

Resiliencia Mexico

Mexico: a mega-diverse country vulnerable to climate change

As a mega-diverse country, Mexico is in a privileged situation that also implies a greater responsibility to safeguard this wealth. In addition to Mexico's biological diversity, it is endowed with great cultural diversity.

Mexico is highly vulnerable to the problems of climate change: rising temperatures, reduction in rainfall levels, intense storms, increased severity of hurricanes, and rising sea levels.

According to the Global Forest Watch, from 2001 to 2018, Mexico lost 3.67 million hectares of tree cover and in 2018 alone, 267,000 hectares were lost.

According to the Natural Disaster Fund, from 1999 to 2017, 91% of the resources allocated for disaster declarations were related to climate and the most costly were the tropical cyclones Manuel and Ingrid in 2013 (US \$61.52 billion). The social and economic impacts of the effects of climate change are high, and projections are not encouraging. In a scenario where the average temperature increases by only 1.0°C, Mexico's per capita GDP growth would decrease by between 0.77% and 1.76%.

About the Project

Resilience is defined as "the capacity of a social-ecological system to absorb or withstand perturbations and other stressors such that the system remains within the same regime, essentially maintaining its basic structure and functions, and the capacity of self-organization and to adapt to stress and change." This, of course, includes the adverse effects of climate change. Accordingly, promoting ecosystemic resilience in general, and the context of the current climate crisis in particular, which implies analyzing and understanding the interaction between groups and communities with ecosystems so as to improve their capacity to resist and adapt as a socio-ecosystemic system.

The Project "Strengthening the effectiveness of the management and resilience of Protected Areas to protect biodiversity threatened by Climate Change," known as "Resiliencia", was implemented in 17 protected natural areas, spanning 7.8 million hectares, in 12 eco-regions and in three environments: land, coastal, and marine.

1. PN Revillagigedo
2. PN Arrecife de Puerto Morelos (Quintana Roo)
3. APRN Don Martín (Coahuila)
4. PN Cañón del Sumidero (Chiapas)
5. PN Constitución de 1857 (Baja California)
6. RB Tehuacán-Cuicatlán (Oaxaca y Puebla)
7. RB El Vizcaíno (Baja California Sur)
8. RB Bahía de los Ángeles (Baja California)
9. APFF Islas del Golfo de California (Sonora)
10. RB Janos (Chihuahua y Sonora)
11. APFF Laguna de Términos (Campeche y Tabasco)

12. RB Mapimí (Durango, Chihuahua y Coahuila)
13. RB Mariposa Monarca (Estado de México y Michoacán)
14. RB Pantanos de Centla (Campeche y Tabasco)
15. RB Selva El Ocote (Chiapas)
16. PN Sierra de San Pedro Mártir (Baja California)
17. PN Isla Mujeres, Punta Cancún y Punta Nizuc; APFF Manglares de Nichupté (Quintana Roo)

With the aim of:

Transforming the management and coverage of terrestrial and marine PNAs in Mexico to mitigate the direct and indirect impacts of climate change on biodiversity of global interest.

The project has three components that respond to the resilience needs of biodiversity and communities in protected natural areas at different scales:

- Improvement of the Protected Natural Areas System: Revision and development of instruments and tools for the conservation, monitoring, financing, and decision-making with regards to climate change.
- Expansion of the Protected Natural Areas System: Establishment of new conservation areas at environment scale, with the aim of incorporating major climate preserves and promoting connectivity between protected areas.
- Improved effectiveness in the management of 17 PNAs for the reduction of climate change impacts and threats specific to biodiversity and populations: Development of capacities of personnel, local communities, CONANP, and other entities involved in creating and strengthening resilience.

Main challenges

On the journey to resilience and sustainability, there are many challenges and obstacles that can make the process more complex.

Financial and political: changes in government structures are always a risk that must be constantly managed, as the continuity of projects can be affected. Similarly, the federal budget for environmental and sustainability issues is often insufficient, so it is necessary to strengthen institutional capacities to seek funding sources and to mainstream biodiversity and climate change in different sectors.

Environmental: the impacts of climate change are increasingly unexpected and extreme weather events are more frequent. This requires designing early warning systems and timely intervention and rapid reaction strategies. The continuity of implemented actions is essential to ensure the resilience of ecosystems, people and livelihoods.

Social and security: vulnerability to climate change is structural; poverty, inequality, and marginalization are problems that need to be addressed on a par with the environmental agenda. The collaborative and articulated work between agencies and sectors is key.

