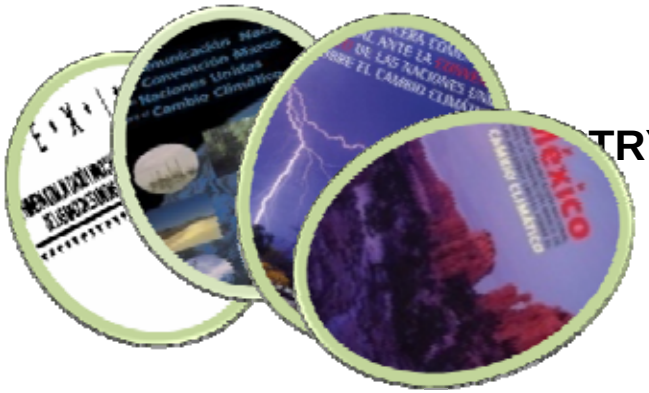
Side event on presentation of second and/or third national communications of Mexico, Republic of Korea and Uruguay

Third and Fourth National Communications from México



JULIA MARTINEZ FERNANDEZ

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National Institute of Ecology

MINISTRY OF ENVIRONMENT AND NATURAL RESOURCES

Saturday 4 December 2010

13:20 – 14:40

Room Pitaya

Cancun, Mexico

National Communication of Mexico to the UNFCCC

1997

The **First National Communication of Mexico to the UNFCCC** release in 1997, included the first Greenhouse Gas Emissions Inventory 1990, and the results of the first studies on the country's vulnerability to climate change.

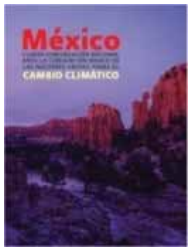
2001

The **Second National Communication**, released in 2001, included the updating of the Emissions Inventory for the 1994-1998 period, and scenarios for future emissions. Both were carried out with funding from the Mexican Government.

2006

The **Third National Communication** presented an update of the Inventory to 2002, and recalculated the figures since 1990. To that end it counted with funding from the Global Environment Facility (GEF) through the United Nations Development Programme (UNDP), the U.S. Environmental Protection Agency (USEPA) and the Mexican government.

2009



The **Fourth National Communication of Mexico** to the United Nations Framework Convention on Climate Change (UNFCCC) reports the progress in climate change made by the country, after the 2006 publication of the Third Communication.

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Mexico's Fourth National Communication

