NATIONAL SUMMARY REPORTS

LATIN AMERICA AND THE CARIBBEAN



SAN JOSE, COSTA RICA 30TH OF MAY TO 5TH OF JUNE 1999

TOWARDS NATURAL
DISASTER REDUCTION
IN THE AMERICAS...
FOR THE 21ST CENTURY

National Reports

Introduction

This section is a summary of the big lines and conclusions presented and discussed by the countries present at the Hemispheric meeting. The countries were divided geographically into three groups: The Caribbean, South America, Central- and North America.

Written reports had been requested in advanced for a comprehensive review of progress and challenges. A country by country summary report is attached as Annex 1.

Reports from Jamaica, the Dominican Republic, the Virgin Islands, Cuba, Dominica, Grenada, Montserrat, and St. Kitts and Nevis.

Caribbean Countries

Experiences, Advances and Challenges

The subregion has been severely hit by tropical storms, hurricanes, floods, landslides, fires and drought over the past 10 years, most notably by Hurricane Georges (1998) and the volcanic eruptions in Montserrat. At the same time, there have been some outstanding achievements:

- 1. All countries have appointed authorities in charge of disaster reduction, although governmental funding is quite uneven from country to country.
- 2. Valuable risk assessments have been carried out in Montserrat, Jamaica, Cuba, the Virgin Islands and Dominica, although the other countries in the subregion still lag behind.
- 3. PAHO has helped develop vulnerability assessments involving hospitals and water supply systems in several islands, and most countries have launched hazard mapping efforts. For example, the Virgin Islands have completed a Hazards and Risk Assessment Project.
- 4. All countries have national disaster reduction plans, but not all have been completed at this stage. In general, they tend to focus on disaster response, although they are starting to incorporate a mitigation component. In particular, there is a need to develop sectoral plans, particularly for those economic sectors most vulnerable to disasters. Jamaica has produced the first draft of a mitigation policy, while Montserrat has completed its Volcanic Emergency Plan. The Virgin Islands have also begun to implement a damage mitigation program. The Caribbean Disaster Mitigation Project deserves special mention.
- 5. All countries have adopted an interdisciplinary approach to this matter, or at least have acknowledged the need to develop one.
- 6. Cuba and Montserrat report improvements in their early warning systems, and all countries in the subregion can claim a fair amount of progress towards this goal.
- 7. Most countries consider that their legislation in this regard is inadequate. Cuba reports that 44 legal instruments were developed in order to enhance disaster management. The British government has been supporting CDERA countries in the development of the necessary legislation, but not all countries have taken advantage of this support.

- 8. The region has been the beneficiary of efforts by regional and international agencies as well as NGOs. For example,
 - DIPECHO is supporting CDERA financially in a project aimed at strengthening public education, including information dissemination in State-run schools.
 - Cuba has cooperated by providing medical personnel and pharmaceuticals to Peru and Nicaragua (1991), as well as care for the children affected by the volcanic eruption in Montserrat. It also sent medical brigades to the Dominican Republic, Haiti, Guatemala, Honduras and Nicaragua, countries severely hit by hurricanes Georges and Mitch. The Latin American School of Medical Sciences has been set up in Havana, with a regional campus in Santiago de Cuba, in order to train human resources at the postgraduate medical level in order to fill future needs in this critical area. During the current academic year, 1,408 students from 10 countries have enrolled.
 - A number of banking institutions have cooperated in these efforts, including the Caribbean Development Bank and the Dominican based Credit Unions.
- 9. All countries report public education and awareness-raising activities employing a variety of methods, including the use of videos and the Internet. CDERA has also carried out a substantial effort in this regard in English-speaking countries. The University of the West Indies has incorporated disaster management into its curriculum, while the University of the Virgin Islands is contemplating a similar initiative.
- 10. NGO experiences display a tremendous range of effectiveness. However, the trend is clearly towards a greater number of initiatives aimed at disaster reduction.
- 11. The most frequently met obstacles to meeting the Decade's goals are.
 - a) Lack of political will and synergy among local institutions.
 - b) Inadequate human and financial resources.
 - c) A lack of coordination and information exchange among countries in the subregion.
 - d) The lack of integrated assessments about the economic impact of disasters.
 - e) A lack of public education and information efforts.

South American Countries

Reports from Argentina, Bolivia, Brazil, Chile, Ecuador, Paraguay, Peru, Uruguay and Venezuela.

Experiences, Advances and Challenges

Participants agreed that the Decade has provided a framework within which to promote disaster management from a preventive perspective, involving all of society's key stakeholders at the national and local levels.

While each of the countries has a different geographical and climatological profile, the most common hazards in the subregion include floods, landslides, drought and technological hazards that are the result of industrialization. The El Niño phenomenon is a recurring event that affects the subregion, although it does have some positive effects that should be maximized.

Some countries in the subregion have reinforced their emergency plans and programs, even to the point of lending support to neighbouring countries. This underscores the subregion's capacity, opportunities and strengths when it comes to disaster reduction.

Higher education has seen the rise of curricula focused on civil protection and general disaster management. Progress has also been made in the development of risk mapping, and there is a growing wealth of literature on the subject, including vital reference material.

Disaster management agencies have improved their organizational and planning skills, complementing the other advances made over the past 20 years. For the most part, countries have engaged in permanent and systematic efforts to create new legal and administrative structures and policies aimed at increasing the efficiency, timeliness and coordination of disaster reduction initiatives.

A greater emphasis is being placed on prevention and mitigation. Investments in infrastructural reinforcements are up, and significant improvements in response capacity and early warning systems have taken place.

Local organization for disaster prevention and mitigation, at the municipal and grass-roots level, has been strengthened, particularly in the field of training, education and information dissemination.

International agencies have beefed up their credit systems. However, two weaknesses remain: the lack of resources for following up on prevention and response measures, and the obsolete nature of much of the relevant legislation, which hinders the efforts to provide much-needed autonomy to disaster management institutions.

Central and North American Countries

Reports by Belize, Canada, Costa Rica, Guatemala, Nicaragua, Mexico and Panama.

Experiences, Advances and Challenges

Every country presented its objectives and achievements during the Decade. In some cases, before-and-after studies were conducted. The most frequent phenomena were described, as were disaster mitigation experiences and plans, as well as the obstacles faced by countries in disaster management. Alternatives were suggested, as well as new approaches to strengthen those institutions dedicated to emergency and disaster response.

Costa Rica. National Emergency Commission (CNE)

The presenter described the most significant disasters to affect Costa Rica during the current decade and described the actions undertaken by the CNE, particularly those related to disaster reduction and mitigation. These were aimed especially at capacity building among organizations dedicated to risk management, and sought to raise awareness of existing hazards and disseminate prevention messages among the population.

Obstacles hindering meeting the goals of the Decade in Costa Rica include the lack of an appropriate legal framework for disaster prevention and mitigation, and the lack of the necessary technical and financial resources to carry out all the actions required. Additional barriers include the lack of land-use regulations and the inability to manage and follow up on development projects in prevention and mitigation. On the positive side, educational and public information programs have promoted a great deal of preparedness among the public in all matters pertaining to prevention and mitigation.

Canada. National IDNDR Committee

The presenter stressed that Canada's strategic plan focuses on risk and hazard assessments, vulnerability assessments, and mitigation. She stressed the need for multidisciplinary approaches and the identification and exchange of success stories.

Ms White reported on the North American Hazards Map, a joint effort involving Mexico, the United States and Canada, as well as on the Risk and Society initiative, a project aimed at integrating education, awareness-raising and communication.

The participation of civil society in risk management is crucial, she said, as is the need to develop a common terminology for risks and disasters.

Guatemala. Executive Secretary of the National Disaster Reduction Task Force

According to the presenter, Guatemala's efforts in disaster reduction before the International Decade for Natural Disaster Reduction (IDNDR) tended to focus on response rather than prevention. He described the most severe disasters to hit his homeland over the past decade, including floods, hurricanes, landslides, earthquakes, volcanic activity and forest fires.

In recent years, he said, emphasis has shifted to disaster prevention, mitigation and reduction through better organization and community training.

The main achievement of the Decade has been the development of the legal framework for the National Emergency Committee to transform itself into a coordinating entity, the Task Force, entrusted with working hand in hand with the National Ham-radio Network. It is also expected to train and help organize local coordination committees in all high-risk communities, implement the National Civil Protection System, and set policies at the highest level for the development of a national disaster prevention and reduction strategy.

Nicaragua. National IDNDR Committee

The presenter reported that the National Committee for Natural Disaster Protection was set up in 1989, by presidential decree.

Nicaragua's achievements during the Decade include organizing fully functional structures for disaster and emergency prevention, mitigation, preparedness and response. A bill currently in Congress would create a National Civil Defense System; it already exists in practice, as a network of local initiatives, and their members have been trained and provided with the necessary communications system. The country's civil defense institutions have a voice at the CEPREDENAC National Commission.

Challenges include the current lack of civil defense policies and strategies, the lack of a legal framework, and the weakness of institutions dedicated to disaster prevention, mitigation and preparedness.

Panama. National Civil Protection System

The presenter described the National Civil Protection System, which is legally entrusted with implementing measures to prevent or mitigate natural and man-made disasters. Its Steering Committee manages to integrate both governmental and non-governmental institutions, facilitating the flow of information among all key stakeholders.

In a country ravaged by floods, fires, tropical storms, landslides and shipwrecks, civil protection offices have been set up from the local to the national level. Institutional and community training programs have played a key role, as have general dissemination and training efforts. One of the training programs that have been most successful in terms of popular acceptance has been the School System Civil Protection Program, which has been undertaken in close coordination with the Ministry of Education.

