

**EMERGENCY RECONSTRUCTION FACILITY FOLLOWING THE
EARTHQUAKE IN THE COFFEE BELT**

(CO-0243)

EXECUTIVE SUMMARY

BORROWER AND GUARANTOR:	The Republic of Colombia	
EXECUTING AGENCY:	Coffee Belt Reconstruction Fund (FOREC)	
AMOUNT AND SOURCE:	IDB:	US\$20,000,000 (OC)
	Counterpart:	US\$13,500,000
	Total:	US\$35,500,000
FINANCIAL TERMS AND CONDITIONS:	Amortization period:	25 years
	Disbursement period:	1 year
	Period for commitment:	9 months
	Grace period:	5 years
	Interest rate:	variable
	Inspection and supervision:	1%
	Credit fee:	3/4%
	Currency:	US dollars from the Single Currency Facility
OBJECTIVES:	The purpose of the project is to resume basic services to the population stricken by the earthquake in the coffee belt.	
DESCRIPTION:	This project is designed to provide resources for urgent activities such as debris removal, building demolition, the inspection and stabilization of buildings and bridges, temporary housing and, in general, repair of the infrastructure of such services as drinking water, sanitation, health and education. Studies will also be done to quantify the damage and draw up plans of action for reconstruction and rehabilitation.	
ENVIRONMENTAL CLASSIFICATION:	The policy set forth in document GN-2038-2, emergency reconstruction facility for natural and unexpected disaster support was followed.	
BENEFITS:	Restoration as quickly as possible of the living conditions of the population stricken by the natural disaster.	

RISKS: The risks include the taking of ill-planned decisions because of the pressures of the stricken communities for immediate responses to improve conditions in the wake of the disaster. This risk is mitigated by the participation of the stricken communities in all aspects of the program. In addition, the possibility of a more flexible response is enhanced by the special procedures for procurements and contracting permitted by the emergency decrees.

Another risk would lie in delays arising out of the novelty of FOREC and the large number of institutions involved in execution. This risk is reduced by the setting up of an entity with the strong leadership of FOREC. In addition, the institutions involved have assigned the human and financial resources needed to meet the emergency.

EXCEPTIONS TO BANK POLICY: See section on Procurements, below.

THE BANK'S COUNTRY AND SECTOR STRATEGY: In natural disasters of major consequences the Bank supports the member countries in their response to the unforeseen effects and their socioeconomic and environmental impacts. The program is consistent with the policy on emergencies created by natural disasters (GP-92-15) and the emergency reconstruction facility to provide support in natural disasters (GN-2038-2).

POVERTY TARGETING: Though the program is not directed at lowering poverty levels, the population that has suffered the most from the disaster is that of the lowest-income earners because of their limited capacity for recovery from the loss of their homes and jobs. Since this project has no specific targeting mechanisms and concentrates most on measures of immediate response to the disaster and on planning for the reconstruction phase, it would not meet the Bank's criteria for operations to reduce poverty.

SPECIAL CONTRACTUAL CONDITIONS: Condition precedent to the first disbursement: presentation to the Bank of the agreement between the borrower and Executing Agency for the transfer of resources and execution of the program.

Contractual conditions for execution:

- a. Establishment of a revolving fund in the equivalent of up to 20% of the loan resources (see paragraph 5.3).

- b. Crediting of expenditures to the financing in the equivalent of up to US\$3 million. (see paragraph 5.2).
- c. Undertaking by borrower to agree with the Bank in the month following signature of the loan contract on (i) the content of the technical profile and specific requirements of each activity in their technical, socioeconomic, financial and environmental aspects (see par. 4.13), and (ii) the model of the financial agreement to be signed with the coexecuting agencies for execution of the activities under the project (see par. 4.7).
- d. Performance of the accounting and financial audit on a quarterly basis following the date of signature of the loan contract (see par. 4.16).
- e. Presentation of quarterly reports on the external monitoring and supervision system coordinated by the universities as from the date of signature of the loan contract (see par. 4.17).

**PROCUREMENT
PROCEDURE:**

Procurement procedures for emergency projects (GP-92-15).

International public bidding procedures will be required for procurements in amounts beyond US\$350,000 and for works contracts in excess of US\$5 million. International public bidding will also be used to contract for consultancies in amounts above US\$200,000. For procurements and contracts not requiring international public bidding, the office of the Bank's Representative will make the ex post reviews of form.

As an exception to the procedure for the selection of consultants by public contest, it is recommended that the Centro Interdisciplinario de Estudios Regionales (Interdisciplinary Center for Regional Studies, or CIDER), Los Andes University, Quindío University, and Pereira Technological University be contracted directly to perform the external monitoring and supervision of the project. These universities will make all procurements, contract consultants and carry out other requisite activities in accordance with the Bank's procedures. These contracts are in compliance with the provisions of chapter GS-403 of the Procurement Manual (see par. 4.17).

I. DESCRIPTION OF THE EVENT -- EXTENT OF THE DISASTER

- 1.1 At 1:19 p.m. on January 25 of this year the coffee belt in western Colombia was stricken by strong earthquake measuring 6 on the Richter scale. The epicenter was located in the vicinity of Córdoba municipality in Quindío department, 16 kilometers southwest of Armenia, the department seat. The earthquake inflicted severe losses in twenty-seven municipalities in the departments of Quindío, Risaralda, Caldas, Tolima and Valle del Cauca, and has been rated one of the most destructive and its toll one of the highest in the history of Colombia.
- 1.2 The city that suffered the most from the earthquake was Armenia, a municipality of about 250,000 inhabitants, where it is expected that the dead could number more than 1,000 and about 90% of the downtown core is reportedly destroyed along with several complete neighborhoods in the southern part of the town. The municipalities near Armenia, such as Calarcá (106 dead and 340 injured), La Tebaida (51 dead and 280 injured), and Montenegro (36 dead and 250 injured) have suffered severe damage. Damage was also considerable in the city of Pereira, capital of Risaralda department, with about 450,000 inhabitants, where an estimated 44 are dead, 650 are injured, and about 25% of the downtown core has been destroyed.
- 1.3 Two weeks after the tragedy the official death toll rose above 1,000 and the number of the injured to more than 4,000, who are being treated in hospitals of the region and in the nearby departmental capitals, and the number of the homeless ranges between 200,000 and 250,000.
- 1.4 Shortages of water supply, electric power and telephone service linger, mainly in Armenia and other municipalities of Quindío and in rural areas. The coverage of water supply in Armenia is estimated to be reduced by more than 80% and that of electric power for homes and other structures not destroyed by the quake at 90%. Refuse collection is being performed with trucks lent by neighboring municipalities, which are currently serving a sizable part of the city accessible to them.
- 1.5 The Bank's operation will be carried out in two stages: (i) in the emergency phase with financing provided through the Emergency Reconstruction Facility for natural and unexpected disaster support (ERF), and (ii) after the emergency, in the reconstruction phase, which could be financed by redirecting funds of current loans and with new loans. The operation here presented is confined to the first phase.

