

EMERGENCY AND INFRASTRUCTURE REHABILITATION PROGRAM

(PR-0112)

EXECUTIVE SUMMARY

BORROWER AND GUARANTOR: Republic of Paraguay

EXECUTING AGENCY: Ministry of the Interior through the Comité de Emergencia Nacional [National Emergency Committee] (CEN)

AMOUNT AND SOURCE:

IDB: (OC)	US\$10.5 million
IDB (IFF): (contingent)	US\$24.5 million
Local contribution:	<u>US\$ 5.0 million</u>
Total:	US\$40.0 million

FINANCIAL TERMS AND CONDITIONS:

Amortization period:	30 years
Grace period:	3.5 years
Disbursement period:	3 years
Interest rate:	variable (OC and IFF)
Inspection and supervision:	1%
Credit fee:	0.75%
Currency:	US\$ from the Single Currency Facility

OBJECTIVES: The specific objectives of the program are to: (i) support the rapid restoration and reopening of the infrastructure destroyed or damaged by the effects of El Niño and prevent future damage from similar phenomena; and (ii) improve the response capacity of the institutions in charge of dealing with emergencies and natural disasters.

DESCRIPTION: The proposed operation will carry out post-emergency activities (see paragraphs 2.3 and 2.4) and will be composed of the following components: (a) Engineering and administration comprising: (i) contracting personnel to advise and support the CEN; (ii) contracting consultants for studies and projects; (iii) contracting consultants to supervise the works; (b) Civil works comprising: (i) rehabilitation of feeder and local roads; (ii) drainage and flood protection works; (iii) bridge repair and reconstruction; (iv) outfitting of shelters; (v) rehabilitation of public buildings, hospitals, schools etc.; and (vi) refurbishment of CEN and National Emergency System offices; (c) Procurement comprising: (i) vehicles and other means of transport;

(ii) meteorological equipment and instruments; (iii) pumps, power generators, water tanks, portable storage sheds, etc.; (iv) computers and an integrated communications system; and (v) geographic positioning equipment and software; and (d) Institutional strengthening which comprises: (i) hiring temporary staff for the Dirección de Caminos Vecinales [Local Roads Directorate] (DCV); (ii) contracting specialized advisors; (iii) training; and (iv) setting up information systems for emergency planning, administration, and control of resources.

**ENVIRONMENTAL
CONSIDERATIONS:**

The program will chiefly have positive social and environmental benefits since it is intended to mitigate the harmful effects of floods and other natural phenomena on the victims thereof. The potential negative impact of the works to rehabilitate infrastructure will be insignificant. In any event, the program includes mechanisms to ensure the timely identification of risks and negative impact through the eligibility criteria and control measures established in the Operating Regulations (paragraphs 3.16 to 3.22).

**THE BANK'S
COUNTRY STRATEGY:**

The proposed program is consistent with Bank strategy (paragraph 1.41) since it is chiefly intended to mitigate losses in the productive sectors and to restore and, if possible, improve the quality of life of the affected population. The program will also make it possible to repair damage to infrastructure and provide the country with better capability to cope with future emergencies.

**SPECIAL
CONTRACTUAL
CONDITIONS:**

The loan contract will include the following conditions:

- a. Prior to the first disbursement: (i) contracting the basic personnel required to bolster the staff of the CEN and the DCV (paragraph 2.7); (ii) presentation of the operating plan including a detailed timetable of activities (paragraph 3.2); (iii) placing the program Operating Regulations in effect (paragraph 3.2); and (iv) establishment of a special account to manage program funds (paragraph 3.24).
- b. Prior to disbursements for any component or subcomponent that is the responsibility of a subexecuting agency, an interinstitutional agreement must be signed by the agency and the CEN (paragraphs 3.4 and 3.49).

- c. Prior to approving contracts or disbursements to outfit temporary shelters, evidence must be available that the respective municipal agencies established the availability and ownership of the land on which they are to be built and ensured that it is not subject to seizure (paragraph 2.14).

Loan 1103/OC-PR, authorizing the use of up to US\$500,000 from Project Preparation Facility FPP-004/PR has been approved to ensure rapid compliance with these conditions (paragraph 2.10).

**BANK NATURAL
DISASTER POLICY:**

The Bank's policy on natural disasters (OP-704) establishes that Bank assistance should be focused as follows: (a) during an emergency: to minimize the loss of life and property; and (b) after an emergency: (i) to repair damage to service infrastructure as promptly as possible; (ii) to provide necessary services and safety for the population; and (iii) to support measures to help economic activity return to normal.

OP-704 also states that rehabilitation can include measures to prepare for and prevent and/or mitigate the adverse effects of future recurrences of similar natural disasters, and to address their impact on the environment.

Under these policies the Bank may consider the following special measures, among others: (i) longer reimbursement periods and lower interest rates for new loans (paragraph 2.30); (ii) a more flexible system of competitive bidding (paragraphs 3.29 to 3.41), including direct contracting of construction work; and (iii) a shorter procedure for processing new loans on an emergency basis.

BENEFITS:

The immediate benefits of this program will be: (i) alleviation of the shortage of supplies and basic services for disaster victims and reduction of the risks to which they are exposed owing to the lack of communications in areas that are still isolated; (ii) rapid reestablishment of economic activities that have been interrupted by cut-off roads and destroyed bridges and recovery of the competitiveness of products for which transportation is an important cost component; and (iii) alternative employment opportunities for people who have lost their normal jobs stemming directly or indirectly from the works to be built. The medium and long-term benefits will be: (i) prevention of similar disasters in future as a result of the protective works included in the

program; and (ii) reduction of the risk of loss of lives and property thanks to better weather forecasting capacity in the CEN and the equipment and systems that will be provided for rapid response to crises.

**COMMUNITY
PARTICIPATION:**

Local emergency committees will participate in selecting projects for inclusion in the program, particularly with regard to: (i) construction of dikes and canalization to protect urban areas; (ii) outfitting of shelters; and (iii) rehabilitation of public buildings. The CEN will hire a public affairs consultant to disseminate information on program activities and organize mechanisms for active participation by beneficiary social groups (paragraphs 4.15 to 4.16). In order to ensure participation by civil society in the decision-making process, the borrower and the Bank will agree to designate a national nongovernmental institution to appoint the delegate(s) who will participate actively in these processes. The procedures that will govern such participation will be set forth in the program's Operating Regulations (paragraph 4.17).

RISKS:

The main risk that could affect achievement of the program's objectives and alter its goals is the possibility that weather conditions will remain adverse in the region, or that El Niño will recur with the same or greater intensity during the program. This could impede execution of the works, aggravate the damage already done, and increase the need for resources to protect the public and rehabilitate infrastructure.

Although there is a consensus on the priority and urgency of this program, its startup could be delayed unless it is rapidly approved by Congress.

An additional, although less serious risk, which will be minimized through institutional strengthening, would be difficulties in coordination since different public agencies are involved which do not normally have sufficient resources to perform tasks that are not included in their programs of activities and operating budgets.

**POVERTY FOCUS
AND SOCIAL SECTOR
CLASSIFICATION:**

Most of the displaced population, isolated and without access to services and who have suffered property losses or loss of their source of income, are poor and live in the zones that are most exposed to the impact of El Niño (paragraph 1.20). The program is intended to mitigate this impact and can therefore be classified as poverty-targeted.

Accordingly, the Bank is able to increase the normal financing matrix for the country by 10% (paragraph 2.28).

I. FRAME OF REFERENCE

A. Background

- 1.1 Starting in the last three months of 1997 and lasting until May 1998, the basins of the Paraguay and Paraná rivers have been subject to heavy rainfall and other unusual weather phenomena such as severe storms, tornados, and hailstorms, as a result of El Niño. El Niño occurs each year between December and March and consists of the warming of surface waters in the South Pacific and in alterations in sea currents along the western coast of South America. El Niño, which normally only affects the coasts of Ecuador and northern Peru, becomes more intense on a cyclical basis, producing lengthier and more wide-ranging disturbances that can lead to flooding in some areas and drought in others, not only in the American hemisphere but also outside the Pacific basin.
- 1.2 The effects of El Niño were more intense in Paraguay in 1982-1983 and in 1992, causing heavy damage to the economy and loss of life and property among the population living in the proximity of the Paraguay and Paraná rivers. The most recent El Niño has been worse than the earlier ones, since in addition to flooding from rivers in Concepción, Alberdi, and Pilar and in riverside areas in Asunción, a vast part of the Chaco region was affected, where much of the land has remained under water on account of the torrential rains, poor drainage, and impermeable soils.
- 1.3 The CEN and other Paraguayan government agencies, with the assistance of different national and international institutions and support from neighboring countries, have been able to meet the most urgent needs of the affected population and take basic steps to control the emergency. However, significant investments will be required to make the infrastructure that was destroyed or damaged functional, particularly transportation infrastructure, and to prevent similar damage in future. The government has therefore asked international lending agencies for support and cooperation to undertake an emergency program.

B. The 1997-1998 emergency

- 1.4 In terms of natural disasters, 1997-1998 was one of the worst the country has seen in the last 30 years, not only on account of the extent of the damage, but also because of the diversity of the weather phenomena, the size of the area hit, and the duration of the effects.
- 1.5 Heavy rains and severe storms with strong winds and lightning occurred between April and June 1997 which caused loss of life and extensive property damage in the city of Asunción and the towns of Villarrica and Raúl Arsenio Oviedo.