For things to keep improving, the presenter stressed the need for budgetary commitments, the strengthening of local authorities, and the establishment of links between social and economic development programs and environmental protection within a sustainable development framework.

Mexico. National Disaster Prevention Centre

After describing the major hazards facing his country, the presenter described the structure and operations of the National Civil Defense System, which was created as a result of the International Decade for Natural Disaster Reduction (IDNDR). In 1990, the National Civil Protection Council was created as an advisory body entrusted with coordinating all disaster prevention and response efforts and headed by the President of the Republic.

Achievements include consolidating an organizational structure throughout the land: each state of the Mexican federation has its own Civil Protection Council entrusted with developing civil protection programs operated by state or municipal Civil Protection Units. These have been staffed and provided with the necessary equipment, and work hard at promoting a culture of disaster prevention among the population.

Special mention must go to the Health Facility Protection Program, the organization of response brigades, and training and dissemination activities.

Belize. Deputy Mayor of Belize City

According to the presenter, the recent impact of Hurricane Mitch on the region, although comparatively benign when it came to Belize, made the government realize how weak its National Disaster Management Plan was.

Since then, the government has committed itself fully to disaster preparedness, and requested the technical assistance of the Inter-American Development Bank and the Caribbean Development Bank. In April 1999, the National Disaster Management Administration and the Disaster Management Plan were thoroughly updated.

District-level workshops have been held, and emergency committees have been set up, in preparation for the next hurricane season. A special department was set up as part of the Prime Minister's Office, and a National Coordinator was appointed. The NDMA brings together the Prime Minister's Office and the Ministries of National Security and Immigration, of Transport and Communications, of Labour, of Housing, of Health, of Human Development, of Women and Youth, of Natural Resources and the Environment, and of External Affairs.

Each District Emergency Committee has its own Hurricane Response Plan, which is constantly updated.

The goal is to promote accountability, define mechanisms for private and public sector coordination with international aid agencies, identify resources for disaster response and mitigation, and provide capacity building to all relevant actors. Future plans include disseminating the Plan among the population, responding to communication barriers, strengthening the shelter network, updating the Plan on a regular basis, and carrying out regular drills.

Common Challenges (on the Basis of All Three Regions and their Reports)

- Continue to build disaster response capacity, particularly in the fields of prevention and mitigation, including risk assessments and strategy development. Integrate prevention and mitigation into all environmental protection and sustainable development plans. Include the "risk" variable in development projections.
- Follow up on plans and projects launched during the International Decade for Natural Disaster Reduction, with international support.
- Increase the availability of human and financial resources, including the participation of professionals, scientists and technicians in each relevant field, and improve forecasting and early warning systems.
- Seek support for disaster prevention and mitigation projects involving international agencies and local NGOs.
- Develop the necessary legal framework to facilitate disaster reduction, including the cross-sectoral revision of all pertinent legislation.
- Strengthen cooperation and coordination among the nations in the hemisphere. Caribbean countries, for example, agreed on the need for greater subregional integration in disaster prevention. Ecuador recommended the establishment of an International Centre for the Study of the El Niño Phenomenon. Participants also recommended that Andean Pact countries get together to develop a project for subregional integration in civil protection and defense, and they recommended the appointment of regional technical and scientific committees dedicated to disaster reduction.
- Establish inter-institutional coordination mechanisms among international relief agencies.
- Introduce disaster prevention and mitigation into all relevant curricula in every country, from grade school to higher education. Promote a culture of disaster prevention through specific programs, in all countries where no such programs exist at present.
- Encourage the media to promote a culture of disaster prevention, by creating training programs for journalists.
- Involve other sectors, such as the insurance industry, in disaster prevention and mitigation activities, so as to facilitate risk assessment and reduce the costs of natural disasters.
- Strengthen urban and rural human settlement planning, given the increase of population in the region.
- Standardize disaster prevention and mitigation terminology throughout the region.
- Develop mechanisms for the ongoing training of emergency and disaster prevention, mitigation, preparedness and response personnel.
- Strengthen the multi-sectoral participation of national-level institutions entrusted with emergency and disaster response.
- Improve the monitoring of natural phenomena at the local and regional level.

ANEXO 6 Summaries of National Reports

ASSESSMENT OF ACHIEVEMENTS DURING THE DECADE

This document includes a set of tables that summarize the written information received by May 15 1999, in response to a questionnaire sent out to specialized institutions in each country. Its purpose is to provide a general picture of the achievements attained during this past decade, assessed from the perspective of the individuals or institutions who submitted the reports. Therefore, not all of the details provided are included in this document.

Countries:

Argentina
Bolivia
British Virgin Islands
Costa Rica
Cuba
Ecuador
Guatemala
Jamaica
Mexico
Panama
Paraguay

Uruguay Venezuela

Pending: Brazil, Dominican Republic, Nicaragua

ARGENTINA		Report b	eport by:		
	(tem 1: Experie	nce and r	ecent disasters		
Items			Information suppl	ed	
1. 1 Major disasters occurred in the country	Trigger event		Victims	Losses est. in millions of \$US	
during the past 5 years.	Forest fires			1400	
Total mentioned: Not specified					
rotal montioned, 14ot specified	Floods		— No information given.		
	Snowstorms				
1.2 Impact of disasters reported.	• "Environn	nental, eco	onomic "		
	• "Socio-ec				
	• "Economi	c"	·		
1.3 Mitigation measures adopted	 Reforestat 				
			for agriculture and construc	ction of shelters.	
1.4 Preparedness and prevention activities that	 Subsidies Public aw 				
the country needs to strengthen.			mpaigns ponse capacity of emergenc	w organizations	
	Financing			by organizations.	
1.5 Did the proclamation of the IDNDR					
improve disaster reduction in your country?	YES. The object	tives of II	s of IDNDR have provided a major stimulus.		
1.6 Successful measures or projects that	The coordination of technical bodies in charge of follow-up on El Niño provided the		low-up on El Niño provided the		
incorporate preventive actions. necessary informati			implement early mitigation	measures against floods.	
2.1 National achievements	Progress made		start of the IDNDR		
2.1 National achievements		a) R	isk assessment:		
		A na	ational inventory has been	orepared of the main hazards, and	
		has	been distributed at local lev	rel.	
		a)	Structured mitigation plan	15:	
		1			
			re are general and specific		
		b)	Access to Early Warning	Systems:	
		Dete	ection system to determine	the level of the watercourses on	
		,	coast.	and lover of the watercourses on	
2.2 Obstacles encountered by the country in the			of funding for these object	tives.	
objectives of the IDNDR and recommendations to overcome these.		se.			
2.3 Information and education campaigns (ways and means)					
		1.			
2.4 Liaison with political sectors, organizations and the media.			Information campaigns on specific issues. Linion established through a second control of the second cont		
portion sociols, organizations and the media.			Liaison established through conferences, seminars and meetings. Cooperation agreements have been formalized at national, state		
2.5 Work with other sectors to incorporate disaster reduction			local level.	on tormanzou at national, state	
activities into planning.					
2.6 Contributions made by international information provided for		į.	Because it was recently formed, the responding institution has not		
the execution of the IDNDR objectives in the country.		parti	cipated in the correspondir	ng meetings.	

Ite	em 3: Existing national organization and structure
3. 1 Governmental authority designated for disaster reduction activities.	
3.2 Governmental budget assigned	Yes, there are budget lines for actions such as to combat fires, infrastructure works, shelters and water containment structures.
3.3 Legal framework	At provincial level. For example, earthquake resistant building codes.
3.4 Incorporation of applicable concepts and measures into education curricula.	No, with some exceptions
3.5 Sectors and institutions to strengthen	The organizations in charge of drafting earthquake contingency plans disseminate
the transfer and application of knowledge	information and technology in the national sphere.
and technology	
in disaster reduction	
Main partners and interdisciplinary	The Public Security Forces, the social welfare and public health institutions. NGOs such as
approach	the Red Cross.
	Item 4: Future requirements
4.1 Requirements for future success in the	Strong political commitment is required. This should be reflected in the assignation of
execution of disaster reduction activities.	budget resources administered by competent technicians.
4.2 Desirable measures for the 21st	Formation of an international operational force to respond to emergencies in any part of the
century	world financed by all the United Nations agencies.

Country: BOLIVIA		Report by: Luis Daza Director of the National Civil Defense Service		
	tem 1:	Experience and re	·	11100
Items	Information supplied			plied
1. 1 Major disasters occurred in the country during the past 5 years.	Trigg	er event	Victims	Losses reported
Total mentioned: 5	1996	lides in La Paz, and another ed event	11 dead 5.060 homeless	84 homes partially o totally destroyed.
Trigger events:	1	lide in Larecaja z, 1996	13 dead 645 homeless	50 homes partially or totally destroyed.
Earthquakes: 1 Landslides: 3 Climatic variations: 1 (El Niño)	1	quake in Aiquile, a and Mizque 1998	60 dead 5.000 homeless	130 homes partially or totally destroyed.
	•	s and droughts I by El Niño	119.588 families homeless	245.154 km2 affected by drought. 169.004 km2 affected by floods.
1.2 Impact of reported disasters.	The main references are to destruction of homes,			
1.3 Mitigation measures adopted.	 Assistance with food, medicines, tools, blankets, mattresses, etc. Well drilling plan Medical supplies plan Disaster management courses Training for instructors Education programmes for the population Seed supply and distribution programme. 			
1.4 Preparedness and prevention activities that the country needs to reinforce.				

