

Chapter 7

International co-operation to strengthen civil protection

International co-operation plays an important role in comprehensive civil protection as risks do not stop at borders. This chapter examines the foundations for international co-operation in the Mexican National Civil Protection System. It identifies good practices in cross border co-operation between Mexico and its neighbouring countries in areas such as risk prevention, data sharing for the operation of early warning systems and preparation with joint training and exercises. It also considers co-operation in the broader international context of the provision, receipt and distribution of humanitarian assistance to and from other countries in the immediate aftermath of a disaster and the emerging role of Mexico as a donor of humanitarian assistance.

Man-made territorial boundaries do not protect a country from disruptive events that originate beyond those boundaries. Extreme natural hazards, and climate-related hazards in particular, may require some OECD countries to scale-up preparedness, response and recovery capacities with the aid of foreign partners, intergovernmental institutions and relief organisations. Recent events such as the Great East Japan earthquake and tsunami have shown that the magnitude of natural hazards, in conjunction with knock-on effects, may exceed even the highest levels of preparedness and response capabilities. Such events illustrate the importance of multilateral and bilateral co-operation in civil protection both before and during the immediate aftermath of a disaster. Once immediate relief actions have been performed, the role of international co-operation may focus on helping to finance the reconstruction of damaged or destroyed infrastructure, as well examining lessons learnt and sharing them with neighbouring countries, regional partners and even distant countries.

Good practices in disaster risk management have emerged at the international level in recent years, thanks in part to the willingness of countries to take a critical look at their own performance after a disaster and reflect upon what could be done differently in the future. Even the most advanced countries continue to struggle, however, to implement many of these recommendations on such cutting-edge questions as risk assessment in complex systems, calculating the cost-benefit ratios of long-term investments in disaster risk prevention and mitigation, the development of human and technological capacities for hazard monitoring and mapping, early warning systems and rapid response, and the imperative need to build community resilience. For these reasons, international co-operation plays a key role in the civil protection strategies of countries to ensure that they learn from partners and explore cost-effective approaches to guarantee the rapid scaling-up of capacities that are proportionate to their needs.

This chapter discusses the policies and programmes that are in place in the National Civil Protection System (*Sistema Nacional de Protección Civil*, SINAPROC) to promote the effective and efficient co-ordination of disaster preparedness and response at the international level. In particular, it examines institutional arrangements and practices to share technical expertise, regular conduct of joint exercises, cross-country training and collaborative scientific research, and data and information sharing between hazard monitoring services. Bilateral and multilateral agreements in the field of civil protection that serve these purposes have proven to help mutualise common risks and address capacity gaps such as weak informational infrastructure or notification, tardy co-ordination of relief operations leading to under-response, uncoordinated relief measures resulting in over-response, or the incapacity to contain or minimise disaster spillover effects that could affect populations across borders.

Mexico began developing its civil protection policies in 1985 to become practically self-sufficient in terms of managing its own emergencies. In the past, Mexico was primarily a recipient of international civil protection assistance, but it is now an important regional partner in its own right. This chapter examines how Mexico has leveraged SINAPROC to engage in international co-operation both as a donor and recipient of civil protection assistance. Political support at the federal level for many of these activities is apparent, but some of the state governments that are the most well placed to manage co-operation directly with neighbouring states do not have the resources to properly develop concrete actions on a formal and consistent basis. Mexico makes full use of several international organisations with activities related to disaster risk management, leveraging their convening power and expertise to access risk management tools and

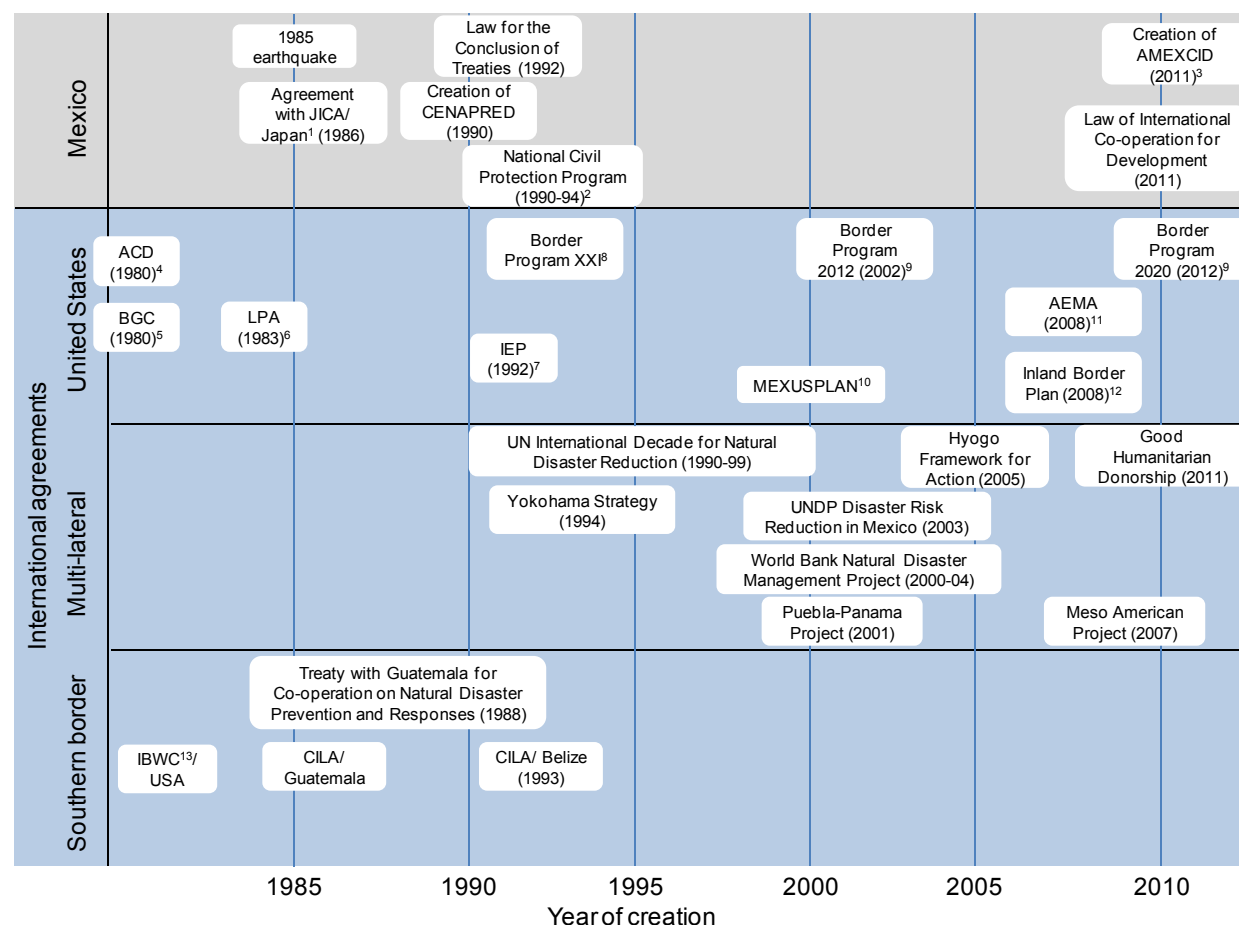
programmes, as well as spread its own innovations that merit the attention of other countries.