- 1.6 In September of the same year, heavy and persistent rainfall began in the Paraguay river basin which caused the river to swell to levels far above normal, leading to overflowing and flooding along its banks and those of its affluents. Many river towns were affected and some became cut off when access roads were washed out or wooden bridges destroyed. These events also caused loss of life and of the crops that feed these communities.
- 1.7 Although the early months of 1998 were relatively calm and river levels dropped, the rainstorms intensified again in March, mainly in the Paraná river basin. The rise in the level of the Paraná at its confluence with the Paraguay river began to make it difficult to drain off the heavy flows already present in the Paraguay and worsened the flooding in the Pilar region and in the southwestern tip of the country, completely cutting off access to the town of Pilar.
- 1.8 Torrential rains also occurred in the Chaco region in arid zones frequently subject to drought. The flatness of the land and the clay soil have hampered both surface runoff and infiltration of the large volumes of water that accumulated. Approximately two million hectares in the departments of Boquerón and Presidente Hayes were flooded, leaving some 2,000 families cut off and living in emergency conditions owing to the destruction of roads and bridges and the loss of crops and pastures.
- 1.9 In mid-May, the situation stabilized and rainfall slackened throughout the region, as witnessed by the slow descent in the levels of the Paraguay and Paraná rivers.

C. Impact of El Niño

1. Macroeconomic impact

- 1.10 The Paraguayan economy has been growing modestly in recent years. GDP grew by 1.3% in 1996 and 2.5% in 1997, and the forecast for 1998 is about 2% which is insufficient to bring about an increase in per capita income. Growth was chiefly based on agriculture and construction, with the other sectors stagnant. The financial crisis of 1997, which has still not been fully surmounted, has contributed to a climate of instability mirrored in low levels of economic activity. The fiscal imbalance has widened in recent years.
- 1.11 Moderate growth in agriculture in the 1996-1997 crop year was due to higher production of soybeans, maize, yucca, and livestock, which compensated for the drop in cotton and other traditional small farming crops. One of the government's main initiatives in 1997 was to offer incentives to farmers to plant more cotton. However these efforts may be canceled out or severely diminished owing to the effects of unseasonal and heavy rains and flooding.

- 1.12 In this macroeconomic picture, El Niño has had a major impact on the performance of the national economy and will cause a significant decline in expected production and in the country's development prospects in the coming years unless timely measures are taken to mitigate or compensate for its consequences.
- 1.13 From the fiscal standpoint, the estimated US\$120 million deficit in 1997 represented an increase of 72.5% over the previous year. Although the deficit continues to be relatively low at just 1.3% of GDP in 1997, it is on the upswing as evidenced by the fact that it had been the equivalent of 0.7% of GDP in 1996. Since the current tax structure is not able to produce rapid and significant increases in revenue, policies to balance the budget are mainly based on cutbacks in public spending, which undermines the government's action capacity. However, the need for investments to repair and/or mitigate the damage caused by El Niño has increased the pressure on public funds, which is why the government considers it essential to resort to long-term debt to address this need.
- 1.14 The trade deficit worsened in 1996-1997, rising to US\$1.869 billion equivalent, according to figures from the Central Bank of Paraguay. With the drop in domestic agricultural production owing to the damage described above, there will be a reduction in exports with the consequent decline in foreign exchange earnings, accompanied by higher demand for imported goods. Any increase in the trade deficit will have an impact on Paraguay's external accounts and on the position of its international reserves.
- 1.15 Given the structural characteristics of the Paraguayan economy and the magnitude of the macroeconomic impact of El Niño, there is a clear need to obtain support from external sources of financing – and from the Bank in this case – to surmount the crisis.

2. Social impact

- 1.16 Paraguay has a total population of 4.9 million according to the 1995 census, which is split approximately 50/50 between urban and rural areas. Average per capita income is around US\$1,500, with the country continuing to be one of the poorest in the region.
- 1.17 Migration from the countryside to the cities, which began in the 1980s, led to haphazard growth in urban areas. Because of their poverty, most migrant families went to live in substandard housing on low-lying riverside land prone to flooding or on the outskirts of cities where services are lacking. Rural communities are widely scattered throughout the country and access to most of them is by dirt roads with poor drainage and fairly old wooden bridges.
- 1.18 Under these conditions, torrential rains and other unusual weather have had devastating consequences, primarily for the very poor living in zones at greatest risk or in very remote areas. Large numbers of dwellings have been damaged or destroyed in the areas prone to flooding where the low-income population lives. As of the

end of May 1998, the death toll due to the severe weather was 49 and an estimated 19,100 families had been directly affected. They either lost their homes or some of their household belongings, or were cut off from basic services. Since the average family has five members, almost 100,000 people (or 2% of the country's population) have been directly affected by this crisis.

- 1.19 Some 500,000 people in rural and urban areas have been indirectly affected, chiefly owing to difficulties in obtaining supplies, interruption in the economic activities that were the source of family income, and a decline in health and the quality of life in areas with no access where it is impossible to provide regular basic social services.
- 1.20 Data suggest that between 15% and 25% of people in urban areas (excluding metropolitan Asunción) and between 55% and 65% of the rural population live below the poverty line, which in Paraguay is US\$720 equivalent per capita per year. Given the extent of the damage caused by El Niño, which was more extensive in rural and marginal urban areas, it can be assumed that over 50% of the victims are poor.

3. Impact on infrastructure

a. Road infrastructure

- 1.21 The road infrastructure has suffered most from the torrential rains in 1997-1998 and from the other weather-related disasters in the country. Flooding, overflowing rivers, and high water have destroyed or damaged bridges, and immersed, eroded or destroyed sections of feeder and local roads and city streets. According to the Ministry of Public Works and Communications (MOPC), some 150 wooden and reinforced concrete bridges (ranging in length from six meters to 50 meters and totaling close to 2,000 linear meters) were destroyed or damaged, including their protective walls and access embankments. Approximately 400 km of main, feeder, and local roads were seriously damaged, in some cases cutting off all vehicular access to the populated areas they link.
- 1.22 It will cost an estimated US\$40 million to replace this road infrastructure. The figure does not include the cost of repairing damage to various road works in the advanced stages of construction by private contractors, which will also have to be repaired.
- 1.23 The MOPC is concentrating on repairing the sections of main highways damaged by El Niño and has spent close to US\$5 million up to May 1998. However it does not have the financial or institutional capacity to replace or repair all the infrastructure that has been destroyed or damaged.

b. Urban infrastructure

- 1.24 The extraordinary rise in the level of the Paraguay river and its tributaries also caused extensive flooding with the concomitant damage to dwellings, city streets, and public services.
- 1.25 The cities hardest hit by the flooding were Valle-mi, Concepción, Asunción, Alberdi, and Pilar. The case of Alberdi was one of the most dramatic, since this town of about 8,000 has been 90% flooded since last December, and 500 people have been forced to take refuge in the Argentine city of Formosa.
- 1.26 There are no official estimates of the direct and indirect social and economic damage caused to cities affected by the latest recurrence of El Niño. However initial Comité de Emergencia Nacional [National Emergency Committee] (CEN) estimates suggest that 1,000 dwellings were destroyed and 4,000 were seriously damaged.

D. Government strategy and capacity to cope with the emergency

1. National Emergency Committee (CEN)

- 1.27 The CEN was established by Executive Decree 6,088 in June 1990 and confirmed by Law 153 of May 1993. Its functions are to prevent and counteract the impact of natural and man-made disasters that affect the well-being of a large number of citizens or a large part of the country. The CEN is required to promote, coordinate, and steer the activities of public, municipal, and private institutions in planning and taking steps to prevent and mitigate damage and to assist and rehabilitate communities affected by emergencies.

2. Organization and measures to prevent and mitigate the impact of El Niño

- 1.28 The climate changes that were felt starting in mid-1997 off the coast of Ecuador and Peru were indications that El Niño would be stronger than usual in 1997-1998. Following the example of other countries that had begun to take preventive measures, the CEN asked for cooperation from the United Nations Development Programme to obtain technical assistance in designing preventive measures and establishing systems to cope with the impact of the phenomenon.
- 1.29 In response to that request, support was provided by the United Nations Department of Humanitarian Affairs to identify the CEN's institutional strengthening needs and to define the functions and responsibilities of the agencies forming part of the national emergency system, in which all of the country's departmental and municipal governments participate. A report containing recommendations was submitted to the CEN in October 1997.

3. Declaration of a state of emergency

- 1.30 In view of the torrential rains in the Pantanal region where the Paraguay river has its source and the severe storms in the upper Paraguay toward the end of 1997, which confirmed the forecasts regarding the possibility that the river would flood, on December 22, 1997, Decree 19,402 was issued declaring a state of emergency in all the areas bordering the Paraguay river and its tributaries. Similar events that occurred subsequently in the upper Paraná river watershed led to a new decree (20,803 of April 28, 1998), declaring an emergency in all areas bordering that river and its tributaries.

