

Annual Report **2021**



COMMISSION FOR
ENVIRONMENTAL
COOPERATION





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A Word from CEC Executive Director

Richard A. Morgan

This 2021 Annual Report provides an overview of the activities performed by the Commission for Environmental Cooperation (CEC), in support of its mission for effective collaboration among Canada, Mexico, and the United States and their contribution to sustainable development.

This Annual Report reflects the CEC's commitment to good governance, as it strives to maintain and exceed the highest standards of transparency and accountability. As such, the CEC uses this reporting period to inform the public on how it mobilizes resources to drive action on Council's environmental priorities and other concerns, to describe the progress the CEC is making on its strategic and operational priorities, and as a tool to plan for the months and years to come. In a sense, annual reporting can be viewed as a necessary vehicle for making sound decisions and taking action. It is a vehicle that is equipped with

a rear-view mirror, as it helps take stock of the current situation but yet is clearly focused on the road ahead.

In 2021, the CEC began delivering on new projects and initiatives and will continue to work collaboratively with government officials and advisory groups—namely the Joint Public Advisory Committee (JPAC) and the Traditional Ecological Knowledge Expert Group (TEKEG)—on developing other activities that benefit from value-added community leadership and stewardship. The CEC's agenda continues to reflect community engagement in its activities, with emphasis on diversity and inclusion, as well as new partnerships, through increased leveraging. Whether it is through the information disseminated by the Submissions on Enforcement Matters (SEM) process or through improved performance measurement, communications approaches, public participation and stakeholder

awareness remain at the forefront of CEC's objectives and collective actions.

The CEC continues to strive for solutions that target high environmental quality requirements, sustain healthy ecosystems, and encourage green growth. The CEC will continue to take advantage of its unique ability to act as a catalyst for creativity, given its large network of stakeholders, partners, and collaborators. The CEC provides individuals and the general public with user-friendly access to tools and products that foster a knowledge- and responsibility-sharing culture. The path to a cleaner environment at local and regional levels, as well as to help address global issues, depends on a better understanding of our relationship with the environment and constant awareness of our ecological footprint, and how these can so intrinsically relate to human health and economic prosperity.

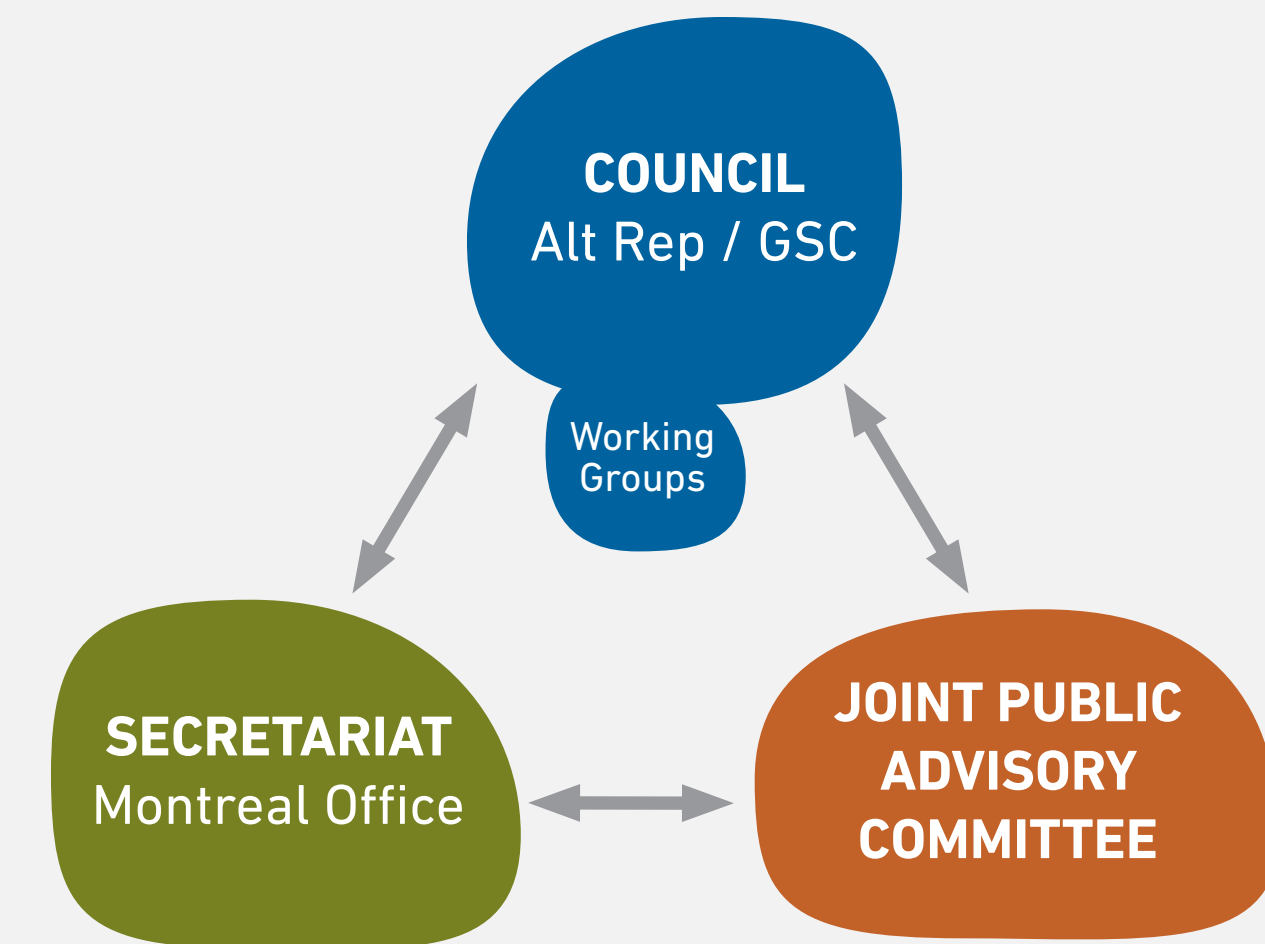
Richard A. Morgan

Executive Director, Commission for Environmental Cooperation

CEC Mission Statement

In the context of environmental, economic and social linkages between Canada, Mexico and the United States, the CEC facilitates effective cooperation and public participation to conserve, protect and enhance the North American environment in support of sustainable development for the benefit of present and future generations.

Three constituent parts of the CEC



- Council:** The Council is the CEC's governing body and comprises cabinet-level representatives from Canada, Mexico and the United States.
- JPAC:** The Joint Public Advisory Committee provides advice to the Council and is composed of 9 citizens, 3 per country, from Canada, Mexico and the United States.
- Secretariat:** The Secretariat provides technical, administrative and operational support to the Council.

2021 Regular Session of the CEC Council and JPAC Forum

9-10 September 2021



USEPA Administrator
Michael Regan hosts
the 2021 CEC Council Session

Each year, the cabinet-level environment ministers from Canada, Mexico and the United States gather at the CEC's Regular Session of Council to reaffirm their commitment to environmental cooperation in North America, reflect on progress made in the last year, discuss pressing topics of mutual interest and establish future areas of work for the CEC.

