INECC

INSTITUTO NACIONAL
DE ECOLOGÍA
Y CAMBIO CLIMÁTICO

MEXICO CLIMATE CHANGE

National Institute of Ecology and Climate Change

INECC

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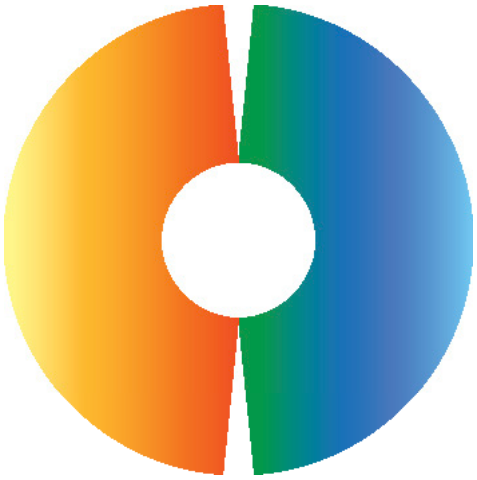
International Cooperation



CLIMATE CHANGE

MÉXICO
GOBIERNO DE LA REPÚBLICA

SEMARNAT
SECRETARÍA DE MEDIO AMBIENTE Y RECURSOS NATURALES

INECC
INSTITUTO NACIONAL DE ECOLOGÍA Y CAMBIO CLIMÁTICO

CULTURA
SECRETARÍA DE CULTURA

gef

Environment and Climate Change Canada

PNUD

6ª Comunicación Nacional

CAMBIO CLIMÁTICO Y CRECIMIENTO VERDE

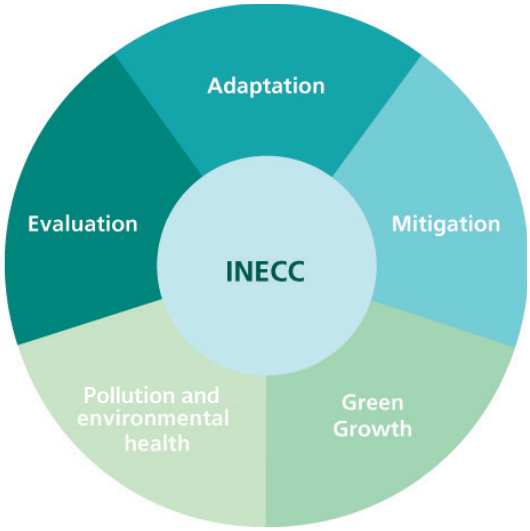

LABORATORIO DE
CAMBIO CLIMÁTICO
Y GANADERÍA

Who we are?

The National Institute of Ecology and Climate Change (INECC) was created in 2012 by the Climate Change General Law, with the aim of generating and integrating technical and scientific knowledge on climate change ecology, green growth, pollution and environmental health.

What do we do?

- Coordinates and develops studies, as well as scientific and technological research projects on climate change, environmental protection and sustainability.
- Provides technical and scientific support to design, carry out, and assess national policies on these topics.
- Participates in the development of strategies, plans, programs, tools, and actions, while contributing technical and scientific information related to sustainable development, the environment, and climate change.
- Promotes capacity building at the state and municipality level, for developing emission inventories and mitigation and adaptation policies to climate change.



- **Topics:**
  - a) Climate change adaptation
  - b) Climate change mitigation
  - c) Green Growth
  - d) Assessment of climate change mitigation and adaptation policies
  - e) Pollution and environmental health

How?

INECC provides technical and scientific inputs for decision making to the public (at the three governmental levels) and private sectors, as well as to academia, and non-governmental organizations, both nationally and internationally.

It has analytical reference laboratories for pollution and atmospheric monitoring, toxic substances management, genetically modified organisms, biosecurity and eco-toxicology.

In addition, to fulfill its goals, the Institute places great value on its work with local communities with a strong emphasis on gender equality in environmental and climate change initiatives, especially in high vulnerable areas.

INECC at international level

Mexico joined the United Nations Framework Convention on Climate Change (UNFCCC) in 1994 and has taken its responsibilities and commitments within this multilateral forum very seriously.

Worldwide, Mexico was the second country to implement a specific law for climate change, the General Law of Climate Change (2012), which establishes the creation of INECC, the first national research organization of its kind in Latin America.

Specifically, INECC is responsible, among others, designing Mexico´s NDC and its implementation pathways, and preparing the National Communication and Biennial Update Reports to the UNFCCC.