	Standard	CALANT COLUMN	
	• Strengthenin	g of the National Civil Defense System and SENADECI.	
1.5 Did the proclamation of the IDNDR	YES, through the	introduction of international training programmes (OFDA, La	
1.		of inter-institutional scientific-technical committees and greater	
	· ''	rt of Central Government, public institutions and non-	
		private organizations.	
1.6 Successful measures or projects that	Mapping of hazards, earthquakes and floods in Bolivia.		
incorporate preventive actions.		sessments in hospitals, schools and densely populated areas.	
	Organization	of Civil Defense Committees (at national, departmental and	
	provincial le	vel).	
Ţ	tem 2: Progress made s	ince the start of IDRDN	
2.1 National achievements		a) Risk assessment:	
		SENADECI now has a data bank and presents periodic reports	
		to the Defense Ministry.	
		15 00	
		b) Structured mitigation plans:	
		There are no national disaster management plans	
		c) Access to Early Warning Systems:	
		National Food Security Monitoring System and Early	
		Warning, of the Agriculture Ministry.	
		Naval Hydrographic System, San Calixto	
		Observatory (earthquake monitoring)	
2.2 Obstacles encountered by the country in	the fulfillment of the	Recommend: delegates should be sent to the IDNDR Secretariat	
objectives of the IDNDR and recommendations to overcome these.		for guidance on inter-institutional coordination and training courses.	
2.3 Information and education campaigns (ways and means)	Annual training and education programmes all over the country	
		(courses, seminars, lectures, simulations).	
2.4 Liaison with political sectors, organizat	ions and the media	No.	
2.5 Work with other sectors to incorporate of	lisaster reduction	None	
activities in planning.	risastor reduction	None	
2.6 Contributions made by the international	information provided	The information that GENIA DEGV	
to the execution of the objectives of the IDN	IDR in your country	The information that SENADECI receives from the IDNDR is	
		very scant and insufficient for the implementation of activities. ganization and structure	
3. 1 Governmental authority designated		ense Service, attached to the Defense Ministry.	
for disaster reduction activities.			
3.2 Governmental budget assigned.	A very limited budget is	s assigned by the National Treasury, and is mainly used to provide	
	assistance to disaster vio	etims.	
3.3 Legal framework	Only earthquake resistant building codes, which are currently being prepared.		
3.4 Incorporation of applicable concepts	No.	yB bookmon	
and measures in education curricula.			
.5 Sectors and institutions to strengthen No links have been estab		blished for this purpose.	
the transfer and application of knowledge			
and technology to disaster reduction.			
3.6 Main partners and interdisciplinary	The Armed Forces, the I	Bolivian Police, the Fire Brigades, the Bolivian Red Cross, NGOs,	
approach	USAID and La RED.		
41 P	Item 4: Future		
4.1 Requirements for future success in	A new Civil Defense La	w is required, as well as norms to regulate land use, human	
settlements, industrial safety and management of hazardous substances. We need to creat			
activities,	a National Emergency F	und, regulate the activities of the civil defense committees	
	establish a national com	munications system for disasters and inter-institutional	

4.2	Desirable measures for the 21st	agreements for the exchange of information and technical support.
	century.	

BRITISH VIRGIN ISLANDS West Indies	Report by: Information Training Manager. Office of Disaster Preparedness		
The state of the s	Item 1: Experience and recent disasters		

Note: The document begins with the following paragraph: "We have not experienced any disasters during the past five years but we have been affected by hazards such as hurricanes, floods, oil spills and earthquakes".

Items			Information supplied			
1. 1 Major disasters occurred in the country		Trigger event	Victims	Losses est. in millions of \$US		
during the past five years.						
		Hurricanes Louis &				
Trigger events:		Marilyn, 1995		8		
TT 1		Hurricane Bertha, 1996		1		
Hurricanes: 4.		Humiagna Casusas	+	1.5 – 2		
Oil spills: 1		Hurricane Georges		12		
		Oil spill				
				0.85		
1.2 Impact of disasters reported		hurricanes and earthqual	loss of life or deces".	estruction of property as a result of the		
1.3 Mitigation measures adopted		 Study on natural and technological hazards and mitigation strategies, 1997. Recommendations in implementation phase. Public Education and Information Programme has been improved. National Disaster Plan, including the implementation of specific plans in critical agencies. 				
1.4 Preparedness and prevention ac	tivities that	Reinforce application	ion of the building	code and disaster legislation, once approved		
the country needs to reinforce		Reinforce mitigation	on activities and im	prove damage assessment methods.		
1.5 Has the IDNDR proclamation	YES, IDNI	DR has helped to create a	greater awareness of	of the hazards that can affect the country and		
improved disaster reduction in your country?	to undersec	ore the need for preparedn	ess in all sectors.	and the country and		
1.6 Successful measures or	• Legis	lation in disaster reduction	n '			
projects that incorporate		aredness activities included		condary school curricula		
preventive actions.		rnment Contingency Fund		ondary solicor currouta.		
	More	support from private sect	or.			
	• Disas	ster plans to deal with diffe	erent hazards and to	provide relief services.		
		12: Progress made since				
2.1 National achievements		a) Risk assessm				
		internatio	nal agencies.	isk, shared with many national and us hazard reports, all available at our Web		

2.2 Obstacles encountered by the objectives of the IDNDR a overcome these.		 b) Structured mitigation plans: There is a National Disaster Plan with a well-structured work programme that includes mitigation activities. New activities are prepared each year. Mitigation strategies are included in the National Integrated Development Strategy. c) Access to Early Warning Systems: We use the printed media, our National Radiophone Emergency System, hurricane warning flags and VHF communications at all levels. The country forms part of an HF network at regional and international level, The main obstacle is the shortage of human resources. The Government currently provides additional staff. 	
2.3 Information and education means)	campaigns (ways and	 Disaster preparedness is now part of the school curriculum. Information is distributed to the public through the media and exhibitions are organized for schoolchildren and other groups. There is a solid relationship with the media. A corps of volunteer helpers collaborates in the dissemination of information to local committees and at all levels. 	
2.4 Liaison with political sectors, organizations and the media. 2.5 Work with other sectors to incorporate disaster reduction activities into planning. 2.6 Contributions made by the international information provided in the execution of the objectives		Training programmes for the media, the public and private sectors and decision-makers to create awareness of hazards and mitigation efforts. Presentation of contingency plans and contacts with various agencies. Numerous publications aimed at the business sector, which is also included in simulation exercises. Various international and regional agencies have provided technical and operational assistance, training and information. IDNDR has provided a global	
of the IDNDR in the country.		perspective of the problems and issues and several lessons that are applicable to our disaster programme. g national organization and structure	
3. 1 Governmental authority designated for disaster reduction activities. 3.2 Governmental budget		ss Office, ODP, supervised by the <i>Deputy Governor</i> and by the Governor.	
assigned 3.3 Legal framework	There is an annual government budget for the functioning of the ODP and a contingency fund for post-disaster recovery operations. Building code, legislation on disasters and a national development strategy that includes aspects such as land-use planning.		
3.4 Incorporation of applicable concepts and measures into education curricula.	 The ODP provides training in disaster management at all levels. Primary and secondary schools include these topics in their curricula. Courses have been planned for local communities. 		
3.5 Sectors and institutions to strengthen the transfer and application of knowledge and technology to disaster reduction.	Channels such as the Internet are used for this purpose. Our annual reports are widely circulated. The "training of trainers" approach is encouraged and our volunteers disseminate information at local level.		
3.6 Main partners and interdisciplinary approach	At regional and international level we work with agencies such as PAHO, OFDA, DTRS, DFID, CDERA, FEMA, VITEMA, SRU in Trinidad y Tobago, Tropical Shipping, IMO, REMPEITC, USCG, CRRT and others. At national level we work with departmental governors' offices, NGOs, volunteers and local committees.		
	Ite	em 4: Future requirements	

4.1 Requirements for future	Implementation of international coordination mechanisms
success in the execution of	Budget commitments
disaster reduction activities.	Policy commitments
	Establishment of action networks
	Communications instruments
	Closer linkage between economic and social development, environmental protection and
	sustainable development.
	Strengthen legislation in this area.
4.2 Desirable measures for	More aid for development of mitigation programmes. Definition of standards for access to
the 21st century.	international assistance and donor agencies.
	More support for training in all areas of disaster management.