On 9–10 September, 2021, the CEC Council held its twenty-eighth Regular Session virtually, due to the continuing COVID-19 pandemic. This was the first Regular Session under the United States–Mexico–Canada Agreement (USMCA) and Environmental Cooperation Agreement (ECA). The theme of the session was Climate Change and Environmental Justice Solutions for North America. The three countries launched a new grant program, EJ4Climate, to address environmental justice and climate change impacts in vulnerable communities across North America. The Council also introduced three new, large-scale initiatives:



- 1) Mitigating 'black carbon' to improve air quality and support environmental justice
- 2) Addressing 'ghost' fishing gear in marine ecosystems
- 3) Supporting environmental education

The Council announced its support for an additional initiative on Indigenous approaches to freshwater management in North America. Finally, the Council announced the winners of the fifth annual Youth Innovation Challenge, funding innovative solutions from young people to address environmental challenges.



Virtual JPAC Public Forum 2021

On the margins of the 2021 annual Council Session, the JPAC held, on 9 September, an open forum for the public to engage with experts on climate change and environmental justice. The forum focused on potential solutions to increase the resilience of vulnerable or historically marginalized communities, by incorporating social considerations in public policies and programs, and by building partnerships with underrepresented groups.

2021 Council Session Chair Summary

“The Council of the CEC affirms our commitment to environmental cooperation as we conclude our first Regular Session under the United States-Mexico-Canada Agreement (USMCA) and its companion Environmental Cooperation Agreement (ECA).

The Parties’ unwavering commitment to the CEC since its inception in 1994 is firmly rooted in the understanding that addressing the environmental challenges of our time requires ambitious and innovative solutions that transcend national borders.”

North America can be a global leader on linking nature and climate. We share geography, critical habitats, key waterways, and a common desire to conserve and enhance biodiversity for current and future generations.

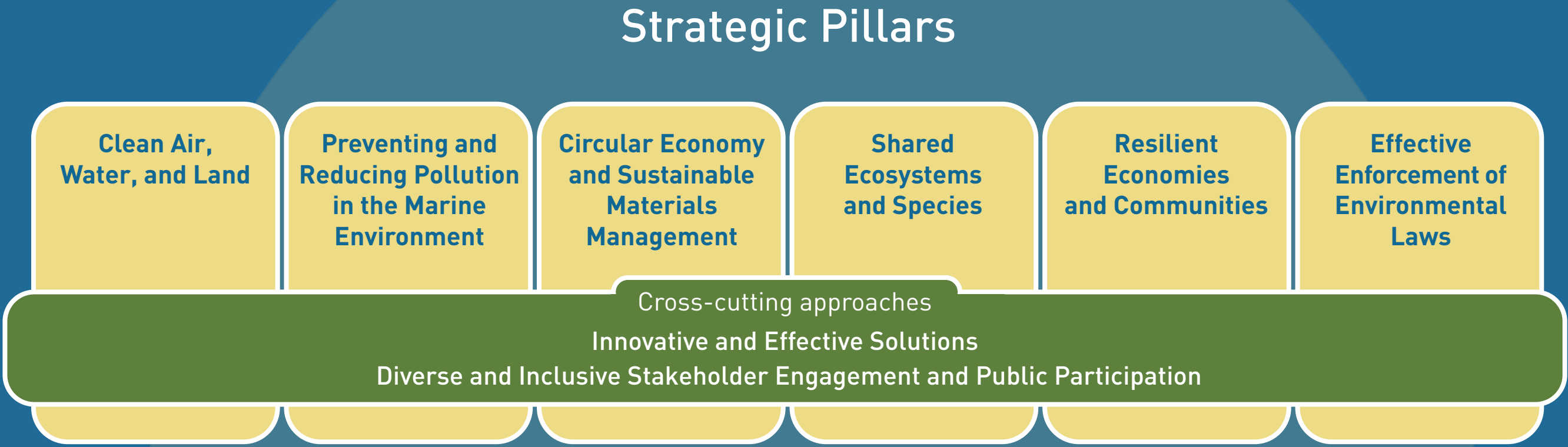
Available at: <www.cec.org/files/documents/chair-summary-of-the-twenty-eighth-regular-session-of-the-cec-council.pdf>



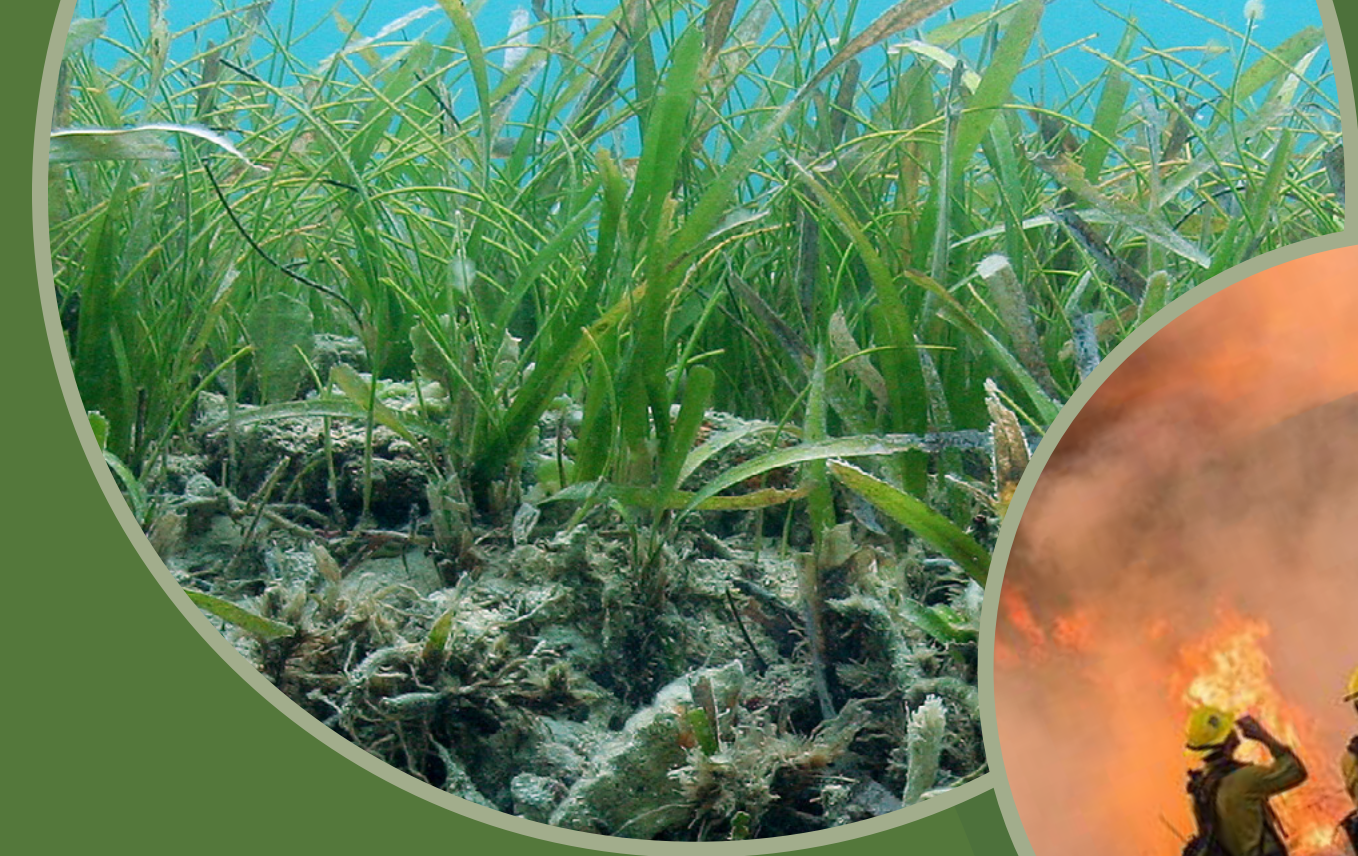
A Common Vision to Protect the Environment and Health of Communities in North America