II. PROCLAMATION OF A STATE OF EMERGENCY

- 2.1 The gravity of the situation prompted the National Government to proclaim, in Decree 182 of 1999, the day following the earthquake, "a national disaster in the coffee belt region" based on Decree Law 919 of 1989, which authorizes special measures in the following fields: standards for contracts, fiscal control of resources, procurement and expropriation, temporary occupancy and demolition, imposition of rights of way, debt moratoria, diverse incentives for rehabilitation, reconstruction, administration and the uses of grants. In his address to the Nation the night after the tremor, President Andrés Pastrana expressed the National Government's resolve to facilitate a quick response to alleviate human suffering in the area. He also said that the government had requested emergency resources from the World Bank and the Inter-American Development Bank, which agencies immediately promised broad support at the highest level. President Pastrana noted that he would contract for independent auditing to guarantee transparency in the use of these resources (see document II-1, in the technical files of the project).
- 2.2 On January 29 this year the Council of Ministers approved Decree 195 proclaiming a 30-day State of Economic and Social Emergency in 27 municipalities of five departments and granting the President powers, among other, to increase the budget by decree, to contract external debt without the usual procedures, and to set up an organization to coordinate reconstruction in the stricken area. This is the fourth time in the last 16 years that the National Government has proclaimed a state of emergency because of a severe public disaster. The others were for the earthquake in Popayán, the eruption of the Nevado del Ruíz volcano, and the occupation of the Palace of Justice and the earthquake and subsequent floods in the region of the Páez river (see document II-2, in the technical files of the project).

III. INITIAL DAMAGE ASSESSMENT

- 3.1 The National Government tentatively estimates the damage inflicted by the earthquake at more than US\$700 million, the greatest losses having been in housing. The largest share of the resources would go to Armenia municipality, where an estimated 26,000 homes have been destroyed or damaged. Much of the municipal infrastructure will have to be rebuilt and investments made in the construction of schools, health posts, hospitals, roads and public services. Reports indicate that in the countryside the impact has been serious not on the coffee and other crops (the main source of income in the region) but on housing and on the post-harvest infrastructure. In the economic infrastructure damage is concentrated chiefly in the facilities for the processing of coffee and other crops and in businesses in the hardest-hit urban districts.
- 3.2 The diagnosis that follows is general, and will be developed in detail by the censuses and damage assessment work now in progress. The following points sum up the present situation in the most severely stricken sectors. (See annex III-1 on the technical evaluation of infrastructure done by the Dirección Nacional para la Prevención y Atención de Desastres).
- 3.3 The earthquake caused the collapse of many of the structures in the municipalities of Armenia, Calarcá, Montenegro and La Tebaida in Quindío department and in several towns of Risaralda department. Other structures in the same areas were severely damaged and many will have to be demolished. The housing units damaged are estimated at more than 35,000, the largest number in Quindío department. It is calculated that in Armenia alone 1.5 million m² of housing was destroyed and that more than 1 million m³ of rubble will have to be cleared. Rubble is now being piled at temporary sites until local and environmental authorities identify and prepare the places for its final disposal.
- 3.4 Most water supply and sewer systems suffered no massive structural damage. The treatment plants and storage tanks are in operating condition. The service utilities are assessing the damage, most of which was to the distribution systems, and the risk of collapse of water offtakes (the situation in Pereira municipality is particularly critical). In Armenia, thanks to the collaboration of enterprises in the country's leading cities, water is being supplied to more than 80% of the city. The sewer system is discharging properly.
- 3.5 The public utility enterprises of Armenia are providing solid waste collection in the areas that the garbage trucks can reach, and the service is being provided to hospitals in accordance with their requirements. However, it is anticipated that obvious growth of

the volume of waste will soon exceed the capacity of the place where it is being deposited. In addition, the place is so sanitary that its effect on the environment is expected to increase and necessitate pest- and vector-control operations. Collapses and damage caused in the Pereira sanitary landfill will have to be repaired as soon as possible so that normal operations may be resumed.

- 3.6 Severe damage was done to four hospitals in municipalities of Quindío department, including one of the leading hospitals in Armenia and a sizable number of health posts. Three hospitals in the same department were slightly damaged. More than half of the day-care centers for children between 0 and 7 years of age, of low-income families, were severely damaged and will have to be rebuilt from the ground up.
- 3.7 Damage to the educational infrastructure is considerable, which has led the Quindío authorities to decree indefinite school vacations. The data indicate that in the city of Armenia and the hardest-hit municipalities in the department about 50% of the educational facilities were destroyed or will have to be demolished. In addition, the schools not damaged in the region have been made into temporary shelters.
- 3.8 Regarding the road system, there were 19 cave-ins and 25 fractures in the La Línea roadway, the road that links the region to the central part of the country; on the whole, however, no significant damage was done to the primary roads. There was damage to the urban thoroughfares and to the intermunicipal secondary and tertiary road systems owing to many collapses of diverse magnitude which severed lines of ground communication and to structural damage to some bridges.
- 3.9 The electric power system was interrupted mainly in the areas of cave-ins. In Quindío department damage was done to two transformers of the primary network and to the control structures of the secondary network substations. The public lighting system was also affected. Nevertheless, these services were resumed in the week following the tremor with the collaboration of several enterprises in the sector.
- 3.10 Basic telephone service has been restored in most of the area, but major investments will be required to repair the damage to the Armenia system.
- 3.11 A preliminary assessment at the Armenia airport indicates that the runway, apron and control tower will have to be rebuilt and an assessment made of the damage caused by the increase in the number of daily flights. Both the telecommunications plant and the control tower suffered damage that compelled the suspension of commercial flights.

- 3.12 As regards the penitentiary infrastructure, some of the principal prisons in the area were affected. The jail of the Armenia Judicial District was almost totally destroyed, and the Colombian Instituto Nacional Penitenciario (INPEC) is engaged in studies to determine whether it must be entirely rebuilt or part of the structure can be saved.

