

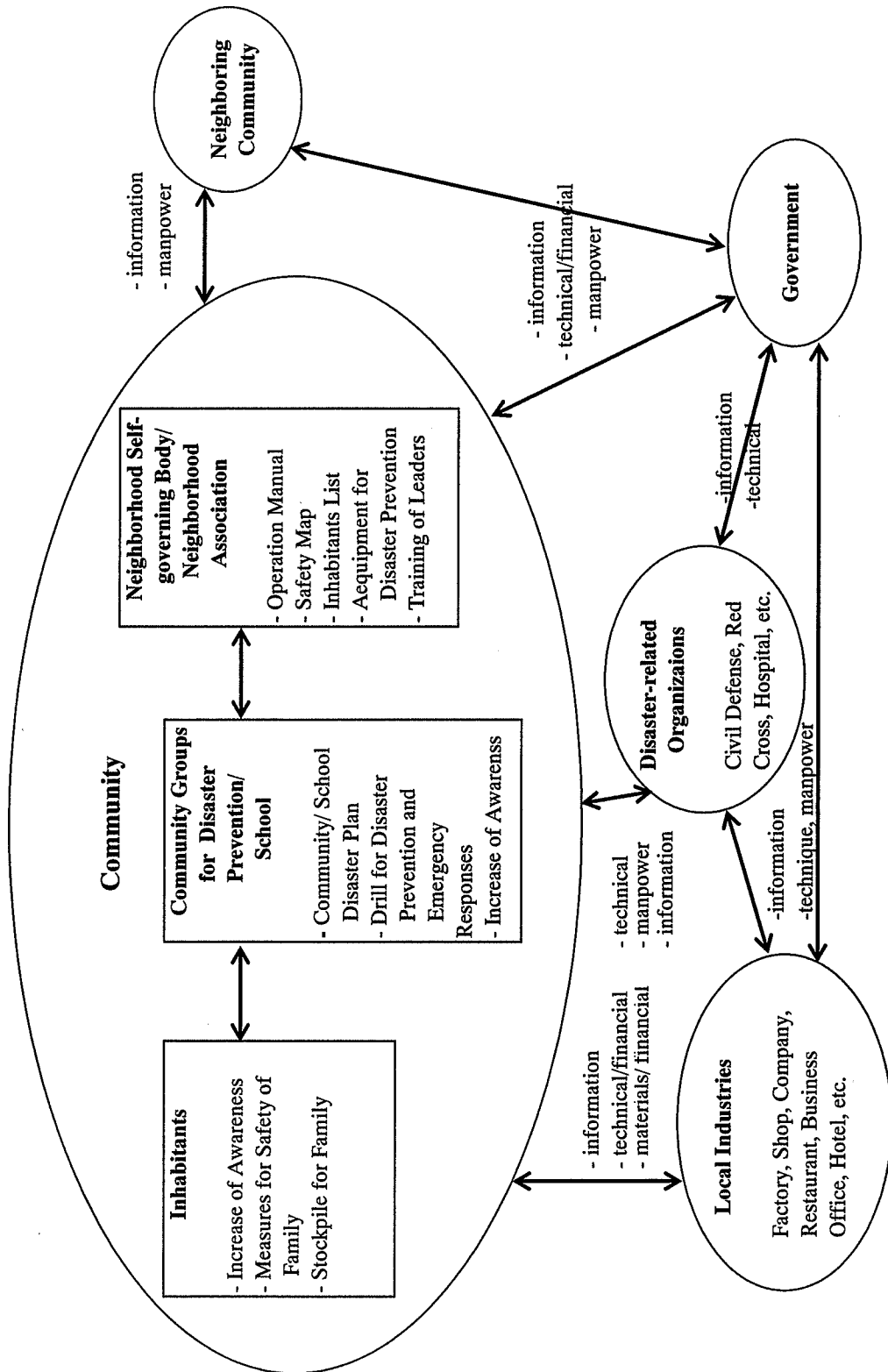
### Appendix 5.5.1

### Summary of Laws and Regulations for Rehabilitation

Laws and regulations	Descriptions
Decree 1355, 1970 National Police Code	The mayors of a municipality can order a demolition if a construction is about to be collapsed and if public safety is in risk, or in order to stop a fire or to stop any other public calamity.
Decree 1547, 1984	The National Calamity Fund must be used to maintain the environmental sanitation during the reconstruction and rehabilitation phases.
Decree 919, 1989	<p>On the other hand, the mayors in the disaster area have the power to command the demolition of any construction that represents a risk for security or health of the inhabitants. The National Office for Attention of Disasters would recruit studies to evaluate areas where no settlements or buildings can be constructed because of environmental danger or risk reasons.</p> <p>Section IV, it describes the administrative procedures for land or properties acquisition and/or expropriation, when public benefit or social reasons exist. The Committee in charge of the reestablishment of minimum conditions for environmental sanitation is the National Operative Committee for the Attention of Disasters.</p> <p>The National Fund of Vicinal Roads will provide the funds to plans of actions for the attention of disasters, without co-financing requirements.</p>
Law 388, 1997	<p>According to criteria of public utility, land or properties can be expropriated. In order to perform this process, national and territorial entities, as well as industrial and commercial companies of the state of the national, prefecture and municipal orders, have the faculty to develop it. The expropriation must be done to fulfill the objectives and land uses established on the POT, and the procedure for it is the one foreseen in law 9<sup>th</sup> of 1989.</p> <p>In respect to expropriation by administrative way, it can be done if the correspondent administrative authority considers the presence of emergency conditions; the institution must pay an indemnity, which is equal to the commercial valuation of the property.</p> <p>Even though the land usage or distribution is not related directly to disasters or rehabilitation projects, the land distribution done in the POTs might represent a guideline for the reconstruction of a city.</p>

