Lessons learned from the project Climate Protection in the Mexican Urban Policy

Executive Summary

2017 - 2020

GOBIERNO DE MÉXICO
DESARROLLO TERRITORIAL
SECRETARÍA DE DESARROLLO AGRARIO, TERRITORIAL Y URBANO
MEDIO AMBIENTE
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Cities and Climate Change

The current urban development pattern will largely determine the level of access to greener public spaces, better air quality, safer and more comfortable streets, and a multimodal transportation that prioritizes walking and cycling. Furthermore, the incorporation of green infrastructure elements or systems into urban planning allows to make better use of natural resources, address water management and heat island issues, and make better decisions regarding changes in land use and its connectivity with protected natural areas.

Over the last 30 years, Mexico's urban population has doubled, while urbanized areas have grown tenfold on average (1), resulting in a fragmented, dispersed and unconnected expansion. Consequently, higher greenhouse gas (GHG) emissions are generated, and social inequality deepens. At the same time, this trend of disorganized urban growth does not help to reduce emissions from the transport sector, the largest contributor to GHG emissions at national level, accounting for 26 % in 2015 (2); a percentage that may be even higher in local level emissions.

Tackling climate change has been a priority for Mexican cities that GIZ Mexico has supported since 2017. Today, this work —materialized in the document *Lessons learned from the Climate Protection Project in Mexico's Urban Policy (CiClim) 2017-2020*— is an invitation to know and learn about success stories and their respective actors in order to stimulate the already existing potential in cities, on their path to design resilient, inclusive and climate-committed cities.

CiClim political context and cooperation framework

In 2017, following the foundations laid by the GIZ project called Urban-Industrial Environmental Management (PGAUI), the Secretariat of Agrarian, Territorial and Urban Development (SEDATU) and the Secretariat of Environment and Natural Resources (SEMARNAT) recognized the relevance of continuing the work on urban sustainability issues.

This precedent set the stage so that, for the first time, a project about Climate Protection in the Mexican Urban Policy —financed by the International Climate Initiative (IKI)— had SEDATU as its main counterpart. As a member of the Inter-Secretariat Commission on Climate Change, SEDATU recognized the importance of climate protection in urban development, which throughout cooperation work became important in the international arena.

Urban challenges and working lines of CiClim

The project addressed four main urban development challenges:

During the period 2017-2020, the project CiClim worked on the following components and cities:

CiClim main components

Ecosystem services

- **Conserving biodiversity** in cities and their outskirts, so future generations have access to better water and air quality for a decent living.

Urban planning

- **Designing compact cities,** where people's homes are better connected with their place of work, schools, public spaces, and green areas.
- **Incorporating green-infrastructure elements** into urban planning to make a sustainable use of resources and increase resilience to climate change.

Sustainable urban mobility

- **Improving mobility planning** so that people have greater access to sustainable public spaces and streets by promoting non-motorized, inclusive, and safe mobility.
- **Fostering capacity building** to implement urban infrastructure for active and intermodal mobility.

Partner cities

Hermosillo

- Cycle route platform and road safety strategy
- Green infrastructure in the private sector

Morelia

- Densification strategy including climate change criteria
- Ecosystem services valuation for the conservation of natural protected areas
- Urban vegetable gardens that yield social, environmental, and economic benefits

Mérida

- Sustainable urban mobility and tactical urban planning
- Green infrastructure, urban woodland, and access to public spaces
- Digital innovation, citizen participation, and climate change

Tlaquepaque y Zona Metropolitana de Guadalajara

- Sustainable urban mobility and tactical urban planning
- Green infrastructure in bicycle lanes