COSTA RICA	Report by: Lidier	-		
Item 1: Experience and recent disasters				
Items		Information supp	lied	
1. 1 Major disasters occurred in the country	Trigger event	Victims	Losses est. in millions of \$US	
during the past 5 years. Total mentioned: 16	Limon earthquake (7,5°)1991	48 dead	172	
Trigger events:	Torrential rain Atlantic coast, 1996		10	
miggor overta.	Hurricane Cesar, 1996	39 dead	22	
Successive earth tremors: 1 Earthquakes: 2	Tropical storm Lily,			
Tropical storms:2 Hurricanes: 4 Torrential rain: 4	Hurricane Mitch	4 dead 4 missing		
Tropical depression: 1 Tropical wave: 1		5.500 housed in shelters		
El Niño: 1				
1.2 Impact of reported disasters	damage and problems, es		ned caused a wide range of losses, frastructure, health services, water sheries.	
1.3 Mitigation measures adopted	Activities aimed at determining risk levels: application of earthquake intensity model, estimation of density of alluvium, building foundations code, etc. Various studies and research. Additional measures mentioned under other items.			
1.4 Preparedness and prevention activities that the country needs to strengthen.	Legal framework Strengthening of lo Committees. Training and resou Incorporation of ri Regional cooperati Establishment of ir National policy on	rces for the municipalities. sk reduction in reconstruct on agreements. formation centers in the co	ion efforts.	
1.5 Did the IDNDR proclamation improve	governmental plans	ning structure.		

disaster reduction in your country?	YES. The initiative	has focused attention on the theme of disasters and has encouraged	
,	h	torical and social approach to the problems of development. Positive	
		en to support mitigation and prevention projects and mass	
	information campai		
Iti		since the start of IDNDR	
2.1 National achievements	G	a) Risk assessment:	
		Annual publication of Cantonal Atlas of Natural Hazards	
		Identification of hazards in specific areas.	
		Vulnerability studies in numerous communities, as part of	
		risk management projects.	
		b) Structured mitigation plans:	
		Regulatory Plans have been implemented for reconstruction in 14	
		events declared a "national emergency"	
		c) Access to Early Warning System;	
		There is access to regional meteorological information, especially	
		from the US. The Central American Earthquake Center is based in	
		Costa Rica. Volcanic monitoring is conducted by specialized	
		institutions. Specific mention is made of the monitoring plan for	
		the Caribbean river basins.	
2.2 Obstacles encountered by the country in t	he fulfillment of the	The report mentions 13 obstacles: inadequate legal framework,	
objectives of the IDNDR and recommendation	ons to overcome these.	duplication of efforts and gaps in institutional actions, lack of	
		systematic research on vulnerability and its causes, little input	
		from scientific, technical and academic sectors in the	
		communities, and little involvement by these in planning efforts.	
		Also, weakness of local governments, lack or non-application of	
		regulatory or contingency plans in high-risk areas. The present	
		scale of risk management is not useful to local planning. Lack of	
		capacity to manage and follow up on disaster reduction projects,	
		limited involvement by state institutions and lack of a planning	
		system to guide the implementation of the Strategic and	
		Operational Plan.	
2.3 Information and education campaigns (w	ays and means)	A National Education strategy for Disasters has been proposed,	
		along with a national system of medical emergencies and three	
		programmes. The CNE has its own education and information	
		department with 4 operational areas. The education and culture	
		sector is given priority within the National Emergency Plan and	
		disaster issues have been incorporated at all levels of education.	
2.4 Liaison with political sectors, organization	ns and the media.	The National Emergency Plan establishes responsibilities and a	
2.5 Work with other sectors to incorporate di	saster reduction	framework of action for the different planning bodies of the state.	
activities in planning.		There are 10 inter-institutional committees for specific thematic	
		areas.	
2.6 Contributions made by the international information provided		Exchange of experiences with other countries has been enhanced	
to the execution of the IDNDR objectives in the country.		and relations of cooperation have been established.	
Item	3: Existing national	organization and structure	
		y Commission (CNE), attached to the Ministry of Public Works and	
		ion most closely related to this role. However, its legal framework -	
		n – do not empower it to undertake preventive actions.	
3.2 Government budget assigned	The CNE has a budget of	of 450 million colones (\$1.600.000 approx.) for preparedness	
	programmes and its own	n payroll expenses. It is authorized to administer the funds assigned	
t	o reconstruction efforts	in affected areas,	
		al framework for disaster mitigation, but there are several laws that	
	egulate related issues.	For example, the General Health Law, the Building Code, etc.	

3.4 Incorporation of applicable concepts and measures into education curricula	 None of the disciplines mentioned in the questionnaire has incorporated this topic into its curriculum. There are optional courses in Psychology, Mass Communications and other subjects. Courses in Medical Technologies and Masters degrees in Geography and Public Health include some of these topics. The Disasters Programme of the Ministry of Education (PREMED) provides training in these subjects.
3.5 Sectors and institutions	The national model of organization for disasters is intersectoral.
to strengthen the transfer and application	The CNE has an inter-institutional communications network. The Technical Advisory
of knowledge and technology in disaster	Committees are composed of a wide range of experts. The Emergency Committees facilitate
reduction	the transfer of technology at local and regional level.
3.6 Main partners and interdisciplinary	• The CNE's partners are all public officials and private citizens who participate in the
approach	organizational system, more than 3,000 in total
	Advice is provided by various United Nations agencies and OFDA.
· · · · · · · · · · · · · · · · · · ·	
	Item 4: Future requirements
4.1 Requirements for future success in	It is necessary to implement, promote or improve community participation, regulatory
the execution of disaster reduction	(master) plans, the dissemination of information, the implementation of Early Warning
activities.	Systems with community participation in earthquake monitoring, risk and impact
	evaluation, information, coordinated interdisciplinary work in the binational river basins,
4.2 Desirable measures for the 21st	and the management capacity of emergency committees. In more general terms, it is
century	necessary to update the National Emergency Plan.

Country: CUBA	Report by: Jose Angel Llanes National Directorate of Civil Defense		
	Item 1: Experience and	d recent disasters	
Items	Information supplied		
1. 1 Major disasters occurred in the country during the past 5 years.	Trigger event	Victims	Losses reported
	Hurricane Lily	No deaths reported.	
Trigger events mentioned: Hurricanes: 3	Hurricane Georges	6 dead, 818,000 evacuated	
numeanes, 5	Hurricane Mitch		
1,2 Impact of disasters reported	Mainly damage to agriculture.		
1.3 Mitigation measures adopted	 Mass preparation of the population 750,000 animals evacuated (Hurricane Georges) 		
1.4 Preparedness and prevention activities that the country needs to strengthen.	 Prevention and preparedness of citizens to respond to disasters and how to act in situations of disaster and recovery. 		
1.5 Did the IDRDN proclamation improve disaster reduction in your country?	YES. The prevention and mitigation measures put into practice have significantly reduced the impact of disasters. The annual celebration of International Day for Disaster Reduction enjoys a high level of popular participation.		
1.6 Successful measures or projects that incorporate preventive actions.	"Meteoro" exercise (popular exercise in actions to take during a disaster situations). Implementation of Integrated Urgency and Medical Emergency System.		
(also see item 2)	Installation of Units for Analysis and Trends in Health (epidemiological monitoring system). Improving legal framework of Defense System.		

	tem 2: Progress made si	nce the start of the IDNDR
2.1 National achievements		a) Risk assessment
		Risk assessment is carried out in various education, research and study centers, e.g. the Latin American Center for Medical Disasters, the Veterinary Center for Prevention in Cases of Disaster and the Engineering Center for Disaster Prevention and Mitigation.
		b) Structured mitigation plans:
		National Development Plans include disaster reduction components. c) Access to Early Warning Systems: Our EWS have improved considerably, especially in relation to hydro-meteorological, earthquake, epidemiological,
2.2 Obstacles encountered by the country	in the fulfillment of the	phytosanitary, technological and environmental hazards.
IDNDR objectives and recommendations		The intensification of the economic war waged against Cuba by the United States has affected our national development programmes.
2.3 Information and education campaigns (ways and means)		Several study centers have been established Improved preparedness training for schoolchildren and university students, including more than 4.000 doctors and veterinarians.
2.4 Liaison with political sectors, organiz	ations and the media.	Steady improvements in planning for disaster situations. Plans are
2.5 Work with other sectors to incorporate disaster reduction activities in planning.		updated annually under the supervision of the respective government authorities
2.6 Contributions made by international information to the execution of the IDNDR objectives in your country.		During the Decade, as previously, Cuba offered cooperation to Latin American countries affected by disaster situations, especially in the area of public health and earthquake vulnerability studies. In return, this has provided us with valuable experiences in solidarity.
I	tem 3: Existing national	organization and structure
3. 1 Governmental authority designated for disaster reduction activities	 The National Chic leaders of popular In relation to the I 	of of Staff of Civil Defense, composed of vice-ministers and national organizations. Decade, in 1991 the Cuban National Committee was established by of the Executive Committee of Ministers of Cuba. It is headed by the
3.2 Governmental budget assigned	n/r	
3.3 Legal framework	National Defense Law N° 75, decreed by the Popular National Assembly in 1994, establishes the basic structure and development of Cuba's Civil Defense System. Exe Order N° 170 (1997) specifies in greater detail the aspects related to disaster reduction During the Decade, 3 Laws, 7 Executive Orders and 21 ministerial resolutions have be promulgated. Most of these are related to prevention.	
3.4 Incorporation of applicable concepts and measures into education curricula.3.5 Sectors and institutions to strengthen the transfer and application of knowledge and technology to disaster reduction.	See item N° 2.	
3.6 Main partners and interdisciplinary approach		