Source: Summarized by JICA Study Team

**Appendix 5.6.1 Ideal Relationship among the Concerned Parties for Disaster Management**



# Appendix 5.8.1 Project List

## 1. Implementation Plan - Strengthen Important Buildings (Bogota)

Program	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule																
				Short			Medium				Long									
				2002	2003	2004	2005	2006	2007	2008	2009	2010								
1.1 Strengthen Emergency Commanding Centers	1.1.A. Seismic diagnosis study of the Ministry of Interior	Ministry of Interior	8	█																
	Reinforcement of the Ministry of Interior	Ministry of Interior	386	█	█	█														
	1.1.B. Seismic diagnosis study of the OPAD	Cundinamarca Government	1	█																
	1.1.C. Reinforcement of the OPAD	Cundinamarca Government	60	█	█	█														
	1.1.D. Seismic diagnosis study of Cundinamarca Prefecture	Cundinamarca Government	91	█	█	█														
	1.1.E. Reinforcement of Cundinamarca Prefecture	Cundinamarca Government	4,582	█	█	█														
	1.1.F. Seismic diagnosis study of the 19 Locality Offices	Each locality Bogotaá	89	█	█	█														
	1.1.G. Reinforcement of the 19 Locality Offices	Each locality Bogotaá	4,459	█	█	█														
	1.1.H. Seismic diagnosis study of the 8 Municipalities	Each municipality of Cundinamarca	42	█																
1.1.I. Reinforcement of the 8 Municipalities	Each municipality of Cundinamarca	2,129	█	█	█															
1.2 Strengthen Operation Buildings	1.2.A. Seismic diagnosis study of the Police Headquarter La Estanzuela	Police	2	█																
	1.2.B. Reinforcement of the Police Headquarter La Estanzuela	Police	86			█	█	█												
	1.2.C. Seismic diagnosis study of the Civil Defense Headquarter	Civil Defense	24	█																
	1.2.D. Reinforcement of the Civil Defense Headquarter	Civil Defense	1,176	█	█	█														
	1.2.E. Seismic diagnosis study of the Red Cross Headquarter	Red Cross	76	█																
	1.2.F. Reinforcement of the Red Cross Headquarter	Red Cross	3,816	█	█	█														
	1.2.G. Seismic diagnosis study of the Central Command of Army	Ministry of Defense	194	█																
	1.2.H. Reinforcement of the Central Command of Army	Ministry of Defense	9,723	█	█	█														
1.3 Strengthen Important Hospitals	1.3.A. Seismic diagnosis study of the 38 Hospitals and Clinics in III Level Category 1.3.B. Service	Each Hospital	1,201	█																
	1.3.B. Reinforcement of the 38 Hospitals and Clinics in III Level Category 1.3.B. Service	Each Hospital	60,062	█	█	█														
1.4 Strengthen Rescue Operation Buildings	1.3.A. Seismic diagnosis study of the 13 Fire Fighting Stations	Fire fight Bogotaá City	30				█	█	█											
	1.3.B. Reinforcement of the 13 Fire Fighting Stations	Fire fight Bogotaá City	1,483				█	█	█											
	1.3.C. Seismic diagnosis study of the 27 Police Stations	Police	301				█	█	█											
	1.3.D. Reinforcement of the 27 Police Stations	Police	15,070				█	█	█											
	1.3.E. Seismic diagnosis study of the 14 Civil Defense Branches	Civil Defense	28				█	█	█											
	1.3.F. Reinforcement of the 14 Civil Defense Branches	Civil Defense	1,412				█	█	█											
	1.3.G. Seismic diagnosis study of the 124 Army Buildings	Ministry of Defense	648				█	█	█											
	1.3.H. Reinforcement of the 124 Army Buildings	Ministry of Defense	32,385				█	█	█											
1.5 Strengthen Hospitals	1.5.A. Seismic diagnosis study of the 15 Hospitals and Clinics	Each Hospital	139				█	█	█											
	1.5.B. Reinforcement of the 15 Hospitals and Clinics	Each Hospital	6,936				█	█	█											
1.6 Strengthen Regional Evacuation Buildings	1.6.A. Seismic diagnosis study of the Regional Evacuation Places	Bogotaá City	214				█	█	█											
	1.6.B. Reinforcement of the Regional Evacuation Places	Bogotaá City	10,683				█	█	█											