With the entry into force on 1 July 2020 of both the new trade agreement and the ECA, the three countries renewed their commitment to the CEC. Under the ECA, the three nations stated their willingness to cooperate to reduce pollution, strengthen environmental governance, conserve biological diversity and sustainably manage natural resources. Such agreement “modernizes and enhances trilateral cooperation, including by supporting implementation of the environment commitments in the USMCA.”

During their 2021 Council Session, the Ministers again affirmed a common vision for a prosperous and sustainable economy that will help protect the environment and health of communities across North America, particularly underserved and vulnerable communities.



The adoption by the CEC Council on 26 June 2020 of the 2021-2025 Strategic Plan defined a path forward to work together on pressing regional and global issues. It outlined six priority areas for cooperation and two cross-cutting approaches to a more effective implementation of the work.



Turning the Vision into Action

Because of the pandemic, 2021 was a transition year to complete projects initiated under the 2019–2020 Operational Plan, as well as needed to raise visibility for key products and results. Efforts during this transition year were also focused on the development of the following 16 projects and initiatives that were intended to achieve the ambitious agenda of the five-year 2021–2025 Strategic Plan.



Costing Floods

In March 2021, the CEC held a workshop to discuss the findings of the 2019–2020 project to develop a standardized methodology for estimating the costs of flood damage across North America. As a result of this workshop, the CEC produced a policy brief, “Understanding the Comprehensive Economic Impacts of Floods in Canada, Mexico, and the United States,” available at: <www.cec.org/files/documents/publications/11878-cec-policy-brief-flood-costing-understanding-comprehensive-economic-impact-en.pdf>. Additionally, a peer-reviewed article describing the methodology and recommendations was submitted for publication to the Bulletin of the American Meteorological Society.





Improving the Effectiveness of Early Warning Systems for Drought

In January 2021, the CEC published a report summarizing the 2020 Drought Summit. This report includes discussion of the summit's themes, various case studies, and available tools as well as high-level recommendations. Available at: www.cec.org/files/documents/drought_summit_report_en.pdf.

The Guide to Drought Indices and Indicators in North America was published in May. Available at: www.cec.org/files/documents/publications/11872-guide-drought-indices-and-indicators-used-in-north-america-en.pdf. The project results were also published on NOAA's National Centers for Environmental Information website and a peer-reviewed article was submitted to the journal, Atmosphere.

Using Remote Sensing to Prepare for and Respond to Extreme Events

This project sought to improve the capacity of emergency managers, first responders, and decision-makers to use real-time satellite imagery to complement existing tools and practices for preparedness and response to extreme events in disaster-prone regions. This year (2021), the CEC reviewed lessons learned from this project and drafted a concept note covering potential collaborative activities for future consideration.

Using Volunteer Observer Networks to Monitor Precipitation and Wildfires

This project produced an assessment that identified the opportunities, challenges, and successful conditions for expanding the Community Collaborative Rain, Hail and Snow (CoCoRaHS) and SmokeSense networks in Canada and Mexico. These initiatives engage community scientists and volunteers to provide observations about wildfire smoke and precipitation to improve prediction and response capabilities, as well as health outcomes. As a result, the LEO Network in Canada (through the First Nations Health Authority) and in the US (through the Alaska Native Tribal Health Consortium) became partners in the promotion of CoCoRaHS in both countries. Canadian and US government organizations began discussions about the potential for adapting the SmokeSense app to include Canadian indicators. The CEC also explored possible approaches for use of the SmokeSense app in Mexico.



Preventing and Reducing Food Loss and Waste

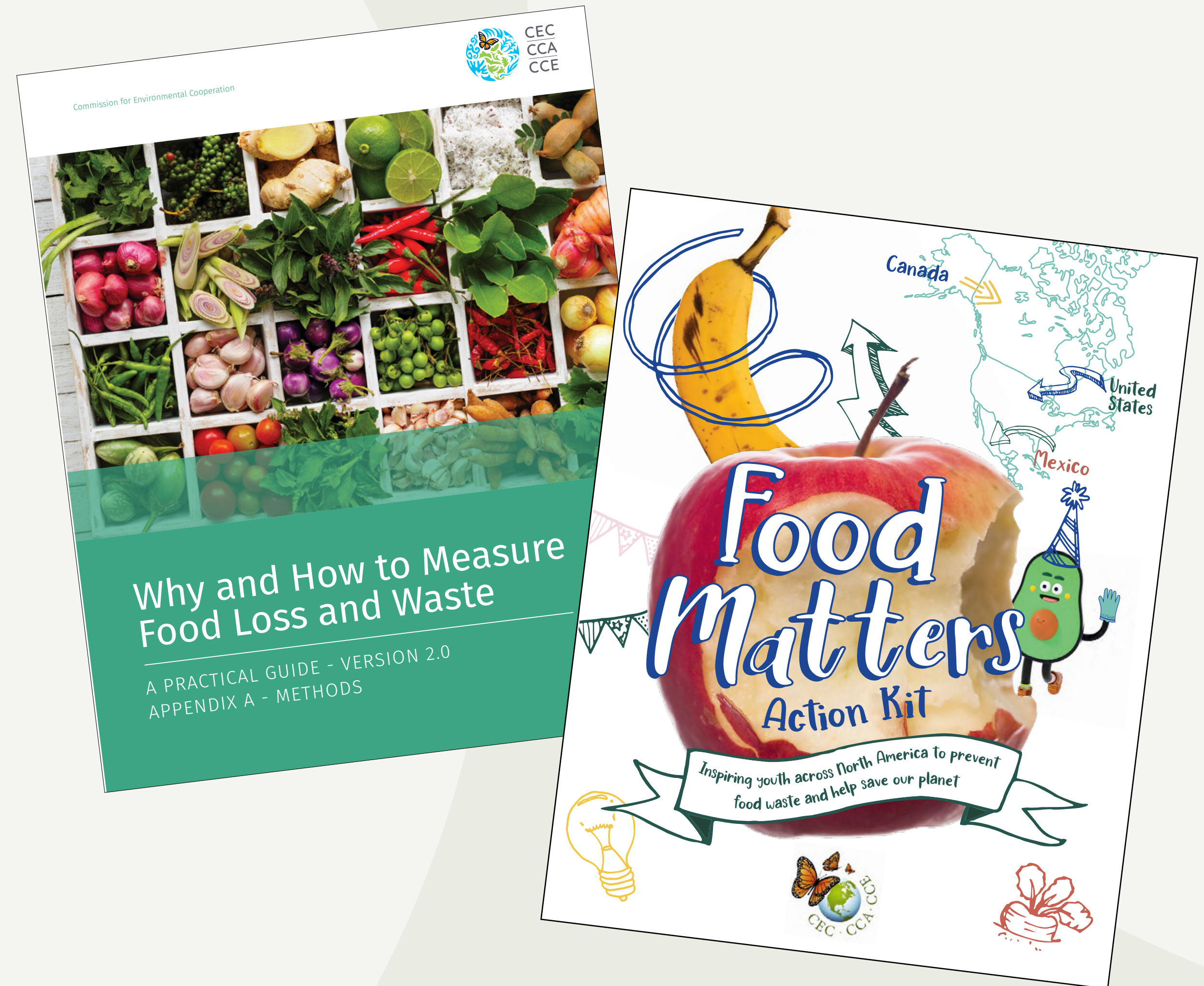
The CEC supported a dialogue and pilot testing of its *Practical Guide on Why and How to Measure Food Loss and Waste*.