At the national level, INECC is the focal point to the following international forums and organizations:

- Intergovernmental Panel on Climate Change (IPCC)
- Inter-American Institute for Global Change Research (IAI)
- Climate & Clean Air Coalition (CCAC)
- Nairobi work programme on impacts, vulnerability and adaptation to climate change
- Regional Centre for Sustainable Consumption and Production - Stockholm Convention on Persistent Organic Pollutants
- Adaptation Fund established under the Kyoto Protocol
- National Designated Authority to the Climate Technology Centre and Network - CTCN.

United Nations Framework
Convention on Climate Change

With regard to international cooperation, INECC has implemented bilateral, triangular and regional initiatives with multiple countries:

Canadá
Chile
Cuba
Denmark
France
Germany
Japan
Korea

Latin America
Netherlands
Spain
Switzerland
United Kingdom
United States

INECC also provides technical support for the development and strengthening of capabilities, mainly in Latin America.

Belize
Chile
Costa Rica
Cuba
Dominican Republic
El Salvador

Guatemala
Honduras
Jamaica
Nicaragua
Panama

With regard to multilateral funding, as well as technical and scientific cooperation, INECC has collaborated with the following organizations and international institutions:

- Climate and Clean Air Coalition (CCAC)
- Commission for Environmental Cooperation (CEC)
- Global Environment Facility (GEF)
- Green Growth Global Institute (GGGI)
- Inter-American Development Bank (IDB)
- United Nations Development Programme (UNDP)
- United Nations Educational, Scientific and Cultural Organization
- United Nations Environment Programme (UNEP)
- United Nations International Children's Emergency Fund (UNICEF)
- World Bank (WB)
- World Resource Institute (WRI

Adaptation of the Gulf of Mexico coastal wetlands to the climate change impacts

Objective

To face climate change through the implementation of preliminary adaptation measures to reduce the vulnerability of communities settled in the coastal wetlands of the Gulf of Mexico.

Its ecosystemic approach conceived of a dynamic interrelationship between people, society, culture, ecological and socio-cultural systems, promoting gender equity and active participation of communities, as well as the strengthening of adaptive capabilities, along with the involvement and appropriation of adaptation measures.

Funding Agency

World Bankd and Nacional Financiera, S.N.C.

Implementing Entity

The National Institute of Ecology and Climate Change (INECC) and the Mexican Institute for Water Technology (IMTA).

Partners (at national and international)

The National Water Commission (CONAGUA) and the National Commission for Natural Protected Areas (CONANP).

Outcomes

5,733 people directly benefited and 707,648 indirectly in the states of Veracruz, Tabasco and Quintana Roo.

The following adaptive measures were implemented in each community:

1. **Papaloapan Lake – Alvarado Lagoon, Veracruz**
    - Mangrove and riparian vegetation reforestation, and river channel dredging to restore water flow.
    - Sustainable use of mangrove through a Management Unit for Wildlife Conservation (UMA).
    - Ecological planning of Alvarado municipality, with a climate change approach.
    - Design of climate change adaptation measures.

2. **Carmen-Pajonal-Machona lagoon system**, Tabasco:
   - Mangrove and riparian vegetation reforestation, and river channel dredging to restore water flow.
   - Palafittes with elevated crop gardens, rainwater and solar energy harvesting to safeguard against floods.
   - System for rainwater harvesting and purification in an elementary school.
   - Radio-communication equipment for sending and receiving climate and health alerts.
   - Strengthening communities' capabilities.
   - Provide a climate change approach in the ecological land management in the state of Tabasco.
   - Design of climate change adaptation measures .

3. **Punta Allen wetland, Sian Ka'an biosphere reserve, Quintana Roo**
   - Coral reef restoration.
   - Reestablishment of water flow at El Playón for natural restoration of the mangrove.
   - Oceanographic equipment for monitoring of the protected area.

4. **Transverse measurements in the three pilot sites:**
   - Installation and operation of three tide gauges/weather stations integrated to the National Tide Service Network.
   - Project communication and outreach strategies.
   - Reinforcement of capabilities.
   - Meetings and related workshops with local civil society organizations, academics, and federal, state and municipal institutions.

Artisanal brick production

Objective

Develop a market study related to the mitigation of black carbon and other pollutants caused by the brick industry.

The project proposed a business model based on a portfolio of sustainable public policies with the objective of reducing Short-lived Climate Pollutants caused by artisan brick production in Mexico.