Foundations of international co-operation in civil protection

International co-operation played an important role in the aftermath of the 1985 Michoacán earthquake, when over 250 entities provided humanitarian assistance, including national governments, non-governmental organisations (NGOs), international humanitarian agencies, etc. (Pan-American Health Organization, 2006). The delivery of international assistance in this instance was concentrated heavily on the emergency response and early recovery phase. In subsequent years, international technical co-operation has played an instrumental role in strengthening Mexico's own civil protection capacities. Likewise, SINAPROC's vision to achieve integrated risk management is a testament to its openness to doctrines of disaster risk management promoted by such international fora as the United Nations International Strategy for Disaster Reduction (UNISDR), the United Nations Development Programme (UNDP) and the World Bank's Global Facility for Disaster Reduction and Recovery.

The Ministry of Foreign Affairs (*Secretaría de Relaciones Exteriores*, SRE) centralises and guides the federal government's international co-operation in the arena of civil protection, managing the conditions for providing and receiving official international assistance before and during emergencies. In particular this covers: *i*) the negotiation and implementation of agreements and programmes related to civil protection with neighbouring countries; *ii*) the development of technical co-operation both as a recipient of aid and as a donor itself through the newly created Mexican Agency for International Development Co-operation (*Agencia Mexicana de Cooperación Internacional para el Desarrollo*, AMEXCID); and *iii*) co-operation with international organisations and agencies in the field of risk management. At the same time, several federal entities with responsibilities related to civil protection functions are involved in the management of international co-operation, in particular the Ministry of the Interior (*Secretaría de Gobernación*, SEGOB) and its General Co-ordination of Civil Protection (*Coordinación General de Protección Civil*, CGPC). State and local entities are involved in decentralised international co-operation efforts, as acknowledged by the Law for the Conclusion of Treaties (*Ley sobre la Celebración de Tratados*, LCT) in 1992. This law grants local governments and agencies the standing to enter into inter-institutional agreements (although not treaties) with foreign governmental agencies and international organisations¹ within the boundaries of their area of competence and/or territorial jurisdiction. This law has given impetus to develop international co-operation activities in a decentralised manner. Figure 7.1 and Table 7.1 summarise Mexico's main international partners and areas of international technical co-operation with significance for civil protection (see Annex K for more information on these subjects).

Figure 7.1. Timeline: International co-operation in civil protection



Notes: 1. This agreement led to the Japanese International Co-operation Agency (JICA) providing financial resources for the construction of CENAPRED. 2. The National Civil Protection Program 1990-94 included the principles of the UN International Decade for Natural Disaster Reduction 1990-99. 3. Mexican Agency for International Co-operation in Development. 4. Agreement of Co-operation for Disasters (ACD) for emergency management in bordering areas. 5. Border Governor Conference (BGC). 6. La Paz Agreement (LPA) on Co-operation for the Protection and Improvement of the Environment in the Border Area (LPA), signed in 1983. 7. Integrated Environmental Plan (IEP) for the Mexican-US Border Area. 8. The La Paz Agreement led to the establishment of joint working groups in charge of environmental concerns and the Border XXI Program (1996-2000). 9. The Border Program 2012 (BP2012) was created by the US Environmental Protection Agency (EPA) and the Federal Attorney for Environmental Protection (PROFEPA) – an internal body within SEMARNAT – in partnership with other federal agencies from both countries, the ten border state governments and US tribal government. In 2012, the BP2012 evolved to the Border Program 2020. 10. MEXUS joint contingency plan signed between SEMAR and the US Coast Guard (USCG) in 2000. 11. The Agreement on Emergency Management Co-operation in Cases of Natural Disasters and Accidents (AEMC) superseded the ACD. 12. Mexico-US Joint Contingencies and Emergencies Plan for Preparedness and Response to Events Associated with Chemical Hazardous Substances in the Inland Border Area (Inland Border Plan) (2008). 13. In 1944, the International Boundary and Water Commission (IBWC, CILA in Spanish – *Comisión Internacional de Límites y Aguas*) was created with the Treaty for the Utilization of Waters of the Colorado and Tijuana Rivers and of the Río Grande though an International Boundary Commission that was established in 1889. 14. From 1965 to 2010, international technical and scientific agreements were signed with France (1965); Israel (1966); the United States (1972); Venezuela (1973); Brazil (1974); Finland, Iran and the United Kingdom (1975); Spain (1977); Colombia (1979); Switzerland (1980); Australia and Italy (1981); Denmark (1982); Egypt (1984); China and Korea (1989); Bolivia, Chile and Uruguay (1990); Ecuador and Paraguay (1992); Bulgaria and Romania (1994); Belize, Costa Rica, the Czech Republic, El Salvador, Honduras and Nicaragua (1995); Argentina, Indonesia, Panama, Peru, the Russian Federation (1996); Germany (1997); Lebanon (2000); Guatemala (2001); Algeria (2010).

Sources: Figure created with information from diverse national institutions and international organisations.

Table 7.1. **International co-operation**

	Agreements					Risk management cycle		
	Political	Technical	Scientific	Financial	Prevention	Monitoring systems	Emergency response	Recovery
United States	Treaties	•	•	•		•	•	
	IBWC/CILA			•		•		
	EPA	•				•	•	
	NOAA ¹			•		•		
	FEMA	•	•			•		•
	United States Coast Guards		•					•
	United States Geological Survey		•					
	Incorporated Research Institutions for Seismology		•			•		
	Border Governor Conference	•						•
Central America	Belize	•	•	•		•		
	Guatemala	•	•	•		•	•	
	Meso-America project	•		•	•	•		•
Rest of the world ²	•	• ³	•		•		• ³	
International organisations and agencies	UNDP		•			•		
	World Bank		•		•	•		
	UNISDR	•				•		
	WMO		•	•		•		
	ECLAC		•			•		
	USAID		•			•	•	
	UNESCO		•	•		•		
	UN-SPIDER		•	•		•	•	
JICA		•	•		•		•	

Notes: 1. It notably includes the Pacific Tsunami Warning Center (PCTW). 2. Agreements for scientific and technical co-operation with several Latin American countries. 3. Good Humanitarian Donorship Programme.