I. National context

II. National GHG Inventory

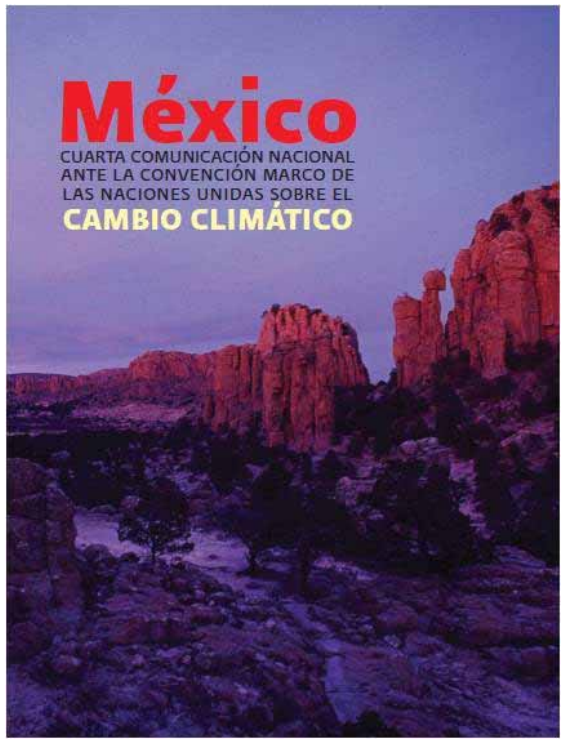
III. Institutional arrangements

IV. Adaptation programs (impacts, vulnerability and adaptation)

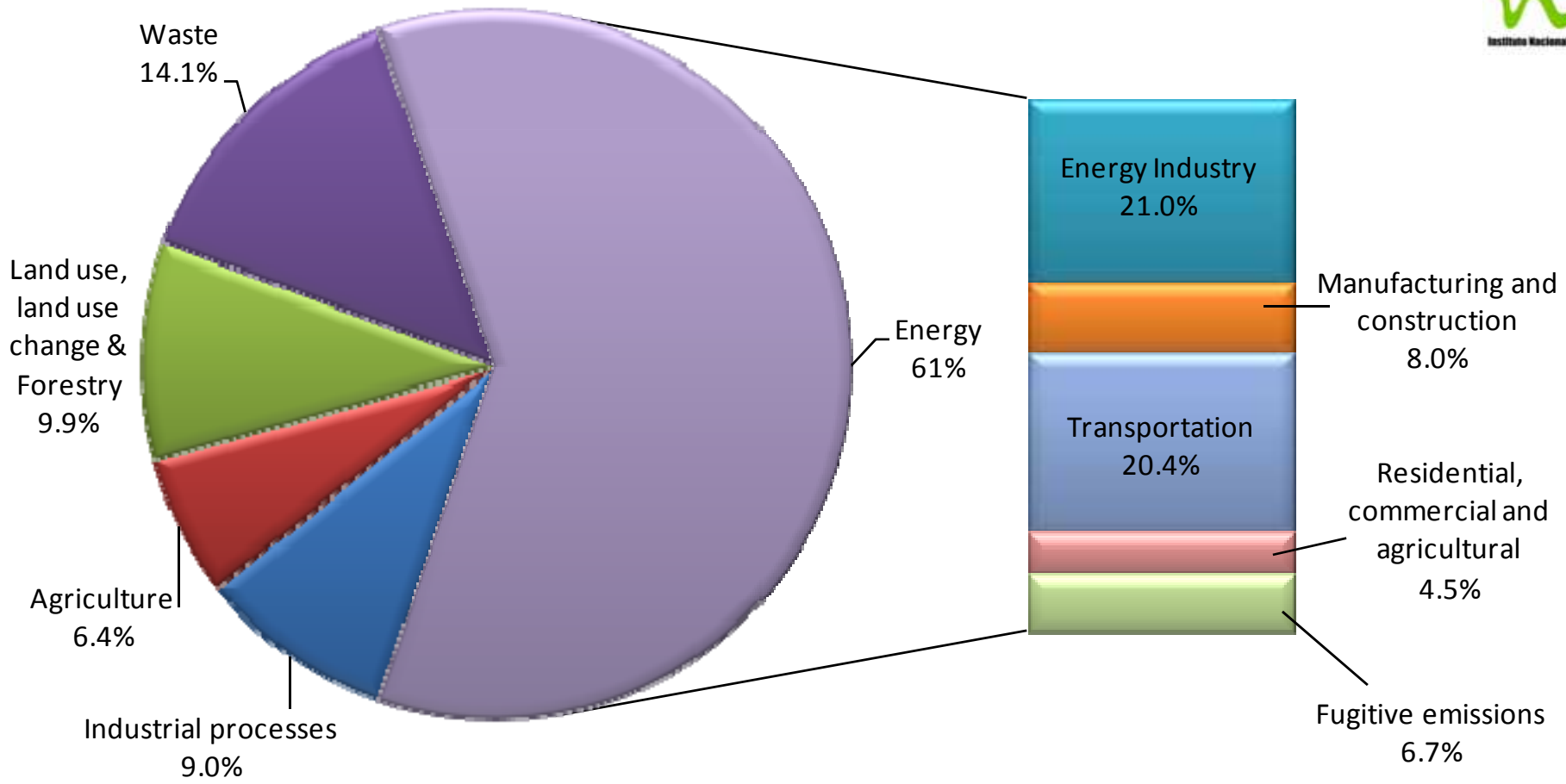
V. Climate change mitigation programs

VI. Relevant information

VII. Barriers, limitations and needs related to climate change



National GHG Inventory, 2006

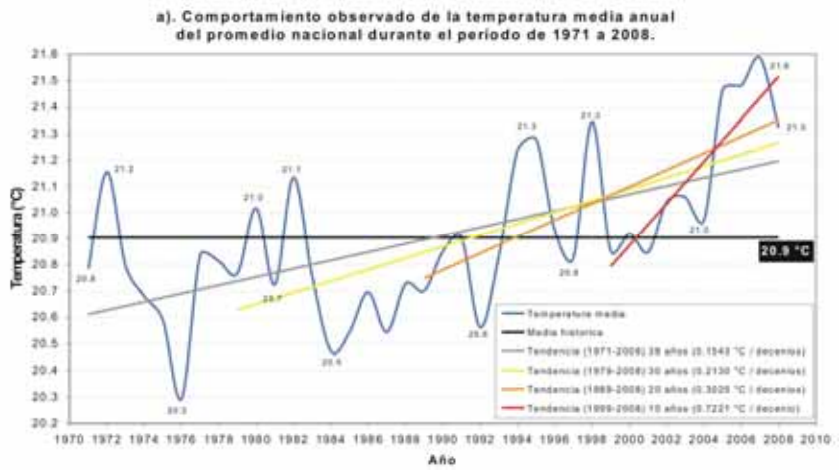


709 million tonnes of CO_2eq

National GHG Inventory, 2006

- Mexico´s GHG emissions (in CO_2e) grew 40.3% from 1990 to 2006.
- “Energy” prevails as the main source of emissions of GHG in Mexico, with the greatest part deriving from fossil fuel use in energy generation and transportation.
- Improvements in energy efficiency and investments aiming at the use of cleaner technologies have improved the energy intensity (energy consumption per unit of GDP) and emissions intensity (CO_2 per unit of GDP) between 1990 and 2006.
- The GHG emissions growth rate in Mexico is lower than the growth rate of its economy.