4. Humanitarian assistance

- 1.31 Coinciding with the decrees mentioned above, the CEN's budget was increased to provide it with resources to establish the departmental and local emergency committees in the zones that were hardest hit. These committees are responsible for organizing temporary shelters and sanitation measures to protect disaster victims, and for distributing food, clothing, and other items donated by national and international organizations.
- 1.32 The extent of the damage and the number of people affected by the flooding have outstripped the CEN's ability to coordinate and rapidly meet the needs that have arisen in different parts of the country. In most cases, rapid and adequate response has been seriously hampered by the lack of transportation and a well-established communications network. Nonetheless, minimum essential services have been provided for the majority of the displaced population, with help from other agencies and neighboring countries, particularly Argentina.
- 1.33 The Bank has contributed to humanitarian assistance with nonreimbursable technical-cooperation funding of US\$50,000 from the net income of the local FSO, which will be executed by the Ministry of Finance through the Jazmín Foundation.

5. Emergency activities to keep basic services operational

- 1.34 The declaration of the state of emergency requires all public agencies to mobilize to deal with the crisis and to keep basic services operational, to the extent possible, in the areas that have suffered most from the flooding and other adverse weather conditions. The MOPC, through the National Roads Directorate (DNV) and the Local Roads Directorate (DCV), has deployed most of its road maintenance personnel and equipment to keep the main routes open in the affected zones, providing temporary crossings where bridges and/or culverts have been destroyed and assisting vehicles across sections where water levels are higher than the road bed. Nonetheless, many feeder and local roads are still impassable and more extensive works will be needed to reopen them.

- 1.35 In some localities electricity and water supplies have been partially maintained by installing portable generators and water tanks, but there are still many communities without such facilities and more units of this kind are needed. Other social services such as health care and education can only be reestablished or operate adequately once the floods have receded from buildings in which they are housed.

E. Bank participation and experience with similar programs

1. Paraguayan government request

- 1.36 On April 7, 1998, the Paraguayan government asked the Bank to help finance a program with two main components: the first to boost the CEN's response capacity to cope with the emergency, and the second to rehabilitate the infrastructure - roads primarily - destroyed by El Niño. In response to this request and based on the operating policies designed for cases of this kind, the Bank began to evaluate the situation and to determine, in conjunction with Paraguayan authorities, the specific components of the operation, the eligibility criteria for projects to be financed, and the amount, terms, and conditions of the financing.

2. Bank emergency policy

- 1.37 The Bank's operating policy in cases of natural disasters (OP-704) is intended to help member countries effectively protect and resume their socioeconomic development. The Bank also assists member countries in adopting measures to prevent or reduce losses from disasters.
- 1.38 OP-704 distinguishes three stages in the assistance process, which cover situations prior to, during, and after an event. In Paraguay's case, all indications suggest that the maximum rainfall and adverse weather conditions are now over, and therefore the Bank's actions would be framed to fit scenarios involving situations during and after the emergency. Therefore, actions aimed at achieving the following would be eligible for financing: (i) minimize the loss of lives and property; (ii) mitigate the losses and suffering of the victims; (iii) repair the damage to service infrastructure as quickly as possible; (iv) provide services and safety measures to protect the public; and (v) help the economic situation in the affected zones return to normal.

3. Recent experiences in other countries

- 1.39 In November 1997, the Bank approved loans 1057/OC-EC and 1058/OC-PE to support the governments of Ecuador and Peru, respectively, in the adoption of measures for prevention, emergency response, and mitigation of the social and economic impact of El Niño.
- 1.40 In designing and processing these two operations, special procedures were adopted to accelerate presentation of the projects

to the Bank's Board of Executive Directors, as provided for in OP-704. On both occasions, simplified contracting and procurement procedures were approved, as were disbursement mechanisms geared to the urgency of obtaining the services and goods needed to cope with the emergency and alleviate the isolation of the hardest-hit communities. Following the same principles, the present operation proposes similar procedures despite the fact that the program will be implemented in the post-emergency stage.

F. The Bank's country strategy

- 1.41 The Bank's strategy in Paraguay is intended to achieve sustainable development over the medium and long terms. It will give priority to operations intended to: (i) support modernization of the productive sector; (ii) continue to support basic infrastructure sectors, particularly transportation and energy; (iii) help to develop the social sectors, particularly in the delivery of basic services, poverty reduction, and improvement in the standard of living; and (iv) encourage modernization of the State through institutional strengthening and equipment.
- 1.42 The proposed program is consistent with Bank strategy since it is chiefly intended to mitigate losses in the productive sectors and to restore and, if possible, improve the quality of life of the affected population. The program will also repair damage to infrastructure and provide the country with better capacity to deal with future emergencies.

G. Participation by other institutions

1. World Bank

- 1.43 The World Bank has also responded to the Paraguayan government's request for assistance in the emergency. It is processing an addendum to the agreement in connection with loans 3774A-PA and 3775-PA, approved on July 20, 1994, originally intended for a financial sector development program. Under the addendum, the scope of these loans will be extended and part of the uncommitted funds, amounting to some US\$16 million, will be used to help in the emergency. The funds will go to: (i) rehabilitate school and health care infrastructure; (ii) rehabilitate some 100 km of roads and 80 bridges; (iii) construct flood dikes at Valle-mi and Pilar; (iv) procure equipment; (v) design a national emergency plan for future flooding; and (vi) analyze the social impact on the population of Asunción affected by the floods.
- 1.44 The components covered by World Bank and IDB financing will complement each other and cover the needs identified by the CEN based on a preliminary survey of the damage to basic infrastructure as of the end of April 1998. Close coordination will be maintained with the World Bank during the program to optimize resource allocation and, to the extent possible, to follow similar criteria and procedures (paragraph 2.4).

2. Cooperation with other countries and institutions

- 1.45 Different governments and international agencies such as the OAS and the United Nations, as well as private enterprises, have offered to help the Paraguayan government by providing technical support in the form of supplies, clothing, and medications, or nonreimbursable financial assistance to buy tents, equipment, and supplies for temporary accommodation for the victims. Most of these funds are being administered by the CEN, with the support of the United Nations Office in Paraguay.

II. THE PROGRAM

A. Objectives

- 2.1 The general objective of the program is to help mitigate the risks and difficulties faced by the population affected by the floods and disasters caused by El Niño and reduce financial losses in areas that have been flooded or cut off owing to the destruction of the infrastructure that provides access to those areas. The specific objectives are to: (i) support the rapid restoration and reopening of the infrastructure destroyed or damaged by the effects of El Niño and prevent future damage from similar phenomena; and (ii) improve the response capacity of the institutions in charge of dealing with emergencies and natural disasters.

B. Description and scale

- 2.2 Based on a preliminary inventory of the affected area and an evaluation of financing, technical support, and equipment needs to repair the damage and prevent similar damage in the future, the Paraguayan government prepared a list of projects to rehabilitate physical infrastructure, build protective works, outfit temporary shelters, provide institutional strengthening, and procure equipment, which was divided into two roughly equal parts for simultaneous submission to the IDB and the World Bank for financing (paragraphs 1.36 and 1.43).
- 2.3 An analysis of the situation performed by the Bank in May concluded as follows: (i) the most critical stage of El Niño was over and therefore Bank participation would focus on post-emergency recovery; (ii) some towns may continue to be flooded and isolated for several months more and therefore ongoing support will be required for supplies and improvements to temporary shelters; (iii) part of the effects of future flooding can be prevented by building dikes in some towns; and (iv) the country does not have equipment or systems to permanently monitor weather conditions in order to produce timely forecasts and the CEN is not properly equipped to respond rapidly to emergencies.
- 2.4 In view of the above and the fact that basic humanitarian assistance is being provided by the government, the international community and other donors, including the Bank, the proposed operation stresses actions to repair the road infrastructure, build protective works, and strengthen capacity to forecast and respond rapidly to future events of this kind. The components of the program were also scaled taking account of parallel activities to be financed by the World Bank (paragraph 1.43).
- 2.5 The proposed operation will consist of the components outlined below.

1. Engineering and administration (US\$3.3 million)
- 2.6 The purpose is to help prepare, execute, and administer the program through the following subcomponents.
 - a. Technical and administrative support for the CEN (US\$700,000)
 - 2.7 Professionals will be hired to support the CEN, as necessary, in the areas of highway and bridge engineering, hydrology and drainage, environment, organization and systems, accounting, sociology and public affairs, and other activities to assist the CEN with coordination, administration, and supervision during the program. The CEN and the Bank will agree on which specialists should be contracted prior to the first disbursement of the loan. Up to 25% of the funds for this subcomponent, which forms part of the local counterpart, may be used to hire temporary support staff and to purchase spare parts and supplies to operate and maintain the equipment purchased with loan proceeds.
 - b. Studies and project preparation (US\$1 million)
 - 2.8 Consulting services will be contracted for technical, environmental, and financial studies and for the working designs to define and determine the costs of works, goods, and services to be financed by the program. Part of the funds will be used to produce a study to formulate a strategy and a plan for permanent resettlement of people living in zones prone to annual flooding, except for Asunción, whose study is included among the activities to be financed by the World Bank (paragraph 1.43). A publicity campaign will also be carried out under this subcomponent to encourage community participation in the program (paragraph 4.16).
 - c. Supervision of works (US\$1.1 million)
 - 2.9 This subcomponent includes consulting services for technical and financial supervision of the works and for monitoring and supervising the environmental protection measures called for in the projects.
 - d. Repayment of the Project Preparation Facility (US\$500,000)
 - 2.10 This item will be used to repay loan 1103/OC-PR, approved on June 1, 1998, which financed the Project Preparation Facility to contract personnel, make procurements, and perform the preparatory studies for this operation.
 2. Civil works (US\$27.75 million)
 - 2.11 The funds for this component will be used to finance works in the categories mentioned below, provided they meet the eligibility criteria established for this operation, their designs and bidding documents have been approved by the Bank, and they are contracted

out following the procedures set forth in the Operating Regulations.