Country: ECUADOR	Report by: Gus	tavo Burbano Natio	onal Director of Civil Defense
	Item 1: Experience and	recent disasters	
Items		Informati	ion supplied
1. 1 Major disasters occurred in the country during the past 5 years.	Trigger event	Victims	Losses est. in millions \$ USD
Total mentioned: 7	Landslide in Azuay, 1993	6.400	350
Trigger events	Landslide in Zamora, 1993	30 dead	2.0
Earthquakes: 3 Landslides: 2	Fire Galapagos Islands 1994	, N/i	4.500 Hectares of forests
Forest fires: 1 Climate variations: 1 (El Niño)	Earthquake in Morona Stgo. 1995	N/i.	10.0
	Earthquake in Cotopaxi,1996	N/i.	7.0
1.2 Impact of reported disasters	Overall impact on the establishment of the sanitation.	Overall impact on the economy, housing, roads, transport, health and environmenta	
1.3 Mitigation measures adopted	 Training of authorities and population Contingency plans Activation of COEs 		n
1.4 Preparedness and prevention activities that the country needs to reinforce.			· · · · · · · · · · · · · · · · · · ·
1.5 Did the proclamation of the IDNDR improve disaster reduction in your country?			conomic resources and citizen awareness.
1.6 Successful measures or projects that incorporate preventive actions.			t been consolidated, such as the Building s in Guayaquil and the Quito Project.
	n 2: Progress made sinc	e the start of IDNI	DR .
2.1 National achievements			dies are carried out and disseminated locally.
		overnmental bodies. Access to Early	responsibility of Civil Defense but of other Warning Systems: sunami Warning System through the
		Oceanographic Institute of the Navy. No local EWS because of financial constraints.	
2.2 Obstacles encountered by the country in the fulfillment of the objectives of the IDNDR and recommendations to overcome these.		ssentially, lack of m	oney which affects the entire country.
2.3 Information and education campaigns (way	· · · · · · · · · · · · · · · · · · ·	ublic and private co	mmunications media have been used.
2.4 Liaison with political sectors, organization		ery limited.	
2.5 Work with other sectors to incorporate disa activities in planning.	1	In 1994 the risk variable was incorporated into National Development Plans by the National Planning Council (CONADE)	

2.6 Contributions made by the international	l information provided	"None that I am aware of ".	
to the execution of the objectives of the IDNDR in the country.			
Ite	m 3: Existing national o	organization and structure	
3. 1 Governmental authority designated		n created by presidential decree, which I barely functional.	
for disaster reduction activities		, , , , , , , , , , , , , , , , , , , ,	
3.2 Governmental budget assigned	N/r		
3.3 Legal framework	These activities rely exc	lusively on local governments and engineers' associations.	
3.4 Incorporation of applicable concepts		h the Education Ministry for training at primary and intermediate	
and measures to education curricula.	level.		
3.5 Sectors and institutions			
to strengthen the transfer and application	n/r		
of knowledge and technology in disaster			
reduction.			
3.6 Main partners and interdisciplinary			
approach	n/r		
	Item 4: Future	requirements	
4.1 Requirements for future success in	"All the criteria proposed in the questionnaire are valid, but the budget resources are not		
the execution of disaster reduction	available to put these into practice".		
activities.			
4.2 Desirable measures for the 21st	Disseminate inform	nation about the seriousness of any natural disaster through various	
century,		es supported with materials that are accessible to communities.	
	This includes mate	rials in the languages of our ethnic groups. Internal and external	
financial support to provide training to all social sectors.			

Country: GUATEMALA	Report by: National Coordinator for Disaster Reduction (CONRED)		
	Item 1: Experience and 1	ecent disasters	, , , , , , , , , , , , , , , , , , , ,
Items	Information supplied		
1. 1 Major disasters occurred in the country during the past 5 years.	Trigger event	Victims	Losses reported
Trigger events:	Landslides in Alta Verapaz, 1995.	Deaths (number is not specified)	
Forest fires: Several Hurricanes (affected	Forest fires in Petén, 1998		
country as tropical storms): 3 Landslides: 2	Eruption of Pacaya Volcano, 1998		
Volcanic eruption: 1	Hurricane Georges,		
	Hurricane Lester, 1998		
	Hurricane Mitch, 1998		
	Landslides in El Quiché, 1998	Deaths (number is not specified)	
1.2 Impact of reported disasters	 Damage to road infrastructure Major degradation of rainforest Loss of crops, damage to banana plantations and livestock. 		and livestock.
1.3 Mitigation measures adopted.	 Tons of ash deposited on the capital Organization of Local and Departmental Emergency Committees. Improvements to CONRED's radio communications network. 		

1.4 Preparedness and prevention activities that the country needs to reinforce.	 Monitoring of rainfall and hydrological parameters in river basins on the South Coast, to implement SATs. Small protective barriers and mitigation actions on rivers on the South Coast. Organization and training of communities in high risk zones. Information and orientation campaigns. Awareness of national authorities. Incorporate the "disasters variable" within development projects and programmes. Establish national disaster prevention policies. Implementation of monitoring systems (earthquake, volcanic and hydromet.) with effective technologies. Institutional and community organization. Response capacity. 		
1.5 Did the proclamation of the IDNDR	YES, because it ha	s focused interest more on prevention issues than on disaster	
improve disaster reduction in your country?	management. It has gradually contributed to improved international cooperation and exchange of experiences and technology. The technicians in this field would like to have more contact with the UN officials in charge of following up on the proclamation		
1.6 Successful measures or projects that	1	ramme to Strengthen Local Disaster Reduction and Mitigation	
incorporate preventive actions.	Organizations.	· · · · · · · · · · · · · · · · · · ·	
2.1 National achievements	12: Progress made	since the start of IDNDR c) Risk assessment	
		Decree to create CONRED d) Structured mitigation plans Contingency Plans at national, departmental and local level, duly documented. e) Access to Early Warning Systems: Access to global, regional, national and local EWS.	
2.2 Obstacles encountered by the country in the		Cultural obstacles (illiteracy, multilingual society) to the	
IDNDR objectives and recommendations to overcome these.		dissemination of disaster reduction information in Spanish, Lack of access to advanced technologies Recommend: Financial support for the national organization of CONRED.	
2.3 Information and education campaigns (ways and means)		 Programme (and follow-up) to create and develop a culture of prevention. Integration of this subject into primary and secondary school curricula and mandatory seminars on risk reduction as part of some professional courses. Information and awareness campaigns through the Executive Secretariat of CONRED 	
2.4 Liaison with political sectors, organizations	and the media.	The private sector is represented within CONRED and promotes the interest of investors. It undertakes education, training and promotion of volunteer service with the social sectors.	
2.5 Work with other sectors to incorporate disa activities into planning.		Ministry of Agriculture Ministry of Communications, Transport and Public Works. Ministry of Health Ministry of Finance	
2.6 Contributions made by international inform	=	It has enabled us identify institutions and bodies whose	
the execution of the objectives of the IDNDR i	n your country.	connection with the disaster reduction process was not	

	known. • New centers and channels of information have been created (e.g. with CRID in Costa Rica).		
I	em 3: Existing national organization and structure		
3. 1 Governmental authority designated for disaster reduction activities.	National Coordinator for Disaster Reduction (CONRED).		
3.2 Governmental budget assigned	There is a National Fund for Disaster Reduction		
3.3 Legal framework	Executive Order 109, of 1996, which created CONRED.		
3.4 Incorporation of applicable concepts and measures into education curricula.	Information lectures for students and teachers of the Faculties of Engineering and Medicine.		
3.5 Sectors and institutions to strengthen the transfer and application of knowledge and technology to disaster reduction.	There are plans to offer an optional course, with the respective credits. The National Council for Disaster Reduction, which manages CONRED, is made up of various Ministries, public service institutions and private enterprise. It provides a basis for the exchange of information, but its action is limited by a lack of resources.		
3.6 Main partners and interdisciplinary approach	The above mentioned National Council, private enterprise, scientific organizations, universities, NGOs and public service institutions are our main partners, providing an interdisciplinary approach.		
	Item 4: Future requirements		
4.1 Requirements for future success in the execution of disaster reduction activities.	Secure political commitment at the highest level to define a national strategy. Improve and adapt instruments of induction and information on disaster reduction. Work to ensure that the disaster variable is incorporated into all development processes. Promote private investment in efforts to reduce the impact disasters.		
4.2 Desirable measures for the 21st century.	 Continuous and general strengthening of CONRED. Optimization of technological and scientific exchanges among international risk reduction organizations. 		

Country:	Report by: Barbara Carby.		
JAMAICA	Director General. Office of Disaster Preparedness and Emergency Manag		
	Item 1: Experience and		3
Items	Information supplied		
1. 1 Major disasters occurred in the country during the past 5 years.	Trigger event	Victims	Losses reported
Total mentioned: 9	Annual floods		
Trigger events: Floods: 6	Droughts: 1996, 97 and 98.		
Droughts: 3			
1.2 Impact of reported disasters	Loss of life, displaced co	mmunities, econor	mic losses, education and health problems,
1.3 Mitigation measures adopted	 Response measures to drought Dredging of rivers Reinforcement of protective structures to prevent flooding 		
1.4 Preparedness and prevention activities that	13 thouation of populations at risk		

the country needs to strengthen.	rebuilding of drainage systems and storage facilities for potable water.		
1.5 Did the proclamation of the IDNDR	• Training		
improve disaster reduction in your country?	YES. By providing increased information, IDNDR created greater awareness about th		
-	risks of natural disasters and led to renewed action on disaster management.		
1.6 Successful measures or projects that		varning systems for floods.	
incorporated preventive actions.		homeless people in less vulnerable areas.	
T _f	em 2: Progress made	since the start of IDRDN	
2.1 National achievements	and a rogress made	a) Risk assessment:	
		W. A. S.	
		Efforts are beginning.	
		b) Structured mitigation plans:	
		The National Plan was updated in 1997. We are beginning to	
		develop structured plans and policies.	
		b) Access to Early Warning Systems:	
		Automated EWS in Rio Cobre since 1993.	
		Several community EWS.	
2.2 Obstacles encountered by the country in	the fulfillment of the	Recommend that the IDNDR Secretariat support the functioning	
objectives of the IDNDR and recommendation		of the National IDNDR Committee.	
2.3 Information and education campaigns (ways and means)		A public education programme has been implemented.	
2.4 Liaison with political sectors, organization	and the media	This will do the do	
2. 1 Diamon Will pointion sectors, organization	his and the media.	Liaison with the media in the formation of committees and	
2.5 Work with other sectors to incorporate disaster reduction		production and dissemination of information.	
activities in planning.	saster reduction	Extensive work with the private sector, which has sponsored	
g,		information materials and organized seminars on contingency plans in various companies.	
		Regular meetings are held with government institutions to create	
, , , , , , , , , , , , , , , , , , , ,		awareness of disaster issues.	
2.6 Contributions made by the international i			
to the execution of the objectives of the IDN		n/r	
		organization and structure	
	The Office for Disaster Preparedness and Emergency Management (ODPEM), regulated		
	an Act of 1993.		
	Receives annual funds f		
3.3 Legal framework	There are various legal instruments in this area. The most important is the "The Town and		
	Country Planning Act" and there is a National Building Code.		
· · · · · · · · · · · · · · · · · · ·	The Geology Department of the University of the West Indies offers a course in		
i	Environmental Geology that includes disaster reduction. The University of Technology has a disaster reduction module in one of its courses.		
· 1		he country facilitate these exchanges.	
to strengthen the transfer and application	John John Million	Tacintate these exenanges.	
of knowledge and technology to disaster			
reduction.			
3.6 Main partners and	Governmental agencies	in all sectors, various professionals, universities, NGOs and local	