Source: Based on information from diverse national institutions and international organisations.

Cross-border co-operation in civil protection matters

When natural hazards repeatedly cross territorial boundaries, neighbouring countries have an interest to face the common threats together. This may take the form of sharing hazard monitoring data and real-time updates, as well as defining common protocols for communication and early warning, and conducting joint emergency operations. Mexico shares borders with Belize, Guatemala and the United States. Many zones along these borders are exposed to natural hazards, including hurricanes, earthquakes and floods. Mexico has developed extensive international co-operation with these countries, as well as with other countries in Central America (i.e. Costa Rica, El Salvador, Honduras, Nicaragua and Panama).

Cross-border co-operation with the United States

Mexico has concluded numerous co-operation agreements with the United States related to civil protection and disaster risk management, both at the national and local levels. The management of water resources along the border was first formalised with the International Boundary and Water Commission (IBWC) in 1889² to manage jointly the Río Bravo, and the water resources of the Colorado and Tijuana rivers (Box 7.1). The IBWC currently monitors the implementation of international agreements signed between Mexico and the United States, including compliance with responsibilities and rights related to these common water resources. The Mexican branch, known as the *Comisión Internacional de Límites y Aguas* (CILA), monitors water levels of the Río Bravo and notifies the General Directorate of Civil Protection (*Dirección General de Protección Civil*, DGPC) if flood thresholds are expected to be exceeded. It also co-ordinates with the United States' branch in the implementation of joint programmes. This cross-border co-operation mechanism is well established and has demonstrated its efficiency in regulating water issues. While floods are not very frequent in these river basins, the IBWC mechanism provides a good example of cross-border data exchange and standard operating procedures (SOPs), and is considered by Mexican authorities to be a model of cross-border governance for different areas of international co-operation and border areas.

Box 7.1. The IBWC with Belize, Guatemala and the United States

Transnational risks require bi-national or multinational co-ordination and co-operation amongst the potentially affected countries. The historic and geographic importance of the Río Bravo led to the establishment of an International Boundary and Water Commission (IBWC, established in 1889), which is divided in two co-ordinated branches – one in each country, CILA in Mexico and IBWC in the United States. The IBWC was created with the United States to manage the Río Bravo, and the Colorado and Tijuana rivers' water resources, which spread across the two countries. In 1944, the Treaty for the Utilization of Waters of the Colorado and Tijuana Rivers and of the Río Grande expanded the commission's responsibilities and formally enacted the functioning of the Mexico-US IBWC.

The IBWC manages water demand for irrigation purposes through the operation of dams. It has also developed a flood protection programme and a civil contingency programme in case its infrastructures are affected. Joint activities include the regulation and conservation of the Río Bravo's water resources; construction, operation and maintenance of bi-national dams; and the protection of lands along the river from floods by levee and floodway projects. The IBWC also includes a mutual information-sharing process. The National Water Commission (Comisión Nacional del Agua, CONAGUA) and CILA are in charge of managing two bi-national dams located on the Mexico-United States border (the Amistad Dam – located between the states of Coahuila and Texas – and the Falcon Dam – located in Tamaulipas and Texas).

The high-profile issues associated with the northern border tend to overshadow the fact that Mexico's territory shares six river basins with Belize and Guatemala. Mexico created an IBWC with Guatemala in 1961 in order to manage water resources from the Suchiate, Usumacinta and Chixoy rivers, and in 1990, a treaty was signed to strengthen this co-operation. An IBWC with Belize was created in 1993 to monitor the Río Hondo and Arroyo Azul water levels and water quality. It also provides for the management of three bi-national hydro-climate stations that function to measure the water quantity flowing every day to monitor climate data. These commissions are intended to provide bi-national solutions and joint management for issues related to boundary demarcation, use and treatment of water, floods and hazard controls in the border areas and risk management. The Mexican sections of each IBWC are decentralised entities dependent on the Ministry of Foreign Affairs.

Sources: International Boundary and Water Commission (IBWC), www.ibwc.state.gov; Ministry of Foreign Affairs, www.sre.gob.mx/cilasur/index.php/consulado.

In addition to water use, a series of bilateral agreements addressing cross-border disaster risk management has been in place between Mexico and the United States for many years (Box 7.2). While the first agreements were meant to address all types of natural hazards, more recently co-operation has focused on environmental risks, and especially those associated with chemical pollutants. Concrete steps have been taken in this domain, such as the elaboration of joint contingency plans developed in the Border Program 2020, and both countries are committed to joint efforts to safeguard against risks due to the cross-border transport of hazardous waste. The heads of state civil protection services are actively involved in the Border Program 2020, together with the DGPC, and have so far focused on co-operation to deal with chemical spills and accidents in the border area.³

Box 7.2. Bilateral co-operation with the United States

The 1980 Agreement of Co-operation for Disasters (ACD)¹ between Mexico and the United States was intended to create co-operation mechanisms along the border area to manage jointly natural hazards such as hurricanes, floods, earthquakes, freezes, landslides, etc. A multi-department Advisory Committee for Natural Disasters was established in both countries, including representation from the Ministry of the Interior, the Army, the Navy and the Ministry of Finance in Mexico, and the Federal Emergency Management Agency (FEMA) and the External Aid Office for Disasters from the United States Department of State. In 2008, the Agreement on Emergency Management Co-operation in Cases of Natural Disasters and Accidents (AEMC) superseded the ACD.

In 1983, the La Paz Agreement² put in place plans for emergency preparedness and response to environmental disasters, and introduced the concept of the “border region”, defined as “the area situated 100 kilometres on either side of the inland and maritime boundaries between the parties” (Article 4). It remains a pillar of cross-border co-operation between the two countries.

The Border Program 2012 (BP2012) was launched in 2002 to promote protection of the environment and public health in the Mexico-United States border region. Initiated by the Environmental Protection Agency (EPA) in the United States and the Mexican Ministry of the Environment (SEMARNAT) in partnership with other federal agencies and the ten border state governments, its objectives relate to disaster risk prevention, the formulation of joint contingency plans for all 14 pairs of “sister cities”, and the development of a chemical emergency advisory/notification mechanism between Mexico and the United States.

The AEMC, signed in 2008, has expanded co-operation to the entire territory of both countries, increasing the range of possibilities for implementing joint emergency response programmes. It seeks to establish a Mexico-United States Working Group on Emergency Management, with representatives from SEMARNAT, the Ministry of Agriculture (Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación, SAGARPA), the Center for Investigation and National Security (Centro de Investigación y Seguridad Nacional, CISEN) and the National Institute of Immigration (Instituto Nacional de Migración, INM).