- The results of the National GHG Inventory 1990-2006 show that there is evidence of decoupling of economic growth and GHG emissions in Mexico .

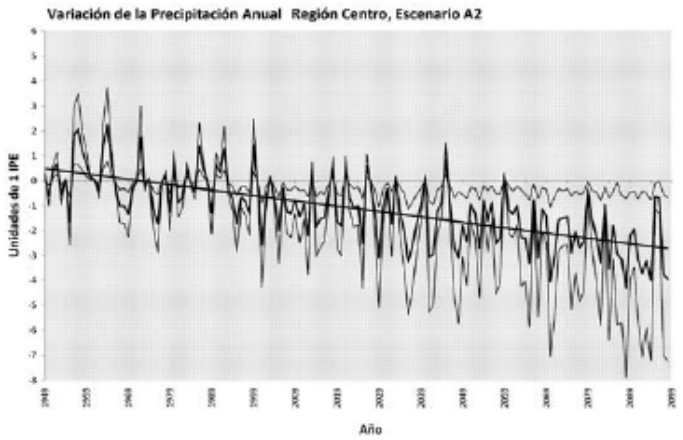
Observed temperature



Instrumental observations over the last 38 years show that the annual average temperature has risen 0.6°C in average in the Mexican territory over this period. The historical average temperature of the period is 20.9°C, with the observations after 1990 being all above this average. Over the last 10 years, the trend indicates an intensive warming of 0.7°C.

Standardized precipitation index

Drought could intensify in the Central region, Jalisco region and Chiapas region. Under the A2 scenario, it would be worse than that experienced in the fifties and seventies for the first two regions. In general, meteorological drought leads to hydrological drought, as well as reductions in precipitation; increases in temperature would increase evapo-transpiration.



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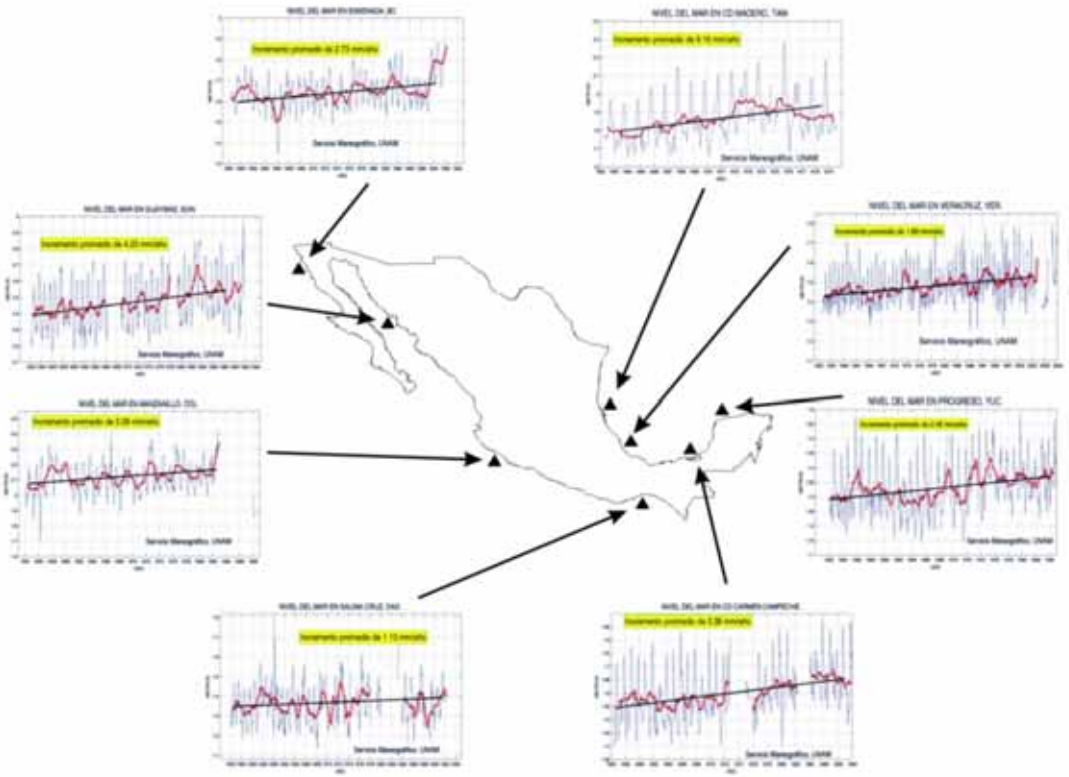
Sea level rise in Mexico