Through this collaboration with organizations across the food supply chain—processing, distribution, retail and consumption—the CEC improved the Guide and published it as version 2.0.

Additionally, case studies, documents and tools were developed, showcasing how businesses can measure food loss and waste to generate economic, social and environmental benefits.

Campaign to #ShrinkFoodWaste

The Council approved a follow-up to the CEC's "Let's Shrink Food Waste Mountain," a campaign aimed at educating youth about the impact of food loss and waste. Existing CEC materials on this topic will therefore continue to be utilized to raise awareness of this important issue in North America.



Ecolnnovation Network

In 2021, the CEC worked with partners to develop a transition plan for moving the Ecolnnovation Network to a new host institution. As a result, the University of Waterloo in Ontario, Canada, came forward in March with a proposal to serve as manager of the Network. The Council later approved a two-year follow-up project to support the transition of the Network's financial, operational and governance responsibilities from the CEC to the University of Waterloo.





Modernizing the Data Exchange System for Hazardous Waste Transfers

In 2021, the CEC helped Canada, Mexico and the United States to continue to update and improve their Notice and Consent Electronic Data Exchange system. This system facilitates the exchange of information prior to export and import of hazardous waste. The Council authorized a follow-up project to support continuation of this joint work by the three countries.



Strengthening the Implementation and Effective Enforcement of CITES for Timber in North America

The CEC launched a new two-year project to improve the capacity of the three countries to enforce the Convention on International Trade in Endangered Species (CITES), including developing information on CITES enforcement processes and enhancing the capacity of enforcement officials to identify CITES timber species reaching North American borders. This project will also explore methods and systems for tracking timber species in trade and support scientific assessment of a new CITES source code related to timber species.



Transforming Recycling and Solid Waste Management in North America

The CEC launched a new four-year project to accelerate the uptake of circular economy and sustainable materials management practices that are needed to transform North American recycling and solid waste management. This will be accomplished by developing milestone studies for a better understanding of the opportunities for the recycling sector and secondary material markets in North America, and providing an overview of the relevant legal and policy frameworks. The project will also identify emerging materials and technologies and support stakeholder collaboration and knowledge-sharing through networking activities. Building on the results of milestone studies and stakeholder input, the project will include pilot projects to assess the feasibility of implementing innovative technologies or practices at scale across North America.

Strengthening Regional Pollinator Conservation to Secure Local Benefits

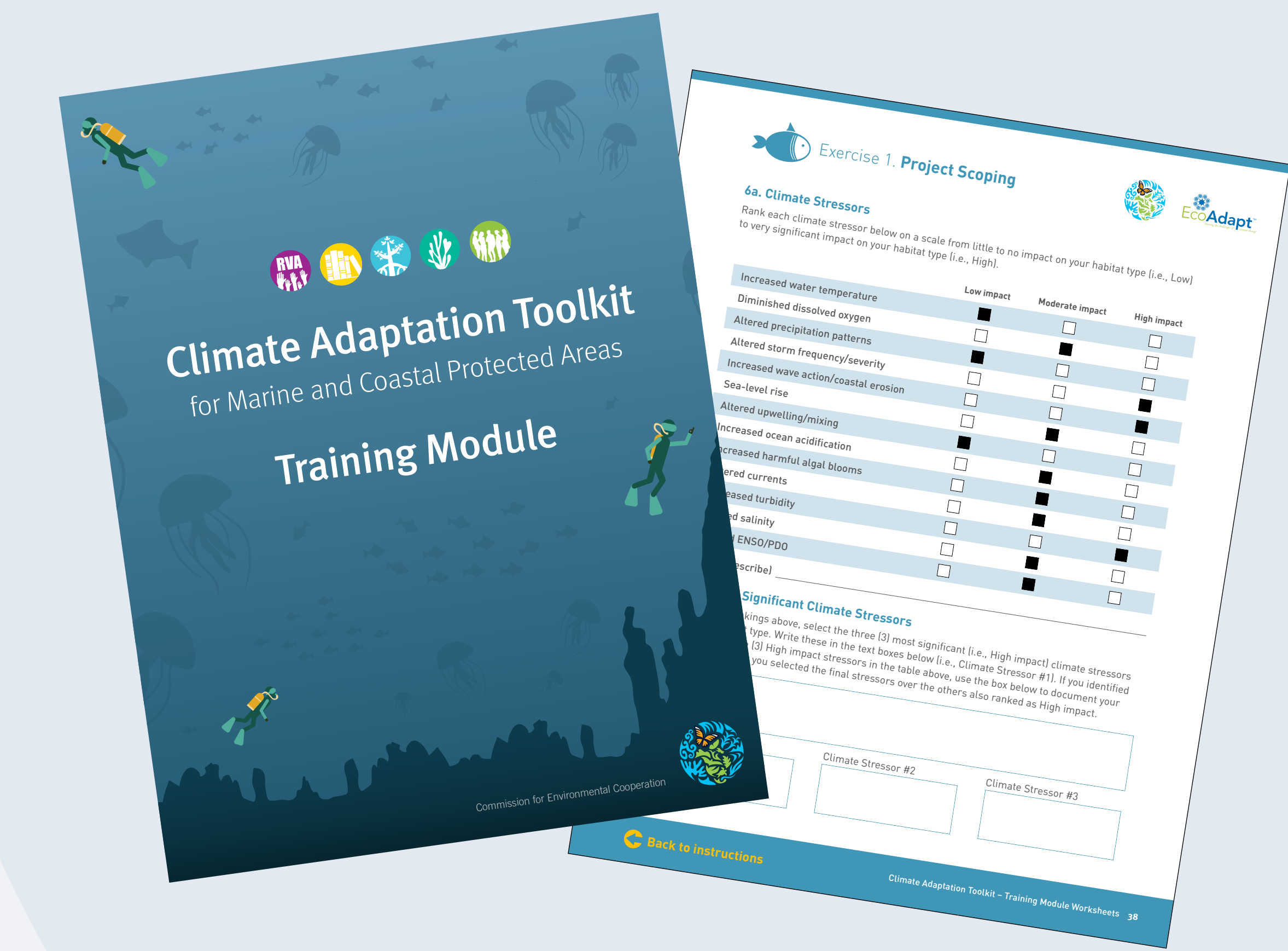
Pollinators support the reproduction of about 80% of wild vascular plants and 75% of crop species, and as such are crucial to food security, human well-being, and ecosystems. The sizes of pollinator populations have declined worldwide. Over two years, the project held targeted workshops and supported a literature review to inform the drafting of a first North American Pollinator Framework. The framework highlights the need for long-term, harmonized monitoring data to design and implement effective pollinator conservation strategies. During 2021, the CEC continued developing a first state of knowledge on pollinators in North America, setting the foundation for collaboration on pollinator conservation.