IV. GOVERNMENT ACTION

A. The government's response to the emergency

- 4.1 The initial response to the disaster is being coordinated by the Dirección Nacional para la Prevención y Atención de Desastres (National Directorate for Disaster Prevention and Response) and by the Red de Solidaridad Social (Social Solidarity System) with the support of the Red Cross, Civil Defense, the army and the police. Locally the governors and mayors of the stricken local communities are active, and the different departmental and municipal secretariats, with the health secretariats in the lead. Shortly after the magnitude of the catastrophe was confirmed, the government set in motion its emergency response structure, which has already proved its worth. The response has been satisfactory so far in Pereira and the municipalities of Risaralda, Caldas, Valle and Tolima, where the impact of the tremor was less. In Armenia and neighboring municipalities, owing to the limitations of their institutional capabilities, lack of needed heavy equipment and problems of access, the size of the catastrophe exceeded the government's capacity to respond, especially in the construction of temporary shelters and the feeding of the homeless. At this writing, however, care of the homeless has normalized significantly.
- 4.2 The government has received international support in the form of experts in natural disasters and equipment to search for victims and later to remove rubble. Several countries have provided emergency supplies such as tarpaulins, foodstuffs and drugs. The government's relaxation of importation requirements has ensured that aid of this kind will not be delayed on its way to the disaster area.
- 4.3 Because of the inadequacy of the legal functions and resources allocated to the National Disaster Response and Prevention System and in order to bring about the requisite coordination between the national and local levels, on January 30 President Pastrana issued decree 197 creating the Coffee Belt Reconstruction Fund [Fondo para la Reconstrucción del Eje Cafetero], (FOREC). FOREC will finance, support and manage the economic, social and ecological reconstruction of the stricken region. It will be directed and administered by a Directing Council and an executive director, who will be its legal representative and be appointed by the Directing Council. The Plan Nacional para la Reconstrucción del Eje Cafetero (National Plan for Reconstruction of the Coffee Belt) will be conducted by the Directing Council and its Chairman. This Council will be made up of representatives of the public and private sector

of high national credibility who are members of local and national entities actively involved in the project. 1/

- 4.4 Among the functions assigned to FOREC by its establishing decree is that of designating "a firm of established international prestige to audit the acts and contracts of the Fund." (Article 3 (6), Decree 197 of 1999).
- 4.5 In Decree 198 of January 30, 1999, the government authorized an additional allocation on the budget of COL\$542,300 million (about US\$330 million), to be channeled through FOREC.

B. The Executing Unit (FOREC)

- 4.6 FOREC is a special national entity attached to the Administrative Department of the Office of the President; it has been set up as a legal person with its own assets and financing, and operates out of headquarters in Armenia. To avert an increase of public bureaucracy and facilitate more flexible human resource management, FOREC will assemble almost all of its work force under service (consultancy) contracts, a device of common use in Colombia for programs of short duration. All contracts of whatever nature or the amounts involved, entered into by FOREC with public and private entities shall be subject to the procurement procedures for the Bank's emergency projects. The special powers invested in FOREC shall remain in effect throughout the life of the Fund and not just for the duration of the State of Economic and Social Emergency.

C. Structure for execution (first phase)

- 4.7 All the external and domestic resources of the emergency phase covered by this program will be channeled through FOREC to the different executing entities. These entities may be national or subnational, of the private sector and nongovernmental organizations (NGOs), which will be contracted by FOREC as needed. FOREC will present to the Bank for approval the model of the financing agreement to be entered into with the coexecuting agencies for execution of the project activities.
- 4.8 The activities eligible for financing with resources of the program will be those named under the ERF's policy using the environmental criteria and procedures agreed upon with the Bank. These urgent activities include rubble removal, building demolition, the

1/ By authority of Decree 199 of 1999, the members of FOREC's Directing Council are Luis Carlos Villegas, Chairman; Diego Arango, Luis Carlos Sarmiento, Jorge Cárdenas, and Manuel Santiago Mejía for the private sector; and Carlos Arturo López, Governor of Risaralda, Álvaro Patiño, Mayor of Armenia, and Jaime Ruiz Llano, Director of the National Planning Department for the government sector.

inspection and stabilization of buildings and bridges, temporary housing and, in general, repair of the physical and social infrastructure. In addition, financing will be provided for studies to quantify the damage and draw up plans of action for reconstruction and rehabilitation.

D. Structure for execution (second phase)

- 4.9 Though not actually covered by the loan, it is useful to mention some of the criteria for execution of the second phase of the Bank's intervention.
- 4.10 The Bank will support the final design of the structure of FOREC for the reconstruction phase. The initial proposal of the institutional scheme for execution of the National Plan for Reconstruction of the Coffee Belt is based on geographic decentralization in which the functions of the national and the local governments are clearly distinguished in accordance with their areas of competence and responsibilities. In recognition of the historical organization of society in this area, all operations envisaged for execution under this Plan will be based on the community organizations of the municipalities, grouped under and guided primarily by nongovernmental organizations under the supervision of the municipal and departmental governments. The national government will act as facilitator in reallocation of the resources of the National Development Plan to the area and provide the support and means that may come to be needed there.
- 4.11 Execution of the project will be based on the participation of the civil society and will proceed in areas and microareas identified by the local governments in concert with the civilian population. For each of these areas a recovery management unit run by an NGO will be established to have charge, in conjunction with the community, of the drawing up and then the execution of an area action plan encompassing both restoration of the physical infrastructure in the area and its social and economic reconstruction. The area action plans must meet the essential minimum specifications to be spelled out in operating regulations that will be drawn up in conjunction with the local entities and will contain the guidelines and parameters by which investments are to be governed. The Directing Council of FOREC will receive and review the several area action plans and verify that the envisaged activities meet the eligibility criteria.
- 4.12 The different activities and investments carried out in an area will be designed to repair the social fabric and reactivate the economy. The social impact will be mitigated by generating employment for those left jobless by the disaster. The incentives to be provided must always seek the consolidation of community groups and so work for regeneration of mutual trust and cooperation among the inhabitants in the difficult circumstances in which they find themselves.

E. Environmental considerations

- 4.13 The intent of the activities envisaged under the program is to alleviate the hardships created by the disaster; therefore their impact on the environment will be positive and their benefit to society high. Given the nature of the operation and of the measures envisaged in the first stage, no environmental evaluation will be made in this stage. Some measures, such as rubble removal, disposal of hospital and other contaminating wastes could have an undesirable effect on the environment. It is recommended that rubble not be removed in areas in which there may be hazardous materials requiring special handling and disposal. For such cases environmental criteria and procedures will be established such as those presented in Annex IV-1.
- 4.14 One of FOREC's functions must be to ensure the environmental quality of the program and to evaluate application of the environmental criteria and verify compliance with the country's environmental standards so that the measures promoted by the program will not generate degradation in fragile areas of high ecological value. To do this the technical staff of FOREC must include a specialist in sanitation and the environment to take charge of these matters.
- 4.15 During the reconstruction phase specialized services must be engaged for the monitoring and environmental follow-up of the activities promoted and to develop the applicable criteria, requirements and mechanisms for environmental evaluation. These requirements must be concerted with the competent environmental authorities to ensure their consistency with the standards in effect in Colombia.