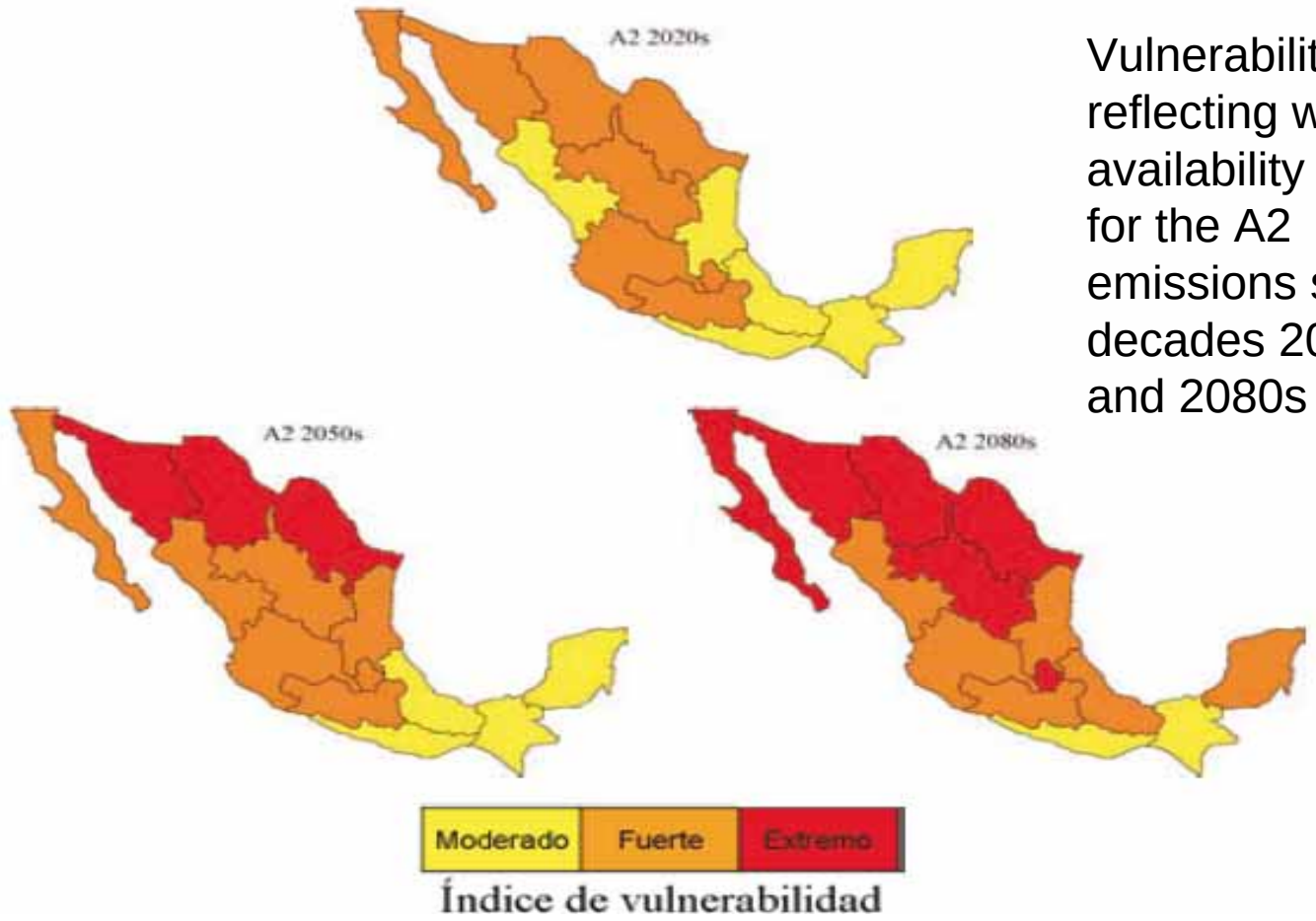
Sea level rise would affect human and natural coastal systems, due to lowland flooding, saline intrusion, and a greater risk of storm surge, increased by a possible change in frequency and/or intensity of extreme weather events like hurricanes or “Nortes”, among other.