1.7 Strengthen Other Potential Evacuation Sites	1.7.A. Seismic diagnosis study of the 84 Kindergarten Buildings	Bogotaá City	68							█	█	█								
	1.7.B. Reinforcement of the 84 Kindergarten Buildings	Bogotaá City	3,406							█	█	█								
1.8 Strengthen Other Important Government Buildings	1.8.A. Seismic diagnosis study of the 28 Ministries Buildings	Each Ministry	659								█	█	█							
	1.8.B. Reinforcement of the 28 Ministries Buildings	Each Ministry	32,936								█	█	█							
1.9 Strengthen Transportation	1.9.A. Seismic diagnosis study of the Airport	Airport Authorities	361									█	█	█						
	1.9.A. Reinforcement of study of the Airport	Airport Authorities	18,052									█	█	█						
	1.9.B. Seismic diagnosis study of the Bus Terminal of Bogotaá	Secretary of Transport	90										█	█	█					
	1.9.C. Reinforcement of the Bus Terminal of Bogotaá	Secretary of Transport	4,520										█	█	█					
1.10 Strengthen Goods Storage Site	1.10.A. Seismic diagnosis study of Corferias - Exhibition Center	Bogotaá City	108											█	█	█				
	1.10.B. Reinforcement of Corferias - Exhibition Center	Bogotaá City	5,393											█	█	█				
1.11 Strengthen Food Storage Site	1.11.A. Seismic diagnosis study of Corabastos	Bogotaá City	201												█	█	█			
	1.11.B. Reinforcement of Corabastos	Bogotaá City	10,097												█	█	█			

1. Implementation Plan - Strengthen Important Buildings (Cundinamarca)

Program	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule														
				Short	Medium	Long	2002	2003	2004	2005	2006	2007	2008	2009	2010			
1.12 Strengthen Emergency Commanding Centers in Cundinamarca	1.12.A. Seismic diagnosis study of the Local Major Offices	Cundinamarca Government	93															
	1.12.B. Reinforcement of the Local Major Offices	Cundinamarca Government	1,868															
1.13 Strengthen Organizations for Rescue Operation in Cundinamarca	1.13.A. Seismic diagnosis study of the Fire Fighting Stations	Fire fight	7															
	1.13.B. Reinforcement of the Fire Fighting Stations	Fire fight	348															
	1.13.C. Seismic diagnosis study of the Police Stations	Police	18															
	1.13.D. Reinforcement of the Police Stations	Police	925															
	1.13.E. Seismic diagnosis study of the Civil Defense	Civil Defense	2															
	1.13.F. Reinforcement of the Civil Defense	Civil Defense	83															
	1.13.G. Seismic diagnosis study of the Red Cross	Red Cross	4															
	1.13.H. Reinforcement of the Red Cross	Red Cross	212															
	1.13.I. Seismic diagnosis study of the Army	Ministry of Defense	1															
	1.13.J. Reinforcement of the Army	Ministry of Defense	50															
1.14 Strengthen Important Hospitals in Cundinamarca	1.14.A. Seismic diagnosis study of the Hospitals and Clinics	Each Hospital in Cundinamarca	28															
	1.14.B. Reinforcement of Hospitals and Clinics	Each Hospital in Cundinamarca	1,403															
1.15 Strengthen Hospitals in Cundinamarca	1.15.A. Seismic diagnosis study of the Health Consulting Centers	Each Health Consulting Center in Cundinamarca	120															
	1.15.B. Reinforcement of Health Consulting Centers	Each Health Consulting Center in Cundinamarca	5,976															
1.16 Strengthen Regional Evacuation Sites in Cundinamarca	1.16.A. Seismic diagnosis study of the Regional Evacuation Places	Cundinamarca Government	38															
	1.16.B. Reinforcement of Regional Evacuation Places	Cundinamarca Government	1,896															
1.17 Strengthen Other Potential Evacuation Sites in Cundinamarca	1.17.A. Seismic diagnosis study of Schools & Kindergartens	Cundinamarca Government	454															
	1.17.B. Reinforcement of Schools & Kindergartens	Cundinamarca Government	22,687															