a. Road rehabilitation (US\$11 million)

- 2.12 Approximately 300 km of feeder and local roads that have been damaged by flooding will be rehabilitated. The chief purpose of these works is to make the roads passable and to provide protection in the most vulnerable areas to prevent future damage by erosion and flooding. The main work to be performed will be: (i) reconstruction and/or raising of embankments; (ii) removal of unstable soil and its replacement with suitable materials; (iii) replacement of damaged wearing surfaces and specific improvements in areas where passage is difficult; (iv) protection of slopes in areas subject to erosion; (v) installation and/or rehabilitation of drains, culverts, and other means of channeling surface and groundwater to improve drainage and prevent pooling and erosion; and (vi) replacement of signage and road safety devices that were destroyed and installation of warning signs at places that could be dangerous in heavy rainstorms.

b. Drainage and flood protection works (US\$7.6 million)

- 2.13 This subcomponent includes the construction of walls and dikes to prevent or attenuate the risk of future flooding in the towns of Concepción and Alberdi, and the construction and equipping of pumping stations. The beds of rivers and streams that are tributaries of the Paraguay and Paraná, whose high waters could damage nearby towns and the grading and drainage of their access roads, will be cleaned.

c. Outfitting of temporary shelters (US\$2.1 million)

- 2.14 To improve the situation of families who have been displaced by the floods, some of whom are still living in shelters with little capacity and no services, sites will be rehabilitated or built and temporary services will be installed in areas above flood levels. When the emergency is over, these areas will be maintained for public use should similar situations recur in future. Four shelter areas will be built, each roughly 10,000 m² in size. The respective municipal agencies will have established the availability and ownership of the land to be used for shelters and ensured that it is not subject to seizure, before investments are made in this component, and they will be responsible for taking steps to ensure that people vacate the camps once the state of emergency is over.

d. Bridge repair and reconstruction (US\$5.8 million)

- 2.15 About 70 wooden bridges and 10 reinforced concrete bridges will be built to replace those that have been totally destroyed or severely damaged by the effects of El Niño. Contracts will include the construction of accesses and walls or riprap to protect the bridges

from high water and erosion. The funds for this category can be used to repair and/or reinforce partially damaged bridges and other major structures whose useful life can be prolonged with these investments.

e. Other infrastructure rehabilitation works (US\$1 million)

- 2.16 This item includes minor rehabilitation and/or repairs to public buildings such as schools, hospitals, community kitchens, and public, community or municipal service centers to put them back in operation as quickly as possible.

f. Refurbishment of CEN offices (US\$250,000)

- 2.17 In order to operate the systems to be provided under this operation efficiently and to administer the present program and respond to future emergencies, the CEN will need to adapt and overhaul its central office in Asunción and provide for suitable premises in the communities at greatest risk of similar crises. The funds allocated for this category will be used to upgrade and expand the CEN's current installations and to acquire portable buildings to be set up as operations centers at places where emergencies occur.

3. Procurement (US\$4.52 million)

a. Transportation (US\$1.11 million)

- 2.18 Despite the cooperation that the CEN is receiving from other public and private institutions to evacuate victims and provide food and supplies for communities that have been cut off, this support has not been sufficient to cover all transportation requirements with the necessary timeliness and continuity. Therefore, the funds for this subcomponent will be used for: (i) leasing aircraft to rapidly deploy rescue and first-aid personnel, airlift victims in critical condition, and fly in personnel and basic equipment to organize operations in emergency zones; (ii) four-wheel drive vehicles for coordination and supervision of the field work for which the CEN is responsible; (iii) a vessel to carry food and supplies to isolated communities until normal transportation services have been restored; and (iv) fast outboard motor boats to convey personnel from the CEN and from the local and departmental emergency committees in charge of administering and distributing assistance and providing health care services for the communities.

b. Meteorological instruments and equipment (US\$2.62 million)

- 2.19 Modern weather forecasting instruments and equipment and access to information that specialized satellites and other stations in the region are continuously gathering make it possible to predict severe weather, such as torrential rains, thunderstorms, hurricanes, and tornados with good accuracy and lead time. In many cases, the public can be alerted in advance and injuries or deaths can be avoided or reduced. Emergency response agencies are able to

organize and deploy their resources in advance to begin rescue operations quickly and to adopt assistance measures and safeguard people and property.

- 2.20 Paraguay is one of the countries participating in a regional program known as Clima Ibero-Americano, sponsored by the Bank, whose purpose is to establish a regional system for the collection, processing, and exchange of meteorological information in real time. The data obtained by this system will also facilitate programming of agricultural and other economic activities, make for safer air navigation, and contribute in general to transportation planning in areas whose infrastructure cannot be used in all kinds of weather. The program will procure meteorological instruments and equipment such as: (i) radar; (ii) radiosonde equipment; (iii) a high-resolution satellite image receiver; (iv) an automated interconnection system for the national network of ground stations; and (v) an automated meteorological telecommunications system. This equipment is compatible with the regional Clima Ibero-Americano program under way and will enable Paraguay to join the system expeditiously.

c. Other equipment and systems (US\$790,000)

- 2.21 This category includes equipment and systems to improve the CEN's emergency response capacity and the administration and control of its resources. Pumping equipment, power generators, potable water tanks, and portable storage sheds will be procured to rapidly assist victims. Communications and computer equipment and all necessary devices will be procured to improve coordination and management, and technical services will be hired to assemble an integrated communications system to effectively coordinate and direct emergency activities.

4. Institutional strengthening (US\$810,000)

- 2.22 This component has two main objectives. The more immediate one involves temporarily increasing the technical and operating capacity of certain institutions that will have specific responsibilities in implementing this program. The second, and more permanent, is to train the personnel of institutions with direct links to the national emergency system in charge of operating and maintaining the equipment and systems to be acquired with loan proceeds.

a. Support staff for the DCV (US\$370,000)

- 2.23 The funds allocated to this category will be used to hire incremental professional and technical-support staff to increase the DCV's operating capacity and thereby enable it to play its part in the program. Its functions will chiefly involve: contracting and reviewing studies and projects for infrastructure rehabilitation; contracting construction companies to build the

works and consulting services for their supervision; and technical, environmental, and financial supervision of the works.

b. Specialized advisory services for the CEN (US\$100,000)

- 2.24 The services of specialized consultants may be engaged to carry out specific short-term studies and/or advise on the solution of isolated problems that require considerable know-how and experience.

c. Training (US\$200,000)

- 2.25 These funds will be used to train key staff in organizations that are directly and permanently linked to the national emergency system, such as the CEN, the Meteorology and Hydrology Directorate (DMH), the Military Geographic Service Directorate (DISERGEMIL), in the operation and maintenance of the meteorological equipment and communications systems that will be provided under the program, and in processing the data and interpreting the results. Training will be carried out under a plan which will be submitted to the Bank for consideration, and may be offered through: (i) special courses at universities or technical institutes; (ii) consultants or experts hired to give seminars and short courses and/or prepare procedural guidelines and manuals; and (iii) professionals and technicians hired to provide direct in-service training.

d. Implementation of georeferenced systems (US\$140,000)

- 2.26 The generally scattered, isolated, and diverse nature of damage caused by large catastrophes makes it necessary to have a system to locate and identify that damage. In an emergency, data of this kind are indispensable for planning rescue operations and for deploying emergency response resources. Planning for future emergencies and control of resource use can benefit considerably from a well-discriminated, georeferenced statistical database. Under this subcomponent, consulting services will be hired to install the information system.

C. Program costs and financing

- 2.27 The program will cost a total of US\$40 million. The Bank will provide US\$35 million or 87.5% of the total as follows: (i) up to US\$10.5 million from the ordinary capital; and (ii) up to US\$24.5 million from the Intermediate Financing Facility. The Paraguayan government will provide the US\$5 million counterpart (12.5% of the total) from the national budget.
- 2.28 The proposed percentages and use of IFF resources are justified on the basis of the Bank's natural disaster policy and because the program will help to alleviate the critical situation of the victims, who mainly belong to low-income groups.