Historical Trends



Sea level rise has been observed in four sites that have been studied in the Gulf of Mexico. It ranges from 1.89 mm/year in Veracruz, Veracruz, up to 9.16 mm/year in Cd. Madero, Tamaulipas. For the Pacific, the site with the smallest increase was Salina Cruz, Oaxaca, with 1.13 mm/year; and the greatest was observed in Guaymas, Sonora, with 4.23 mm/year.

Water availability impact



Vulnerability index reflecting water availability and quality for the A2 GHG emissions scenario for decades 2020s, 2050s and 2080s

Climate change impacts

Agriculture

Losses in agriculture would increase significantly as a consequence of higher temperatures and less water availability.

Fisheries

Climate change would affect ocean currents, stratification of the water column in the ocean and the upwelling of productive water.

Forest fires

Considering El Niño conditions as indicative of expected conditions under climate change, the cost of forest fires would be as high as US$ 1.5 billion per year.

Mammals

By mid-century, 30 of the 61 species of mammals analyzed would lose 50% or more of their current distribution area.

Health

With a 2ºC temperature increase, losses from disease (malaria, dengue fever and gastrointestinal disease) are estimated at US$15 billion annually.

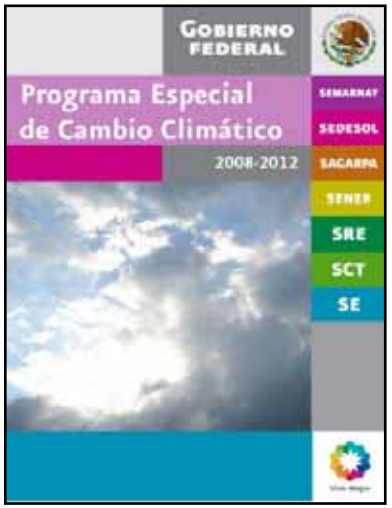
Mitigation

- Mexico acknowledges the importance of undertaking actions that contribute to the efforts of the international community to mitigate GHG emissions.

- The Mexican Government put into force the **Special Program on Climate Change** (PECC 2009-2012).

- Compliance to PECC at the end of the current administration will result in a **reduction of 50 million tonnes of CO_2e in 2012**.

- In a long-term vision, PECC establishes, as an aspirational goal, the reduction of **50% of national GHG emissions by 2050**, as compared to 2000 levels, and a flexible convergence towards a global per capita emissions average of 2.8 tonnes of CO_2e in 2050.



Mitigation in the energy sector

- With the implementation of various energy saving programs in industrial, commercial and public services, a saving of 15.7 million barrels of oil equivalent was obtained during the 2006-2008 period, preventing the emission of 8.6 million tons of CO_2e.
- With the Daylight Savings Program, emissions decreased by 4.5 million tons of CO_2.
- In 2008, a total of 18 Mexican Official Standards (NOMs) was put in place, 16 of which are associated with electricity consumption and two with thermal processes.
- With the first 16 standards, savings equivalent to 15,775 GWh were obtained, and emissions of 12.8 million tonnes of CO_2e were avoided.
- Similarly, with the implementation of thermal efficiency standards, savings of 6 million barrels of oil equivalent, representing a consumption of 35.16 PJ, were achieved, and 1.97 million tonnes of CO_2e were not emitted.
- Preliminary figures for the first half of 2009 show that, as a result of energy efficiency measures, savings of 12,558 GWh, equivalent to 10.2 million tons of CO_2 are expected.

Mitigation in the residential sector

- According to the goals set by the Mexican Government, between 2007 and 2012, six million housing mortgages will be granted, of which approximately 20% should be used for sustainable housing.