Notes: 1. All of this builds on previous efforts. For example, an Agreement for Aid in Case of Disasters was established in 1968 between Mexico and the United States through the exchange of diplomatic notes, and was replaced by the 1980 agreement. 2. According to La Paz Agreement, the objectives of the agreement are to establish the basis for co-operation between the Mexican and US governments “for the protection, improvement and conservation of the environment and the problems which affect it, as well as to agree on necessary measures to prevent and control pollution in border area, and to provide the framework for development of a system of notification for emergency situations” (Article 1).

Source: Treaty between the United States and Mexico on Co-operation in Case of Natural Disasters, signed 15 January 1980, *Diario Oficial de la Federación*, decree published 4 May 1981; Treaty between the United States of America and Mexico on Co-operation for the Management of Emergencies in Case of Natural Disasters and Accidents, signed 23 October 2008, *Diario Oficial de la Federación*, decree published 18 March 2011; Treaty between the United States of America and Mexico on Co-operation for the Protection and Improvement of the Environment in the Border Area, La Paz Agreement, signed 14 August 1983, entry into force 16 February 1984.

Two more international agreements distinguish between co-operation along the inland border areas and those that occur in coastal waters. The Mexico-United States Joint Contingencies and Emergencies Plan for Preparedness and Response to Events Associated with Chemical Hazardous Substances in the Inland Border Area (IBP), applies to significant incidents and emergencies involving chemical hazardous substances that affect or have the potential to affect the environment along the Inland Border Area of Mexico-United States. The MEXUS Joint Contingency Plan on Pollution Events in Coastal Waters formally establishes cross-border co-operation between the United States Coast Guard and the Mexican Navy in response to pollution incidents that could seriously affect the coastal waters and coastal regions of both countries, or in cases where the impact on the waters of one country would be of such a magnitude to request assistance from the other country, which would be co-ordinated under the concepts and operational provisions discussed in the plan.

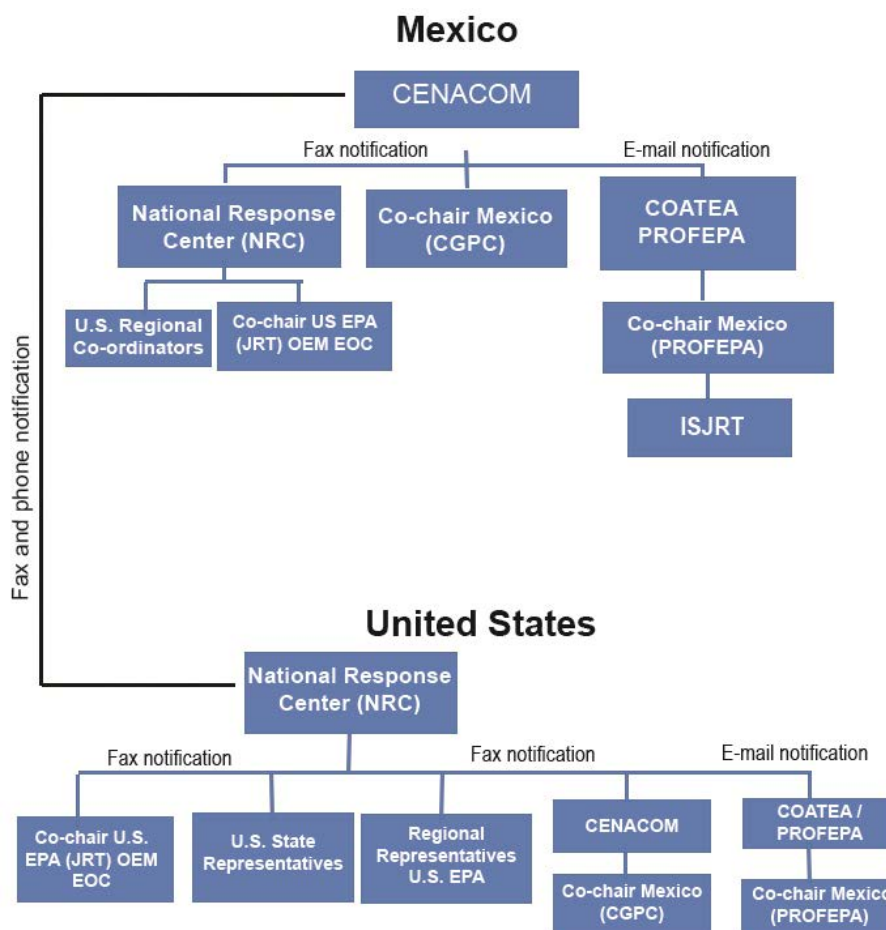
The IBP and the MEXUS plans clearly specify the procedures to follow for notification, activation, deactivation and response activities, as well as the governmental agencies or bodies to be involved. The IBP notification procedures set out an institutional co-ordination mechanism and communication protocols between the two countries, with the DGPC sharing the responsibility of co-chair with Mexico's federal Environmental Protection Agency (*Procuraduría Federal de Protección al Ambiente*, PROFEPA) (Figure 7.2). While the IBP and the MEXUS plans are focused on chemical risks and oil spills, their importance is based on the establishment of well-defined procedures and roles for official bodies on both sides, which could then potentially be expanded to other hazards.

The Border Governors Conference (BGC) creates a venue for governors of federal states in Mexico and the United States located along the shared border, to discuss transboundary issues such as migration and drug trafficking. In 2007, it created a specific work programme to plan for cross-border natural disasters, and proposed a five-year Joint Strategic Emergency Response Plan, with the possibility of establishing memoranda of understanding for mutual assistance in case of emergencies (Good Neighbor Environmental Board, 2008). The heads of civil protection authorities at state and municipal levels also liaise through the BP2020 meetings; 14 "sister cities"⁴ agreements have been established in this context (Figure 7.3). In addition, four regional working groups have been formed to address common environmental concerns. These groups were created during the development of the BP2012 and include representatives from bi-national organisations, NGOs and the academic and private sectors (US EPA, 2012). Such multi-level activities have facilitated the implementation of joint emergency response planning, training and cross-border drills, and have helped to strengthen co-operation between bordering local governments.