F. Monitoring and follow-up system

- 4.16 There will be four types of audits and monitoring of the program: (i) an accounting and financial audit done by an independent auditing firm acceptable to the Bank, (ii) a system of internal follow-up set up as part of FOREC's National Technical Committee, (iii) a system for intervention in each work or consultancy contracted for (under Colombian law), and (iv) an external monitoring and follow-up system coordinated by two of the leading universities in the stricken region for the purpose of ensuring transparency in the use of the resources, the targeting of expenditures to the victims, and evaluation of the impact of investments.
- 4.17 The last-described system is similar to those used under other programs financed by the Bank in the country. Quindío University and Pereira Technological University will be in charge of following up and monitoring by a methodology to be transferred from and under the ongoing supervision of the Centro Interdisciplinario de Estudios Regionales (Interdisciplinary Center for Regional Studies,

or CIDER), of the University of the Andes, which is experienced in work of this kind. This basic staff will be augmented by officers from important regional institutions such as the departmental coffee-growers' committees, the Armenia and Pereira Chambers of Commerce, and the two Departmental Associations of Architects and Engineers. When a problem arises it will be met by measures as called for by its nature and magnitude, which will range from the application of corrective mechanisms to executing agencies to explanations to communities, and even advices to agencies of public control. The monitoring and follow-up system will oversee the utilization of FOREC's resources from the very first and make it possible for timely corrective action to be taken at all levels of the execution structure.

V. THE BANK'S INTERVENTION

A. Emergency Reconstruction Facility for natural and unexpected disasters support (ERF)

1. Budget

- 5.1 Based on the information on damage obtained from national and local agencies and the conclusions of project staff after visits to the area, it is estimated that the ERF resources should concentrate on the following aspects:

Table V-1 USE OF ERF RESOURCES (in US\$ millions)

BUDGET CATEGORIES	IDB financing	Local counterpart
1. Administrative costs		
1.1 Technical staff of FOREC		0.500
1.2 Independent accounting and financial auditing		0.250
SUBTOTAL		0.750
2. Direct costs		
2.1 Rubble removal and demolition of unstable buildings and structures	3.000	3.000
2.2 Cleaning and repair of damage to environment, upgrading of existing and new rubble and refuse dumps	2.000	2.000
2.3 Restoration and repair of infrastructure	11.300	2.200
2.4 Temporary housing and structures, community kitchens	1.000	3.000
2.5 Monitoring and follow-up system	0.500	0.500
2.6 Preinvestment, studies and designs	2.000	1.000
SUBTOTAL	19.800	11.700
3. Financial charges		
3.1 Fund for Inspection and Supervision (FIV)	0.200	
3.2 Interest and commissions		1.050
SUBTOTAL	0.200	1.050
TOTAL	20.000	13.500

2. Recognition of expenditures

- 5.2 The Bank will credit to the financing up to US\$3.0 million (15% of the loan amount) in expenditures made under the above heads between the date of the loan application and that of the signing of the contract, for which the procurements and contracts conform to the procedures agreed upon between the government and the Bank.

3. Revolving fund

- 5.3 In view of the nature of the program it is recommended that a revolving fund be established in an amount up to the equivalent of 20% of the loan resources.

4. Procedure for procurements and contracts

- 5.4 In view of the nature of the financing, the Bank's procurement procedures for emergency projects will apply. Modalities and discretionary limits below those required for international public bidding will be defined between the government and the Bank.

5. Force account

- 5.5 The Bank will credit to the financing or the counterpart contribution up to US\$5 million in expenditures made or to be made by the government on force account which are in accordance with the procurement procedures for emergency projects. The limit per individual contract will be determined between the government and the Bank.

6. Local counterpart contribution

- 5.6 Based on the substantial domestic and external resources to be channeled through FOREC, no difficulty is expected to arise in maintaining the ratio of 60/40 for the general counterpart contribution of Colombia.

B. Other possible actions of the Bank for reconstruction

- 5.7 The studies to be funded from the ERF would provide a basis for redirecting some programs in the Bank's portfolio, and eventually for financing with new loans the operations to be included in the second phase of the Bank's intervention, that is, reconstruction of the physical, social and production infrastructure.
- 5.8 There is available more than US\$75 million of the loan for the Social Solidarity Network (889/OC-CO), which would be used to finance a program of massive construction of urban and rural housing. There is also about US\$28 million in uncommitted balances of two loans currently in execution by the Ministry of Health (716/OC-CO and 910/OC-CO) that could be targeted at the reconstruction of health centers. In addition, about US\$10 million

of the Environmental Program (774/OC-CO, 910/OC-CO) could be redirected to environmental recovery work and to strengthen the technical capabilities of national and regional institutions for response to and the prevention of emergencies, including recovery of the georeferenced information system of Armenia and the purchase of seismological equipment. Part of the resources of the Land Improvement Program (863/OC-CO), which has a balance of US\$137 million, would finance investments in the rural sector. The actual demand for resources will have to be evaluated in view of the decision of the National Coffee-Growing Fund and the Guarantee Fund of Financial Institutions (FOGAFIN) to allocate about US\$40 million for restoration of the infrastructure of the coffee industry. And the US\$100 million of the Departmental Roads Program (1075/OC-CO) might finance the reconstruction of some damaged secondary and tertiary roads.

- 5.9 The earthquake was a powerful blow for the financially weak departments of Risaralda and Quindío and their municipalities. The Bank could consider a program to support the governments of the stricken departments and municipalities.
- 5.10 The possibility of designing an MIF emergency operation to contribute to the recovery of microenterprises in the stricken areas is under study against the record of an MIF operation that the Bank carried out in response to the disaster of hurricane Mitch. This project would also contribute to the financial and operational strengthening of the intermediate lending institutions that serve the microenterprises operating in the area. The feasibility of this operation will be evaluated when preliminary statistics have been worked out on the victims in this sector.
- 5.11 For the ERF and the redirection of resources from existing loans the government will have to appropriate resources on a General Budget of the Nation that is very tight; the resulting impact on the delicate fiscal situation would be manageable, according to the government's own tentative estimates.

VI. INITIAL JUSTIFICATION AND EVALUATION OF THE REQUIRED ERF RESOURCES

- 6.1 Based on the estimate of the cost of reconstruction in the coffee belt, which, as previously mentioned, would exceed US\$700 million, on January 28 the National Government asked the Bank for an emergency loan in the equivalent of US\$20 million from its ordinary capital resources.
- 6.2 The magnitude of the catastrophe fully justifies the National Government's request for all the resources available in the ERF. The government has fully complied with all requirements of the ERF policy.
- 6.3 The resources of this loan would be channeled by FOREC, which would set up a structure for execution of the Plan for Recovery of the Coffee-Growing Area, in which NGOs, the private sector and the universities would have important parts to play and the stricken communities would participate heavily, with coordination by the local governments. It is useful to note that the institutional capacity in the region is generally good, and endowed with a sizable social capital.

