

Annex A

States and municipalities interviewed during the peer review

Figure A.1. Map of Mexico

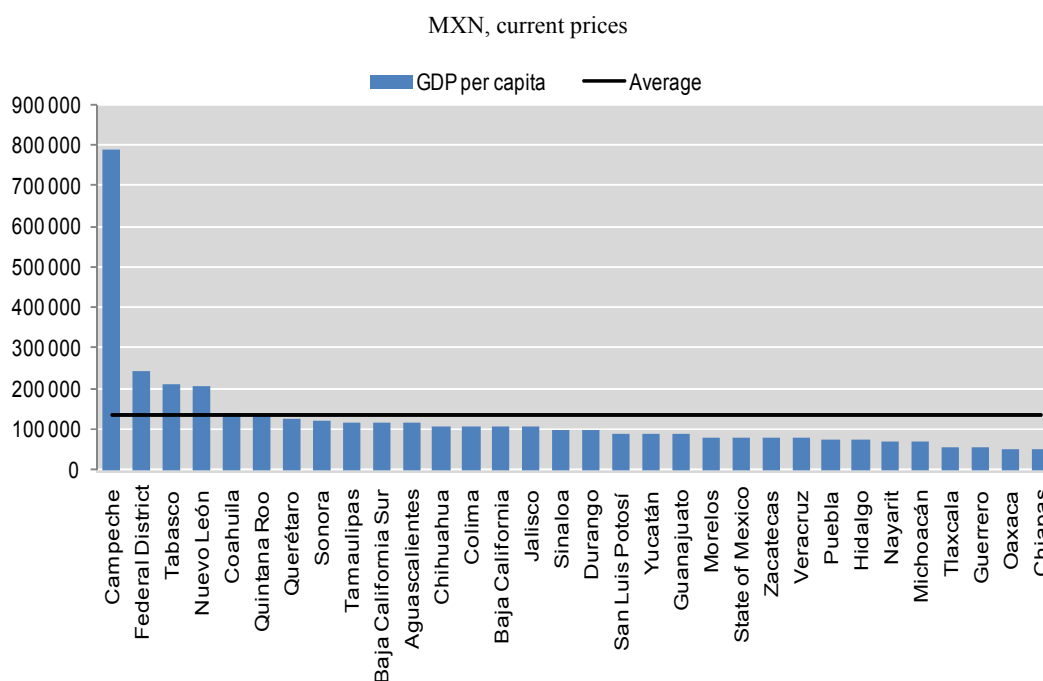


Note: This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map.

Federal District

The Federal District is Mexico's economic centre, contributing a higher share of GDP (about 17.16%) than any federal state. With a population of approximately 8 million people, and 20 million people in the greater metropolitan area, its population density is among the highest in the world (8 400 inhabitants/km²). The demographic and geological characteristics of the nation's capital make it one of the areas with the highest seismic risks in the world. Its soil consists of highly compressed lacustrine clay, interspersed with layers of sand, which amplifies seismic hazards. It is also located in a closed basin, making it susceptible to flooding.

Figure A.2. Annual GDP per capita by state (2010)



Source: INEGI.

State of Colima

Colima is located on Mexico's Pacific coast, and is part of the West-Center civil protection region comprising nine federal states. Its main exposure is to earthquakes, volcanic eruptions and hurricanes. With a population of just 650 000, it is among the least populated of Mexico's federal states. Recent natural hazards have led to significant damages, including a magnitude 7.6 earthquake in 2003 that destroyed 2 005 houses and damaged an additional 6 615, which resulted in over 10 000 people homeless. A 1959 hurricane led to approximately 2 000 fatalities; however, there were much fewer deaths when Hurricane Joba hit in 2000, with only 2 lives lost, perhaps due to the strong focus recently on civil protection activities.

State of Chiapas

Chiapas is located in the south-east region of Mexico and has a population over 4 million. Its territory includes 260 kilometres of coasts with 2 135 localities no more than 30 meters above sea level, exposing more than 245 000 people to coastal floods. These areas are also exposed to a high level of seismic hazard. Its recent Civil Protection Law (2011) is highly aligned with national policies on disaster and risk prevention. Chiapas put in place the State Procedure for Rain Alert (PROCEDA) based on a colour-coded warning system for rainstorms. Chiapas has its own catastrophe insurance policy to cover damages to roads, water infrastructure and public housing. Through its "Civil Protection Prevention Program" (PP5), Chiapas has made dedicated efforts to transfer civil protection knowledge to the population, strengthen self-protection measures and raise the population's risk awareness. Among the civil protection challenges facing the state of Chiapas is its highly dispersed rural, indigenous population (20 047 inhabited

areas within the state, 12 838 of which have a population less than 50), which have been unable to sustain local civil protection capacity.

State of Coahuila

In recent years, Coahuila has been affected by natural hazards such as forest fires, frosts, extreme rainfall, drought and floods, among others. This complexity has led to the declaration of emergencies and disasters in virtually all of its municipalities. For instance, in 2010, as a result of the rains produced by Hurricane Alex, 32 of the state's 38 municipalities were declared as disaster areas by the Fund for Natural Disasters (FONDEN). Coahuila's government is trying to improve its civil protection capacities within the framework of its Special Programme of Civil Protection 2011-17, establishing strategic objectives and specific action lines for the years to come.

State of Jalisco

The state of Jalisco is one of the most populated states in the country, with over 7 million people as of 2010. After the Federal District, the state of Mexico and the state of Nuevo León, it contributes the most to Mexico's GDP. Located on the Pacific coast of Mexico, it is a member of the West-Center civil protection region and is in charge of regional co-ordination. The state is exposed to natural hazards such as earthquakes, hurricanes and tsunamis. In order to improve its internal co-ordination, the state has divided its territory into seven regions, similar to the practice at the national level. Jalisco has focused on strengthening land-use regulations to improve risk management at the local level. Specific actions to improve targeted capacities include the System of Massive Alert for Tsunamis and Tropical Cyclones, and the establishment of a local fund for civil protection services. It has carried out massive drills to prepare for tsunami alerts, with the participation of tourist hotels.