Agency or financial institution

Climate & Clean Air Coalition (CCAC

Implementing Entity

United Nations Environment Programme (UNEP)

Outcome

The project will potentially contribute to the identification of business opportunities in the sector, with the aim of changing the vision of traditional producers, helping them to understand the evolution of the market, to establish links with the private sector, diversify their portfolio, to take advantage of financial sector loans and to make their production and marketing processes more efficient.

Likewise this project seeks to lay the foundations for a National Improvement Program for the artisanal brick sector, focusing on process governance at a national level, integrating normative elements, social awareness, training, certification of labour skills, and technology transfer in support centres for training and innovation.

The project will benefit both producers and decision-makers, as well as key players such as politicians, public policy makers, academics and technology providers, among others.

Mexico-Denmark Cooperation Project on Energy and Climate - Danish Energy Agency

Objective

Strengthen capabilties for Mexican government departments working on climate change or energy, such as the Department of Energy (SENER), the Department of Environment and Natural Resources (SEMARNAT) and the National Institute of Ecology and Climate Change (INECC). Specifically, the project aimed to improve the design and implementation of public programmes and to identify opportunities as well as obstacles for achieving goals on climate change mitigation.

The Mexico-Denmark program provided technical assistance, monitoring and support to develop guidelines, assessment criteria, methodological frameworks and for designing initial assessments of climate policies of the Special Programme on Climate Change (PECC) 2014-2018, as well as the Transverse Annex of the Federal Expenditure Budget on the subject of climate change (Annex 16).

Agency or financial institution

The Danish Ministry of Foreign Affairs (MFA), through the Danish Energy Agency (DEA).

Implementing entities

A Steering Committee composed of high-level representatives from SEMARNAT, SENER and DEA was established for managing the programme at the national level.

Participants (national or international partners)

SEMARNAT and INECC for the climate change component, SENER and the National Committee for Efficient Energy Use (CONUEE) for renewable energies and energy efficiency components. At the international level, the Danish Ministry of Foreign Affairs (MFA) and the Danish Energy Agency (DEA).

Outcome

Strengthening of INECC's institutional assessment capabilities, as well as those of the government departments and institutions that form part of the National System of Climate Change (SINACC), listed below:

- Inter-departmental Committee on Climate Change.
- Climate Change Council, composed of 15 members from the social, private and academic sectors.
- Governments of the 32 federal states.
- Governments of Mexico's local municipalities, represented in SINACC by the national associations of legally recognized municipalities.
- National Congress.
- INECC.

National Inventory of Greenhouse Gases and Compounds Emissions

Objective

Update the National Inventory of Greenhouse Gases and Compounds Emissions to comply with the conditions established by the United Nations Framework Convention on Climate Change (UNFCCC), based on methodologies determined by the Intergovernmental Panel on Climate Change (IPCC).

Agency or financial institution

Global Environment Facility (GEF).

Implementing entity

United Nations Development Programme (UNDP), through the Sixth Communication from Mexico to the UNFCCC.

Participants (national or international partners)

National Institute of Ecology and Climate Change (INECC) and institutional arrangements with:

- SEMARNAT
- Ministry of Energy (SENER)
- Ministry of Economy (SE)
- Mexican Geological Survey (SGM)
- Ministry of Communications and Transportation (SCT)
- Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA)
- Agri-food and fisheries information system (SIAP)
- National Institute of Geography and Statistics (INEGI)
- State Governments
- National Water Commission (CONAGUA)
- National Forestry Commission (CONAFOR)
- Mexican Petroleum (PEMEX)
- Federal Electricity Commission (CFE)
- National Iron and Steel Chamber
- National Chamber of the Cement Industry
- National Paper Chamber
- National Chemical Industry Association
- Glass industries
- National Association of the Lime Industry

- National System of Individual Identification of Livestock (SINIIGA)
- National Confederation of Livestock Organizations (CNOG)
- National Livestock Association (ANGADI)
- National Institute of Forestry, Agriculture and Livestock Research (INIFAP)
- National Autonomous University of Mexico (UNAM)
- Postgraduates College
- Shared Risk Trust (FIRCO)

Outcome

As a direct result of the project, INECC developed and strengthened technical capabilities, forming and establishing a group of experts for each emission source category: energy; industrial processes and product use; agriculture, forestry and other land uses (AFOLU); and waste.