VII. COORDINATION WITH OTHER AGENCIES

- 7.1 Several countries, nongovernmental organizations and multilateral organizations have confirmed technical and financial contributions for reconstruction of the area. As it did to the Bank, the Colombian government asked the World Bank (IBRD) for support by redirecting existing loans and providing fresh resources. According to the IBRD mission that visited the country and with which a coordination meeting was held, US\$100 million from four existing loans is to be reprogrammed in the next sixty days for allocation to the different areas of investment of FOREC. This reallocation would take the original loans away from the sectors for which they were originally made. In addition, the IBRD confirmed the possibility of processing a fresh loan for FOREC if found necessary. For the second phase of the Bank's intervention its staff will coordinate with that of the World Bank and the government to draw up operating regulations for FOREC and unified procurement and contracting procedures.
- 7.2 The local office of the United States Agency for International Development (USAID) has advised the Bank of the possibility of including resources for the coffee-growing area in a special appropriation in preparation for the reconstruction of Central America in the wake of Hurricane Mitch. The grants made to date by the international community are itemized in document VII-1, which may be found in the technical files of the project.

DIRECCION PARA LA PREVENCIÓN Y ATENCIÓN DE DESASTRES
TECHNICAL EVALUATION OF INFRASTRUCTURE

Date: February 4, 1999

Time: 6:00 p.m.

MUNICIPALITY	EVALUATION	ACTION	REMARKS
ARMENIA	Electricity service in recovery	Taken in hand by ISA	
	85% of public services restored		
	External telephone system in poor condition	Evaluation of lines out of service. Long-distance service restored	
	About 26,456 housing units affected (51%)		Approx. calculation based on overflight
	50,000 of 75,000 telephone lines damaged		
	VHF system functional		
	La Línea-Armenia road: 86 earth movements. Average of about 3.7 landslides/km (relatively HIGH), 40 involving between 1 and 20 m ³ of earth, 27 between 21 and 100 m ³ , 13 between 101 and 500 m ³ , 5 between 501 and 2,000 m ³ , and 1 of more than 2,000 m ³ (rockfall in quarry)	Taken in hand by INVIAS, evaluated by INGEOMINAS	Limited travel by high-tonnage vehicles have to be cleared to prevent blockage. More may occur owing to continuing rain, fissured and weakened slopes
	La Línea-Armenia road: Fissures opened by quake: (K0+000 in Armenia) 100-m. long fissure at K13+513, 50-m. fissure at K15+250, fissure in wall at K15+460, 143-m. fissure at K15+790 to K15+647, critical fissures, wall unsound, 100-m. fissure at K16+227 affecting half of shoulder		Fissured locations require work
CALARCÁ	Possibility of landslides on slopes of marginal neighborhoods in event of fresh tremors and precipitation	Taken in hand by IDEAM	Continue under observation
	Electricity service 80% restored	Taken in hand by ISA	
	Long-distance service operating normally		
	External telecommunication system 80% damaged		
	80% of housing units affected		
	606 housing units destroyed		
	Education and banking facilities severely damaged		
	Health, fire-fighting, Red Cross and Civil Defense installations damaged		
	Limited travel on Calarcá-La Línea road	Taken in hand by INVIAS	
	Landslides blocking Calarcá-Quebradanegra road	Taken in hand by IDEAM	Continue under observation
	Downtown core shows signs of soil instability on slopes	Taken in hand by IDEAM	Continue under observation
	Two landslides of <20 m ³ on Calarcá-Barcelona road, one of about 100 m ³ and other of about 500 m ³ 2 km from Calarcá. Extensive fissure about 300 m long 300 m north of K1+500	Evaluated by INGEOMINAS. Material of movements of <100 m ³ already removed. Material of 500 m ³ slide seriously affecting road shoulder for 20 m, with high possibility of failure	Fissuring of ground north of road creates risk of slope failure that would endanger houses. Must be posted to warn against sites of failures in the ground to avert presence of vehicles. Restoration will require

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MUNICIPALITY	EVALUATION	ACTION	REMARKS
BARCELONA	Telecommunications system 90% out of commission		
	Water supply service restored		Contamination in some sectors
	Sewer system severely damaged		In evaluation
	Police station and hospital damaged		
	Church destroyed		
	280 housing units damaged (about 80%)		Send construction materials
	Access routes in good condition		
	Small (<30 m ²) landslides affecting some housing units	Evaluated by INGEOMINAS	These landslides could be triggered by strong tremor. It is recommended that kept out of the affected areas, the soil removed, and the destabilized slopes with machinery and ditches be dug to channel inflow of rainwater until a detail be done
	Landslides on 14th Street (Carrera 14) affecting housing units		
	Landslides at eastern end of 9th street (calle 9) affecting street and some housing units		
	Landslide on northern slope of cemetery affecting some housing units		
FILANDIA	No household gas network		
	Electricity service 100% restored	Taken in hand by ISA	
	Water supply service 100% restored		
	Sewer service 100% operational		
	30 housing units in urban area destroyed		Equipment for rubble removal needed
	60 housing units destroyed in rural area		
	Access routes 50% blocked	Taken in hand by INVIAS	Only La India and Principal roads pass
	70% of telephone service in operation Landslides in Mariano Ospina neighborhood. Soil saturated by poor water management. One house collapsed owing to closeness to landslide slope. Structural defects (structures without columns)	Evaluated by INGEOMINAS	Work on areas near slopes. Demolish Mariano Ospina neighborhood. Make studies. Promote quake-resistant construction methods for smaller structures. Change management radically

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MUNICIPALITY	EVALUATION	ACTION	REMARKS
MONTENEGRO	No household gas network		
	No industrial hazards reported		
	Partial water supply service	Hydraulic engineers have been requested	Service supplemented by tank trucks
	Sewer system 70% destroyed, 30% clogged	Construction materials needed	Without sewer service
	Electricity service 70% restored	Taken in hand by ISA	No electricity in the hospital
	Rural sector without electricity		
	Local telephone service 40% restored	Taken in hand by TELECOM	
	No telephone service to rest of country		
	Telephone service in Pueblo Tapao in good condition		
	1,188 housing units in urban sector destroyed		Plastics and construction materials needed
	2,000 housing units in urban sector damaged		Hospital and town hall severely damaged fighting house damaged
	450 housing units in rural sector damaged		
	40% of housing units destroyed		
	1 bridge destroyed		
	Road to La Tebaida damaged		
	Numerous landslides <100 m³ on Armenia-Montenegro road	Evaluated by INGEOMINAS	Material already removed from roadways obstructing gutters still not removed and warning of existence of landslides
	Landslides on Quimbaya-Montenegro road and in Soledad and La Julia	Taken in hand by INVIAS	
	Possibility of landslides along first two kilometers of Montenegro-Quimbaya road	Taken in hand by IDEAM	Continue under observation
	Possibility of landslides in northwestern part of downtown core	Taken in hand by IDEAM	Continue under observation
	4 landslides <20 m³ and 1 of about 100 m³ on Circasia-Montenegro road	Evaluated by INGEOMINAS	Road now restored for travel. Continue observation
	Landslides on border slopes especially in outskirts of downtown core: neighborhoods of Santa Helena, Cincuentenario, Alfonso López, Gaitán, Chica, Caldas, Pueblo Nuevo, Goretti, El Carmen, Luis Flores, and departure to Quimbaya	Evaluated by INGEOMINAS	Relatively small landslides. Detailed studies for restoration work. Hazardous areas cordoned off and urban development prevented areas adjacent to slopes. Prevent entrance affected area, remove loose material and ditches to channel rainwater

