

ICLEI MECS, Mexico (Federal)

Municipal Climate Action Planning and Implementation for Mexican Cities



In Mexico, the Municipal Climate Action Plan (Plan de Acción Climática Municipal, short PACMUN) strengthens local capacity by training local government officials to promote municipal climate change policies and development plans through the three main phases: elaboration, follow up, and implementation. Additionally, to increase multi-level government action, the PACMUN program consists of three methodological areas: GHG emissions inventories and mitigation, climate change vulnerability awareness, and adaptation guidance.

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Summary

The Municipal Climate Action Plan (PACMUN) is a program of ICLEI - Local Governments for Sustainability. The initiative is led by the Mexico, Central America and the Caribbean Secretariat (ICLEI-MECS), supported by the Mexican federal as well as subnational government, and the British Embassy Mexico Prosperity Fund. To support the coordination and cooperation between levels of government, ICLEI, the Mexican National Institute of Ecology and Climate Change (INECC) and the British Embassy in Mexico have been crucial to strengthening links between stakeholders.

Through working together, this strategic synergy has facilitated the implementation of an integrated climate policy in Mexico, as well as created the basis for a multi-governance roadmap to bolster the climate change policies of both new and existing national and sub-national institutions. The main mechanisms and contributions of the PACMUN include: strengthening institutional resilience, and the facilitation of strategic relationships or partnerships between participating municipalities, agencies, national and international associations, and local governments worldwide.

PACMUN: Calling on cities for national action

Countries will not reach their national level climate targets without commitment and action at both the local and federal level. That being said, cooperation across levels of government is easier to talk about than to accomplish. Implementing multilevel action requires frequent communication, training, and commitment from all parties. The PACMUN represents an initiative that has achieved multilevel climate action, to the extent that it now serves as an example for other countries to replicate.

Response from the local level upwards, however, can be prohibitively costly. The implementation and enforcement of the mitigation and adaptation measures, which have been identified by the municipalities, depend on the ability of local management bodies to find sources of financing, in order to fund feasibility studies and implement programming. This in turn requires supportive national and international frameworks.



Population / Land area
122,300,000/ 281,573.95 km² (2013)

Federal GDP
1.261 trillion USD (2013)

Participating Municipalities
258



The ICLEI office in Mexico City is responsible for ICLEI's activities in Mexico, the Caribbean, and Central America.

Intensification of climatic challenges in Mexican cities

In the past two decades, Mexico has faced a growing number of extreme hydro-meteorological events such as hurricanes, floods and droughts; the damage from which has subjected the country to high economic and social costs. For example, the agrarian segment of the population has found it difficult to cultivate crops and preserve their cattle under the threatening circumstances of weather related disaster. This challenge necessitates adaptation activity at the local level in order to reduce the vulnerability of citizens to the effects of climate variability.

Simultaneously, Mexico's cities continue to heavily impact the environment through their GHG emissions. In Mexico's case, GHG emissions are particularly significant in regards to the energy, transportation and waste sectors; therefore, there is a strong need for local level mitigation action.

In 2012, to address Mexico's dual challenge, Mexican climate change policy underwent a significant evolution: it became the second country in the world to approve pioneering climate change legislation, known as the General Climate Change Law (LGCC). Through the LGCC mandate, Mexico became the first developing country to implement a climate action plan at the local level which promoted multilevel governance.

The LGCC brought fundamental change, opening up opportunities for building resilience, but also presenting formidable challenges. For example, finding ways to

enhance effective communication between the three levels of government, as well as securing financial support to develop and implement local climate change policy and programs (i.e. PACMUN), presented major barriers.

Mexican Municipalities developing and implementing the PACMUN – a transformational change

The PACMUN (Municipal Climate Action Plan) arose in 2011 following ICLEI-MECS's identification of the opportunity to fund a pilot project for the development and the strengthening of local capacity through international cooperation. After the great success of the national pilot project, ICLEI-MECS then upgraded and up-scaled the PACMUN as a program for climate change mitigation which serves as a replicable model for local government collaboration.

The PACMUN program's goal is to strengthen institutional capacities within municipalities through the establishment of strategic relationships or partnerships between participating local governments, agencies and national and international associations worldwide. Of equal importance is the promotion of public policies that enable the sourcing of funding and the development of strategies to achieve the implementation of mitigation measures and sustainable adaptation in Mexico.

The following three methodological areas lie at the heart of the program:

Greenhouse Gas (GHG) emissions inventories to track the total emissions from municipalities. This is accomplished by adapting the IPCC methodology, while categorizing the results under the headings of; energy, waste, industrial processes, agriculture, and LULUCF (Land use, land-use change and forestry).



Over 15 months, 258 Mexican municipalities have joined the project PACMUN; 30 have officially finished the project.

Box 1: PACMUN's Three Methodological Areas of Action

The development of PACMUN is divided into three major methodological areas:

GHG emissions inventories: The PACMUN conducts an initial diagnosis for the participating municipality in respect to GHGs emitted in a base year. The inventory standards include the following characteristics: transparency, completeness, accuracy, consistency and comparability in accordance with the Intergovernmental Panel to Climate Change (IPCC) methodology.