In addition, the project's resources allowed INECC to produce studies in key categories:

- Emission factors for the different types of fossil fuels and alternative fuels consumed in Mexico.
- Calculation of the amount of vehicle use at the local level in Mexico, for modelling the estimation of greenhouse gas emissions and mitigation measures.
- Measuring emission factors for carbon dioxide (CO2), suspended particles of 2.5 and 10 microns (PM2.5 and PM10) and short-lived pollutants: methane (CH4) and black carbon caused by agricultural burning practices.
- Estimation of methane emission factors due to enteric fermentation of cattle by age, sex, use, diet and production system by region.
- Update of activity data in final disposal and biological treatment of waste.
- Incorporation of uncertainty into activity data and emission factors.

Quantifiable gathered data helps in the definition of public policies, thus directly benefiting the national public administration and, indirectly, the population at large.

Initial assessment of the Minamata Convention in Mexico

Objective

Provides a country's panorama with regard to mercury management and allow the rapid implementation of the Minamata Convention, through technical and scientific knowledge and the use of appropriate tools by those responsible for the management of mercury and its compounds.

Agency or financial institution

Global Environment Facility (GEF), with INECC acting as executing agency

Implementing entity

UNEP

Participants (national or international partners)

- Mexican Association of Batteries (AMEXILAS)
- Mexican Association of the Automotive Industry (AMIA)
- National Association of Paint and Ink Manufacturers of (ANAFAPYT)
- National Association of the Chemical Industry (ANIQ)
- National Association of Manufactures of Buses, Trucks and Tractors, A.C. (ANPACT)
- National Cement Chamber (CANACEM)
- National Chamber of the Iron and Steel Industry (CANACERO)
- National Chamber of the Transformation Industry (CANACINTRA)
- National Chamber of the Cosmetics Industry (CANIPEC)
- National Chamber of the Pulp and Paper Industries
- National Chamber of the Pharmaceutical Industry (CANIFARMA)
- National Chamber of Electrical Manufacturers (CANAME)
- Mining Chamber of Mexico (CAMIMEX)
- National Center of Measurements (CENAM)
- National Center for Prevention Programs and Disease Control (CENAPRECE)
- Mexican Council of Funeral Services Companies (COMESEF)
- Federal Electricity Commission (CFE)
- Federal Commission for Protection against Health Risks (COFEPRIS)
- National Water Commission (CONAGUA)
- CYDSA S.A. of C.V.
- Trust for the Saving of Electric Energy (FIDE)
- Mexican Social Security Institute (IMSS)
- Mexican Petroleum (PEMEX)
- Federal Office of Environmental Protection (PROFEPA)

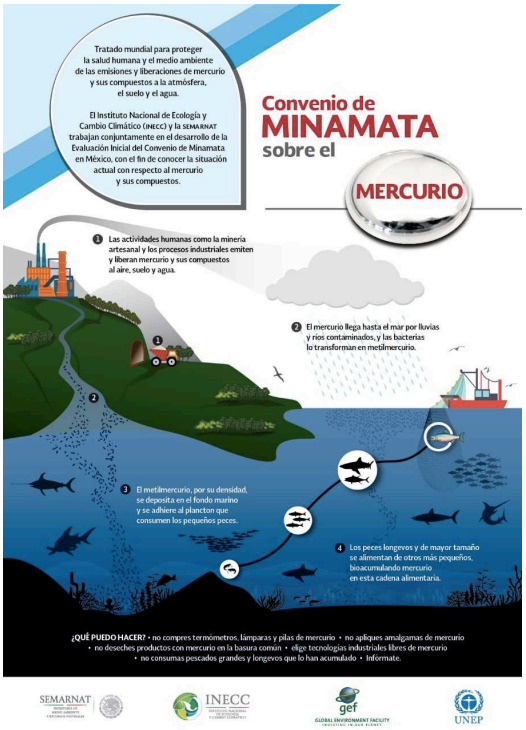
- Ministry of Finance (SE)
- Ministry for the Sustainable Development of Querétaro
- Ministry of Environmental and Natural Resources (SEMARNAT)
- Ministry of Health
- Mexican Geological Service (SGM)

Outcome

The project includes five components:

1. Setting up a mechanism for process coordination and organization.
2. Assessment of national infrastructure and capacity for mercury man agement and monitoring, including national legislation.
3. Development of a mercury emissions and releases inventory using tools developed by UNEP, as well as identifying strategies for assessing mercury in contaminated sites.
4. Identification of the challenges, requirements and opportunities to implement the Minamata Convention.
5. Preparation and validation of the national MIA report, for the implementation of activities and dissemination of results

According to the United Nations proposed methodology, the document "Initial Assessment of the Minamata Convention in Mexico" will develop the components and an outreach strategy of the results.



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