2. Implementation Plan - Infrastructure - Bridges Program

Programme	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule																
				Short	Medium			Long												
				2002	2003	2004	2005	2006	2007	2008	2009	2010								
2.1	Seismic diagnosis study and reinforcement of vehicular bridges along emergency road network and high liquefaction potential area	2.1.A. Seismic diagnosis study of vehicular bridges (25 bridges)	IUD	2,000	█															
		2.1.B. Reinforcement of the above bridges (29 bridges)	IUD	29,000				█	█	█										
2.2	Seismic diagnosis and reinforcement of vehicular bridges in emergency road network and out of liquefaction area	2.2.A. Seismic diagnostic study of bridges (69 bridges)	IUD	5,500	█															
		2.2.B. Reinforcement of the above structures (88 bridges)	IUD	88,000				█	█	█										
2.3	Seismic diagnosis and reinforcement of vehicular bridges in other road network and high liquefaction potential area	2.3.A. Seismic diagnostic study of bridges (11 bridges)	IUD	900	█															
		2.3.B. Reinforcement of the above structures (13 bridges)	IUD	13,000				█	█	█										
2.4	Seismic diagnosis and reinforcement of vehicular bridges in other road network than above	2.4.A. Seismic diagnostic study of bridges (48 bridges)	IDU	3,800	█															
		2.4.B. Reinforcement of the above structures (48 bridges)	IDU	48,000				█	█	█										
2.5	Seismic diagnosis and reinforcement of pedestrian bridges in emergency road network	2.5.A. Seismic diagnostic study of bridges (30 bridges)	IDU	600	█															
		2.5.B. Reinforcement of the above structures (110 bridges)	IDU	55,000				█	█	█										
2.6	Seismic diagnosis and reinforcement of pedestrian bridges in high liquefaction potential area	2.6.A. Seismic diagnostic study of bridges (3 bridges)	IDU	50	█															
		2.6.B. Reinforcement of the above structures (3 bridges)	IDU	1,800				█	█	█										
2.7	Seismic diagnosis and reinforcement of pedestrian bridges in other area	2.7.A. Seismic diagnostic study of bridges (33 bridges)	IDU	200	█															
		2.7.B. Reinforcement of the above structures (33 bridges)	IDU	16,500				█	█	█										
2.8	Seismic diagnosis study and reinforcement of vehicular bridges in Cundinamarca	2.8.A. Seismic diagnosis of vehicular bridges (17 bridges)	INVIAS	500	█															
		2.8.B. Reinforcement of the above bridges (17 bridges)	INVIAS	27,200				█	█	█										
2.9	Seismic diagnosis and reinforcement of pedestrian bridges in Cundinamarca	2.9.A. Seismic diagnostic study of pedestrian bridges (19 bridges)	INVIAS	100	█															
		2.9.B. Reinforcement of the above structure (19 bridges)	INVIAS	10,000				█	█	█										

