic benefits

- 4.5 The return per hectare was studied, defined as the value of production less production costs of a group of Andean products. The products concerned are garlic,

leeks, celery, onions, cauliflower, strawberries, lettuce, potatoes, cucumbers, cabbages and carrots, which together represent 73% of the gross value of the production of Trujillo, Mérida and Táchira. At both market prices and efficiency prices these products show a positive profitability per hectare. The approximate cost of rehabilitating the small irrigation systems is US\$1,500 to US\$2,000 per hectare. Even taking the two products with the lowest profitability (potatoes and celery), net farm income covers the cost of rehabilitation in one year.

- 4.6 The estimate at actual figures per hectare for the chief products is consistent with the one that was made at market prices by reviewing historical figures from the original structures, which recovered the investment cost in no more than two years. The estimated benefit at market price is also confirmed by the fact that some producers are putting in totally private systems since these are effective in providing them with access to water.
- 4.7 The estimates at market price are confirmed by the analysis of the value of the land. In Trujillo and Mérida rural land without irrigation is of little value, unless it is in semiurbanized areas. When it includes entitlement to irrigation, however, producers put its value at over US\$20,000 per hectare. In Táchira there are greater possibilities for rainfed production, and the producers' estimates indicate US\$10,000 per hectare for land with irrigation and US\$5,000 without it.²⁰ These figures confirm the importance of irrigation, and also the expectations that the irrigators have as to its productivity-enhancing value and the urgency of ensuring that its operation is not brought to a halt by deterioration of the systems.

C. Program return

- 4.8 Calculation of the program's return requires specifying what would be the "without project" situation. This section includes calculations for two possible scenarios. The first assumes that, without the program, the irrigators will continue incurring repair costs, while the second recognizes that the most likely "without project" situation is that the government will be obliged to finance the entire rehabilitation by means of the traditional modalities.
- 4.9 The internal rate of return of the program was estimated using the rate of return per hectare at efficiency prices for the products mentioned in paragraph 4.5. The assumptions used include a one-time increase in the rate of return per hectare as a result of irrigation system rehabilitation. This increase was calculated at 5%, which represents the most conservative estimate made by the producers in a project sample. The 5% increase was applied to the 8% of the Andean zone that is estimated to participate in the program. The program costs were calculated at the

²⁰ These prices are subjective, since there are practically no transactions in irrigated areas. However, they point to a significant subjective assessment of the value of irrigation. The estimates were considered reasonable by real estate agents and sector technicians.

disbursement rate shown in Table 3.1. In addition, it was assumed that the one-time increase would apply for one half of the beneficiaries starting in year 3 and for the total program area as of the fourth year. This conservative estimate results in an economic internal rate of return of 14%, calculated at efficiency prices (net present value US\$1.5 million at 12%).

- 4.10 The above calculation of the internal rate of return presumes that the “without project” situation would remain at the current level of production and productivity. However, the most probable situation would be rehabilitation at government expense, due to the pressure to find a quick solution to the poor condition of all the systems. Even in a scenario in which the producers obtain private financing, this would hardly cover more than just simple and direct rehabilitation of the irrigation systems. Accordingly, the program’s contribution will be evident if it helps to bring about a sustainable approach to rehabilitation through this innovative experiment, than would otherwise be possible if rehabilitation is done with the limited funds available.
- 4.11 In terms of rehabilitation of small systems, the program can only benefit a maximum of 70 systems, assuming that the costs will range between US\$200,000 and US\$300,000 per system rehabilitated. This would mean that less than 8% of this important infrastructure would be rehabilitated. The program accordingly proposes to use the opportunity for quickly launching a process that can lead to a sustainable modality for developing up to nearly 900 irrigation systems covering 60,000 hectares in the Andean zone. This opportunity arises from the fact that the systems are in urgent need of rehabilitation combined with the fact that the current government is looking for innovative ways of acting with the organized community. Without the program, the urgency of the situation would probably result in pressures to gain access to public financing in the more traditional way.

D. Environmental and social feasibility

- 4.12 The environmental impact assessment did not identify any negative environmental or social impacts resulting from the program. The characteristics and size of the program render significant impacts unlikely, although its success would contribute to sustainable water and soil management in Venezuela’s Andean zone. The program’s environmental strategy is based on the system rehabilitation project concept, which projects will be supported differently than at present, by giving preference to projects that include sustainability actions specified in the program Operating Regulations,²¹ instead of simply viewing them as proposals for replacing pipes and equipment. The approach adopted makes it possible to coordinate operations with actions of other agencies and programs. Specifically, the program

²¹ The project eligibility criteria include compliance with current legal requirements and certification of water availability for the irrigation system concerned. The rating system assigns preference to sustainable practices for production and natural resource management.

requires that irrigators be organized in associations and that ownership of the systems be regularized, these being factors that facilitate sustainability.