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MUNICIPALITY	EVALUATION	ACTION	REMARKS
CIRCASIA	Electricity restored	ISA, Quindío public services	
	50% of sewer system affected		
	Hospital and gallery damaged		
	Town hall and police station severely damaged		
	Fire-fighting station to be demolished		
	1 rural school severely damaged		
	395 housing units destroyed in town center		
	286 housing units destroyed in countryside		
	Access roads in good condition		
	Telephone service in operation		
	50% of population without water supply (1,200 inhabitants)	Water delivered by tank trucks and in bags	Water contaminated
	It is suggested that the La Soledad creek be placed under observation as a vital source of drinking water (Circasia and Montenegro)	Taken in hand by IDEAM	Continue under observation
	2 critical areas visited: Alto de la Cruz, and Alto de la Tasa	Evaluated by INGEOMINAS	Requires detailed studies and measures. Alto de la Cruz: houses to be demolished, avoid substandard settlement; Alto de la Tasa: slope, water management, channeling stream so it will not undermine the fill
PIJAO	No household gas network		
	No water supply service	Water supplied by tank trucks and in bottles	Possible sanitary problems. Water off treatment plant destroyed
	Electricity 60% restored	Electric power generators needed	
	Sewer system 40% destroyed		
	No telecommunications	Taken in hand by TELECOM	
	1,950 housing units destroyed		Destruction of town hall (80%), hospital (100%), church (100%), fire-fighting station (60%), station (60%), and school (50%)
	3 schools destroyed in urban area		
	22 schools destroyed in rural area		
	Collapses of roadway and shoulder in access routes		
	Cave-in 9 km from Verde river	Taken in hand by INVIA	Passable only by light vehicles
	120 slumps of surface with no danger		
	Danger of landslides in rectification of Verde river with possible damming of the Lejos river	Taken in hand by IDEAM	Continue under observation

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MUNICIPALITY		EVALUATION	ACTION	REMARKS
				CRITICAL MUNICIPALITY
LA TEBaida		Electricity restored 90%	Taken in hand by ISA	
		Town hall and fire-fighting and police stations 80% damaged		
		Church damaged		Tower must be demolished
		TELECOM building and gallery damaged		
		80% of housing units affected		
		Telephone service operating		Possibly partial problems
		OOPP assigned to inspect the secondary and tertiary roads		
		In La Tebaida-Montenegro road: 2 slides < 50 m³, two of 100-200 m³, one of about 2,000 m³	Evaluated by INGEOMINAS	The 2,000-m³ slide is blocking vehicular traffic. Material to be removed
		Small slides (<100 m³) on 5th street where it departs for Armenia in the Pablo Molina neighborhood. Road partly damaged	Evaluated by INGEOMINAS	Remove loose material blocking gutter and slope by terracing the material. Inflow of water must be controlled while detailed work is being done
		No household gas network or report of industrial hazards		
		Water supply system 100% damaged	Aguas de Colombia, a municipal enterprise	Supplied by tank truck
		Electric energy supply 20% operational	Taken in hand by ISA	Requesting electric power generators
		Unquantified damage to sewer system		
		Hospital and town hall to be demolished		
		Fire-fighting station and church damaged		
CORDOBA		TELECOM building severely damaged		
		539 housing units damaged		Aid in construction materials
		77 housing units destroyed		
		No telecommunications services	Taken in hand by TELECOM	
		Communication by VHF		
		Neighborhood thoroughfares in poor condition	Taken in hand by INVIAS-Obras Públicas	

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MUNICIPALITY	EVALUATION	ACTION	REMARKS
QUIMBAYA	No household gas network		
	Breakdown in electricity distribution (20% of system affected)	Taken in hand by ISA	
	Limit travel on roads: Quimbaya-Alcaldía, Quimbaya-Montenegro, Puertorico-Montenegro, Quimbaya-La Cima		
	Access roads in good condition		
	90% of water supply system in operation		Water possibly contaminated in some
	Sewers collapsed in Grisales neighborhood		
	Sewer system 60% operational		
	354 housing units damaged in urban area		
	1,146 housing units collapsed and to be demolished in urban sector		
	100 housing units damaged in rural area		
	300 housing units collapsed and to be demolished in rural sector		
	20 schools damaged in rural area		
	4 schools damaged in urban sector		
	Town hall damaged		
	Local telephone service in good condition		
	Telephone service to rest of country 50% operational		
SALENTO	No household gas network		
	No telecommunication service		
	50% of drinking water supply affected		Tank trucks needed
	50% of sewer system affected		
	Electric power supply 100% operational	In evaluation by safety committee	
	Rivers rising		
	4 schools, rest home, arena, municipal building in urban sector damaged		
	5 schools damaged in rural area		
	15 housing units to be demolished		
	80 housing units damaged		
	55 housing units require structural reinforcement		
	20% of housing units affected		
	60% of access roads damaged		Roads: Vda. los Pinos-Llano Grande, National Highway, Salento-Navarro, Salento-Navarro, Salento-Palmera, Salento-El A -El Castillo, Salento-Palagrande
	Significant rise in level of Quindío river in upper reach	Taken in hand by IDEAM	Situation resolved
	Earth slides in Palma de Cera neighborhood near El Mudo creek, with 20-m. fissure in Alto de la Cruz neighborhood and fissured road in Canaan district	Evaluated by INGEOMINAS. Detailed studies and stabilization work required	3 affected housing units in Palma de C neighborhood, road to La Ceja in Alto and others, to be evaluated