ICLEI made necessary adjustments to the methodology for its application at the municipal level, taking into account the following emission categories: Energy, Industrial Processes, and Agriculture, Land Use, Land Use Change and Forestry (LULUCF), and waste.

Mitigation: The methodology used in the PACMUN to address mitigation issues is oriented to identify, analyze, evaluate and prioritize mitigation measures for municipalities, regardless of their characteristics. Thus, each municipality is responsible for selecting and undertaking those measures that best suit their own circumstances and mitigation opportunities. The goal is to make an initial diagnosis of mitigation in order to assess its key sectors - Energy, Transport, Industry, Residential, Commercial, Agricultural, Livestock, Forestry, and Waste - resulting in measures proposed by the municipalities for each.

The chosen mitigation measures are based on analyses, taking into account the direct and indirect benefits that the city could gain through their implementation. Following this, the municipality evaluates and ranks the best proposals, to serve as a starting point for local implementation.

Vulnerability and Adaptation: In developing their PACMUN, a municipality evaluates its current vulnerability towards hydro-meteorological events by establishing an inventory of their socioeconomic indicators for health, education, housing and population, as well as other pertinent sectors. In addition, an analysis of social perception to assess the sensitivity and adaptability of different productive sectors to those events is performed, and adaptation measures that take a sustainable approach to reducing the vulnerability are identified.

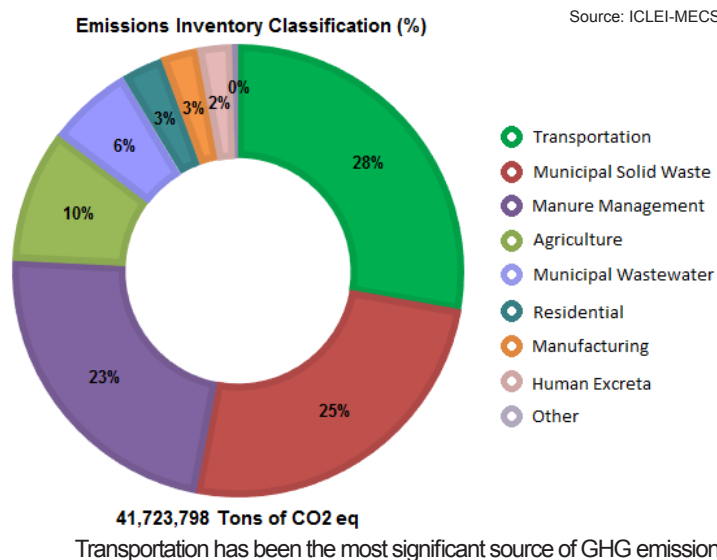
Mitigation actions, to harness opportunities to reduce, avoid, or absorb CO₂ emissions. The most significant being actions taken in regard to the generation and usage of electricity, as well as transportation and waste management.

Vulnerability focus, in order to identify hydro-meteorological hazards (primarily torrential rains and flooding) and their impacts on municipal sectors and production systems. Through the implementation of strategic adaptation actions across topics pertaining to education, health, infrastructure and food security, the impact of climate change on urban and natural ecosystems is reduced.

Identification of pilot cities and expansion of the project

In order to include a representative range of Mexican cities and their varying geographical contexts, PACMUN identified key sectors and needs according to each municipality or region, beginning with nine pilot municipalities in the first trimester of 2012. To date, the number has been expanded to 258 participating municipalities across 23 Mexican states. Through PACMUN's methodological areas of action (see Box 1) the following adaptation and mitigation benefits have been achieved to varying degrees:

- Increased knowledge of vulnerability and opportunities for adaptation to climate change
- Improved planning, leading to the possible reduction of capital investment and spending on infrastructure maintenance
- Preservation and promotion of regional "green" areas



- Reduced traffic congestion
- Reduced GHG emissions and pollution
- Promotion of efficient energy use
- Efficient and sustainable economic development for industrial processes, including improved waste and resource management, reducing the consumption of fuel, water, electricity, etc.
- Economic savings from the use of environmentally friendly technologies
- Setting the foundation for a green economy

The administrative procedure involves the submission of a letter of interest, followed by the signing of a mutual agreement. Once accepted, each municipality is paired with a designated PACMUN area manager responsible for the provision of technical advice, in coordination with academics or consultants who support the local municipality. To ensure success, PACMUN carries out the following actions:

- A letter of commitment from the municipality to provide project staff with the help of a local university or technical college for any assistance required for the technical aspects (e.g. inventory, monitoring) of the PACMUN program.
- Follow up from the PACMUN facilitators to ensure compliance with the objective of the program.
- The exchange of the pilot municipalities' experiences and guidance, to enhance replicability and catalyze similar PACMUN projects among participating municipalities in the national and international network.

Budget and Finances

The funding for the PACMUN program is provided through the British Embassy, Mexico's Prosperity Fund, INECC, and ICLEI MECS. Together this amounts to 2,200,000 Euro.