León

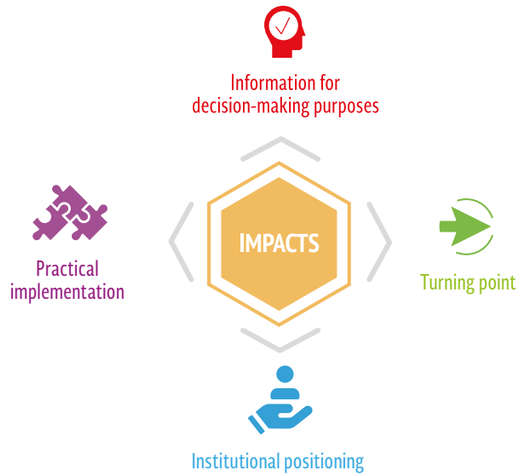
- Sustainable forest nurseries for the reforestation of a protected natural area
- Valuation of ecosystem services and diagnosis of urban biodiversity
- Emergent bicycle lane

Impacts from the project CiClim

The impacts of the project were classified into four categories, for a better understanding of their scope.

1) *Information for decision-making purposes;*
2) *Turning point;*
3) *Institutional positioning, and*
4) *Practical implementation*

Type of impacts of the project CiClim. Adapted from the document Lessons learned from the project Climate Change and Protected Areas Management Project in Mexico 2011-2014.



The following are some of the impacts achieved in collaboration with cities, the federation, and organized civil society.

Institutional positioning

The General Direction for Environment of the City Council of León in Guanajuato included biodiversity conservation in its urban planning through the definition of 23 indicators that help to evaluate and monitor the status and progress in the conservation of existing biodiversity in the city of León. This and other initiatives of the City Council of León promote the recovery of natural areas preventing urban-sprawl growth and contributing to the provision of ecosystem services.

In Morelia, Michoacán, since 2017, the Municipal Planning Institute (IMPLAN) has promoted a Municipal Urban Development Program (PMDU) including ecosystem services and climate change criteria. With the support of GIZ Mexico, IMPLAN Morelia included in its PMDU 2020-2040 the description of areas of environmental value, risk management, environmental management, mobility and densification strategies including a climate change perspective, both in mitigation and adaptation.

Practical implementation

In cooperation with Bukis a la Calle, a civil society organization, a road safety strategy was implemented in Hermosillo. This initiative aims to improve conditions for pedestrians through a comprehensive road safety strategy, whose goal is to achieve zero deaths and zero serious injuries from road accidents. Actions carried out included painting 400 square meters of crosswalk areas, the reduction of crossing distances, including bicycle lanes, and planting trees.

The Secretariat of Infrastructure and Public Works in Jalisco developed and implemented a mobility and green infrastructure project in the Guadalajara Metropolitan Area, which suffers from floods that cause severe damage to roads. Infiltration planters were installed in a 1.3 km bike path that connects two main roads, helping to prevent flooding and improve road safety conditions for cyclists.

Three emergent bicycle lanes were built in the following municipalities, San Nicolás de los Garza, Nuevo León; Torreón, Coahuila; and León, Guanajuato. This effort involved cross-sectoral and inter-agency coordination with SEDATU, municipalities, civil society organizations, and the private sector regarding the management, coordination, implementation and communication of the bicycle lanes. In brief, roughly 30 km of new cycling infrastructure were developed, with a reduction of approximately 2,450.34 tons of carbon dioxide equivalent per year (tCO_2 e/year).

Sharing spaces to carry out webinars and the *Support Groups for Climate Action* in a digital version fostered the exchange of experiences between Mexican and German cities as to the implementation of actions that promote greater resilience and response to climate and health emergencies.

Turning point

Since CiClim started, green infrastructure was identified as a working line that combines the urban and environmental dimensions with a focus on climate change. At first, a relevant diagnosis was made in Mexico and later an *International Green Infrastructure Forum* was organized. After this forum, the *Green Infrastructure Road Map* was drawn up, which has been used as a reference to develop green infrastructure strategies in León and Mexico City, as well as for the ongoing evaluation of climate co-benefits from SEDATU's Urban Improvement Program (PMU, in Spanish).