SINAPROC co-operates with two major United States federal agencies in the fields of emergency response and disaster prevention: the Federal Emergency Management Agency (FEMA) and the United States Agency for International Development (USAID). FEMA co-operation with Mexico is mainly focused on providing support and training to federal and local authorities. In Puerto Vallarta, guidelines and report templates from FEMA's Incident Command System management are used to set up a crisis communications centre. USAID supports disaster risk reduction programmes in Mexico and has developed a Latin America Disaster Risk Reduction Plan for 2012-14. This plan notably aims at strengthening early warning systems, increasing the capacities for disaster risk reduction in urban settings, developing technical assistance and conducting trainings. Workshops such as the Seismology Workshop (2011) are organised with experts from

Central America, Mexico and the United States to foster the dissemination of research. The Regional Disaster Assistance Program provides technical assistance and trainings in Latin America. Mexico receives USAID funding for disaster preparedness, emergency response and management programmes, as well as USAID emergency response support. In 2007 and 2010, USAID provided Mexico relief funds and emergency supplies in the wake of hurricanes and floods. The Mexican federal government plays an important co-ordination and communication role in the emergency response for important cross-border natural events, such as hurricanes.

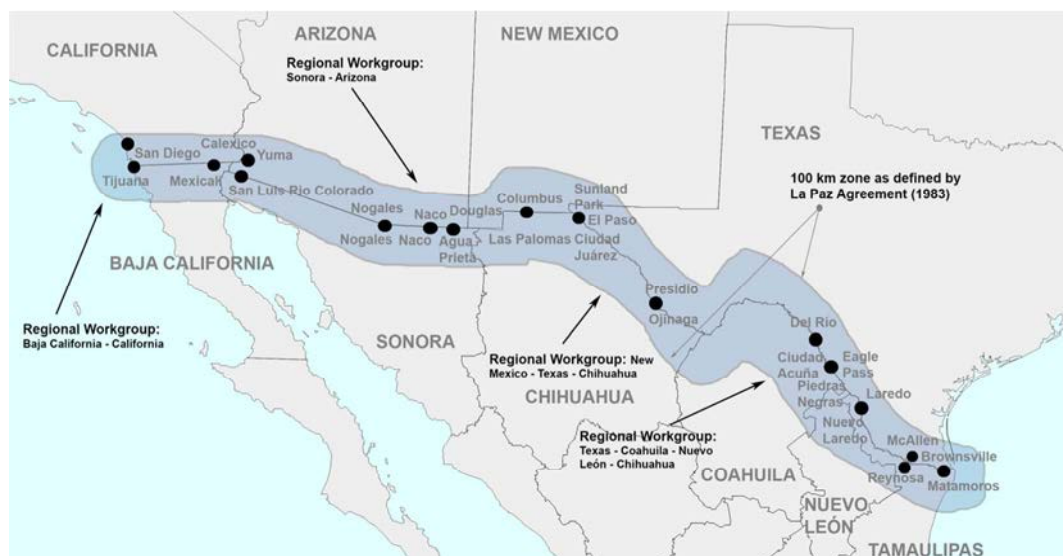
Figure 7.2. IBP Institutional notification procedures



Notes: CENACOM – National Communications Center (SEGOB); COATEA – Center for the Orientation of Emergencies (PROFEPA); EOC – Emergency Operations Center; ISJRT – Incident-Specific Joint Response Team; JRT – Joint Response Team (Co-chairs: Mexico PROFEPA, Civil Protection and US EPA); OEM – Office of Emergency Management; PROFEPA – Federal Attorney for Environmental Protection.

Source: US EPA (2009), Mexico-United States Joint Contingency Plan, Preparedness for and Response to Emergencies and Contingencies Associated with Chemical Hazardous Substances in the Inland Border, US EPA, Washington, DC, www.epa.gov/oem/docs/chem/ipmjcp-e.pdf.

Figure 7.3. Mexico-US sister cities and regional groups



Notes: Sister cities (Mexico-United States): Tijuana-San Diego, Mexicali-Calexico, San Luis-Yuma, Nogales-Nogales, Naco-Naco, Agua Prieta-Douglas, Puerto Palomas-Columbus, Ciudad Juárez-El Paso, Ojinaga-Presidio, Ciudad Acuña-Del Río, Piedras Negras-Eagle Pass, Nuevo Laredo-Laredo, Reynosa-McAllen, Matamoros-Brownsville.

Source: Based on information from the United States Environmental Protection Agency (EPA); www2.epa.gov/border2020.

While international agreements and joint co-operation mechanisms related to risk management have been established between Mexico and the United States, both at the federal and local levels, cross-border co-operation has not been developed to its full potential. A strong emphasis is placed on chemical hazards but does not encompass a wider all-hazard approach. Common threats such as earthquakes on the western side of the border and hurricanes on its eastern side are not addressed. Strengthening this co-operation could lead to greater efficiency for both countries, and could address the harmonisation of monitoring and warning systems and evacuation orders for hurricanes (as conflicting information across the border could lead to confusion) and the development of common emergency and evacuation plans, which could include specific procedures to cross the border. During Hurricane Alex in 2010, the United States agreed to ease the entrance of citizens and food supplies across the border in order to by-pass the affected areas in Mexico and to more quickly reach their final destination in Mexico.

Cross-border co-operation with Belize and Guatemala

International co-operation in civil protection between Mexico and its southern neighbours, Belize and Guatemala, likewise requires additional attention and resources. Natural hazards have occurred across the southern borders that have led to emergencies inside Mexico, especially in Tabasco and Chiapas, where local and state civil protection authorities recognise the need to step-up co-operation with their counterparts across the border. During the 20th century, 5 earthquakes with a magnitude above 7.0 occurred within 150 kilometres of Mexico's southern borders. Mexico's territory is also situated downstream from these countries in several cross-border watersheds that have produced disastrous floods. This includes the Río Usumacinta flowing from Guatemala, which

contributed to the catastrophic floods in Tabasco in 2007. International boundary and water commissions (IBWC) have been established with both Belize (in 1993) and Guatemala (in 1961) (Box 7.1). The IBWC/Belize is in charge of monitoring Río Hondo water levels and for managing three bi-national hydro-climate stations. Real-time monitoring of water levels and data exchange between the countries, however, still lacks the desired technical capacities.

The threat of earthquakes and floods in the Guatemala border area calls for enhanced bi-lateral co-operation. While the 1988 Treaty for Co-operation on Natural Disasters Prevention and Response provides a basic agreement and establishes a bi-national advisory committee, there is a lack of formalised joint planning, training and procedures for emergency response at the local level. This might be addressed by strengthening the participation of state civil protection officials from Tabasco and Chiapas who have demonstrated capacity to consult Guatemala's civil protection authorities.