3-1. Implementation Plan - Life Line Program - Water Supply System

Programme	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule														
				Short	Medium	Long	2002	2003	2004	2005	2006	2007	2008	2009	2010			
3-1.1	Reinforcement of Distribution tanks and Pump stations	3-1.1.A. Seismic diagnosis study of equipment, structure and foundation (10 stations)	EAAB	600														
		3-1.1.B. Reinforcement of the above structures:	EAAB	6,000														
3-1.2	Reinforcement of Transportation and distribution system	3-1.2.A. Seismic diagnosis study of pipeline and the attached structure	EAAB	400														
		3-1.2.B. Reinforcement of the above	EAAB	4,000														
		3-1.2.C. Replacement of CIP with sleeve joint of RC, of PVC and of Asbestos Cement with high seismic pipe and joint	EAAB	200,000														
		3-1.2.D. Emergency shutdown valve or new valve installation for minimizing area for water supply	EAAB	20,000														
3-1.3	Reinforcement of Purification plant, Distribution plant	3-1.3.A. Seismic diagnosis study of equipment, structure and foundation	EAAB	740														
		3-1.3.B. Reinforcement of the above as listed below;		7,400														
		3-1.3.C. Mechanical, electrical and instrumentation equipment. Inspection and Reinforcement of redundancy of cables, electric generator, pump, facility, chemical agent storage tank, chlorination equipment	EAAB	2,000														
3-1.4	Reinforcement of Supply Facilities	3-1.4.A. Inspection and Reinforcement of branches for high seismic resistance installed where large deformation of ground is foreseen	EAAB	4,000														
3-1.5	Reinforcement of Other Plant, pipeline and facilities	3-1.5.A. Seismic diagnosis study of plant, pipeline, equipment, structure and foundation	EAAB	2,000														
		3-1.5.B. Replacement of pipeline, by-pass pipe, block system of distribution network, connection with other watershed or other responses, etc	EAAB	200,000														
3-1.6	Provision of Emergency Water Tanks	3-1.6 A. Provision of Emergency Water Tanks in Bogota	EAAB	69,455														
		3-1.6 B. Provision of Emergency Water Tanks in Bogota	EAAB	10,305														

3-2. Implementation Plan - Life Lines Programs - Gas Supply Systems

Programme	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule																
				Short			Medium				Long									
				2002	2003	2004	2005	2006	2007	2008	2009	2010								
3-2.1 Reinforcement of City Gate Receiving Station	3-2.1.A. Seismic diagnostic study of vessel, spherical gas holders, support structures, foundation	Gas Natural Company	50	█																
	3-2.1.B. Reinforcement of the above structure, equipment and foundation	Gas Natural Company	200			█	█	█	█	█										
	3-2.1.C. Seismic diagnostic study of administrative (control) building	Gas Natural Company	20			█	█													
	3-2.1.D. Reinforcement of the above structure	Gas Natural Company	60						█	█										
3-2.2 Reinforcement of Valve station (Carvajal) located in high liquefaction potential area	3-2.2.A. Seismic diagnostic study of vessel, spherical gas holders, support structures, foundation	Gas Natural Company	100	█																
	3-2.2.B. Reinforcement of the above structure, equipment and foundation	Gas Natural Company	400			█	█	█	█	█										
3-2.3 Reinforcement of Trunk and distribution pipeline installed in high liquefaction potential area	3-2.3.A. Seismic diagnosis study of pipeline	Gas Natural Company	200	█																
	3-2.3.B. Reinforcement or replacement of the above structure	Gas Natural Company	1,000			█	█	█	█	█										
3-2.4 Installation of other station, and trunk and distribution pipeline	3-2.4.A. Seismic diagnosis study	Gas Natural Company	400	█																
	3-2.4.B. Introduction of block system	Gas Natural Company	2,000			█	█	█	█	█										
	3-2.4.C. Installation of emergency shutdown valve	Gas Natural Company	2,000	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

3-3. Implementation Plan - Life Lines Programs - Electrical Supply Systems - CODENSA

Programme	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule																
				Short			Medium				Long									
				2002	2003	2004	2005	2006	2007	2008	2009	2010								
3-3.1 Seismic diagnosis and reinforcement of 13 substations in high potential liquefaction area	3-3.1.A. Seismic diagnostic study of structure and foundation (13 stations)	CODENSA	260	█																
	3-3.1.B. Reinforcement of the above structure, foundation (13 stations)	CODENSA	2,600			█	█	█	█	█										
3-3.2 Reinforcement of other stations and administrative building	3-3.2.A. Seismic diagnosis and reinforcement of structure and foundation	CODENSA	400	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
3-3.3 Seismic diagnosis and reinforcement of Power plant	3-3.3.A. Seismic diagnostic study of administrative building, structure and foundation, dam structures (9 structures)	EMGESA	3,000	█	█	█	█	█	█	█										
	3-3.3.B. Reinforcement of the above structures (9 structures)	EMGESA	10,000				█	█	█	█	█	█	█	█	█	█	█	█	█	█
3-3.4 Seismic diagnosis and reinforcement of other facility	3-3.4.A. Seismic diagnostic study of administrative building, structure and foundation (9 structures)	EMGESA	500			█	█	█	█	█										
	3-3.4.B. Reinforcement of the above structure (9 structures)	EMGESA	5,000								█	█	█	█	█	█	█	█	█	█