2.29 Table II-1 presents the main components, estimated costs, and distribution by source of funding.

PARAGUAY - PR-0112 COMPONENTS AND ESTIMATED COSTS				
COMPONENTS	IDB	GOP	TOTAL	(%)
Engineering and administration	3.140,000	160,000	3.300,000	8.25
Technical and administrative support for CEN	540,000	160,000	700,000	1.75
Studies and projects	1,000,000		1,000,000	2.50
Works supervision	1.100,000		1.100,000	2.75
Repayment of PPF	500,000		500,000	1.25
Civil works	26.230,000	1.520,000	27.750,000	69.38
Road rehabilitation	10.450,000	550,000	11,000,000	27.50
Drainage and flood protection works	7.220,000	380,000	7.600,000	19.00
Outfitting of shelters	1.900,000	200,000	2.100,000	5.25
Construction of wood bridges	2.850,000	150,000	3,000,000	7.50
Construction of concrete bridges	1.710,000	90,000	1.800,000	4.50
Additional works related to bridges	950,000	50,000	1,000,000	2.50
Infrastructure rehabilitation	950,000	50,000	1,000,000	2.50
Refurbishment of CEN offices	200,000	50,000	250,000	0.63
Procurement				
Means of transportation	1.100,000		1.100,000	2.78
Leasing of airplanes	200,000		200,000	0.50
4 x 4 trucks	130,000		130,000	0.33
Vessels	780,000		780,000	1.95
Meteorological instruments & equipment	2.620,000		2.620,000	6.55
Radar	1.700,000		1.700,000	4.25
Radiosonde	160,000		160,000	0.40
Satellite image receiver	130,000		130,000	0.33
Automation of network of stations	250,000		250,000	0.63
Automation of meteorological telecommunications	380,000		380,000	0.95
Other equipment and systems	790,000		790,000	1.98
Power generators	300,000		300,000	0.75
Communications equipment	370,000		370,000	0.93
Geographical positioning equipment	60,000		60,000	0.15
Computer and office equipment	60,000		60,000	0.15
Institutional strengthening	760,000	50,000	810,000	2.03
Incremental staff to support MOPT	350,000	20,000	370,000	0.93
Hiring of experts for the CEN	100,000		100,000	0.25
Training	190,000	10,000	200,000	0.50
Implementation of georeferenced systems	120,000	20,000	140,000	0.35
Financial costs	350,000	3.270,000	3.620,000	9.05
Interest		3,000,000	3,000,000	7.50
Commitment fee		270,000	270,000	0.68
Inspection and supervision by the IDB			350,000	0.88
TOTAL	35,000,000	5,000,000	40,000,000	100%

- 2.30 The conditions for the Bank loan will be: (i) amortization period, 30 years; (ii) grace period, 3.5 years; (iii) disbursement period, 3 years; (iv) interest rate, variable (OC and IFF); (v) inspection and supervision, 1%; (vi) credit fee, 0.75%; and (vii) currency, U.S. dollars from the Single Currency Facility.

D. Program preparation status

- 2.31 The Paraguayan government has presented 80 project profiles to repair roads and bridges, containing the information required by the Bank to evaluate their eligibility and estimate their probable cost. Preliminary projects are also available for protective works in Concepción and Alberdi.
- 2.32 Funds from the recently-approved PPF (paragraph 2.10) are being used to contract consulting services to develop the working designs for eligible road and bridge projects in the first group presented to the Bank. The terms of reference and specifications used in the national rural roads program (loan 744/OC-PR) are available and have been adapted to the nature of the works envisaged under this program.
- 2.33 Technical specifications and reference prices for the specialized meteorological equipment to be procured under the program are being prepared by the technical agencies involved, with support from the World Meteorological Organization.
- 2.34 Based on its experience in executing loan 744/OC-PR, the DCV is preparing model documents and packages of projects to be used in contracting the road works.
- 2.35 The CEN and the DCV are identifying candidates from among whom they will select advisors and professional and technical personnel to temporarily bolster their technical and administrative staff for program execution.
- 2.36 The Environment Directorate (DOA) which reports to the National Resources and Environment Branch (SSRNMA) of the Ministry of Agriculture (MAG) has issued environmental permits for the road and bridge reconstruction works (paragraph 3.19).
- 2.37 Draft Operating Regulations have been prepared for the program (paragraph 3.2) setting forth technical, economic, and environmental eligibility criteria for the projects to be included in the program, and procedures for the supervision and monitoring of the technical, environmental, and financial development of the different components. This document and the model technical and environmental profiles can be consulted in the operation's technical files.

III. PROGRAM EXECUTION

A. Borrower and executing agency

- 3.1 The borrower will be the Republic of Paraguay, while the executing agency will be the Ministry of the Interior (MI) through the National Emergency Committee (CEN) which was created by Law 153/93.

B. Program coordination and execution

- 3.2 As executing agency, the CEN will be responsible for program coordination and administration and will act as the communications link with the Bank. Its main functions will be to: (i) select the projects to be included in the program, verifying their eligibility and programming their physical and financial execution; (ii) administer and control the loan proceeds; (iii) authorize disbursements; (iv) supervise bids and procurements; and (v) prepare reports for the Bank. Prior to the first disbursement of the loan, the executing agency will present an operating plan for the program to the Bank for approval and place the Operating Regulations in effect (paragraph 2.37), which will set forth the procedures to be followed in carrying out the above-mentioned functions and include a timetable for implementing all the activities (paragraph 3.48).
- 3.3 The subexecuting agencies will be ministries and other public sector agencies with technical responsibility for carrying out activities in their areas of specialization.

C. Interinstitutional agreements

- 3.4 Participation by the MOPC and other subexecuting and/or beneficiary agencies of certain components such as the National Civil Aeronautics Directorate (DINAC), the Military Geographic Service Directorate (DISERGEMIL), municipal governments, etc., will be established by means of interinstitutional agreements to be signed prior to making any disbursements relating to the subcomponents in each case. The agreements will establish the responsibilities and commitments of the beneficiary agencies to provide the resources needed to operate and maintain the works and/or equipment and systems allocated to them pursuant to standards acceptable to the Bank. In principle, program execution responsibilities will be distributed as described below.

1. Ministry of Public Works and Communications

- 3.5 All the road and bridge repair and reconstruction projects and other heavy construction works such as walls and flood-protection works, preparation of sites for shelters, piping and drainage, etc., will be implemented by the MOPC through the Local Roads Directorate (DCV). Part of the institutional strengthening funds

will be used to contract incremental professional and technical staff to temporarily boost the operating capacity of the DCV (paragraph 2.23).

2. National Civil Aeronautics Directorate

- 3.6 The National Civil Aeronautics Directorate (DINAC), through the Meteorology and Hydrology Directorate (DMH), will advise the CEN on procurement of meteorological equipment and instruments under the program and will take responsibility for its operation and maintenance, making a commitment to provide the CEN with the information and support it requires for its activities. Part of the institutional strengthening funds will be used to train the staff of the DMH (paragraph 2.25).

3. Military Geographic Service Directorate (DISERGEMIL)

- 3.7 DISERGEMIL will cooperate with the CEN in identifying and preparing specifications for equipment, software, and technical assistance to establish a georeferenced information system to facilitate emergency planning and response. It will also take responsibility for operating and maintaining some of the equipment and systems. Part of the institutional strengthening funds will also be used to train the staff of this directorate (paragraph 2.25).

4. Other subexecuting agencies

- 3.8 The CEN will directly execute all the other components or, with the Bank's consent, may sign agreements delegating that responsibility to other public sector agencies, departmental or municipal governments, etc.

D. Technical aspects

1. Projects to be financed

- 3.9 The Paraguayan government has presented a list of projects for Bank financing, together with the profiles of 80 projects which contain the basic information needed by the Bank to evaluate their eligibility, technical features, and estimated costs. This group of projects has been used as a representative sample to scale the program. Since this is a multiple-works operation, the projects in the list and others that may be added subsequently must comply with the eligibility criteria agreed upon by the borrower and the Bank.

2. Eligibility criteria

- 3.10 For a project to be eligible under the program it must meet the following requisites: (i) be located in the area declared to be in a state of emergency by the national government; (ii) be included in the types of activities defined in the program's components; (iii) furnish reliable evidence that the damages were caused by the extraordinary weather conditions resulting from El Niño; (iv) be

necessary to assure supplies and restore access to services that are indispensable for the well-being of the affected communities; (v) have technical studies, designs, and/or specifications to ensure the durability of the works, and a benchmark budget for bidding and contracting; (vi) have the necessary official environmental permits; and (vii) have been approved by the Bank for inclusion in the program.

3. Project selection and priority

- 3.11 The departmental and local committees that form part of the national emergency system are composed of representatives from local governments, producers' and trade associations, and communities in the emergency zones. They will participate in selecting and recommending the projects to be included in the program.
- 3.12 The projects will be selected and programmed giving preference to those intended to: (i) expand or improve temporary shelters for people whose housing continues to be uninhabitable and repair access roads to allow supplies to be delivered to isolated areas; (ii) permit the resumption of economic activities that provide employment for the low-income population; (iii) facilitate the delivery of emergency public services; (iv) regularize traffic flows in the hardest-hit areas; and (v) prevent damage from similar phenomena in future.

4. Preparation of studies and bidding documents

- 3.13 Depending on their complexity, studies, designs, specifications, and bidding documents will be prepared by consulting firms or individual consultants, following the selection and contracting procedures described below. To obtain economies of scale, ensure that design criteria are homogeneous, and facilitate contract administration, projects will be packaged to the extent possible on the basis of geographic location and similarity, to be awarded to a single consulting firm.
- 3.14 The technical agencies in charge of executing the respective components will be responsible for supervising and monitoring the studies and approving them, in accordance with the interinstitutional agreements to be signed by the Ministry of the Interior (as program executing agency) with the subexecuting agencies.