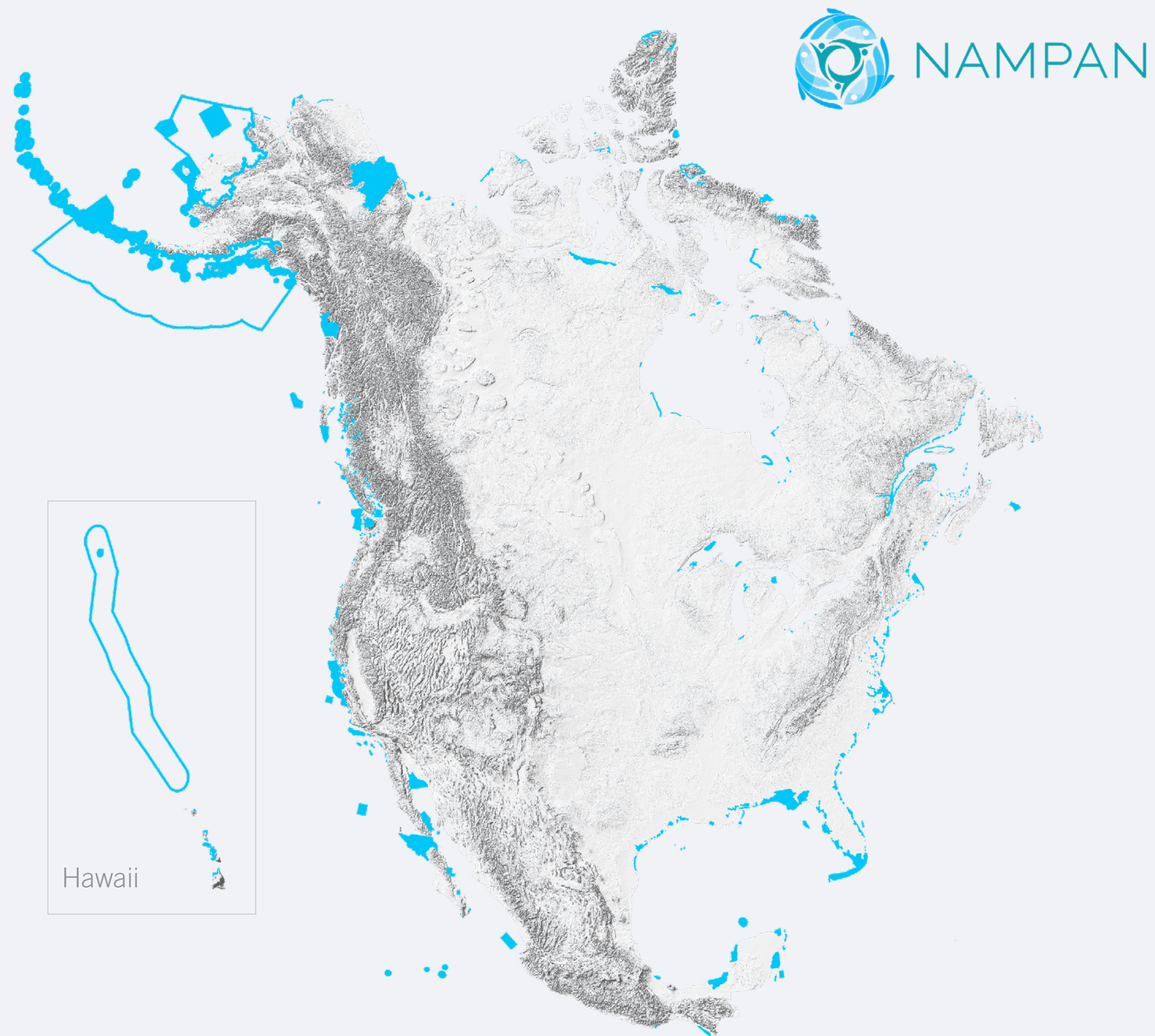


Strengthening Adaptation Capacity in Marine Protected Areas

The CEC worked to build the capacity of marine protected area practitioners on climate adaptation planning and blue carbon. Building on previous work, the CEC published a training module for the web-based *Climate Adaptation Toolkit for Marine and Coastal Protected Areas*. The toolkit was also updated and four *Adaptation Briefs for Practitioners* were developed.

The CEC also published a summary of the North American meeting on blue carbon science, conservation and collaboration and an updated map of blue carbon habitats, showing the most comprehensive spatial distribution of mapped salt marsh, mangrove, and seagrass habitats in North America. Available at: www.cec.org/north-american-environmental-atlas/north-american-blue-carbon-2021/.





NAMPAN

The CEC also continued its support of the North American Network of Marine Protected Areas (NAMPAN) under the stewardship of United Nations Environment Program's North America Office, launching the discussion list and website <<http://nampan.org>>.

Community Solutions for Reducing Marine Litter

In May 2021, the CEC launched engagement tools to address land-based sources of marine litter at the local level, targeting cities and organizations located inland. The Toolkit for Community Engagement and Last Stop: The Ocean campaign will help leaders effectively engage with community members, drive local action, and develop impactful public awareness campaigns on the journey of litter to the ocean to prevent marine litter.

Providing Tools for Decision-Makers



Tracking Pollutant Releases and Transfers in North America

The North American Pollutant Release and Transfer Register (PRTR) initiative involves compiling, presenting and analyzing data and information through the CEC's *Taking Stock* report and Taking Stock Online website. This ongoing initiative provides access to and comparability of PRTR data for policymakers, industry, experts and the public. Other activities include ongoing collaboration with the three national PRTR programs on data quality and comparability, as well as exploring a voluntary industry "Pollution Prevention Challenge." Learn more at: <www.cec.org/takingstock>.