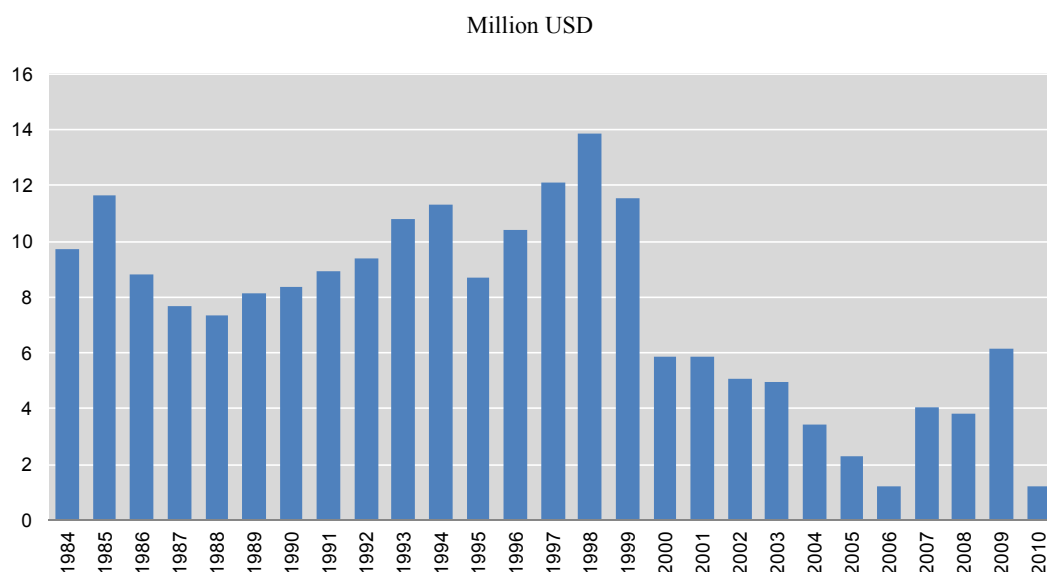
Chiapas created the Ministry for the Development of the South Border and International Co-operation to develop joint projects with border cities in Guatemala similar in principle to the “sister cities” scheme found in the northern states. The civil protection service of Chiapas has also established co-ordination channels with the Co-ordinator for Disaster Reduction in the Republic of Guatemala (*Coordinadora Nacional para la Reducción de Desastres*, CONRED) and with the Co-ordination Center for Natural Disaster Prevention in Central America (*Centro de Coordinación para la Prevención de los Desastres Naturales en América Central*, CEPREDENAC) to facilitate technological and strategic exchanges.

International co-operation in crisis management

In the event of a large-scale disaster, worldwide media attention often triggers offers for humanitarian assistance from a multitude of stakeholders: international humanitarian organisations, national development agencies and emergency responders, NGOs, private companies and even citizens. Organising and managing this wave of goodwill during times of crisis requires a clear framework to ensure resources are used efficiently, and to avoid diversion of resources from the national civil protection system.

Provision of international humanitarian support to Mexico

As a key stakeholder within SINAPROC, the Ministry of Foreign Affairs manages offers of humanitarian assistance in co-ordination with the General Co-ordination for Civil Protection (CGPC) of the Ministry of the Interior. The federal government can call for international humanitarian assistance through the President when emergency response capacities are insufficient to manage a major disaster. While many offers of assistance have been made since the 1985 Michoacán earthquake, Mexico has not requested any through this mechanism. Figure 7.4 shows that beginning in 2000, there has been a sharp decrease in humanitarian assistance provided to Mexico. While disaster damages continue to increase, Mexico has enjoyed consistent economic growth for over 20 years and is perceived to be less suitable as a recipient of humanitarian assistance than it was in the past. Canada, France, Germany, Spain and the United States continue to provide bilateral assistance, but a sign of change was apparent in 2002 when Mexico was removed from the European Union's list of beneficiaries, which is the largest provider of humanitarian assistance worldwide.

Figure 7.4. **Humanitarian assistance to Mexico (1984-2010)**

Source: OECD Stats database, <http://stats.oecd.org>, consulted in September 2012.

Once the SRE receives offers for international assistance, the decision to accept it and to direct it is made in co-ordination with the CGPC. The SRE also has a role to co-ordinate internally with other Mexican ministries and agencies to obtain the most efficient and simple emergency response. The *Organization and Operations Manual of the National Civil Protection System* articulates the various roles of each ministry and agency in the co-ordination of humanitarian support under the leadership of the SRE (Table 7.2). In particular, specific mechanisms have been established to ease customs formalities for humanitarian support.

When a major disaster hits Mexico, support may be offered from a broad variety of sources in addition to that coming from countries and international organisations for which the SRE is responsible. For instance, after major flooding in Tabasco in 2007, bilateral aid came from Australia, Belgium, Cuba, Germany, Ireland, Italy, Peru, Spain and the United States, among others, but also from major private companies such as Wal-Mart, football clubs such as Real Madrid, Red Cross organisations from many countries, and more widely from individuals. In fact, significant donations and material resources came from Mexico's large diaspora in Canada, Spain and the United States. The SRE has developed procedures to open dedicated bank accounts abroad to collect financial support from these sources and channel it directly to identified and assessed needs.

NGOs and other volunteer groups also play an important role in emergency response; however, their involvement is often insufficiently co-ordinated with public authorities, which can lead to ineffective use of the resources provided. For example, during the 2007 floods in Tabasco, NGOs were already active in the area while the federal government was still trying to manage international aid offers, which resulted in costly co-ordination difficulties. Consequently, the federal government developed guidelines for co-operation with international NGOs inspired by the Red Cross Guidelines for International Aid Management. The DGPC is developing a Directory of First Responders in order to increase its management capacity to mobilise the most capable and qualified

organisations. This directory is not limited to international NGOs, and includes national volunteers and private institutions. At the state level, Tabasco put in place institutional measures to better co-ordinate the disparate initiatives of various sources of assistance, including a specific Commission for Humanitarian Aid to manage NGO and international aid. A total of 13 commissions have been created for specific areas related to emergency response. These commissions are headed by a state ministry which provides leadership to other ministries that may be related to the area.

Table 7.2. **Co-operation activities promoted by the SRE for international support**

Ministries co-operating with the SRE	Activities related to international co-operation emergency response
Ministry of Finance (SHCP), Administrative Service of Taxes (SAT), Mexican Customs	Gathering of supplies according to the Law of Customs and the needs estimated by SEGOB
Ministry of Economy (SE)	Authorisation of food and goods imports according to the Law of Foreign Trade
Ministry of Health (MH)	Emission of sanitary permits for the entry of medicines and medical staff
Ministry of Agriculture, Livestock, Rural Development and Food (SAGARPA)	Phyto-sanitary permits for the import of agricultural supplies, search and rescue animals and food which requires authorisations
Ministry of Communications and Transport (SCT) and Ministry of National Defence (SEDENA)	Circulation permits for foreign cargo or emergency vehicles that transport hazardous materials
Ministry of National Defence (SEDENA)	Flying and landing permissions for aircrafts – in co-ordination with the General Directorate of the Protocol of the SRE
Ministry of Navy (SEMAR)	Authorisation for foreign ships to navigate in Mexican territorial waters
National Institute of Migration (INAMI)	Authorisations for the entry of international experts
Ministry of Public Education (SEP)	Authorisation for the works of specialists who come to Mexico to provide support as doctors, nurses, rescue teams, construction engineers, among others
Ministry of Social Development (SEDESOL)	Co-ordination for the storage and distribution of international aid

Source: SEGOB (2006), *Organization and Operations Manual of the National Civil Protection System*, *Diario Oficial de la Federación*, Mexico D.F.