5. Supervision of works and control of execution

- 3.15 Technical and administrative supervision of the works financed under the loan will be performed by consulting firms or individual consultants, depending on their complexity and size. The subexecuting agencies will be responsible for supervising these contracts and presenting monthly physical progress and financial reports which will be reviewed and consolidated by the GEN.

E. Social and environmental aspects

1. Program impact

- 3.16 The main program components are chiefly small works to rebuild and/or repair rural roads and bridges, all of which were built many years ago. Therefore the indirect impact of the works will be small and their potential direct negative impacts are predictable and will be limited to the construction stage. The program also includes construction of walls to provide protection from flooding rivers in two localities that have already been identified. These works, which are also small in scale, will have positive social and environmental impacts, since their purpose is to minimize the damage from future flooding and protect people living in vulnerable zones. Furthermore, socioenvironmental criteria have been defined to identify potential negative impacts from these and other program activities in order to include measures to mitigate them in projects where this is necessary.

2. Identification and evaluation of project impact

- 3.17 The subexecuting agencies, chiefly the MOPC through its Environment Unit, will prepare socioenvironmental profiles for each project which, together with the technical profiles 1/ will serve to decide on project eligibility and priority. The socioenvironmental profiles will contain the general characteristics of each project, a short description of the socioenvironmental context and, depending on the type of project, its potential impact. This information will allow for timely detection of ecologically fragile areas, parks and protected areas, archeological and cultural heritage sites, and indigenous communities that could be affected and of project risks, so that measures to mitigate them can be undertaken.
- 3.18 The CEN, with support from consultants hired with loan proceeds, including an environmental advisor (paragraph 2.7), will evaluate the eligibility and technical and environmental feasibility of each project, verify that suitable mitigation measures have been included, and send the respective reports to the Bank. Some works, such as the construction of flood protection walls and works for canalization and adjustment of river beds, may require further studies and environmental impact assessments (EIAs). In the event the profiles do not suggest studies of this kind, the CEN should determine whether an EIA is necessary and prepare the corresponding terms of reference.

3. Environmental permits

- 3.19 Under Paraguayan environmental legislation, the Environment Directorate (DOA), which reports to the National Resources and

1/ Available in the technical files.

Environment Branch (SSRNMA) of the Ministry of Agriculture (MAG), is the technical agency responsible for issuing environmental permits for infrastructure works. It has already issued the permit for road and bridge repair after verifying that the information contained in the socioenvironmental profiles for the representative sample of the roads and bridges and the socioenvironmental procedures proposed for the program are sufficient to ensure appropriate treatment of environmental aspects.

- 3.20 The DOA will decide on the other infrastructure works included in the program based on the specific documentation for each project.

4. Monitoring and control of environmental measures

- 3.21 The MOPC's Environment Unit will be responsible for: (i) collecting, organizing, analyzing, and systemizing socioenvironmental information on the infrastructure rehabilitation projects to be carried out by the ministry; (ii) preparing the environmental profiles to be evaluated by the CEN; (iii) contracting and supervising complementary studies and preparing EIAs for projects that require them; (iv) verifying that the necessary environmental protection measures have been included in project designs and contracts for works; (v) supervising execution of environmental protection measures based on contract specifications; and (vi) helping to prepare reports for the Bank. The Environment Unit gained experience in these areas during the national local roads program (loan 744/OC-PR) and can use the MOPC's rural roads and bridges manuals which have recently been updated to include environmental concerns by a consultant financed from the loan in question.

- 3.22 As part of the environmental monitoring and control process, the CEN will be responsible for: (i) evaluating and verifying the socioenvironmental eligibility of projects based on the criteria discussed above; (ii) identifying cases that require specific studies and/or an EIA; (iii) preparing or approving the terms of reference for the studies and/or EIAs and advising the Environment Unit on reviewing reports and approving the results of the studies; (iv) monitoring compliance with environmental impact attenuation measures and environmental management plans when required; (v) organizing consulting processes and encouraging participation by the respective communities through publicity campaigns; (vi) obtaining information and periodically evaluating the positive socioenvironmental impacts of the different program components; and (vii) preparing or consolidating environmental reports for the Bank.

5. Mid-term environmental review

- 3.23 Alongside the mid-term program evaluation which will review technical, administrative, and financial performance (paragraph 3.47), a mid-term environmental review will be performed to study the effectiveness of environmental procedures and their

levels of compliance and evaluate information on the socioeconomic impact of the program. The CEN will use part of the funds to hire specialists and advisors with expertise in sociology and economics to prepare the information required for this review.

F. Financial aspects

1. Special account

- 3.24 Program resources to finance eligible activities will be managed through a special account, with separate accounting, kept independently from the other accounts of the executing agency.

2. Revolving fund

- 3.25 To facilitate and streamline management of the Bank's financing, a revolving fund will be established for the equivalent of up to 5% of the total, to be administered by the CEN.

3. Authorization of disbursements

- 3.26 The subexecuting agencies will prepare monthly certifications of progress in the works and invoices for services provided by third parties and for goods procured in that period. The CEN will review, approve, and consolidate this documentation in order to request the respective disbursements from the Bank. The Bank will process the requests and, if advisable and agreed with the executing agency, it may make direct payments to contractors, consultants, and suppliers of eligible goods and services.

4. Works on force account from the counterpart

- 3.27 For works that are extremely urgent, inexpensive, or located in remote areas of no interest to private companies, which have to be executed on force account, the costs may be recognized as counterpart contributions, provided the following conditions are complied with: (i) timely notification to the Bank; (ii) presentation of documentation justifying the cost (labor, equipment, materials, etc.); and (iii) prices in line with the local market. Works on force account may not total more than US\$1 million equivalent.

5. Financial auditing

- 3.28 The executing agency will present consolidated and audited statements of program investments to the Bank each year. The borrower will hire a specialized firm of external auditors who will be given access to the accounting records and supporting documentation that the subexecuting agencies will be required to keep in separate files, in accordance with Bank requirements. Using their own procedures, the auditors will selectively inspect the works and installations or the places where the equipment

procured with loan proceeds is being operated in order to verify progress or operating conditions and adequate functioning.

G. Special procurement procedures

3.29 In government-declared emergencies, the Bank's policy on natural disasters (OP-704) permits more simplified and flexible procedures to be used for contracting works and services and procuring goods than would normally apply when Bank financing is used. Paraguayan legislation empowers public sector agencies to contract or purchase works, services, and goods to deal promptly with emergency situations, without the need for competitive bidding, and even allows direct contracting and purchasing.

3.30 Based on these provisions, the Paraguayan government and the Bank have agreed to the simplified criteria and procedures described below for all the contracts and procurements included in this program.

1. Publication of notices

3.31 The general procurement notice will only have to be published in *Development Business*. The notice will clearly state that all specific notices for international bids and invitations to submit statements of qualifications will only be published in the local press, and on the CEN's Internet website. The local press notices will be published twice on nonconsecutive days, in two of the country's largest newspapers. The notice will also mention that given the emergency, bidding and contracting will be based on special procedures agreed upon with the Bank and that no restrictions will be placed on participation by foreign firms.

2. Procedures for international competitive bidding and invitations to submit statements of qualifications

3.32 International competitive bidding (ICB) and international invitations to submit statements of qualifications will be necessary when: (i) the cost of the work or package of works in a single contract is US\$2 million equivalent or over; (ii) the cost of consulting services is US\$200,000 equivalent or over; and (iii) the cost of the good or package of goods to be purchased simultaneously is US\$250,000 equivalent or over.

3.33 Prequalification will not be necessary for works or goods. Post-qualification may be used in awarding contracts for works and goods, whereby the subexecuting agency determines whether the lowest bidder has the capacity and resources to perform the contract satisfactorily.

3.34 For consulting services, the specific procurement notices will ask for expressions of interest and will include the selection criteria to be used. The best firm will be selected to negotiate the contract. Prequalification and short lists will not be required.

- 3.35 The deadlines for presenting proposals by ICB of invitation may not be less than 30 calendar days and documents will not be required that would impede or restrict participation by foreign firms owing to the length of time required to obtain them.
- 3.36 When ICB or invitations are necessary, the Bank will perform an ex ante review of all the bidding documents. The executing agency will also obtain the Bank's agreement prior to awarding the contract.

3. Procedures for contracts and procurements for sums below those requiring ICB

- 3.37 Procurements costing less than the amounts established in the preceding section will be made through shopping, which may be international or local. There will be no restrictions on participation by firms from the Bank's member countries.
- 3.38 For works costing less than US\$2 million equivalent, the executing or subexecuting agency may directly invite not less than three construction companies with recognized experience and satisfactory performance of similar works to present bids. Contracts will be awarded to the lowest bidder.
- 3.39 For procurements of goods costing less than US\$250,000 equivalent, three firms that produce or supply goods compatible with the specifications may be directly invited to quote, in order to obtain the best price.
- 3.40 For consulting services costing less than US\$200,000 equivalent, three bidders with recognized experience and satisfactory performance of similar contracts will be invited to present technical and financial proposals. The technical proposals will be ranked on the basis of experience and the suitability of the personnel and equipment assigned to the project.
- 3.41 The Bank will normally only perform ex post review of bids and contracts for conventional studies and works that do not require international competition. However, it reserves the right to request ex ante reviews of the documentation for more complex studies and works.