- 4.13 The social impacts are positive to the extent that they strengthen the irrigation associations, the small businesses that make up the marketing chain and actions designed to generate employment opportunities for women and young people.
- 4.14 The operation's environmental strategy includes: (i) environmental criteria for eligibility and for assigning preference to rehabilitation projects (see paragraph 2.3); (ii) having the support of extension programs under way in the zone for resolving environmental problems at farm level; (iii) attention to common water quality problems and those resulting from inappropriate use of agricultural chemicals, as identified in the environmental impact assessment; (iv) nonreimbursable funding for studies and demonstration projects on topics that contribute to the search for sustainability in irrigation systems; (v) inclusion of an environmental expert in the program implementation team, who will be responsible for support and monitoring of implementation, training of officials and users in the program's environmental components, and preparation of the Environmental Manual; and (vi) semiannual evaluations by independent professionals, who will report to the executing agency and the MARN regarding compliance with the environmental objectives and rules.
- 4.15 The UEMPCs, with the assistance of the environmental expert, will monitor the implementation of the program and will be responsible for detecting the need to make any operating changes. The environmental expert will also be responsible for preparing, within three months of the start of implementation of the program, an Environmental Manual²² that will contain operating guidelines with respect to: efficient water use, proper management of agricultural chemicals from initial storage to final disposal of packagings, sustainable soil management for production, storage and final disposal of agricultural wastes, and hygiene and occupational health.
- 4.16 The findings of the evaluations and environmental reports will be forwarded to the executing agency, the MARN and to the general public. These evaluations and the pertinent reports will be used for the overall evaluation of the innovative program, from the standpoint of achievement of the objectives set forth in the Environmental Manual and compliance with the country's environmental regulations.

E. Poverty reduction and social equity classification

- 4.17 The program does not contribute directly to poverty reduction or equity enhancement. The most direct beneficiaries, namely the producers working

²² In accordance with the program Operating Regulations.

irrigated land, are already past this stage in that they are not among the country's poorest inhabitants but rather now need to consolidate their development.

F. Risks

- 4.18 **Execution.** The program faces the usual execution risks, especially in light of the fact that it has an executing agency with little experience and an incipient organization for execution purposes. The execution of the program has accordingly been simplified to the maximum extent possible, by use of a trust administered by a commercial bank and arrangements for substantial support in technical and administrative matters from the IICA.
- 4.19 **Lack of interest in rehabilitation modality advocated.** The program will fail if the irrigator associations do not submit their competitive financing proposals and, therefore, destroy the strategic thrust of the entire operation. It does not appear that this will be the case, based on the interest detected in the field. However, there will always be a preference for being on the receiving end of grants-in-aid, and the program depends on a political commitment that these will no longer be available, in agreements that have also been supported by the state and municipal governments. These actors' interest in the program derives from the fact that they do not have the resources to cover even a small percentage of the systems that the program could cover, while they stand to benefit from studies and projects that will facilitate the undertaking of actions by several different municipalities acting in unison.
- 4.20 **Lack of interest in the studies and demonstration projects.** If the studies and projects making up Component 2 of the program are not carried out, the program will be deprived of valuable information and experience in addition to those related to rehabilitation, and also of information important for arriving at agreements on crucial topics for its expansion. The studies and projects will make it possible to clear up doubts, try out new experiments and consolidate the social actors' consensus on the communities' future development. These studies and projects will only be executed if requested by the community, which might not happen. This risk is minimized because the program is based on topics reviewed in the field with public officials and irrigators and assigns funds and responsibilities for promoting the performance of said studies and projects.

**LOGICAL FRAMEWORK
OF THE “STRENGTHENING OF RURAL COMMUNITIES” INNOVATIVE PROGRAM
VE-0126**

ATIVE SUMMARY	PERFORMANCE INDICATORS	MEANS OF VERIFICATION	EXECUTION ASSUM
<p>rogram:</p> <p>to the sustainable of private small-scale ems in the states of Táchira, rujillo.</p>			
<p>modality and renovation of ems developed and accepted e rehabilitation of all ems in Venezuela’s Andean</p>	<p>Existence of a program in preparation or with approved financing for extending the tested methodology to the entire Andean zone.</p> <p>Beneficiary producers have adopted the program’s environmental guidelines.</p> <p>The social actors have demonstrated satisfaction with the experiment.</p> <p>The irrigator associations benefited are paying off their loans satisfactorily.</p>	<p>Official document on the program in preparation or with approved financing.</p>	<p>The macroeconomic, sector and environmental policies that su sustainability of agricultural d are maintained.</p>