3-4. Implementation Plan Life Line Programs Telecommunication Facilities

Programme	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule															
				Short			Medium			Long									
				2002	2003	2004	2005	2006	2007	2008	2009	2010							
3-4.1	Seismic diagnosis and reinforcement of 9 local control stations in high liquefaction potential area	3-4.1.A. Seismic diagnosis study of local control station (9 administrative buildings)	ETB	360	█														
		3-4.1.B. Reinforcement of the above stations (9 buildings)	ETB	3,600				█	█	█									
3-4.2	Seismic diagnostics and reinforcement for other local control station		ETB	3,000				█	█	█	█	█	█	█	█	█	█	█	█
3-4.3	Seismic diagnosis and reinforcement of Mobile stations in high liquefaction potential area	3-4.3.A. Seismic diagnostic study of administrative building, structure and foundation in Kennedy.	CAPITEL	60	█														
		3-4.3.B. Reinforcement of the above building and structure and foundation	CAPITEL	600				█	█	█									
3-4.4	Seismic diagnosis and reinforcement of other mobile stations and facilities		CAPITEL	2,000	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

4. IMPLEMENTATION PLAN - URBAN DEVELOPMENT

Programme	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule															
				Short			Medium			Long									
				2002	2003	2004	2005	2006	2007	2008	2009	2010							
4.1	Redevelopment of Priority Area	4.1.A. Community Level Road Development	IDU	25,976	█	█	█												
		4.2 Regional Park Development Project	Bogotá City	61,937				█	█	█									
4.2	Road Development Programme	4.2.A. Road Expansion Project for the Building Dense Area	IDU	109,862				█	█	█									
4.3	Open Space Development Programme	4.3.A. Regional Park Construction Project	Bogotá City	27,378				█	█	█									
4.4	Educational / Enlightenment Programme	4.4.A. Disaster Prevention Pamphlets Creation and Distribution Project	Bogotá City	-	█	█	█												
		4.4.B. Disaster Prevention Drill Execution Project	Bogotá City	-				█	█	█	█	█	█	█	█	█	█	█	█
		4.4.C. Community Safety Map Creation Project	Bogotá City	-	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█



5. Implementation Plan - Earthquake Engineering Programs

Programme	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule										
				Short	Medium	Long	2002	2003	2004	2005	2006	2007	2008	2009
5.1	Geophysical study of subsurface structure	5.1.A. Microtremor array measurement for subsurface velocity structure estimation.	-											
		5.1.B. Microtremor array measurement for site effect study in municipalities in Cundinamarca.	-											
		5.1.C. Seismic reflection study for subsurface velocity structure estimation	-											
		5.1.D. Seismic refraction study for subsurface velocity structure estimation	-											
		5.1.E. Down hole measurement at accelerograph site for site response evaluation	-											
5.2	Geotechnical study for site response and liquefaction evaluation	5.2.A. Liquefaction evaluation in Bogotá and Cundinamarca	-											
		5.2.B. Geotechnical study in municipalities in Cundinamarca for site response evaluation	-											
		5.2.C. Database construction of geotechnical information	-											

6. Implementation Plan Earthquake Engineering Programs

Programme	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule										
				Short	Medium	Long	2002	2003	2004	2005	2006	2007	2008	2009
6.1	Landslides protection works	6.1.A. La Carbonera	4,990											
		6.1.B. Montebello	7,671											
		6.1.C. El Espino	214											
		6.1.D. Jerusalem	469											
		6.1.E. El Paraiso	690											

7. Implementation Plan Flooding Programs

Programme	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule										
				Short	Medium	Long	2002	2003	2004	2005	2006	2007	2008	2009
<b>Structural Measures</b>				<b>251,790</b>										
7.1	Río Bogotá	7.1.A. Relocation of Bogotá City Side bank												
		7.1.B. Heightening of dikes in both sides	171,675											
7.2	Río Tunjuelo (Bogota)	7.2.A. Improvement of Flood Control Structure	57,225											
7.3	Río Botello (Facatativa)	7.3.A. River improvement												
7.4	Río Soacha (Soacha)	7.4.A. River improvement	22,890											
7.5	Qda. Toma (La Carela)	7.5.A. River improvement												
<b>Non-Structural Measures</b>														
7.6	Warning System	Flood Forecasting and Warning System	20											
7.7	Preparation of Flood Risk Map	Hydrological Study	962											