4. Agencies responsible for contracting and procurement

- 3.42 The MOPC will oversee the processes of contracting consulting services, procuring goods, and contracting works relating to projects to repair and reconstruct roads and bridges and other heavy construction works.
- 3.43 Contracts and procurements for all other program components will be the responsibility of the GEN, unless expressly stated otherwise in the interinstitutional agreements between the Ministry of the Interior and other subexecuting agencies.

H. Program follow-up and supervision

1. Administrative follow-up and technical and financial supervision

- 3.44 To carry out administrative follow-up and technical and financial supervision of the program, the CEN will expand its staff by using loan proceeds to contract professionals and specialists to: (i) determine the eligibility of works and projects proposed by subexecuting agencies; (ii) supervise contracting and procurement processes; (iii) verify compliance with contracts for studies and works with respect to use of suitable construction methods and techniques, achievement of the physical goals within the stipulated costs and deadlines, and suitable maintenance of works and goods until they are delivered or assigned to the entities that will take over their regular operation and maintenance; (iv) review and approve certifications for payments to contractors, consultants, and suppliers submitted by the subexecuting agencies; and (v) present disbursement requests to the Bank and keep control over the program's financial statements.

2. Reports to the Bank

- 3.45 The CEN will prepare semiannual progress reports to be presented to the Bank within 10 working days after the end of each period. The reports should include, but not be limited to, the following: (i) evaluation of the emergency and forecasts of possible developments; (ii) physical and financial progress of studies and works under way; (iii) equipment procured and progress in its distribution, installation, and use; (iv) status of training programs and other institutional strengthening activities; (v) status of disbursements and general progress in the program; and (vi) estimates of goals achieved and beneficiaries.
- 3.46 At the end of the program, the borrower will provide the information required by the Bank and cooperate with it in preparing a project completion report.

3. Bank supervision and mid-term program evaluation

- 3.47 In addition to reviews of technical documents and reports, processing of disbursement requests, field inspections, and other normal project supervision activities carried out by the Bank's Country Office in Paraguay, during program execution the project team will participate in a mid-term evaluation of the program to examine progress and achievement of goals. The borrower will prepare the documentation required by the Bank and present it 30 days in advance of the date of the evaluation.

I. Execution schedule

- 3.48 The program will be executed in three years counting from the date on which the loan contract becomes effective. All loan proceeds

will be committed within the first 18 months. The portion of the resources provided by the Bank that has not been committed within the first 18 months, or disbursed within the three-year period, will automatically be cancelled by the Bank. For these purposes, resources will be understood to have been committed from the date on which contracts for works, procurement, or consulting services are signed. The tentative execution and disbursement schedules are available in the technical files.

J. Operation and maintenance

- 3.49 Each of the executing agencies or the end beneficiaries of the works and equipment financed with Bank funds must undertake to operate and maintain the works and equipment up to generally-accepted technical standards. Within the first quarter of each calendar year starting in 2000 and for three years after the final disbursement of the loan, the borrower will present annual reports on maintenance conditions of the works and equipment, based on the findings of an examination of a representative sample of the projects financed by the Bank.
- 3.50 During the program and for three years after the final disbursement of the loan, the Bank may visit and inspect the projects financed, and if it is found that maintenance is unacceptable, the agency in charge will be required to take steps to correct the situation.

K. Ex post evaluation

- 3.51 The borrower undertakes to obtain and keep on file the information necessary to perform an ex post review of the program. The plan of operations will define the types of information and the frequency with which it is to be collected.

IV. PROGRAM FEASIBILITY, BENEFITS, AND RISKS

A. Institutional and technical feasibility

- 4.1 The CEN has operated effectively in the country since it was created in 1990 as the agency directly responsible for responding to all emergencies that arise. With assistance from the United Nations, it has been able to establish a response network composed of national, departmental, municipal, and civic institutions, known as the national emergency system.
- 4.2 This multi-institutional system is considered sufficient for coping with emergencies. Further, the present program and the parallel program being arranged with the World Bank include sizeable components to strengthen the CEN and other institutions responsible for the various phases of prevention and control of emergencies (IGM, DMH, etc.), totalling some US\$8 million.
- 4.3 The CEN will sign interinstitutional agreements with the subexecuting agencies to establish and govern all aspects of execution, based on the specific capabilities of each. The technical capacity of the CEN and the MOPC will also be built up with assistance from environmental experts and other specialists, based on the types of projects declared eligible by the program.
- 4.4 The sectors affected by the emergency will be represented by the ministries and state organizations responsible for them, which have the experience needed to carry out the components assigned to them.

B. Environmental feasibility

- 4.5 The program is intended to rehabilitate minor infrastructure (bridges and rural roads) affected by El Niño. Therefore the indirect impact of the works will be small and their potential direct negative impacts are limited to the construction stage. The program also includes construction of walls to provide flood protection in two localities. These works, which are also small in scale, will produce positive social and environmental impacts, since their purpose is to minimize damage from future flooding and protect people living nearby.
- 4.6 The program also includes mechanisms to ensure the timely detection of risks and negative impact on parks and protected areas, archeological and cultural heritage sites, environmentally fragile zones, and indigenous communities, among others. Furthermore, socioenvironmental eligibility criteria are established in the Operating Regulations and allow for suitable mitigation of the impact of projects and their construction, such as problems with erosion, drainage, disposal of materials, etc.

- 4.7 The Environment Unit of the MOPC will be responsible for monitoring mitigation and control measures under the program and will be strengthened by an environmental specialist contracted specifically for that purpose. The Bank's Country Office in Paraguay will monitor compliance with the environmental regulations.

C. Financial feasibility

- 4.8 The country's budget has grown gradually since 1990, to the equivalent of about US\$4.47 billion in 1998. Budget performance has improved and in recent years has consistently been above 75% of programmed performance.
- 4.9 Allocations to the MOPC, which will be the largest subexecuting agency, have followed the same trend, rising to US\$270 million equivalent in 1998, with US\$150 million of that figure going for investments in roads. On average, its budget performance has been 80% of programmed performance.
- 4.10 The counterpart contribution totaling US\$5 million over the three years of the program will generate demand for public funds at an average of US\$1.67 million a year, which will likely peak at US\$2.5 million in year two. When this figure is compared with the national budget and annual allocations to the MOPC, it is not significant since it will represent less than 2% of the ministry's budget for road investments. Therefore the possibility of providing the counterpart contribution is entirely feasible.
- 4.11 This operation will have no significant impact on the country's foreign debt, since it amounts to just 2.4% of the current balance of US\$1.441 billion, while annual service on the loan will be the equivalent of 0.7% of external debt service in 1997.

D. Program benefits

- 4.12 The current appearance of El Niño will require higher spending on recovery than the emergencies in 1982-1983 and 1992. This unexpected drain occurs at a time when the country's economy is shrinking, which is exacerbated by the impact of the phenomenon itself and by fiscal difficulties that place financial constraints on Paraguay's action capacity. Therefore, the basic benefit of this operation will be to help implement measures to mitigate the economic losses in the different regions affected.
- 4.13 Apart from restoring the infrastructure that has been destroyed or damaged, the operation will boost the response capacity of institutions required to deal with emergencies, creating conditions that will attenuate the impact of similar phenomena in future. The designs for the works to rehabilitate infrastructure will include measures to lessen vulnerability to natural disasters and will therefore reduce future negative impact on people and productive activities, improving the country's economic and social development prospects.

- 4.14 In a country where agriculture accounts for 26.9% of GDP and agribusiness is an important segment of the manufacturing sector, reducing uncertainty in rural production will spur producers to increase the area they cultivate and benefit the national economy. A program to develop small cotton farms intended to expand the area planted (PR-0082) is in the approval process. Its goals will become more attainable when the infrastructure is repaired and duly protected.

E. Community participation

- 4.15 The local emergency committees that form part of the national emergency system are headed by municipal authorities and composed of the managers of public services, chiefs of police, representatives of producers' and trade associations, leading community figures, and representatives of private organizations that are important in the community. The committees are responsible for the organization, outfitting, and administration of refugee camps and most humanitarian aid is channeled through them. The committees also coordinate the efforts of the different public agencies responsible for protecting and/or restoring public services and providing public security.
- 4.16 The local emergency committees will participate in selecting projects to be included in the program, particularly projects for the construction of dikes and canalization to protect urban areas, the outfitting of shelters, and the rehabilitation of public buildings. The CEN will contract specific consulting services to conduct public affairs and publicity (paragraphs 2.7 and 2.8), the purpose of which will be to disseminate information on program activities and organize mechanisms for active participation by beneficiary social groups.
- 4.17 In order to make sure that civil society is involved in the process of assigning priorities for the use of resources and has an active role in decision-making, the borrower and the Bank will agree to designate a national nongovernmental institution, which will appoint delegate(s) to participate actively in these processes. The procedures to be adopted for the appointment and functions of the representative(s) will be set forth in the program's Operating Regulations.

F. Program risks

- 4.18 The main risks that could affect achievement of the program's objectives and alter its goals are the possibility that weather conditions will remain adverse in the region, or that El Niño will recur with the same or greater intensity during the program. This could impede execution of the works, aggravate the damage already done, and increase the need for resources to protect the public and rehabilitate infrastructure. A lesser risk which will be minimized through institutional strengthening would be difficulties in coordination, since different public agencies are involved which do

not normally have sufficient resources to perform tasks that are not included in their programs of activities and operating budgets.