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MUNICIPALITY	EVALUATION	ACTION	REMARKS
BUENAVISTA	Damage in 70% of water supply infrastructure		Drinking water needed
	Drinking water tainted by sewage		
	Electric power supply down		
	Damage in 60% of sewerage infrastructure		Electric generators and fuel needed
	Access roads in good condition		
	Telecommunication switching and transmission operating normally		
	352 housing units destroyed		Town hall, hospital, church destroyed
	120 housing units to be demolished		
GÉNOVA			Not named in emergency decree
	No household gas network		
	No industrial hazards		
	No problems in water supply or sewerage		
	Telecommunications operating normally		Interruptions possible
	Radio communication suspended owing to damage to towers. No evaluation made		Evaluation urgent
	Electric power restored in urban area	Taken in hand by ISA	Interruptions possible
	Not all damage to electric power service repaired in rural area		
	130 housing units damaged in urban area		
	No accurate data on housing units in rural area		
	Fissures in Armenia-Génova road		Danger of slides at two sites
	Road to Pijao blocked		
	Earth slides in some neighborhoods and local roads		
	Rise of flow in affluents to La Vieja river	Will be watched by IDEAM	Could affect road infrastructure
PEREIRA	No problems in water supply, sewerage, access roads, telephone communications, household gas		
	Danger of earthslide at water offtake	Requires shoring up	
	Part of demand for electric energy unmet	Being normalized by ISA	
	12,249 commercial and industrial establishments affected		
	Possibility of earth movements	Must be evaluated by INGEOMINAS	
	VHF communication restored		
	About 1.4 earthslides/km (relatively SLIGHT); 8 slides of 1 to 20 m³, and 1 slide of between 21 and 100 m³	Evaluated by INGEOMINAS	Permanent cleanup by bulldozer. Continuous surveillance to avert blockage of road
	Pereira-Salento road - about 3 slides/km (average level), 18 slides of 1 to 20 m³, 3 slides of 21 to 100 m³, 3 slides of 101 to 500 m³	Evaluated by INGEOMINAS	Permanent cleanup by machinery. Continuous surveillance to avert blockage of road

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MUNICIPALITY	EVALUATION	ACTION	REMARKS
DOSQUEBRADAS	No problem with sewerage or household gas		
	Water supply system 100% destroyed. 40% of population supplied from Pereira	Service may be restored tomorrow	
	Electric power supply situation under control	Taken in hand by ISA in conjunction with CHEC	
	50 housing units destroyed		
	11 buildings to be demolished		
	275 housing units damaged		
	845 housing units at risk		
	27 schools damaged		
	3 bridges damaged		
	Calarcá-Quebradanegra road blocked	INGEOMINAS	
	Travel limited on some neighborhood roads		
	11 industrial plants damaged	Industrial hazards in evaluation	
	Interruptions of telephone service possible		
	Evaluation of possibility of earth movements required	Must be evaluated by INGEOMINAS	
SANTA ROSA DE CABAL	No problem with sewerage, telecommunications or electricity		
	Water offtake damaged. Operating at 80%		
	135 housing units destroyed in San Bernardino		
	15% of buildings damaged in San Juan district		
	95% of buildings damaged in La Estrella district		
	50% of buildings damaged in Ovito district		
	30% of buildings affected in Español district		
	80% of access roads damaged		
	Household gas network installed but not yet in operation	To be verified by Gases de Risaralda	
	Evaluation must be made of earth movements	Must be evaluated by INGEOMINAS	

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	MUNICIPALITY	EVALUATION	ACTION	REMARKS
CA	MARSELLA	All public services in good condition		Danger of earthslides that could affect
		Municipal water supply pipes damaged by earth slides		Sector of Marsella-Pereira road
		Danger of interruption of water supply by earth slides		
		70 housing units roofless		
		22 housing units damaged in urban sector		Roofs and walls
		5 housing units destroyed in urban sector		
		4 housing units damaged in rural sector		Evaluation in rural area continuing
		10 housing units destroyed in rural sector		
		Market place damaged		Structural damage
		Church damaged		Arches of central and lateral naves dis
		1 school damaged in urban area		
		6 schools damaged in rural area		Part of roof and structure
		Marsella-Pereira road blocked by slides		
CA	CAICEDONIA	No household gas network		
		No problem with water, electricity or sewerage		
		95 housing units destroyed in urban area		
		898 housing units damaged in urban area		
		158 housing units damaged in rural area		
		Long-distance service restored, equipment not damaged. Communication fair		
		Earth slides on Barragán-Río Verde road. Detour		Continue under observation
		Unstable soil in basins of Lejos, Azul, Rojo and Grís rivers with possibility of blockage		
		Evaluate earth movements on access roads	To be evaluated by INGEOMINAS	

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MUNICIPALITY	EVALUATION	ACTION	REMARKS
ALCALA	No household gas network or industrial hazards		
	No problem of sewerage or electricity		
	Water supply operating 10% in urban area, 40% in rural area. Water untreated in rural area		Water pipe network must be repaired
	Damage to church tower in urban area		
	8 housing units destroyed in urban area		
	91 housing units damaged in urban area		
	19 housing units destroyed in rural area		
	4 housing units damaged in rural area		
	2 schools damaged in rural area		Manuelita Mejía school structurally damaged; school, in Bélgica district: roof collapsed
	1 school destroyed in rural area		La Polona district school
	Telephone service in operation	TELECOM	
	Access roads in normal use		
	Earth slides on roads to Gran Copa and San Felipe districts		
	Earth slides on roads: Alcalá-Cartago, Alcalá-Pereira, and Alcalá-Quimbaya		
	Rise of water level in dam on Los Micos creek, which should be full in 15-30 days. Poses threat to the town, which is located to one side of the stream. At the railroad the creek is being dammed up by accumulating rubble	Taken in hand by CVC	Provide heavy-duty power pump and pipes to lift water to 25 m and move it. Barge or flatboat required as platform
OBANDO	No household gas network		
	No problem of water supply, electricity or sewerage		
	42 housing units damaged, roofs collapsed, in rural area		San Isidro district: 9 housing units damaged; Chuzo dist.: 1 housing unit, Villa Roda units; Pto Samaria dist.: 11 hsg units; 1 schools
	42 housing units damaged, roofs collapsed, in urban area		Health center and 2 schools involved
	1 health center damaged		
	2 schools damaged		José Hilario López and Manuela Beltrán
	Telephone service operating	TELECOM	
	La Esmeralda, Frías Cañón del Sande 8 earthslides in road	Support with machinery and river material, one large loader and three dump trucks	
ULLOA	Pto Samaria, San Isidro several slides in road		
	No household gas network		
	No problem of water supply, electricity, sewerage, access roads or industrial hazards		
	67 housing units damaged in urban area		Roofs and walls
	59 housing units damaged in rural area		Roofs and walls
	109 housing units (about 20%) semidestroyed in urban and rural areas		
	Telephone service restored		
	Ulloa-Alcalá road obstructed		