Mexico as a provider of international humanitarian support

As civil protection capacities have developed since 1985, Mexico has increased its capacity to export know-how and material assistance as an emergent donor of international humanitarian support. In 2011 it joined the Good Humanitarian Donorship initiative (GHD) and committed to follow its guidelines, which involves following recognised practices when providing in-kind contributions, technical co-operation and emergency response aid in case of a disaster. The SRE manages these activities in co-ordination with SINAPROC stakeholders such as the Mexican National Centre for Prevention of Disasters (*Centro Nacional para la Prevención de Desastres*, CENAPRED), the Ministry of National Defense (*Secretaría de la Defensa Nacional*, SEDENA) and the Ministry of Navy (*Secretaría de Marina*, SEMAR). CENAPRED provides “seed co-operation” to help affected countries build their own capabilities and address their specific civil protection needs. It also developed tools for earthquake-resistant construction in Haiti after the 2011 earthquake. The experience acquired by SEDENA, SEMAR and other civil protection stakeholders during international co-operation activities is collected by DGCP and used to improve internal manuals of procedures at domestic level, thereby strengthening emergency response capabilities in Mexico. At the local level, municipalities have also provided assistance, for example the municipality of Motozintla in Chiapas, which in times of emergency

informally allows displaced Guatemalan populations to stay in temporary shelters in Mexican territory.

Table 7.3. **International humanitarian assistance by Mexico (2004-2010)**

Year	Institution	Country	Event
2004	SEMAR	Indonesia	Tsunami
2005	SEMAR	United States	Hurricane Katrina
2007	SEDENA	Bolivia	Heavy rain
2007	SEDENA	Peru	Earthquake
2007	SEDENA	Nicaragua	Hurricane Dean
2007	SEMAR	Nicaragua	Hurricane Felix
2007	SEDENA	El Salvador	Hurricane Felix
2009	SEDENA	El Salvador	Heavy rain
2008	SEMAR	Belize	Tropical storm Arthur
2008	SEDENA	Ecuador	Heavy rain
2008	SEMAR	Cuba	Hurricane Gustav
2009	SEMAR	Haiti	Hurricane Ike
2009	SEMAR	Guatemala	Forest fire
2010	SEDENA	Haiti	Earthquake
2010	SEDENA	Chile	Earthquake
2010	SEDENA	Venezuela	Heavy rain
2010	SEMAR	Guatemala	Tropical storm Agatha
2010	SEDENA	Colombia	Heavy rain

Source: Based on information provided by SEDENA and SEMAR.

International and bilateral co-operation in disaster risk management

Many countries in the last decades, including Mexico, have recognised the importance of shifting their disaster risk management strategy from a focus on emergency response and recovery toward a more holistic approach with greater emphasis on risk prevention and risk reduction. In parallel, international donors and United Nations agencies with a role in disaster risk management have moved from a traditional humanitarian and emergency support view to the promotion of disaster risk reduction through technical co-operation. Mexico has actively promoted the Hyogo Framework for Action since its adoption by 168 member countries of the United Nations in 2005 at the World Disaster Reduction Conference held in Kobe, Japan. In the same vein, as Mexico has gradually become more of a provider than a recipient of humanitarian aid, it is strengthening its technical assistance to different countries in the field of civil protection.

The role of international co-operation in support of SINAPROC's development

International co-operation has played a major role in the development of SINAPROC's capacities. The Japanese International Co-operation Agency (JICA) provided financial resources for the construction of CENAPRED facilities and its development of joint training programmes between Mexican and Japanese scientists and engineers. This co-operation has been instrumental in strengthening the disaster risk prevention approach in Mexico as well as in fostering a better understanding of risk exposure and vulnerabilities to natural hazards. Mexico's Disaster Reconstruction Fund

(FONDEN) received technical assistance from the World Bank to issue its first catastrophic bond in 2006 and utilised the World Bank Multi-Cat Programme for the issuance of its Multi-Cat bond in 2009.

International co-operation was recognised in the 1995-2000 National Programme of Civil Protection as an important means for developing the capabilities of the country. It is still considered as such today, as Mexico continues to develop its capacities through technical co-operation. For the modernisation plan of the National Meteorological Service (*Servicio Meteorológico Nacional*, SMN), Mexico partnered with the World Meteorological Organisation to carry out a performance assessment of its weather monitoring activities, and produced a ten-year strategic plan for its modernisation, with a clear focus on disaster risk management. This assessment was financed by Spanish and Finnish co-operation agencies and led to a World Bank loan of USD 100 million for its implementation.

From a beneficiary of international assistance to a partner

Mexico makes active use of its membership in several international organisations both to spread its recognised good practices in the realm of civil protection and to refine its concepts of integrated risk management. Through the United Nations, Mexico was an active player in the International Decade for Natural Disaster Reduction and participated actively in the development of the Hyogo Framework for Action in 2005; the Safe Cities are Resistant to Disasters and Safe Hospital programmes (see Chapter 4) are examples of how Mexico implements the United Nations International Strategy for Disaster Reduction (UNISDR) initiatives.

Several states view collaboration with the UNISDR as helpful to align local policies and actions to the broader international vision for disaster risk reduction. The state of Chiapas reflects UNISDR views in its policy to assess how foreign investment projects may contribute to greater vulnerability to disasters; it also evaluates whether foreign investment will improve its Human Development Index, which has steadily improved in recent years. In the Federal District, the civil protection service implemented the UNISDR World Disaster Reduction Campaign on Making Cities Resilient (UNISDR, 2010). Likewise, several programmes with the UNDP have helped to increase local awareness of major hazards and to build operational capacities on the ground. For example, UNDP has run the Disaster Risk Management Programme in the south-east region of Mexico (DRMP) since 2002, which carries out activities in the states of Campeche, Chiapas, Oaxaca, Puebla, Quintana Roo, Tabasco and Yucatán. This technical assistance programme, which is principally financed by the Ministry of Social Development (*Secretaría de Desarrollo Social*, SEDESOL), works in 185 municipalities in the region to strengthen local and institutional capabilities for disaster prevention, preparedness, response and recovery (UNDP, 2012).