EMERGENCY AND INFRASTRUCTURE REHABILITATION PROGRAM FOR PARAGUAY

LOGICAL FRAMEWORK

*(See no

OBJECTIVES	VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
adverse social and economic io	Changes in GDP as compared with earlier periods Variations in production in the affected zones Variations in poverty indicators in the hardest-hit departments Migratory processes from the affected zones	Socioeconomic statistics from the National Planning Institute Censuses and specific surveys in the affected areas Evaluations and audits requested by the Bank	The impact of El Niño begins to diminish starting in June 1998 There are no additional catastrophic events of this kind during the program Coordination between the agencies and their participation takes place as planned in the program
rehabilitation of the infrastructure destroyed and prevent future m flooding the response capacity of responsible for dealing with s	Reopened transportation infrastructure in the affected zones Reestablishment of basic services in the affected communities Construction of protective works to prevent future floods Better trained personnel and more physical resources and equipment for the CEN to enable it to provide rapid assistance and shelter for the affected population Better weather forecasting capacity and warning systems for natural catastrophes Better coordination and communications for the national emergency system	Reports on road condition from the DNV and the DCV Inspections and surveys in the affected communities Inspections and progress reports on the works and installations Reports on training programs, procurement, and availability of shelters for future emergencies Availability of modern meteorological equipment and instruments and data processing systems Availability of an integrated communications system and better mechanisms for activating the national emergency system	The impact of El Niño begins to diminish starting in June 1998 There are no new catastrophic events of this kind during the program Technical assistance is contracted and a training plan is carried out in accordance with the timetable Coordination between the agencies and their participation takes place as planned in the program

*(See no

OBJECTIVES	VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p><u>Rehabilitation</u></p> <p>Feeder and local roads reopened to traffic under safe conditions</p>	<p>Approximately 200 km of feeder roads and 200 km of local roads repaired and in service</p> <p>Repair and reconstruction of about 50 wooden bridges and 30 concrete bridges and reinforcement of other structures completed. Bridges open</p>	<p>Physical and financial progress reports</p> <p>Reports and inventories of the condition of feeder and local roads</p> <p>Field inspections and travel times to localities affected by the emergency</p> <p>Records of acceptance of works</p>	<p>Studies and contracting and execution of works proceed normally</p> <p>Weather conditions permit normal progress of the works and river levels return to normal</p>
<p>Health care facilities, and other public services functioning and operating</p>	<p>Works to repair public buildings and support for the provision of social services concluded</p>	<p>Program and financial progress reports</p> <p>Field inspections and records of acceptance of works</p>	
<p><u>Protection of future flooding</u></p> <p>Roads that were destroyed or damaged are rebuilt to better withstand future flooding</p> <p>Other structures have greater capacity to withstand higher water levels under future conditions</p> <p>Flood protection for urban riverside areas and availability of shelters</p>	<p>Works to raise embankments, surface improvements, canalization, and drainage in specific sections of roads that were cut off completed and delivered</p> <p>Works to reconstruct bridges, slope protection, cleaning of river beds, and other works to facilitate high water flows completed and in service</p> <p>Construction of walls, dikes, and other flood-protection works completed and temporary shelter areas outfitted</p>	<p>Program and financial progress reports</p> <p>Field inspections and records of acceptance of works</p>	<p>Local governments have the land resources to build the shelters</p>
<p><u>Strengthening</u></p> <p>Capacity of and other executing agencies to perform their technical and operating functions for program execution</p>	<p>Incremental staff and specialized advisers for the CEN, the DCV, and other agencies participating in the program are hired and join the executing units</p>	<p>Program and financial progress reports</p> <p>Contracts for personal services and goods procurement</p>	<p>Timely preparation of the terms of reference, specifications, and bidding documents; hiring of incremental staff, specialized individual consultants, technical-assistance services; procurement and assembly of equipment and instruments required for this component</p>

OBJECTIVES	VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p>has more physical resources to assist victims</p> <p>country has modern methods for forecasting and for taking timely action to prevent disasters</p> <p>and the national emergency management have effective systems and procedures for planning, coordinating, implementing, and controlling the use of resources for emergencies</p>	<p>Transportation, communications, and computer equipment procured and operating</p> <p>Equipment and instruments to obtain and process meteorological data procured</p> <p>Staff of the National Meteorology Directorate receive advanced professional and technical training to operate and maintain the equipment</p> <p>Planning, communications and georeferenced information systems for emergency management in operation</p>	<p>Program and financial progress reports</p> <p>Procurement contracts</p> <p>Physical and financial progress reports</p> <p>Procurement contracts</p> <p>Technical-assistance contracts, training plans, and certifications of academic and training courses</p> <p>Technical assistance and service contracts to design and implement the systems</p>	<p>Normal contracting and procurement within the periods determined in the execution schedule</p>
<p>activities will be spelled out in the operating plan to be presented to the Bank by the Government within 30 days after the loan is approved</p>	<p>The operating plan includes the main events, goals, and dates for the completion of each activity</p>	<p>Progress in relation to the approved execution schedule in the operating plan</p>	<p>Systematic follow-up of all operations and operating during the entire project</p> <p>Adoption of timely corrective measures in case of deviations from the approved schedule</p>

Due to the special characteristics of this emergency operation, it is extremely difficult to establish a basis for comparison against which the impact of the program can be measured. The direct or indirect damage that has occurred and continues to occur as a consequence of the floods and other weather phenomena has yet to be quantified. For this reason, no specific indicators have been included for follow-up and monitoring of program activities. Nevertheless, during program execution and to the extent possible, the full magnitude of the impact is expected to be evaluated through inventories and surveys to gather the information needed to eventually measure the final impact of the program.

EMERGENCY AND INFRASTRUCTURE REHABILITATION PROGRAM (PR-0112)						
PROCUREMENT PLAN						
Description	Estimated total (US\$)	Number of contracts	Source of funds	Type of process	Date of notice*	Starting date
CONSULTING SERVICES						
Bridge studies	100,000	10	IDB	LCP	III/98	III/98
Road rehabilitation studies	250,000	4	IDB	LCP	III/98	III/98
Flood protection studies	500,000	2	IDB	ICP	III/98	III/98
Communications systems	100,000	1	IDB	LCP	IV/98	IV/98
Georeferenced systems	100,000	1	IDB	LCP	IV/98	IV/98
Works supervision	1,000,000	10	IDB	LCP	III/98	III/98
CIVIL WORKS						
Road rehabilitation	11,000,000	8	IDB/GOP	LI	III/98	IV/98
Flood protection works	7,600,000	2	IDB/GOP	ICB	I/99	II/99
Shelters	2,000,000	4	IDB/GOP	LI	III/98	IV/98
Bridge reconstruction	6,800,000	15	IDB/GOP	LI	III/98	III/98
Building repair	1,250,000	5	IDB/GOP	LI	III/98	III/98
PROCUREMENT						
4x4 trucks	130,000	1	IDB	LI	III/98	III/98
Boats	700,000	2	IDB	ICB	III/98	III/98
Meteorological instruments	2,000,000	1	IDB	ICB	III/98	III/98
Communications equipment	400,000	1	IDB	ICP	III/98	III/98
Other equipment	300,000	4	IDB	LI	III/98	III/98
GPS equipment	60,000	1	IDB	LI	III/98	III/98

* Notice or invitation, as pertinent

LCP = local call for proposals
 ICP = international call for proposals
 LI = local invitation to submit statements of qualifications
 ICB = international competitive bidding

PROPOSED RESOLUTION
PARAGUAY. LOAN ____/OC-PR TO THE REPUBLIC OF PARAGUAY
(Infrastructure Rehabilitation and Emergency 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 Republic of Paraguay, as Borrower, for the purpose of granting it a financing to cooperate in the execution of an Infrastructure Rehabilitation and Emergency Program. Such financing will be for the amount of up to thirty five million United States of America Dollars (US\$35,000,000), from the Single Currency Facility resources of the Ordinary Capital of the Bank, and will be subject to the "Special Contractual Conditions" and the "Terms and Financial Conditions" set forth in the Executive Summary of the Loan Proposal.

PROPOSED RESOLUTION

PARAGUAY. PARTIAL PAYMENT OF INTEREST.
LOAN ____/OC-PR TO THE REPUBLIC OF PARAGUAY
(Infrastructure Rehabilitation and Emergency Program)

The Board of Executive Directors

RESOLVES:

1. That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, as administrator of the Intermediate Financing Facility Account, hereinafter referred to as "the Account", to enter into such contract or contracts as may be necessary with the Republic of Paraguay, as Borrower, and to adopt other pertinent measures to use the resources of the Account to pay a part of the interest due by the Borrower on outstanding balances of the loan authorized in Resolution DE ____/____, in accordance with the provisions set forth in Document FN-263-2, as amended, approved by the Board of Executive Directors on December 21, 1983.

2. That this Resolution will become effective only if the Bank determines that it has sufficient resources in the Account available for the Republic of Paraguay, for proper application to the loan authorized in Resolution DE ____/____, in accordance with the rules and policies of the Bank.