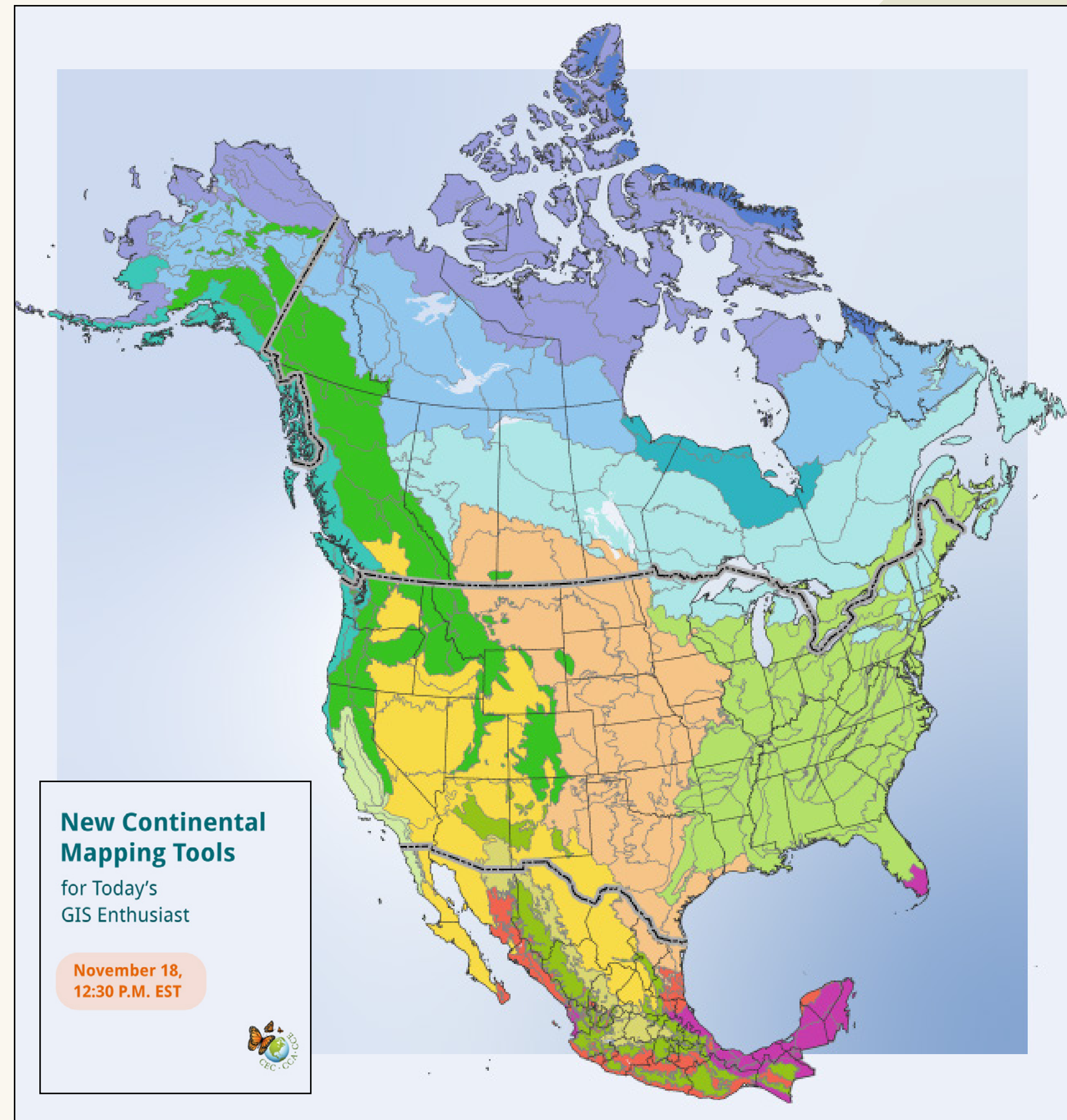


Representatives from the Aamjiwnaang First Nation presented their Pollution Reporter mobile application at the public meeting.

North American Land Change Monitoring System

The North American Land Change Monitoring System is an ongoing collaborative initiative to monitor land cover and its change over time. Available at: cec.org/north-american-land-change-monitoring-system. In April 2021, the North American Land Change Monitoring System StoryMap, “Our Changing Continent,” was selected as App of the Month by ESRI Canada. This year, the North American Land Change Monitoring System was cited 67 times in scientific articles and 11 times in theses or dissertations.





North American Environmental Atlas

The CEC's North American Environmental Atlas is a collection of geospatial mapping products that allow users to research, analyze and manage environmental issues. It assembles seamless, accurate cartographic data, and interactive map layers that are used by decision-makers, land managers, conservation organizations, researchers and international organizations.

In 2021, the CEC published the following four layers with the most up-to-date data: North American Protected Areas, North American Terrestrial Ecoregions, North American Blue Carbon, 2021 and North American Climate Zones. See <www.cec.org/north-american-environmental-atlas/>. These layers were also published externally on the ArcGIS Living Atlas of the World. Available at: <livingatlas.arcgis.com/en/home/>.

Outcome of Joint Public Advisory Committee (JPAC) Activities

In spring 2021, JPAC led a public consultation on ways to strengthen five new trilateral projects under the CEC's cooperative work program and provided a series of recommendations in their Advice to Council, recognizing the importance of: 1) including representatives from Indigenous Peoples and integrating traditional ecological knowledge (TEK) in project elaboration and implementation; 2) considering potential impacts of climate change as part of assessments and during the elaboration of tools and solutions; 3) collaborating with all relevant stakeholders, including representatives from the private sector, to provide a fuller picture of existing initiatives, issues, and challenges to support comprehensive solutions and leverage resources to maximize the impact of projects; and 4) promoting extensive education and outreach campaigns to raise awareness on the issues being tackled by the projects, and disseminating potential solutions, including individual actions that can be taken to address them.



Outcome of Joint Public Advisory Committee (JPAC) Activities

The 9 September 2021 forum, held prior to the Council Session, focused on potential solutions to increase the resilience of vulnerable or historically marginalized communities by incorporating social considerations in public policies and programs and by building partnerships with underrepresented groups. Based on the discussions during the public forum, JPAC provided the Parties with the following six recommendations:

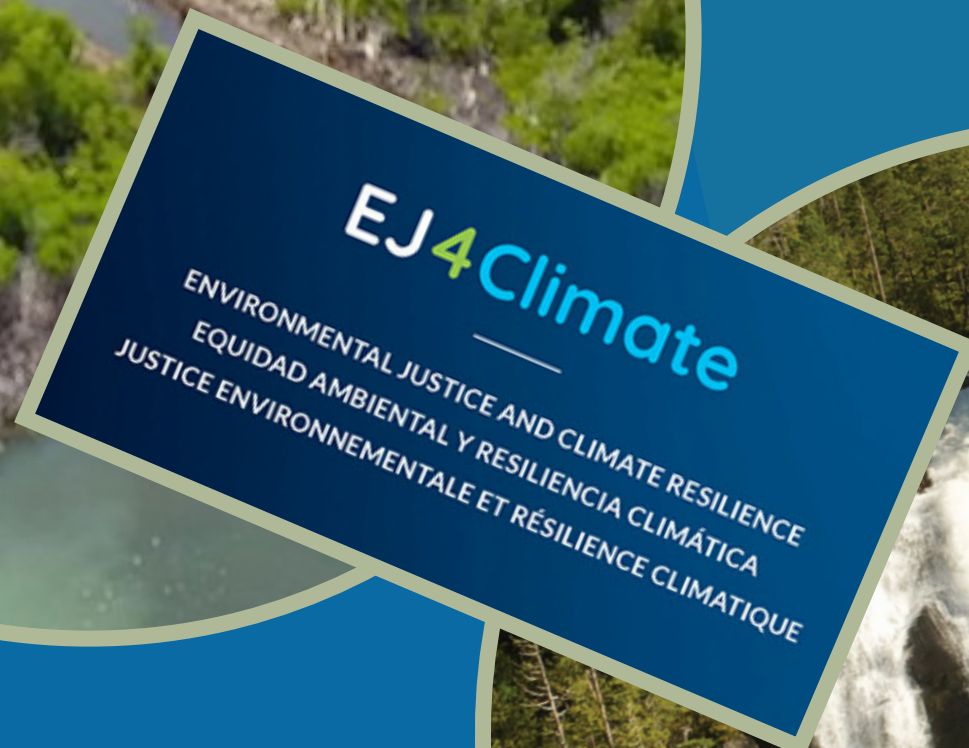
1. Identify and share best practices for the integration of climate change and environmental justice in government policies, programs and activities.
2. Identify and share case studies highlighting measures taken by vulnerable and underserved communities to increase their resilience.
3. Support capacity building for vulnerable, underserved and Indigenous communities.
4. Support climate change literacy through knowledge dissemination targeting vulnerable, underserved and Indigenous communities.
5. Support and/or strengthen the creation of national climate change and environmental justice laws and policies.
6. Support the professional development and involvement in CEC activities of North American youth.



JPAC also hosted a webinar on how to build successful collaborations for the sustainable management of transboundary waters. Experts presented success stories and shared lessons learned on collaboration models involving multiple stakeholders and multiple levels of government. This event was very successful in reaching a new audience less familiar with the CEC's work.



Public Participation, Stakeholder Engagement, and Community Action



Public Participation, Stakeholder Engagement, and Community Action

Traditional Ecological Knowledge

The Traditional Ecological Knowledge Expert Group (TEKEG) provides advice to integrate traditional knowledge into CEC's work. During the annual Council Session, the Parties announced that the TEKEG would be leading a Council-supported initiative, "Indigenous Approaches to Freshwater Management in North America." The objective of the project is to advance the integration of TEK, Indigenous Peoples' perspectives and Indigenous Peoples-led stewardship practices in freshwater management in CEC operations and across North America. More information at: www.cec.org/about/traditional-ecological-knowledge-expert-group.



Public Participation, Stakeholder Engagement, and Community Action



Supporting Youth Engagement and Leadership

On June 5, as part of the official United Nations World Environment Day celebrations, the CEC launched the fifth Youth Innovation Challenge. This edition of the Challenge focused on “Climate Change and Environmental Justice Innovations for Resilient Communities.” This year, 72 solutions were submitted, and the Council selected four winners (one from Canada, two from Mexico and one from the United States). In addition, the Council Session included a Youth Roundtable for the first time. This roundtable, on “The Role of Youth in Ensuring Environmental Justice through Responses to Climate Change,” included a keynote presentation by Dr. Robert Bullard and a lively discussion between Dr. Bullard and Youth Innovation Challenge winners from each country.

Public Participation, Stakeholder Engagement, and Community Action

North American Partnership for Environmental Community Action

The North American Partnership for Environmental Community Action (NAPECA) is a CEC grant program that builds long-term partnerships to improve environmental conditions at the community, Indigenous, local, and regional levels. During 2021, implementation continued for 11 community-based environmental initiatives aimed at adapting to extreme events. Each project included active community involvement, an emphasis on promoting partnerships, a sound implementation plan and measurable objectives to be achieved within the project cycle. As of December 31, all NAPECA projects had been completed successfully. Learn more at: www.cec.org/napeca.



In Puerto Rico, **The Ocean Foundation** successfully developed a large-scale feasibility assessment and mangrove restoration plan for the eastern portion of Jobos Bay, a federally protected estuary that was heavily damaged during Hurricanes Irma and Maria in 2017. This restoration plan will be used by the community to seek funding and obtain permits to begin the very first certified mangrove restoration project under REDD+ in Puerto Rico.

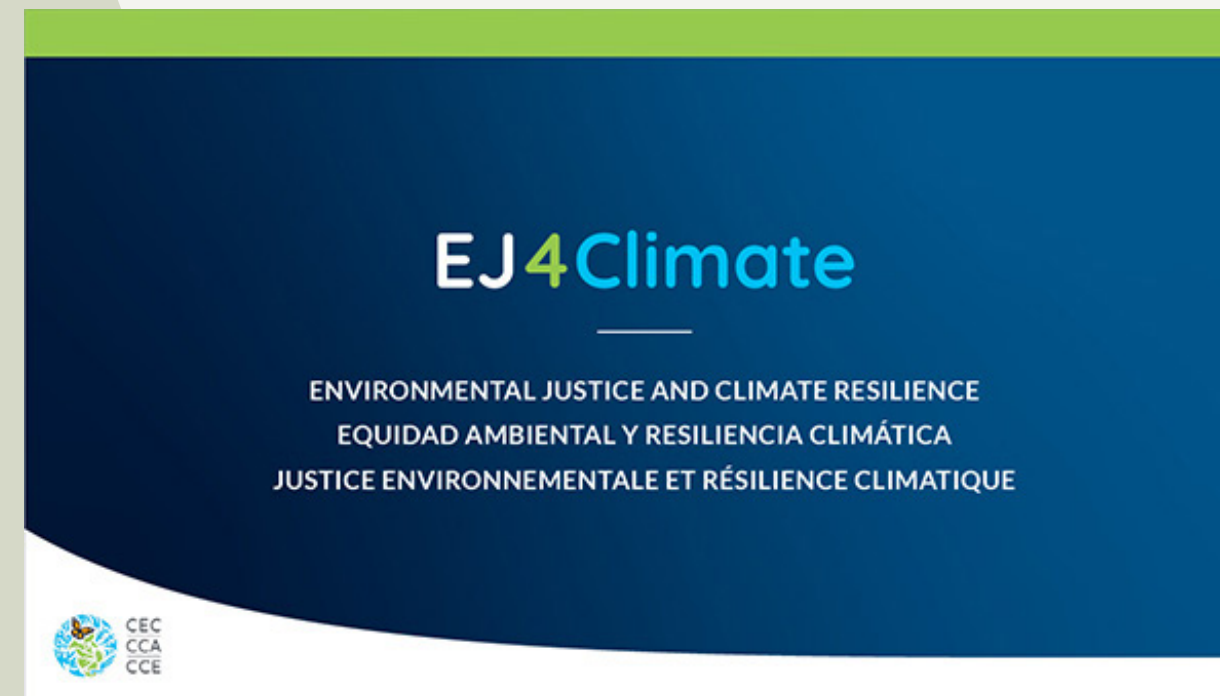


In Alberta, Canada, through its Planning for Resilient Smart Energy Communities program, **QUEST Canada** engaged four communities and local utility companies to develop and complete climate risk assessments and adaptation reports that will help them adapt their energy infrastructure and build resilience to the impacts of climate change, such as increased occurrence of extreme weather events.