<p> <u>irrigation system</u> <u>projects</u> </p> <p> projects are executed the program's methodology. </p>	<p>In 30 months there will have to be:</p> <ul style="list-style-type: none"> • No fewer than 60 projects with systems privately owned and rehabilitated. • No fewer than 800 producers benefited • No fewer than 3 projects involving more than one irrigation system and also including environmental or processing and marketing actions 	<p>Report of the executing agency and reports of the outside auditors.</p>	<p> The existence of irrigator associations interested in competing for the projects and with the capacity to execute projects is confirmed. </p> <p> The program has drawing power and response capacity for promoting projects that combine the rehabilitation of irrigation systems with environmental protection and/or projects involving production chains. </p>
---	--	--	--

<p>2:</p> <p><u>General projects</u></p> <p>informed about the solutions sustainability.</p>	<p>The results of the following studies duly publicized:</p> <ul style="list-style-type: none"> • 2 studies on cost-benefit of environmental practices and efficient water management at farm level • Economic study of better marketing modalities • Study on rural financing in the Andean zone • 2 studies on water availability and demand projections and water quality in two microwatersheds • Study on efficient agricultural chemical use 	<p>Advisors' reports to the executing agency:</p> <ul style="list-style-type: none"> • Audit on monitoring and evaluation of the program • Environmental audit 	
<p>specific environmental and problems publicized.</p>	<p>The results of no fewer than 6 general projects based on rehabilitation projects involving more than one irrigation system duly publicized</p>	<p>Report of the executing agency and reports of the outside auditors.</p>	<p>It is confirmed that the municipalities demonstrate coordination capacity in the implementation of the integrated</p>

<p>3: and evaluation</p> <p>sustainability formed.</p>	<p>Baselines for performance of the external evaluations prepared in three months following the start of the program.</p> <p>Reports on the external evaluations delivered semiannually.</p>	<p>Reports of the outside auditors available in the executing agency's files:</p> <ul style="list-style-type: none"> • Monitoring and evaluation of the program. • Environmental audit. <p>Opinions and perspectives of the social actors.</p>	<p>The associations and the municipality show interest in moving from a management system under supervision to a system based on self-management. (The government donates resources for small irrigation system rehabilitation in the area.)</p>
--	--	--	--

**TENTATIVE PROCUREMENT PROGRAM
STRENGTHENING OF RURAL COMMUNITIES (VE-0126)**

Main program procurement items		Financing	Method	Prequalification	Semester
I.	GOODS Total value US\$14,120,000				
A.	First semester 3 4x4 vehicles, US\$90,000	IDB 100%	LOCP	No	I/01
	10 computers, software and printers, US\$30,000	IDB 100%	LOCP	No	I/01
B.	Semesters 2 to 4 Items procured by system-based producer associations (one lot for each system) Total value US\$14 million				In the course of the year, starting in I/02
	Pipes for irrigation systems, some 20 lots per semester, US\$200,000 per lot	IDB 50%	S	No	
	Equipment for irrigation Systems, 15 units of misc. equipment items for irrigation, US\$20,000 per lot	IDB 50%	S	No	
II.	CONSULTANCY SERVICES Total value US\$900,000 Hiring of consultants and one program administrator ¹				
	Year 1, multiple contracts, US\$300,000	IDB 50%	Q	Yes	The invitations will be issued throughout the year during years of implementation
	Year 2, multiple contracts, US\$300,000	IDB 50%	Q	Yes	
	Year 3, multiple contracts, US\$300,000	IDB 50%	Q	Yes	

S = Shopping

Q = Invitation to submit statements of qualification

LOCP = Local open call for proposals

¹ Authorization will be requested for direct hiring of the IICA.

PROPOSED RESOLUTION

VENEZUELA. LOAN____/OC-VE TO THE REPUBLICA BOLIVARIANA DE
VENEZUELA

Rural Communities Consolidation Program

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the República Bolivariana de Venezuela, as Borrower, for the purpose of granting it a financing to cooperate in the execution of the Rural Communities Consolidation Program. Such financing will be for the amount of up to ten million dollars of the United States of America (US\$10,000,000) from the Single Currency Facility of the Ordinary Capital Resources of the Bank, and will be subject to the "Terms and Financial Conditions" and the "Special Contractual Conditions" of the Executive Summary of the Loan Proposal.