

# Canada, Mexico and the United States Working Together on Climate Adaptation Solutions for North America

In 1994, the Governments of Canada, Mexico, and the United States established the CEC through the North American Agreement on Environmental Cooperation. Since then, the CEC has proven to be an effective instrument to facilitate sustained environmental cooperation between our countries for the conservation, protection and enhancement of the environment in our territories. The cooperative work program of the CEC has helped establish North American networks and build a wealth of expertise, tools, resources, and standards to support communities and governments in addressing common environmental challenges. For over 25 years, Canada, Mexico and the United States have also been working together as a region to address climate mitigation and adaptation and to support some of their international commitments.



The three countries recognize that shared environmental and economic well-being in North America is grounded in the adaptive capacity and resilience of communities, ecosystems, and all sectors of the economy in relation to changing climatic conditions, which may result in a rise of extreme weather events and associated risks to public health, infrastructure, agriculture, forestry, fisheries and the natural environment.

The three countries also acknowledge the importance of self-determination for Indigenous communities over their land and, in addition, the distinct and highly valuable contributions Indigenous Peoples can provide to environmental activities and decisions. Indigenous Peoples have unique perspectives and knowledge that have a vital role in strengthening community-based resilience.



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# Partnering to build North American resilience to extreme events

Since 2015, the CEC has implemented a number of trilateral projects and initiatives to advance our three countries preparedness and response capacities to dealing with extreme events affecting water security, health and environment aspects relevant to communities and populations across Canada, Mexico, and the United States. Some of these actions include:



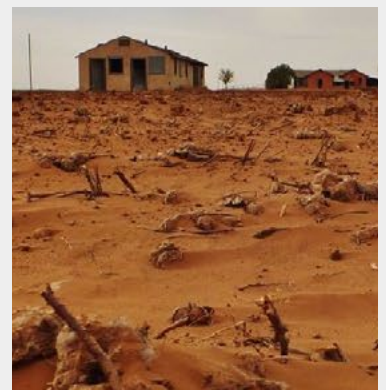
**Costing floods and other extreme events** – developed a standardized methodology for assessing the cost of extreme floods aimed at facilitating the assessment of priorities for infrastructure and institutional investments by governments and private entities to enhance community resilience. A unique feature of this effort is the consideration of Indigenous perspectives in the methods for costing floods and multi-hazard planning.

**Using remote sensing to prepare for and respond to extreme events** – facilitated information exchanges aimed at building local and regional capacities of first responders, emergency managers, and decision-makers relative to obtaining and using real-time satellite imagery in the preparation and response to floods, forest fires and drought. This effort is considered a big step in coordination across the region on satellite-based fire mitigation and early warning systems, and in achieving an organized response in operational satellite-based fire detection and monitoring.



**Monitoring health impacts from extreme heat events** – supported local health authorities in Ottawa and British Columbia, Canada; the state of Sonora and Juarez, Chihuahua, Mexico; the state of Michigan and Pinal County, Arizona, United States, in their efforts to establish or increase their capacity to monitor, identify vulnerable populations and respond to health effects associated with extreme heat events.

**Improving the effectiveness of early warning systems for drought** – collected information and feedback from hundreds of drought experts in our three countries, including from Indigenous governments and organizations, to assess which drought indicators, indices and planning tools are most appropriate to support drought monitoring in North America. This effort resulted in the development of a *Guide to Drought indices and indicators in North America* as well as a *trilateral report offering recommendations* to address information gaps and barriers in accessing national and international drought resources and tools.





# Engaging communities and integrating Traditional Ecological Knowledge (TEK) to adapt to climate change in North America



Using ecosystem function and Traditional Ecological Knowledge together to build resilience and adapt to climate change – experts and community members developed community-based adaptive management plans in Georgina Island First Nation, Ontario, Canada; and El Mingo, Tabasco, Mexico. They considered the experiences of Indigenous communities in southern California (United States) that have applied the Proper Functioning Condition (PFC) ecosystem assessment in their tribal lands and drew upon their traditional ecological knowledge to understand the local context.

EJ4Climate – funds projects supporting underserved and vulnerable communities, and Indigenous communities, in Canada, Mexico, and the United States to prepare for climate-related impacts. Fifteen projects (five in each country) have received funding.