Results and impacts of the project in the community

The experiences of 30 PACMUN pilot municipalities helped define PACMUN's scope of activities for others to follow. Thus far, PACMUN's activities have included the preparation of documents on behalf of municipal officials, with guidance and training having been provided by the ICLEI-MECS Implementation Unit. At publication, 30 municipalities had fully completed their documents and 228 municipalities were at some stage of their development process, resulting in a total of 258 municipalities engaged in the adoption of mitigation and adaptation measures through Council decisions. This means that more than 10 percent of the country's municipalities are engaged in a climate change program. The expected long-term outcome is the assignment of a Green Fund of Local Governments for mitigation and adaptation, and the replication of the model at regional and international levels.

Over 800 municipal officers have been trained to prepare their Municipal Climate Action Plan, through more than 25 workshops conducted across various Mexican cities. This has included more than 1000 hours of remote training via telephone calls and webinars.



Robles Peiro, Mayor of Zapopan, delivers the PACMUN document to Edgar Villaseñor Franco, Regional Director of ICLEI-MECS. Mexico, Central America and Caribbean.

GHG emissions inventories help municipalities target crucial sectors for mitigation. Municipalities have the potential to mitigate between at least 15-20 percent of total emissions through PACMUN. In order to establish the municipal baseline for GHG emissions, inventories for emissions have been established, while sustainable energy production, sustainable transport, and more efficient solid waste management have been promoted to reduce further emissions. The GHG inventories allow municipalities to identify and manage their key GHG emissions sources, with the aid of various administrative actors and sectors. Unfortunately, municipalities have great difficulties obtaining disaggregated local data of good quality. It is therefore necessary to promote a strategy of collaboration between the different actors involved, as well as between the levels of government. In mitigation results posted by 30 PACMUN municipalities, 40 percent of measures taken were in the waste sector (26 percent) and the transportation sector (14 percent).

Resilience and adaptation measures have reduced vulnerability in the following sectors: Agricultural Biodiversity, Communications and Transportation, Energy, Forestry, Livestock, Water, Mining, Fishing, Health, Tourism, and Urban Housing (and equipment). Environmental education, awareness programs for sustainable development, the improvement of agricultural practices and sustainable infrastructure are examples of measures to support this transformation. The major climate vulnerability identified by Mexican municipalities is heavy rain; adaptation actions have been uniformly distributed throughout the municipalities, with the largest focus being placed on risk management, education, and capacity building.

Lessons learned

The PACMUN has provided an excellent guide and created effective public policies for the municipalities of Mexico. The biggest challenge has been to promote the project and spark the interest of municipal leaders. In Mexico, local capacity building has been a challenge, and the key to success has been a concentration on joint collaboration.

PACMUN helps municipalities to manage information and create awareness through training programs directed towards a variety of actors. However, a further strengthening of the knowledge management responsibilities at different levels of government is necessary in order to obtain good data and improve the quality of GHG inventories.

Systematic monitoring in the municipalities is a key factor for success, because it can foster better communication among stakeholders. Regular communication and awareness of the context can prompt a rapid response to an issue from the Implementing Unit.

Proven examples help to eliminate common misconceptions and provide guidance to other local governments. This includes disproving the belief that the PACMUN is inaccessible and requires significant expert capacities for the implementation of mathematical calculations. Since every municipality is situated in a unique context, it is important that they select the options which best suit their projects' local sustainability requirements. The mitigation and adaptation measures proposed by the municipalities can then be prioritized according to their capacities, and will reflect the consensus of the municipality's sectorial stakeholders.

The National Law on Climate Change has significantly improved local climate action planning. The main tools for the project have been based on a guide to develop PACMUN, elaborated by ICLEI's Implementing Unit and based on IPCC

Partnering for success

The implementation of the PACMUN has been possible thanks to the intervention of various agencies from different sectors, including ICLEI Mexico, which have led the project, the British Embassy in Mexico, which provided financial support, and the National Institute of Ecology and Climate Change (INECC), which provided technical support and the use of their facilities. Additionally, local partnerships and networks for engagement and conferences organized for local public policy-makers have played an important role in the development of PACMUN. The Covenant of Mexico City has been an important platform for city networks and local congresses, while agreements with state agencies have helped accelerate understanding and action among Mexican municipalities.

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methodologies. It has resulted in the creation of a database which is updated in real time via computing platforms.

A lack of continuity in municipalities remains a challenge. In Mexico, the rotation of the local government every three years has affected PACMUN's development.

Replication

PACMUN represents a program which encourages the three levels of government (local, state and national) to work together to implement climate change initiatives and support national policy; in the case of Mexico, the Climate Change General Law. In the long run, the PACMUN will be replicated in more and more municipalities of Mexico, with the directive of helping the Federal Government implement the Climate Change General Law at the local level.

In this way, the PACMUN has enhanced the ability of Mexican local governments to effectively implement national climate change policies in a replicable way. In the long term, the hope is that the project will also be replicated in other countries in the Central America and Caribbean region.

Sources

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