The Road Map makes it more feasible to incorporate green infrastructure strategies into the design of different projects and scales, as well as streets, public spaces, buildings, housing, among others. Furthermore, the multiple benefits of green infrastructure are documented; in particular, in relation to water, mobility, biodiversity and public space. It is evident that, whereas it is mainly an adaptation action, it can also contribute to mitigation through CO_2 capture and the promotion of active mobility.

Information for decision-making purposes

The results of a *Cyclist Profile Tool* provide a diagnosis for governments and organizations that seek to promote bicycle mobility and monitor its effects on people's mobility trends over time. The main area of opportunity is to understand the socioeconomic characteristics of the cyclists who are targetted by the sustainable urban mobility policy. It is worth mentioning that another target are potential bicycle users.

The Urban Ecosystem Services Integration approach advocates for the gradual integration of ecosystem services into urban management and planning. This helps to identify priority environmental services to show, afterwards, how their conservation can be achieved in practice. A *Manual* and a *Course* were designed to support the integration of ecosystem services addressed to government staff, non-governmental organizations, the private sector and professionals who endorse urban planning and urban management processes.

SEDATU in cooperation with GIZ developed the course *Streets and Green Infrastructure* taught in Tlaquepaque, Morelia, Mérida and Hermosillo, based on the New Urban Agenda and the Sustainable Development Goals. The course aims to strengthen local technical capacities for a transition into sustainable, safe and inclusive cities in favor of non-motorized mobility. Thanks to the positive results of the course, its contents were adapted in 2020 to a virtual course, that was available through the educational platform of the National Institute for Federalism and Municipal Development (INAFED). With the help of this Institute, the virtual course reached municipalities in the 32 states of the country, with more than 3,000 civil officials were enrolled.

Lessons learned

In December 2020, CiClim team, along with counterparts from SEDATU, SEMARNAT and representatives from the five partner cities, conducted a reflection exercise on the main lessons learned. The GIZ sustainable development management model, called Capacity Works, was used as a reference to highlight individual learning and organizational knowledge management. In this context, some of the lessons learned are shown below, grouped under the five success factors of the Capacity Works model:

Strategy

The political will for a transition into making changes to mandatory schemes (through regulation or planning instruments) was supported. The anticipated allocation of local or federal budget was decisive to move from designing the projects to constructing infrastructure. Implementing these international cooperation projects, especially in times of pandemic and state and municipal election periods, requires flexibility and an adaptative management to changing reality.

Cooperation

It is essential to involve actors such as organized civil society, the private sector and academia, for the development, continuity, and greater success of municipal project interventions. Improving the institutional consolidation of results in the cities towards the national scale and vice versa. It is not only the how, but also necessary to find who (person or area) and the right time (through a political opportunity).

Steering structure

Cooperation projects focused on territorial implementation work best by establishing liaisons in cities, facilitating both communication and project management. In the case of the Federation, the work was performed with GIZ liaisons for specific topics, strengthening the link between the local and federal operation contexts.

Processes

The added value of the project is that the cooperation approach aimed to develop demonstration projects; in this sense, the cooperation process is just as important as the infrastructure built. This infrastructure is the result of the coordination between different authorities, where one of the essential elements was to identify key actors.

Learning

Training of institutional personnel and adopting new concepts must be taken on as continuous processes. For example, the Federation currently offers training to municipalities to include an urban-environmental approach. Besides, peer counseling leads to a better understanding of methodologies and lessons learned.

The concurrence of efforts, visions and different powers are essential synergies so that the environment becomes a cross-cutting dimension in urban planning; but it is also essential that the environmental sector considers urban development. Efforts should be articulated towards a common goal yielding multiple benefits. A pending task is to keep giving more visibility to examples and successful cases from this urban-environmental synergy, as they confirm the importance of a cross-sectoral view between SEDATU and SEMARNAT, such as the *Urban Environmental Agenda*.

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