Public Participation, Stakeholder Engagement, and Community Action

EJ4Climate: Environmental Justice and Climate Resilience

In September 2021, the CEC launched EJ4Climate, a US\$2 million grant program to support underserved, vulnerable communities, and Indigenous communities across North America preparing for climate-related impacts. The program solicited proposals for projects that would support community resilience to climate change; yield tangible, equitable benefits for local communities by addressing or adapting to climate change impacts; consider local knowledge and transform that knowledge into an innovative action or solution; and build partnerships that respond to community-identified challenges. Grant announcements and project implementation will occur in 2022. In addition, the CEC connected with more than 1,500 stakeholders in all three countries, through its grant programs, JPAC fora, public consultations, and other engagement activities online.



What is the SEM Process?

Under the process established in Articles 24.27-28 of North America's trilateral trade agreement, a submission is a document written by the public and filed with the Secretariat, asserting that Canada, Mexico, or the United States is failing to effectively enforce its environmental law.

A national person or organization, or any nongovernmental organization or enterprise, established in Canada, Mexico, or the United States may file such a submission.

Filing a submission can lead to an independent gathering of information by the CEC Secretariat and the publication of a factual record examining the issues raised.



The SEM process was originally created under Articles 14 and 15 of the North American Agreement on Environmental Cooperation (NAAEC) and is now governed by Articles 24.27 and 24.28 of the USMCA as of 1 July 2020.

From 1994 to the end of 2021, 102 submissions have been filed with the Secretariat: 33 concerning Canada, 53 concerning Mexico, 14 concerning the US and two concerning both Canada and the US. The Secretariat has published 24 factual records to date.

This year, the CEC received three new submissions and continued to process four others. In three cases, the Secretariat determined that the submissions met the criteria of Article 24.27(2) and requested responses from the concerned government Party in accordance with Article 24.27(3) of the USMCA. The Secretariat concluded action on the Fairview Terminal submission after reviewing Canada's response. The Secretariat informed the Council that the Loggerhead Turtle submission warranted development of a factual record and began gathering information to develop two other factual records (the Metrobús Reforma and City Park submissions). The Secretariat is still awaiting a Council decision on whether to prepare a factual record on the Hydraulic Fracturing in Nuevo León submission.

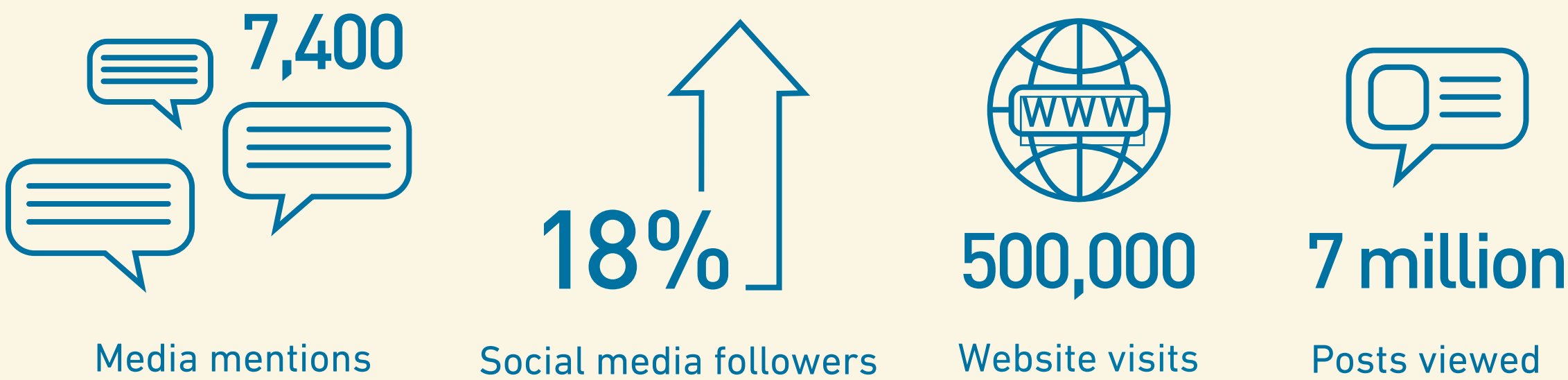
The three new submissions relate to the following: Canada's alleged failure to effectively enforce the Canadian Environmental Assessment Act, 2012 regarding the Fairview Terminal Phase II Expansion Project in Prince Rupert, BC; Mexico's alleged failure to effectively enforce environmental laws resulting in the near-extinction of the vaquita porpoise (*Phocoena sinus*); and the United States' alleged failure to effectively enforce its environmental laws designed to protect the North Atlantic right whale (*Eubalaena glacialis*) from fishing gear entanglement and vessel strikes.

In addition, the Legal Affairs and SEM Unit participated in several online events. More information at: <www.cec.org/submissions>.



CEC Communications

The CEC has been active in pursuing its objective to raise awareness of the CEC and position the organization as a prime North American information portal for environmental data, information and analyses. As well, improved recognition and understanding of the CEC’s distinctive role in helping Canada, Mexico, and the United States address trilaterally sustainable development issues and environmental concerns are key success factors. In this regard, the CEC has been successful in reaching out to a much larger audience than in previous years.



Through its various communications channels, the number of people who accessed news and information from the CEC has proliferated in the last year. For example, traditional media coverage peaked at an all-time high, and social media following increased significantly, as did visits to the CEC website.

Results of the 2020 Financial Audit

DELIVERABLES

Cooperative Projects	1,150,655
North American Partnership for Environmental Community Action (NAPECA) and EJ4Climate	290,154
Submissions on Enforcement Matters	190,498
Tracking Pollutant Releases and Transfers in North America (PRTR)	94,925
CEC Interactive Platforms	78,886
TOTAL DELIVERABLES	1,805,118

INSTITUTIONAL SUPPORT AND MAINTENANCE

Council Support	177,161
JPAC Support	108,708
TEK Expert Group Support	17,966
Communications and Outreach	287,697
Stakeholder Engagement and Partnership Development	159,745
Information System Infrastructure Maintenance	106,156
Performance Measurement and Reporting	123,339
Strategic and Operational Planning	61,380
TOTAL INSTITUTIONAL SUPPORT AND MAINTENANCE	1,042,152

ADMINISTRATIVE AND MANAGEMENT

Salaries, Benefits and Professional Development	3,072,337
Operating Expenses	491,065
External Administrative Support	318,965
Relocation/Orientation, Recruitment	83,682
Executive Director's Office	20,059
TOTAL ADMINISTRATIVE AND MANAGEMENT	3,986,108

TOTAL EXPENSES 6,833,378

As per financial statement 6,869,348

Less loss on exchange -35,969

Expenses 6,833,379

(All figures in Canadian dollars)



COMMISSION FOR
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