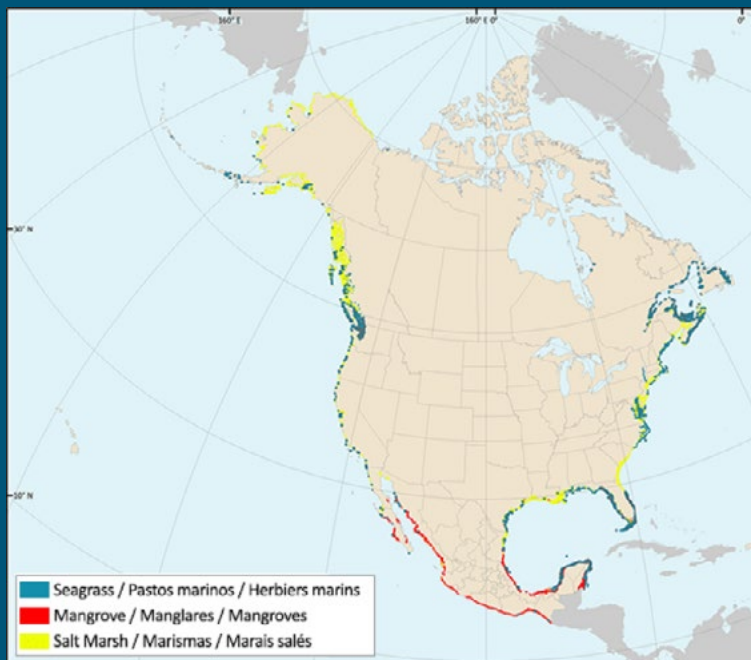
## Nature-based solutions (NBS) to support climate adaptation and mitigation

Nature-based solutions offer an integrative approach to meeting development, climate adaptation and mitigation, disaster risk reduction and conservation objectives. Since 2013, the CEC has been quantifying carbon sources and storage to better understand carbon dynamics in natural systems.

### Integrated modeling and assessment of climate change mitigation options in the north american forest sector –

helped identify regional mitigation options in the forest sector and gain new insights on the net impact of forests on national carbon budgets. It focused on six strategic landscapes (two per country) for which complete data and information on forest carbon budget and mitigation options were synthesized and made available, including estimates of reduction in emissions from the use of long-lived harvested wood products.

The CEC conducted two projects from 2013 through 2017 to improve blue carbon data, mapping, and approaches to reduce emissions and protect current blue carbon sequestration and storage across the continent. These two projects also facilitated a North American community of practice through workshops, meetings and the exchange of information.



Building on this work, the three countries have focused their collaboration since 2015 on strengthening the adaptive capacity of marine protected areas (MPAs). The CEC has helped build the capacity of MPA practitioners to manage the impacts from global and regional changes by developing a Climate Adaptation Toolkit for Marine and Coastal Protected Areas and training instructors in its use. It also strengthened MPA capacity for adaptation planning by increasing networking and collaboration among MPAs through the North American Marine Protected Areas Network (NAMPAN).

## Moving forward

Climate adaptation continues to be a high priority for the three countries of North America. In November 2021, at the North American Leaders Summit (NALS), the CEC was given the mandate to develop a climate adaptation workplan for North America. In July 2022, the environment ministers of Canada, Mexico and the United States met and re-affirmed the urgent need to tackle the devastating effects that climate change poses on the well-being of communities in North America.

Over the next two years, the CEC will continue supporting the sharing and understanding of climate adaptation, blue carbon and other critical habitat conservation and restoration solutions, including those informed by Indigenous and local knowledge.

In addition, the new CEC project *Nature-based Solutions (NBS) to Address Flooding in Coastal Cities* will produce knowledge informed by multidisciplinary expertise to support the use of NBS by coastal communities vulnerable to flooding.

Finally, in response to the NALS mandate of establishing a North American Climate Adaptation Workplan, the CEC will be launching in 2023 an initiative to improve coordination of early warning systems for extreme events and ensure local authorities and communities can take appropriate actions based on their individual climate adaptation plans and processes.

Visit [www.cec.org](http://www.cec.org) for more information on CEC projects and initiatives.



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