8. Implementation Plan Industrial Facilities

Programme	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule									
				Short	Medium	Long	2002	2003	2004	2005	2006	2007	2008
8.1	Handling of hazardous materials	8.1.B. Establishment of inspection system for hazardous materials	-										

9. Implementation Plan - Health Programs in Disaster Prevention (Part 1)

Programme	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule																
				Short			Medium			Long										
				2002	2003	2004	2005	2006	2007	2008	2009	2010								
9.1 Strengthen of the Organizational Capacities for Health Disaster Preparedness	9.1.A. Strengthening 'Area de Emergencias y Desastres (AED)' in Secretaría de Salud, Bogotá.	Bogotá	220																	
	9.1.B. A similar unit like 'AED' in the government of Cundinamarca to improve emergency response capacities	Cundinamarca	330																	
9.2 Improvement the Emergency Health Information/Communication System	9.2.A. Improving radio communication system to synchronize CRUC with CRU	Bogotá/ Cundinamarca	80																	
	9.2.B. Expansion of radio communication system to all private hospitals and private health-related entities	Bogotá	30																	
9.3 Action Plan to Improve the Hospital Capacities for Disaster Emergency Services	9.3.A. Strengthening function of Level III Hospitals E.S.E. to be equipped with Haemodialysis Units, Burn Unit for severely injured victims	Bogotá	2,500																	
	9.3.B. Enlarging emergency services at Level III Hospitals by extending spaces and increasing staff for the Emergency Unit	Bogotá	1,000																	
	9.3.C. Equipping Level III Hospitals with portable medical equipment to enlarge the inpatient receiving capacity in the event of a disaster	Bogotá	200																	
	9.3.D. Implementing seismic reinforcement work of building structures and functions at Level III Hospitals E.S.E. in Bogota	Bogotá	8,000																	
	9.3.E. Implementing seismic reinforcement work of facilities at Level II Hospitals E.S.E. in Bogota	Bogotá	10,000																	
	9.3.F. Enlarging capacities of water reservoir, fuel tank, and medical gases at Level III Hospitals to sustain themselves for 3 days in the event of a disaster	Bogotá/ Cundinamarca	300																	
	9.3.G. Reserving open spaces next to Level III Hospitals for setting up temporary inpatient camps to receive overflowing number of injured persons	Bogotá/ Cundinamarca	-																	
9.4 Action Plan to Increase the Capacities to Stock Emergency Supplies and Equipment	9.4.A. Increasing stock of drugs and medical supplies at Central Store to supply to pre hospital care and Level I and II hospitals for 3 days activities	Bogotá/ Cundinamarca	810																	
	9.4.B. Increasing stock of blood for transfusion at Central Store to supply to Level II and III hospitals for 2 days activities	Bogotá/ Cundinamarca	100																	
	9.4.C. Increasing stock of disinfectants and instrument for environmental health activities at affected area and camps: Cresol, soaps, etc.	Bogotá/ Cundinamarca	100																	
	9.4.D. Increasing stock of general equipment for setting up and operating Medical Aid Stations	Bogotá/ Cundinamarca	7,300																	
	9.4.E. Increasing stocks of drugs and medical supplies at Level III Hospitals to sustain themselves for 3 days without supplementing in the event of a disaster	Bogotá/ Cundinamarca	230																	
	9.4.F. Creating an Information System of inventory of stocked medical supplies, drugs and equipment in the Central Store, public hospitals and the Red Cross: This will be designed as a part of general inventory system	Bogotá/ Cundinamarca	30																	
9.5 Action Plan to Increase Health Education and Training for Disasters	9.5.A. Compiling manuals and textbooks on disaster health activities and first aid for education and training of health personnel and community people	Bogotá/ Cundinamarca	420																	
	9.5.B. Improvement of health personnel capacity by increasing frequency of education and training activities to professional personnel once a year to four times	Bogotá/ Cundinamarca	450																	
	9.5.C. Improvement of health personnel capacity by increasing frequency of education and training activities to Community Health Volunteers	Bogotá/ Cundinamarca	756																	
	9.5.D. Prevailing first aid techniques and disaster preparedness to community people by increasing frequency of seminars	Bogotá/ Cundinamarca	360																	
	9.5.E. Implementing triage and disaster medicine training to medical doctors at El Rosario University	Bogotá/ Cundinamarca	20																	
9.6 Action Plan to Strengthen the Preparedness Activities for Environmental Health, Disease Prevention and Mental Care System	9.6.A. Strengthening the 'Environmental health and Disease prevention system to prepare for a massive disaster' from central to 'localized/municipal' levels organization, manuals, training and simulations	Bogotá/ Cundinamarca	100																	
	9.6.B. Creating a 'Post-disaster Mental Care System' at Bogota D.C. level organizing mobile mental care teams by contract, fixed clinics at Level III hospitals, and training	Bogotá/ Cundinamarca	100																	