State of Mexico

The State of Mexico is the regional co-ordinator for the Central civil protection region. The state surrounds the northern, western and eastern borders of the Federal District, comprising part of the metropolitan area of Mexico City. It is one of the most densely populated areas in the country, with an estimated increase of 1 000 habitants per day – mostly due to internal migration from other states. Urban sprawl and the development of illegal settlements in zones prone to flood hazard have increased along with the growth of its population.

State of Nuevo León

The state of Nuevo León is located in the north of Mexico, sharing a 19-kilometre border with the United States. It contributes 7.5% of Mexico's GDP, the third highest in the country, and its capital, Monterrey, is one of the most industrialised cities in Mexico. The metropolitan area includes 12 municipalities, with a total population over 4 million. Although seismic risk in Nuevo León is low, hurricanes and floods have caused significant damages to its infrastructure. In 2010, Hurricane Alex led to damages in excess of USD 2 billion. The state faces challenges related to land use and illegal dwellings in some municipalities; however, major infrastructure projects are underway to

reduce the impact of future floods, such as deepening the dried river bed that runs through the centre of the city.

State of Tabasco

With a population over 2 million and 17 municipalities, the state of Tabasco contributes 3.7% of the national GDP. Its principal geographic features are plains, with 92.5% of the territory no more than 30 meters above sea level. This south-eastern state includes coastal areas on the Gulf of Mexico and a border with Guatemala. Two rivers converge in its territory: the Grijalva and Usumacinta, which make up 27% of Mexico's hydrological resources. These characteristics increase its exposure to floods; damages over the past six years have been in excess of MXN 45 billion. In 2007, heavy rains caused the overflow of the Grijalva river basin, flooding about 80% of Tabasco's territory. The event affected over 1 million people. As a consequence of this disaster, the state government implemented the High Risk Areas Relocation Programme, relocating 2 840 houses and businesses previously situated in high flood risk areas. The 2007 flood pushed the state to take a proactive stance on civil protection activities, developing programmes and plans to reduce physical vulnerability and improve its hydraulic infrastructure.

State of Tamaulipas

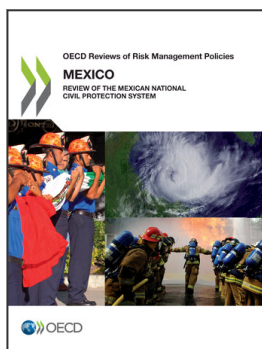
Located in the north of Mexico, Tamaulipas is one of six Mexican states sharing a border with the United States. Its coastal region on the Gulf of Mexico is highly exposed to hurricanes and tropical cyclones. In 1967, tropical cyclone Beulah, a category 5 hurricane, hit three municipalities. Hurricanes Keith (2000) and Alex (2010) caused damages to 19 municipalities. According to the National Oceanic and Atmospheric Administration (NOAA), 67 tropical cyclones occurred in Tamaulipas between 1854 and 2011. These coastal meteorological phenomena produce significant floods, as do heavy rain falls. Seismic activity is relatively mild, and from 1983 to 2011 there were only 11 earthquakes recorded, each with magnitudes less than 4.8. As observed in other states, population increase, land use and illegal dwellings represent some of the state's challenges related to civil protection.

Table A.1. **Municipalities interviewed**

Municipality	State	Population ¹	Population density (inhabitants/km ²)	GDP (USD) ²	GDP per capita (USD) ²	Human Development Index ³	Main risks
Cuauhtemoc	Federal District	531 831	16 415	8 072.17	15 636.02	0.8671	Earthquakes and floods
Guadalajara	Jalisco	1 495 182	2 578	14 170.63	8 607.46	0.8258	Floods and hurricanes
Monterrey	Nuevo León	1 135 512	2 099	17 054.06	15 350.23	0.8486	Floods and hurricanes
Motozintla	Chiapas	69 119	88	195.73	3 269.00	0.6985	Floods, rainfall, hurricanes
Nezahualcoyotl	State of Mexico	1 110 565	17 506	N/A	7 373.42	0.8149	Floods and earthquakes
Puerto Vallarta	Jalisco	255 681	373	16 213.39	8 776.90	0.8111	Floods, hurricanes,
Tampico	Tamaulipas	297 554	4 369	2 622.06	8 875.06	0.8202	Floods and hurricanes
Tuxtla Gutierrez	Chiapas	553 374	1 342	3 808.98	8 773.56	0.8159	Flood, rainfall, hurricanes

Notes: 1. Population data for 2010. Information does not include population related to metropolitan areas. INEGI, 2010 Census of Population and Housing. 2. Data for 2000. Data calculated by UNDP. Calculations based on INEGI, XII General Census of Population and Housing, 2000 and National Household Income and Expenditure Survey, 2000. 3. UNDP Data for 2000. N/A: Not available.

Sources: INEGI, National Commission of Population (CONAPO), U.S. Geological Survey, Mexican Senate (Commission for Hydraulic Matters), information gathered from meetings held during peer review missions.



From:
**OECD Reviews of Risk Management Policies:
Mexico 2013**
Review of the Mexican National Civil Protection System

Access the complete publication at:
<https://doi.org/10.1787/9789264192294-en>

Please cite this chapter as:

OECD (2013), "States interviewed during the peer review", in *OECD Reviews of Risk Management Policies: Mexico 2013: Review of the Mexican National Civil Protection System*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264192294-11-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.