	Item 4: Future requirements
4.1 Requirements for future success in the execution of disaster reduction activities.	 Integration of disaster reduction components into all national development plans and environmental impact assessments. Continue to promote the Internet as a tool for the exchange of information and training.
	• A percentage of all aid funds should be specifically assigned to disaster reduction.
4.2 Desirable measures for the 21 st century.	 A body similar to the IDNDR Secretariat is needed to continue coordinating the dissemination of information.
	Formal courses on disaster management available through distance learning.

Country: MEXICO	Report by: Manu	el Díaz, Director Genera	al of Civil Defense
	Item 1: Experience and	recent disasters	
Items		Information su	pplied
1. 1 Major disasters occurred in the country during the past 5 years.	Trigger event	Victims	Losses reported
Total mentioned: 54.613 Trigger events	Earthquake measuring 7,5° affected Jalisco, Colima and Nayarit, 9 October 1995	51 dead 126 injured	Homes damaged or destroyed. Buildings and hotels damaged. One church destroyed.
Earthquakes: 2	Hurricane Opal, 28/Sept/1995	85.564 homeless	367 homes and 2 schools damaged
Hurricanes: 9 Forest fires: 54.602	Hurricane Roxanne 10/Sept/1995	208.330 homeless	Homes and crops destroyed.
	Hurricane Pauline, 6 October 1997	228 dead 165 missing 288.000 homeless	Homes destroyed
	Forest fires, annual average: 9.100		
1.2 Impact of disasters reported		ed to destruction of home	es and forest resources, mainly
1.3 Mitigation measures adopted.	Most of the data is related to destruction of homes and forest resources, mainly. Food, clothing, mattresses, cardboard sheets, etc. to assist stricken populations. Preventive evacuations and provision of shelter.		
1.4 Preparedness and prevention activities that the country needs to reinforce	 Research and technical development for monitoring, follow-up, forecasting and warning. Improve planning systems on the basis of sustainable development. Awareness and preparedness of civilian population, with emphasis at local level Improve operational coordination with NGOs in providing emergency relief and support. Zonification of risks Development of human and technological resources, especially at municipal level. Role of the mass media in information activities. 		
1.5 Did the proclamation of the IDNDR improve disaster reduction in your country?	YES, because it encourages the development and dissemination of technological advances and the exchange of knowledge and meetings that help raise social awarenes it also promotes the creation of appropriate legal instruments that facilitate preventive actions.		
1.6 Successful measures or projects that incorporated preventive actions.	Contingency Programme	es adopted by all Civil P	rotection Units (7 are mentioned)
Iter	n 2: Progress made since	the start of IDNDR	

2.1 National achievements		a) Diele accessment:		
2.1 National achievements		a) Risk assessment:		
		The National Directorate has prepared a "National Hazards		
		Atlas". A new version of this guide is planned.		
		b) Structured mitigation plans:		
		"Bases for the establishment of SINAPROC"		
		"National Civil Protection Programme" 1996-2000.		
		State laws and municipal regulations		
		c) Access to Early Warning Systems :		
		There are 4 main EWS:		
		National Earthquake Service		
		National Meteorological Service		
		Early Warning System for Tidal Waves.		
2.2 Obstacles an authority the second in	d C lCtl + Od	Earthquake Warning System		
2.2 Obstacles encountered by the country in		Recommendations:		
objectives of the IDNDR and recommendation	ons to overcome these.	Strengthen training of human resources.		
		Promote municipal organization		
		Update legal framework		
		Increase channels to relay information to organized groups		
		and the general public.		
		Promote technological development in this area.		
		Establish non-governmental sources of funding (national		
	•	and international).		
2.3 Information and education campaigns (w	vays and means)	Wide distribution of printed materials		
	,	Social communication campaigns		
		Inclusion of basic civil defense information in educational		
		texts.		
		National Safety and Emergency Programme for Schools		
2.4 Ligison with political sectors, organization	one and the media			
2.4 Liaison with political sectors, organizations and the media.		and the state of the desired different differe		
		councils (public, private and social sectors)		
		Civil Defense Systems in all federal bodies.		
2.5 Work with other sectors to incorporate d	isaster reduction	The National Civil Defense Prog. establishes mechanisms of		
activities into planning.		participation and the responsibilities of its members. Efforts		
		are being made to forge closer links with NGOs. There are		
	····	information and training activities with other sectors.		
2.6 Contributions made by international info	rmation provided to the	The number of activities derived from the IDNDR is		
execution of the objectives of the IDNDR in	your country.	relatively small. Its main effect has been to motivate actions		
		and provide information.		
		Mexico has participated in initiatives generated by IDNDR,		
		such as maps of natural hazards in North America, edited by		
		National Geographic.		
Item 3: Existing national o		organization and structure		
· · · · · · · · · · · · · · · · · · ·		or for Civil Protection is the body in charge of coordinating the		
for disaster reduction activities.		of actions carried out by the National Civil Protection System.		
3.2 Governmental budget assigned				
•		ke up the System have their own resources for implementing		
prevention measures,		T. P		
existing 32 Federal Instit are legal dispositions per		il Protection Law as yet (currently under review), but 24 of the		
		tutions have state legislation on Civil Protection. In addition, there		
		rtaining to some institutions that form part of the System (e.g. the		
		ger municipalities also have local regulations.		
3.4 Incorporation of applicable concepts	 Diploma courses a 	and training in specific aspects of disaster prevention and civil		

and measures in education curricula.	 defense are offered Higher and intermediate education institutions offer training and information programmes.
3.5 Sectors and institutions to strengthen the transfer and application of knowledge and technology to disaster reduction.3.6 Main partners and interdisciplinary approach	The subject of disaster prevention is comprehensively addressed in national institutions and government bodies. CENAPRED maintains different modalities of cooperation with similar organizations. There are cooperation agreements with several countries.
	Item 4 : Future requirements
4.1 Requirements for future success in the execution of disaster reduction activities.	n/r
4.2 Desirable measures for the 21 st century.	

ANAMA Report by: Rafael Bonilla Head of Project Planning		Bonilla		
r AlvaviA	Head of Project Planning			
	National Civil Defense System			
	Item 1: Experience and re	ecent disasters		
Items		Information	n supplied	
1.1 Major disasters occurred in the country	Trigger event	Victims	Losses reported	
during the past 5 years.				
	Earthquake and tsunami	ní.		
Total mentioned: 5	in Bocas del Toro, 1991			
,	Recurring floods	ni.		
Trigger events				
	Frequent forest fires	ni.		
Earthquakes: 1	during the dry season			
Floods: 5 (annual)	Frequent tornadoes	ni.		
Tsunamis: 1	Urban fires	ni.		
Tornadoes: Frequent				
Landslides: Frequent				
Forest fires: Frequent				
Urban fires: Frequent				
1.2 Impact of disasters reported	Heavy material losses, da	mage to homes and	agricultural and productive	
	infrastructure, damage to		C	
1.3 Mitigation measures adopted.	Continuous operation		pping of System	
	Training of more th			
	 Local Organization 		,	
			System in disaster management system.	
	Emergency Respon	se Plan implemente	ed.	
			1A systems. Implementation of an	
	Electronic Hydro-meteorological Stations.		ons	
	Strengthening of joint search and rescue operations.			
1.4 Preparedness and prevention activities tha	Community training			
the country needs to reinforce.	Institutional development			
	Scientific research			
	Strategic planning			