- The Alliance to Save Energy (ASE) granted the “International Award for Energy Saving in Sustainable Housing,” to the Mexican Government, for its efforts on this regard. The award was received by the President of Mexico, Mr. Felipe Calderón Hinojosa, on September 23, 2009.

Mitigation in the forestry sector

In the Special Program on Climate Change 2009-2012 (PECC) mitigation in the forestry sector is focused mainly on:

- the incorporation of about 3 million hectares to sustainable forest management;
- the installation of 600,000 efficient wood stoves; and
- the addition of 750,000 hectares of forest ecosystems to the status of Protected Natural Areas.

Emissions Scenarios of GHG for 2020, 2050 and 2070

In 2009, INE financed and coordinated the "**Study on the Impact of Renewable Energy Sources of GHG Emissions in Mexico in the Medium and Long Terms**", carried out by the Electric Power Research Institute and the study "**GHG Emissions Scenarios in the Medium and Long Terms, 2020, 2050 and 2070**", prepared by the Mexican Institute of Petroleum. These studies will be useful to estimate the national baseline of GHG emissions for the medium (2020) and long (2050) terms.

Other relevant studies on mitigation published in the last two years are:

a) **Study on the Economics of Climate Change in Mexico**, coordinated by SEMARNAT and the Ministry of Finance, with financial support from the UK Government and the Inter-American Development Bank;

b) **Low-Carbon Growth. A potential Path for Mexico**, conducted by the Mario Molina Center and the McKinsey consulting firm;

c) **Low-Carbon Development for Mexico (MEDEC),** developed with funding and technical assistance of: The World Bank;

d) **Climate Change in Mexico and Potential Emission Reduction by Sectors**, conducted by a consultant.

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Projects under the Clean Development Mechanism

- From September 2008 to August 2009, Mexico obtained the registration of 12 projects by the CDM Executive Board.
- This brought the total number of registered projects to 118, of which 20 received Certified Emission Reductions (CERs).
- The mitigated and CDM registered tonnes of CO_2e increased 53%, going from 3.8 to 5.8 million tonnes cumulatively.
- In the same period, the CICC granted letters of approval to 22 projects, with which the cumulative number amounted to 217 (by August 2009).
- Mexico participates with 7% of the global CDM projects:
  - 4th place for the amount of registered projects
  - 5th for the expected volume of CERs
  - 5th country in terms of CERs obtained

State Programs for Climate Change Action (PEACC)

Since 2007, technical specialists and scientists from most of the 32 Mexican States began training for the preparation of their State Programs for Climate Change Action (PEACC):

- The PEACC are part of the development and planning policy instruments at the state level.
- They constitute a rational response to the adverse effects of climate change at the local/state level.
- They contain the basis for policymaking at the local level on climate change and sustainable development.
- Their purpose is to gather information, and to analyze and design courses of action that can be applied locally in response to climate change.

www.ine.gob.mx/peacc

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Future Actions

- The research needs identified after several diagnostic exercises are grouped into five categories: 1) national inventory of emissions of greenhouse gases, 2) monitoring, reporting and scenarios, 3) impacts, vulnerability and adaptation, 4) mitigation of greenhouse gases, and 5) economic, legal and international studies.
- In order to improve the next inventories it is necessary to continue conducting research to determine national emission factors for key sources, and to analyze in depth the differences between the reference and the sectorial approach.
- On the other hand, it is necessary to look deeper into observation activities; to continue building and refining models under different climate change scenarios; as well as to continue putting together and publishing various risk atlas; one would be the first National Atlas of Vulnerability to Climate Change, and to continue with diverse mapping, for example, mapping for morbidity and mortality associated with increased health risks due to climate change.

Future Actions

- For a more efficient management of mitigation options in the Country, it is necessary to continue a more in depth evaluation of the mitigation potential of various technology options, for key emitting sectors.
- Furthermore, it becomes necessary to develop emissions mitigation frameworks to measure, report and verify them in strategic sectors, particularly the definition of Nationally Appropriate Mitigation Actions (NAMAs).
- The need for better estimates on the potential economic and financial costs of climate change impacts in key productive sectors has also become evident.
- Likewise, it is important to analyze the social, economic and environmental impacts derived from the fulfillment of Mexico's international responsabilities on climate change, both present and future.

Thank you for your attention

México. Cuarta Comunicación Nacional ante la Convención Marco de las Naciones Unidas sobre el Cambio Climático (Only in Spanish):

http://www2.ine.gob.mx/publicaciones/download/615.pdf

http://unfccc.int/resource/docs/natc/mexnc4s.pdf