Collaborative scientific research related to disaster risk management with technical institutions in various countries has fostered progress in the gathering of data and methodologies for analysing that data. CENAPRED co-operated closely with the Economic Commission for Latin America and the Caribbean (ECLAC), to develop a methodology for annual assessment of the socio-economic impacts of the main disasters in Mexico. It has developed technical co-operation activities with the United States Geological Survey (USGS) related to seismic and volcanic monitoring. At the same time, the centre is involved in international committees and initiatives such as the International Platform for the Reduction of Earthquake Disasters (UNESCO-IPRED) and the

United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER). The National Seismological Service also co-operates with institutions such as the Incorporated Research Institutions for Seismology (IRIS), USGS and the Pacific Tsunami Warning Center (PTWC). The Ministry of Navy co-operates with the United States National Oceanic and Atmospheric Administration (NOAA) to improve its technical capabilities for oceanographic monitoring, which aids in early warning capacities for tropical cyclones.

Mexico is a major promoter of disaster risk management at the international level. As a highly exposed country, it has credibility in pro-actively engaging partnerships to foster policy co-operation at the national and local level. Mexico has increasingly taken an active role to promote disaster risk management activities at the international level, and ensures that these also feed into the domestic policy agenda. For example, it included principles of the United Nations International Decade for Natural Disaster Reduction 1990-99 into its National Civil Protection Program 1990-94. The organisation of the 2010 United Nations Climate Change Conference in Cancun benefited from this dynamic, where the creation of a Green Fund for the financing of climate change adaptation in the most vulnerable countries is set to significantly change the conditions for investment in disaster risk reduction in the years to come. The SRE and the General Directorate of Global Subjects (*Dirección General para Temas Globales*, GDGS) are active promoters of these initiatives. More recently, Mexico was instrumental in promoting disaster risk management in the context of its G20 Presidency in 2012, with a focus on disaster risk assessment and risk-financing strategies.

Transition from beneficiary of international assistance to donor

Mexico's role as a major international promoter of disaster risk management is further reflected in the development co-operation that it engages in with different countries. While SINAPROC has used international co-operation to strengthen many capacities throughout its system, its components also support the development of civil protection capacities in different countries. Institutional developments in Mexico, such as the creation of AMEXCID (established in 2011), will further enable Mexico to foster, co-ordinate and evaluate its international co-operation activities as an emerging leader in south-south co-operation.

In terms of reversing roles and acting as a donor of technical assistance, SINAPROC stakeholders have focused their efforts for international co-operation in regions where they can be the most effective. Due to fewer cultural and linguistic barriers, most collaboration is centred on Central America. The National Meteorological Service, for example, intends to develop a regional weather monitoring and forecasting centre for its southern region based in Chiapas, which will also monitor the weather conditions throughout Central America. The Mesoamerica Project (MP), created in 2007, is a regional initiative between Mexico, Belize, Colombia, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua and Panama for collaboration in regional integration and economic and social development. A specific work area under this project is devoted to disaster prevention and mitigation. CENAPRED performs an advisory and technical support role for two major programmes in this area: the Mesoamerican System of Territorial Information (*Sistema Mesoamericano de Información Territorial*, MSTI) and the project for the Management of Financing for Disaster Risks. Similarly, FONDEN provides technical support to Latin American countries in the area disaster risk financing.

CENAPRED also exports its technical and scientific know-how in collaboration with the Japan International Co-operation Agency to support countries through the Training Program for Third-party Countries, an international course on earthquake-resistant infrastructure design and construction. In 2007, it launched a new stage of co-operation focusing on civil protection and disaster prevention, involving countries from Central America, South America and the Caribbean. In recent years, CENAPRED has provided technical support to countries such as Colombia (2008) for disaster prevention and management, and to El Salvador in the context of the TAISHIN project focusing on the improvement of technology used for earthquake-resistant social housing (2008-2012).

Conclusion

Mexico has actively engaged in bilateral and international co-operation initiatives in the field of civil protection. It has formalised a number of working agreements with the United States, notably in the management of shared water courses, and in the context of emergency preparedness, in particular emergencies involving chemical hazardous substances and pollution events in coastal waters. Along its southern borders, international co-operation is also required to effectively manage the effects of earthquakes and floods. While some co-operation agreements are in place for flood monitoring, they are less developed than in the north. Additional support is required to enhance emergency response capacities such as joint planning, training and standardised procedures. Finally, co-ordination with foreign non-governmental organisations could be further developed to ensure resource efficiency, particularly during large-scale emergency responses.

Mexico is also starting to leverage its capacities for civil protection to engage further in international co-operation. The creation of the Mexican Agency for International Co-operation and Development offers a number of opportunities to further south-south co-operation.

Recommendations

- Foster the establishment of bi-national or regional co-operation agreements along the south borders with Belize and Guatemala to formalise emergency response co-operation and establish well-defined protocols, procedures and roles.
- Further develop partnerships between the co-operation agency AMEXCID and SINAPROC stakeholders to share international good practices and develop capacity-building programmes with other countries focused not only on risk management, but also on knowledge sharing.
- Clarify the regulatory framework for NGOs delivering humanitarian assistance.

Notes

1. Mexico's Law for the Conclusion of Treaties distinguishes between "international agreements" and "inter-institutional agreements". States and municipalities are not competent to conclude international agreements (as this power is reserved for the President); however, they may enter into inter-institutional agreements with international organisations and agencies of foreign governments. This practice does not require the approval of the Senate, which is one of the main differences with international treaties concluded by the federal government.
2. In 1944, the Treaty for the Utilization of Waters of the Colorado and Tijuana Rivers and of the Río Grande expanded its responsibilities and modified its name to International Boundary and Water Commission.
3. BP2012 Goal 5 also includes acts of terrorism at the border. However, the DGPC is not involved in these issues as this is a matter of public security and is not a responsibility of civil protection.
4. The definition of "border region" provided by the La Paz Agreement led to developing the concept of "sister cities". Ninety percent of the 11.8 million people of the border area resides in 14 paired sister cities. These cities are linked not only by environmental issues or natural events, such as earthquakes in the California-Baja California border or floods in the Arizona/Sonora and Texas/Chihuahua borders, but also by economic or social issues: the rapid population growth of the border is leading to a rapid spread of urban areas, land-use changes and low-income dwellings with no insurance or civil protection culture.

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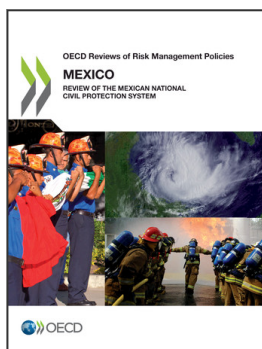
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