	Civil Defense I	Education	
		f technical cooperation projects.	
1.5 Did the proclamation of the IDNDR		magazini, a	
improve disaster reduction in your country? YE	S (no explanation	n given)	
1.6 Successful measures or projects that •			
incorporate preventive actions.		ngthen Local Structures for Disaster Mitigation (1997-99)	
•		ngthen Disabled People's Centers, 1998.	
•	Project "Vulne	rability Reduction in Floods and Local Warning Systems", 1998	
Item 2: P		nce the start of IDNDR	
2.1 National achievements		a) Risk Assessment;	
	ļ	Publication of the study "Natural Disasters and Risk Zones	
	:	in Panama: Conditions and prevention and mitigation	
	1	options ⁻¹¹ ,	
	!	Publication of book "Civil Protection: A Manual for	
		Disasters".	
	ļ	Progress in the identification of areas at risk from	
	!	earthquakes, mapping of flood risk areas and studies on	
	1	land use.	
	ļ	Numerous planning activities.	
		b) Structured mitigation plans:	
		Emergency Operations Plans with logistical annex.	
		c) Access to Early Warning Systems:	
		SATs have been established in accordance with the magnitude	
0.001		and development of the disasters.	
2.2 Obstacles encountered by the country in fulfilling the objectives		 Many national authorities, organizations and communities 	
of IDNDR and recommendations to overcome these	•	do not assume their responsibilities in relation to this	
	ĺ	problem,	
	İ	No budget lines for disaster prevention, preparedness,	
	ĺ	mitigation and emergency relief in institutions concerned	
		with disasters.	
	J	Recommend: Strengthen planning, research and training in	
2.2 Information and all add		these institutions.	
2.3 Information and education campaigns (ways and means)		Public information campaigns through pamphlets, posters	
	ĺ	and fliers.	
		Extensive training programme in public and private sector	
		institutions.	
2.4 Linigan with political	41 42	Civil Protection Project for Schools	
2.4 Liaison with political sectors, organizations and	me media.	A Consultative Council was established with broad	
en e		participation within the National Commission for the	
•		Decade,	
	ļ	The National Committee for Civil Protection in Schools	
	ł	has been strengthened.	
		• Inter-institutional liaison committees have been established	
2.5 Work with other sectors to incompant.		in different areas.	
2.5 Work with other sectors to incorporate disaster pactivities into the planning process.	nevention	• Three areas have been established within the System:	
activities into the planting process.	ļ	Prevention and Mitigation, Operations and Assistance,	
		Reconstruction and Development. Each one works in a	
2.6 Contributions and builder in the		multisectoral manner.	
2.6 Contributions made by international information		Awareness of IDNDR activities at regional level and in each of	
the execution of the objectives of the IDNDR in you	ir country.	the Latin American countries.	
		ganization and structure	

3. 1 Governmental authority designated	The National Civil Protection System, created by Law 22 of 1982. It consists of a General			
for disaster reduction activities.	Directorate, four National Divisions and a Regional Office in each province.			
3.2 Governmental budget assigned	Special funds are assigned from the Office of the Presidency for disaster prevention and reduction activities. The System's budget assigns special funds for Emergencies.			
3.3 Legal framework	The above mentioned Law 22.			
3.4 Incorporation of applicable concepts and measures into education curricula.	The Civil Protection Programme for Schools incorporates the theme of disasters in the curriculum, focusing on central issues.			
3.5 Sectors and institutions to strengthen the transfer and application of knowledge and technology to disaster	There is an Inter-institutional Coordination that has set up several working groups.			
3.6 Main partners and interdisciplinary approach.	The Consultative Council is made up of 42 state and private sector institutions. NGOs have made a significant contribution to civil protection. The System has agreements with scientific and teaching institutions and coordinated with numerous international and technical cooperation agencies.			
	Item 4: Future requirements			
4.1 Requirements for future success in	International coordination mechanisms: these are necessary to continue promoting			
the execution of disaster reduction	the objectives of IDNDR during the next century.			
activities.	Budget commitments: it is essential that technical cooperation agencies include in their annual plan guidelines for financial cooperation with civil defense institutions in the region. Political commitments			
	Creation of action networks: we need to form national information networks and consolidate our participation on the Internet.			
	Improve our technical resources in communications.			
	 Strengthen the role of local authorities within organizations and communities. Full participation in the achievement of the objectives and goals of the National Environmental Authority. 			
4.2 Desirable measures for the 21st	Strengthen existing prevention and mitigation measures.			
century.	Promote policies to reduce the effects of manmade and technological disasters.			
-	Promote exchanges among researchers.			
	Promote policies for the protection of the ozone layer and to lessen the greenhouse effect.			
	Treat problems such as crime, abuse against women and children, drug-addiction and alcoholism as "social disasters".			
	Study the possibility of characterizing motor accidents as manmade disasters.			
	Redouble efforts to deal with adverse events.			

Country: PARAGUAY	Report by: N	ational Emergency Committe	e, Interior Ministry
)	tem: 1. Experience	and recent disasters	
Items		Information sup	plied
1. Major disasters occurred in the country in the past 5 years.	Trigger event	Victims	Losses reported
The report receive constitutes a detailed analysis of the impact caused by the recurring phenomenon of El Niño in the country.	El Niño	49 dead 600,000 - 800,000 families directly or indirectly affected. 100,000 displaced.	7,670 homes damaged or destroyed. Destruction of 172 schools, 87 health centers, 1,790 meters of bridges and 584 kms. Of roads.
1.2 Impact of disasters reported	The impact of El Niño has accumulated over a long period. The floods caused by the phenomenon have affected a huge area, with major losses to agriculture, cattle, mill		

	production and road and -3% in 1983.	infrastructure. GDP dropped from 8.7% in 1981, to between - 1	
1.3 Mitigation measures adopted.	With support from UNDAC, a National Contingency plan was prepared and efforts were made to train authorities and operations officials. A package of mitigation project is being negotiated. Various countries and international organizations have provided resources for repairs and reconstruction.		
1.4 Preparedness and prevention activities that	ıt		
the country needs to reinforce.		And the second s	
1.5 Did the proclamation of the IDNDR			
improve disaster reduction in your country?			
1.6 Successful measures or projects that			
include preventive actions.			
	m 2: Progress made s	ince the start of IDNDR	
2.1 National achievements		a) Risk Assessment	
		Compilation of hydrographic data and assessment of hazards and vulnerability zones. In 1998 an assessment was made of the hydro-meteorological situation, public health and human settlements in affected areas.	
		b) Structured mitigation plans:	
		National Contingency Plan	
		c) Access to Early Warning Systems:	
		Only projects are mentioned	
2.2 Obstacles encountered by the country in t IDNDR objectives and recommendations to c		Budget constraints	
2.3 Information and education campaigns (wa		The report mentions efforts to increase awareness among citizens, training for authorities, officials involved in operations and communities.	
2.4 Liaison with political sectors organizations and the media.		These result from the composition of the CEN itself.	
2.5 Work with other sectors to incorporate disactivities in planning.	saster reduction		
2.6 Contributions made by international infor	mation provided to	Not mentioned	
the execution of the objectives of the IDNDR	•		
Item	3: Existing national	organization and structure	
3. 1 Governmental authority designated for disaster reduction activities The National Emergence by a Council led by the and Social Welfare, Fin		y Committee (CNE) attached to the Interior Ministry. It is headed Interior Minister and consisting of the Ministers of Public Health ance, Public Works and Communications, Education, and heads of	
	he Armed Forces and t	ne National Police.	
3.2 Governmental budget assigned	162 01002		
	Law 153 of 1993		
		been made to train authorities and officials of public institutions,	
curricula.	nunicipalities and NGC	<i>J</i> S.	
3.5 Sectors and institutions			
to strengthen the transfer and application			
of knowledge and technology to disaster			
or knowledge and technology to disaster			

reduction.		
3.6 Main partners and interdisciplinary		
approach		
	Item 4: Future requirements	
4.1 Requirements for future success in		
the execution of disaster reduction		
activities.		
4.2 Desirable measures for the 21st		
century.	. Walland	

Note: A document entitled "Impact of El Niño Phenomenon in Paraguay", sent by the National Emergency Committee, was used as a source to compile the above tables. For this reason, some details are still pending.

TTTSTTATES A T		-	Report by: Ignacio M. Bonifacio Director of the Technical and Operational Directorate of the National Emergency System		
I	tem 1: Experien	ce and r	ecent disasters		
Items			Information supp	lied	
Major disasters occurred in the country during the past 5 years.	Trigger event		Victims	Losses reported	
Trigger events:	Various forest fires, 1997			1.100 hectares of forest and plantations	
	Oil spill caused tanker collision,	-		•	
Forest fires: several Oil spills: 1	Floods, 1997 and		8,000 people evacuated		
Floods: 2 Water shortages: 1	Water shortages affecting half of northern zone.				
1.2 Impact of reported disasters	Loss of forest resources, marine fauna and beaches affected. Damage to agriculture and livestock production. Problems with water supply and electrici services.				
1.3 Mitigation measures adopted.	 Control of Construction beneficiari Distribution Credit faci Campaign Publication 	water-bon of hones. It of food titles to a to prevent of long		d provision of free services to essential household items.	
1.4 Preparedness and prevention activities that the country needs to reinforce.	It is necessary to the hazards of to		-	ions and create general awareness of	
1.5 Did the proclamation of the IDNDR improve disaster reduction in your country?	1	f inform	ntion. As part of the Decad	luction, especially through the e, an Awareness Session on Natural	
1.6 Successful measures or projects that incorporated preventive actions.					
2.1 National achievements	n 2: Progress ma		the start of IDNDR Risk assessment;		
2.1 Pational admovements			sk studies conducted at nat	ional and local level.	