10. Implementation Programs Education Plan

Programme	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule															
				Short			Medium			Long									
				2002	2003	2004	2005	2006	2007	2008	2009	2010							
10.1 Staff in charge of Disasters	10.1.A. Teachers Training. Existing Programme provided by DPAE can be evaluated and followed up.	DPAE	-																
	10.1.B. Government Staff Training Program for Disaster Management in the Country. Selective staff will be trained.	DPAE	-																
10.2 School Education	10.2.A. School Curriculum and Extracurricular Activities. Model schools will be assigned. Annual teaching guide will be prepared, teaching aids/side readers will be utilized and extracurricular activities will be implemented.	Secretary of Education	-																
	10.2.B. School Disaster Management Plan. Model schools will be selected for preparation plan.	Secretary of Education	-																
	10.2.C. Courses for Disaster Management in Universities. Model universities will be selected for experimental courses.	Secretary of Education	-																
10.3 Social Education	10.3.A. Formulation of community Level Education Programme: The Program will be applied to model communities.	Secretary of Education	-																
	10.3.B. Formation of Self-reliant Groups of Disaster Prevention	Secretary of Education	-																
	10.3.C. Formulation of Community Disaster Plan: Model communities and existing community groups will be selected considering the socio - economic characteristics and disaster history.	Secretary of Education	-																

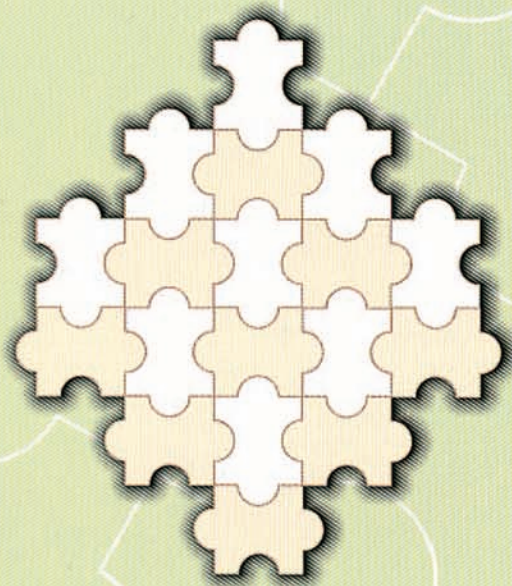
11. Implementation Plan Information System Program

Programme	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule															
				Short			Medium			Long									
				2002	2003	2004	2005	2006	2007	2008	2009	2010							
11.1	Establishment of Disaster Management Information System	Bogota City	9,620																

12. Implementation Plan Monitoring Programs

Program	Project Name	Implementation Agency	Cost (Million Pesos)	Implementation Schedule															
				Short			Medium			Long									
				2002	2003	2004	2005	2006	2007	2008	2009	2010							
12.1 Monitoring Program	12.1.A. Establishment of Monitoring System at El Espino	DPAE	52																
	12.1.B. Implementation of Monitoring at El Espino	DPAE	10																
	12.1.C. Establishment of Monitoring System at San Luis	DPAE	25																
	12.1.D. Implementation of Monitoring at San Luis	DPAE	10																
	12.1.E. Improvement of Monitoring System at Carbonera	DPAE	50																
	12.1.F. Implementation of Monitoring at Carbonera	DPAE	10																
12.2 Seismic instrumentation and monitoring	12.2.A. Installation of accelerographs in municipalities in Cundinamarca	DPAE	-																
	12.2.B. Telemetry data communication system of accelerographs in municipalities in Cundinamarca	DPAE	-																
	12.2.C. Data collection and analysis of accelerogram in municipalities in Cundinamarca	DPAE	-																
	12.2.D. Database construction of recorded accelerogram	DPAE	-																





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