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MUNICIPALITY	EVALUATION	ACTION	REMARKS
SEVILLA	No problems of electricity, sewerage or household gas		Temporary power outages that occurred repaired
	Damage to storage tanks and pipes of water supply in municipal capital	Taken in hand by ACUAVALLE	Damage to pipes repaired. Plant No. destroyed owing to considerable damage to tanks
	Damage to roads in Milonga, Cebollal, La Estrella and El Congal districts	Taken in hand by Coffee-Growers' Committee	Already repaired
	33 housing units destroyed in urban area		
	15 housing units destroyed in rural area		
	468 housing units damaged in urban area		Damage to roofs and terraces
	Municipal Administrative Center (CAM) damaged		No apparent structural damage
	Public enterprises building to be demolished		
	162 housing units damaged in rural area		
	5 schools damaged		Mainly their roofs
	15 community centers damaged		
	7 Police inspectorates damaged		
	Switching and transmission in good condition; long-distance service restored	TELECOM	Possibility of interruptions of service
	Slides in some district roads	Secretariat for Public Works has been clearing the roads	Districts of El Boyano, Cebollal, Cumbal, Totoró, La María, La Estrella and Maul
ARGELIA	No household gas network		
	No problems of water supply or telecommunications		
	No industrial or damming hazards		
	Breakage of sewer pipes between 3rd and 4th streets, in the El Centro neighborhood		Reconstruction of sewer system in this
	Displacement of pole poses threat to housing unit		Relocate telephone pole
	10 housing units destroyed in urban area		
	18 housing units damaged in urban area		
	1 school damaged in urban area		Fabio Martínez school
	6 housing units destroyed in rural area		
	4 housing units damaged in rural area		
	Maracaibo police inspectorate damaged, rural area		Counting of housing units pending
	3 earth slides in Argelia-Ansermanuevo road		Clean up and restore road
ANSERMANUEVO	Earth slides in La Palma district		
	No household gas network		
	No problems of water supply, electricity, sewerage, telecommunications or access roads		
	2 housing units destroyed in urban area		
	1 school damaged in urban area		
	Poses no threat of earth movement from either water damming or industrial hazards		
			Not named in emergency decree

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MUNICIPALITY		EVALUATION			ACTION		REMARKS		
CAJAMARCA	TULUA	No problems in public services							
		Damage to sewers in Monteloro and Iberia districts							
		20 housing units damaged in rural area							
		Damage to urban and rural schools							
		Barrancas-San Rafael road blocked, earth slides in Puerto Frazada-Alto Italia road			INVIAS				
	LA VICTORIA	Public services operating normally							
		40 housing units damaged in urban area							
		24 housing units destroyed in rural area					Miravalle dist.: 4 housing units, Tagua Rivera Alta: none destroyed, Sierramo destroyed, Holguín: 4 units, San José: destroyed		
		144 housing units damaged in rural area					Miravalle dist.: 22 housing units dama 20 units, Cuevaloca 10 units, La Sibe Rivera Alta 10 units, Sierramocha 2 un units, San José 4 units		
		No damage to access roads							
CAJAMARCA		No household gas network							
		Telecommunications operating normally							
		Collapse of drinking water distribution system at some locations							
		Infiltration detected in some segments of sewer system							
		Partial loss of electric power							
		75 housing units destroyed							
		82 housing units to be demolished							
		668 housing units damaged							
		Damage to institutional buildings (town hall, church, etc.)							
		Earth slides on Pan American Highway					Continue under observation		
		Cajamarca-La Línea road: about 1 earth slide/km (relatively slight) 13 slides of 1 to 20 m³, 4 slides of 21 to 100 m³, and 1 slide of 500 to 2,000 m³			Evaluated by INGEOMINAS. INVIAS must be ready		Permanent cleanup, ongoing surveillance, blockage of road		
		Critical areas at edges of terrace under the center of the town and neighborhoods of 20 de Julio, Las Ferias, and Calle Larga. Retriggering of old slides and emergence of new ones			Evaluated by INGEOMINAS. Locations of relatively threatening situations mapped		Relocation of housing units in critical areas considered. Stabilize sector near the Highway		
		Anaime district: Locations of possible emergencies mapped			Evaluated by INGEOMINAS		Stay out of areas subject to flooding		
		Travel limited on some neighborhood roads							
		Earth slides on slopes of Machín volcano			Taken in hand by IDEAM		Continue under observation		
		Earth slides in basin of Toche river, which could dam it if it rains			Taken in hand by IDEAM		Continue under observation		
		Inhabitants report continual grinding sounds in heights of the mountain range, in El Toche district and uplands, the Cumarco waterfall and at source of Cucuanita river.			Taken in hand by IDEAM		Continue under observation		
	FRESNO	No problems of sewerage, water supply, telecommunications or access roads							
		Parish church damaged							
		5 housing units damaged							

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MUNICIPALITY	EVALUATION	ACTION	REMARKS
RONCESVALLES	Partial interruption of water supply poses no grave problem for population	In evaluation by Empresa de Servicios Públicos Municipales	Damage to some segments of the con
	Sewers, electric power, access roads operating normally		
	Congestion of telephone service without affecting networks		
	Agrarian fund building damaged		
	Hospital damaged		Damage to roofs
	1 housing unit destroyed		
	91 housing units damaged		
	2 schools damaged		
	1 health center damaged		
	6 housing units damaged		Santa Elena district
	Presbytery and youth center damaged		
	Instability of soil with local slides on road. Heavy rainfall and danger to roads	Taken in hand by IDEAM	Continue under observation
CHINCHINÁ	No household gas network		
	No problem of water supply, electricity, sewerage or telecommunications		
	No industrial hazards		
	Access roads cleared for travel		
	2 housing units to be demolished in urban area		
	23 housing units damaged in urban area		
	22 housing units to be demolished in rural area		
	75 housing units damaged in rural area		
ALL	Seismological evaluation, monitoring and follow-up	Being done by INGEOMINAS	
	Aerophotogrammetry on scale of 1:10,000 of affected towns	To be done by IGAC	

This report reevaluates, summarizes and updates the previous reports

SOURCES OF INFORMATION:

Local and regional Committees for Disaster Prevention and Response, INGEOMINAS, IDEAM, INVIAS, IGAC, Seismic Engineering Association, Observatorio Sismológico del Suroccidente (Seismological Observatory Southwest), Ministry of Health, Ministry of Telecommunications-TELECOM, ISA, Gases de Risaralda, Consejo Colombiano de Seguridad (Colombian Safety Council), Colombian Red Cross, Corpocaldas

If you have more information, please send it to:

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MODEL OF ENVIRONMENTAL CRITERIA

1. Rubble removal

- a. Pollutant materials (hospital and industrial wastes, chemical and radioactive products, etc.): owing to the destruction of commercial, industrial and hospital areas, the wastes generated by these activities will have to be identified and properly removed and disposed of by internationally accepted procedures. Areas in proximity to water bodies, dependent areas, areas of aquifer recharge, environmental areas, environmentally fragile areas, creeks and upland river basins.
- b. Inert materials: Procedures must be developed for management of rubble existing and to be generated during demolition of condemned buildings.

The rubble management plan must include a study of areas suitable as dumping grounds; a plan for transporting the material; procedures for transportation of the material produced by demolition of buildings and for management of the materials in the dumping grounds, including promotion of practices for reuse of the materials and for recovery of bricks and fill materials.

2. Temporary settlements

Ensure that projects for temporary housing include, as an essential minimum, provision for water supply and solid waste collection, and that sewage receives primary treatment either by connection to existing or to independent sewer system before it is discharged so that it will not contaminate the creeks and rivers in the region.