		b) Structured mitigation plans;		
		Since its creation, the SNE has had structured emergency		
		plans.		
		The banks have credit policies to help the agricultural sector		
		cope with damaged caused by climatic upheavals. The		
		possibility of establishing agricultural insurance is being		
		considered.		
		c) Access to early Warning Systems:		
		Because of its composition, the SNE has an efficient		
		communications system. Since it is based in the Presidential		
		Building, its members have access to the top decision-		
		makers.		
		Departmental emergency committees facilitate early		
		warning and rapid decisions.		
2.2 Obstacles encountered by the country i	n the fulfillment of the	Only financial constraints.		
IDNDR objectives and recommendations t	o overcome these.			
2.3 Information and education campaigns ((ways and means)	The legally competent authorities organize their own campaigns		
		on different themes: fire prevention, prevention of epidemics and		
		traffic accidents, environmental pollution, etc. There are good		
		relations with the media.		
2.4 Liaison with political sectors, organiza	tions and the media.	The SNE is an inter-institutional body.		
2.5 Work with other sectors to incorporate	disaster reduction	The private sectors, through various donations, and the general		
activities into planning.		public have collaborated in emergency situations.		
2.6 Contributions made by the international information provided		The activities implemented within the context of IDNDR have		
to the execution of the IDNDR objectives in your country.		effectively contributed to the achievement of our objectives,		
		particularly the sharing of information and experiences of other		
		countries.		
Ite	em 3: Existing national	organization and structure		
3. 1 Governmental authority designated	The National Emergenc	y System (SNE), which forms part of the government structure.		
for disaster reduction activities.				
3.2 Governmental budget assigned	The SNE does not have	its own budget, but can request special funds. Its member		
		mit resources in the event of a crisis situation.		
3.3 Legal framework		d organization are regulated by Executive Decree. In addition, there		
	are "legal frameworks for	or the prevention of disasters and the reduction of their		
	consequences."			
3.4 Incorporation of applicable concepts		to disaster reduction have been incorporated into academic courses		
and measures into education curricula.	and professional training, for example, architecture and engineering.			
3.5 Sectors and institutions to strengthen	The SNE's own structur	re forms part of an international information and collaboration		
the transfer and application of knowledge	network.			
and technology				
to disaster reduction.				
3.6 Main partners and interdisciplinary		p the SNE. An interdisciplinary approach is facilitated by their		
focus.	collaboration.			
		e requirements		
4.1 Requirements for future success in	Mainly the dissem	nination of information and implementation of sustainable		
the execution of disaster reduction	•	environmental protection programmes.		
activities.		necessary meetings to consolidate links and enhance coordination		
4.2 Desirable measures for the 21st	between countries	to promote prevention and make disaster prevention more effective.		
century.				

Country: VENEZUELA	Report by: Ange	el Ramón Freytez Director	of National Civil Defense
	Item: 1. Experience and	recent disasters	
Items		Information sup	plied
1. 1 Major disasters occurred in the country	Trigger event	Victims	Losses reported
during the past 5 years. Total mentioned: 5	Floods in 16 States, 1994	18.265 affected. 8.015 homeless	
Trigger events	Floods in 18 States, 1995	39.340 affected. 10.107 homeless	
Earthquakes: 1 Floods: 4	Floods in 22 States, 1996	5 dead 149.709 affected 14.753 homeless 20 dead or missing.	
	Earthquake in Cariaco. Sucre, 1997 (5.7°) Floods in 15 States, 1998	28 homeless 37 dead 65 injured 50.864 affected 6.651 homeless	
1.2 Impact of disasters reported			idemics, damage to homes.
1.4 Preparedness and prevention activities that the country needs to reinforce.	been encouraged of Organization of at Creation of state at Updating of resource Citizen participation and more Consolidation of organization of organization of the Evaluation of local within System Civil Defense Edulation	to join the System. In integrated information are und municipal information are inventories of organization plans. Initigation programmes, mational emergency network formation campaigns al response capacities. Coll	rk and support to regional
1.5 Did the proclamation of the IDNDR	VEG 1		
improve disaster reduction in your country? 1.6 Successful measures or projects that incorporate preventive actions.	 Drafting and pres Approval of Secu Puerto Rico-Vene Consolidation of UNDP. Establishment of to unify informati Strengthen Municipal Control 	National Emergency Netwion systems. Cipal Civil Defense	il Defense Plan. n
	m 2: Progress made sinc		
2.1 National achievements	Go co M	nducted by the Venezuelar	(carthquakes, landslides) are n Foundation for Earthquake and national and local level. Some are ified.

		b) Structured mitigation plans: National Civil Defense Plan Permanent National Prevention Plan Earthquake Prevention Plan Plan or the Prevention and Mitigation of Floods. C) Access to Early Warning Systems: Venezuela subscribes to the Satellite Information System. A Natural Disasters Warning and Prevention System is being established through seven specific projects. The Environment Ministry is in charge of monitoring the country's main river basins.
2.2 Obstacles encountered by the country i	n the fulfillment of the	n/r
IDNDR objectives and recommendations t		
2.3 Information and education campaigns ((ways and means)	Public information and education programmes on prevention have been implemented. (The report includes a detailed list of materials and events organized).
2.4 Liaison with political sectors, organiza	tions and the media.	Various means of coordination have been established (Detailed list is added)
2.5 Work with other sectors to incorporate disaster reduction activities in planning.		Mainly participation in meetings, conferences and seminars organized by different professional associations and specialist institutions.
2.6 Contributions made by international information to the execution of the IDNDR objectives in your country.		We have obtained information from many countries of the world on emergency management, which has had a very positive effect on preventive actions and other measures.
It	em 3: Existing national	organization and structure
3. 1 Governmental authority designated for disaster reduction activities.	the Interior Minis Defense Commiss	1 Defense System. Its authorities are: the President of the Republic, ter, the National Director of Civil Defense, the National Civil sion, the State Governors, Mayors or top civilians authorities. In Directorate for the Coordination of Civil Defense, attached to the
	Interior Ministry,	and a National Commission composed of 15 Government Ministers, relevant bodies and the private sector.
3.2 Government budget assigned	The budget assigned to	the National Directorate is 1.174.899.620 bolívars.
3.3 Legal framework	Constitutional Lassame law, as it rel There are other sp	he National Directorate are regulated by Section 5 of the w on Security and Defense (1997) and Partial Regulations N° 3 of the ates to Civil Defense. Recific legal instruments, such as the Constitutional Law on Land Use, I Law and the Forest Law on Soils and Water.
3.4 Incorporation of applicable concepts	Programmes applicable	to disaster reduction have been incorporated into the curricula of
and measures in education curricula.		rofessional training, particularly in the field of Medicine.
3.5 Sectors and institutions to strengthen the transfer and application of knowledge and technology in disaster reduction.	Internet.	mation is based on the National Commission and the use of the nutual support agreements exist with various countries.
3.6 Main partners and interdisciplinary approach	1	tributions and responsibilities of each one are listed), international ed Cross. There is an interdisciplinary approach.

Experience and Recent Disasters
1.1 Please provide a list of major disasters your country has experienced during the past five (5) years.
1.2. What was the impact of the above listed disasters?
1.3. Which measures were taken to reduce the impact of the disaster?
1.3. Which measures were taken to reduce the impact of the disaster?
1.4. Do you believe there can be improvements in preparing for natural hazards in your country and in preventing negative impacts of such
hazards? What sort of improvements?
you believe the IDNDR helped your country to give greater attention to disaster reduction?
YesNo Explain
1.6. Please provide an example(s) an achievement (s) incorporating successful preventive approaches
which you consider a "success story"

Progress made, since the inception of IDNDR, in the field of disaster reduction as a component of development planning and risk management
2.1. Please provide a brief statement of national accomplishment and/or describe current activities related to the achievement of the IDNDR Programme Targets:
(a) Comprehensive national assessment of risks. If an assessment exists, is it published or
codified?
(b) Structured mitigation plans. Do documented comprehensive national disaster management plans
exist?
(c) Ready access to global, regional, national and local early warning systems. Can you provide examples of early warning practices and demonstrated successes?
2.2. What obstacles do you face which prevent the accomplishment of the Decade targets? What are your recommendations to best overcome these
obstacles?
2.3. To what extent have you established and implemented educational and information programmes aimed at generating public awareness? What methods of information dissemination have been utilized?
2.4. Have you liaised with policy makers and major groups, such as local authorities, NGOs, and the media, in order to ensure support for and effectiveness of disaster reduction programmes? Please describe your
activities
2.5. To what extent have you worked with other sectors in incorporating disaster reduction activities into their planning (i.e. insurance, banking, private sector and development agencies)?
2.6. The Decade provides an international arena for information exchange as well as an extensive
international network of partners, how have these inputs contributed to achieving the goals of the

IDNDR HEMISPHERIC MEETING

Decade?
Structures in Place
3.1. Is there a designated government authority for disaster reduction activities? If yes, is this authority's commitment to prevention embodied in the government structure, priorities, budget and legislation?
3.2. Have budget lines for disaster reduction and preventive activities been made available in your government's budget?
3.3. Have legislative authorities (national, state or local level) established legal frameworks for the implementation of disaster mitigation measures (ie. land-
use planning, water and forest management, building codes)?
3.4. Have academic institutions and professional schools in disciplines such as engineering, agriculture, architecture, urban planning, business or public
administration incorporated in their curricula applicable disaster-reduction concepts and measures? Please provide examples.
3.5. Have networks been build in order to aid in the transfer and application of existing knowledge and technology, information dissemination and
international collaboration? Please briefly describe,
3.6. Who are your principal working partners? Do they represent an interdisciplinary approach to disaster
reduction?

Future Requirements
4.1. Given your experience since the inception of the Decade and the new challenges of disasters in the 21st century, please provide comments as to what you believe are the necessary future requirements needed to successfully carry disaster reduction activities into the 21st century. Listed below are some criteria for your consideration: -international mechanism for coordination -budgetary commitments -policy commitment -network building -information dissemination -communication tools -local authorities -links to economic and social development programmes, environmental protection and sustainable development

4.2. What sort of national or international measures would you like to be put in place in the 21st
century?