

Annual Report **2022**



COMMISSION FOR
ENVIRONMENTAL
COOPERATION





Table of Contents

A Word from the CEC Executive Director	3
CEC Mission Statement	4
2022 Session of the CEC Council and JPAC Forum	5
A Common Vision to Protect the Environment and Health of Communities in North America	8
Turning the Vision into Action	9
Cooperative projects	10
Council-supported Initiatives	24
Providing Tools for Decision-Makers	31
Public Participation, Stakeholder Engagement, and Community Action	41
CEC Communications	51
2022 Expenses	53

A Word from the CEC Executive Director

The Commission for Environmental Cooperation (CEC) will be entering its 30th year of existence since the signing of the North American Free Trade Agreement and North American Agreement on Environmental Cooperation in late 1993, and now with a renewed North American commitment to our shared environment embodied in the USMCA/CUSMA trade agreement and the Environmental Cooperation Agreement.

The trilateral cooperative work of the CEC is designed by consensus to assist the Parties and actors across North America in advancing regional efforts to conserve, protect and enhance our shared environment; fostering public participation and engagement; facilitating the exchange of environmental knowledge, technology, and tools; incorporating the views and perspectives of key constituencies, including Indigenous peoples and vulnerable groups, as well as promoting environmental justice; encouraging the effective enforcement of environmental laws; inspiring environmental action across our nations; and creating synergies and efficiencies through improved communication, coordination and collaboration on a range of trade and environmental issues.

The work of the CEC, summarized in this Annual Report for the year 2022, has never been as important as it is now, when we face an existential climate and biodiversity crisis that necessitates all of society to take action to thwart global warming and loss of biodiversity, to manage the impacts of climate change as quickly and as effectively as possible, to be stewards of our natural resources, and to lift up our most climate-vulnerable communities.

This Annual Report is a summary of the CEC's broad programmatic actions and initiatives during this past year, efforts that involved direct engagement with local communities, collaboration with our partners, assistance and guidance provided to policymakers, and support the CEC provided to innovative local actors advancing sustainability and environmental justice across North America.

This report by the CEC Secretariat is intended to inform the Council, the public and our partners on how we leverage our resources to conserve, protect and enhance the North American environment in support of sustainable development for the benefit of present and future generations. It shows the advancements we are making on the implementation of our mandate, on our Strategic and Operational Plans, and on the numerous programs and initiatives we coordinate that are set forth

in those Plans. It also details the CEC's engagement and key initiatives undertaken with the CEC's Joint Public Advisory Committee (JPAC), which facilitates public participation and advises the Council members, and the Traditional Ecological Knowledge Expert Group (TEKEG) that provides Indigenous expertise to our intergovernmental work. This report also highlights CEC engagement with key audiences and interested groups and individuals, including LGBTQ+ persons, youth, academics, and other engaged actors.

Through our expanding partnerships, by embracing diversity, and through three decades of experience in initiating and coordinating regional efforts to protect and conserve our environment, the CEC is mobilizing at this critical moment all of our material, financial, technological and human resources to achieve a more sustainable, inclusive, and socially just environment for North America.

This report is a testament to where we have been, where we are, and where we are going in the stewardship of our region's natural resources and biodiversity.

Jorge Daniel Taillant

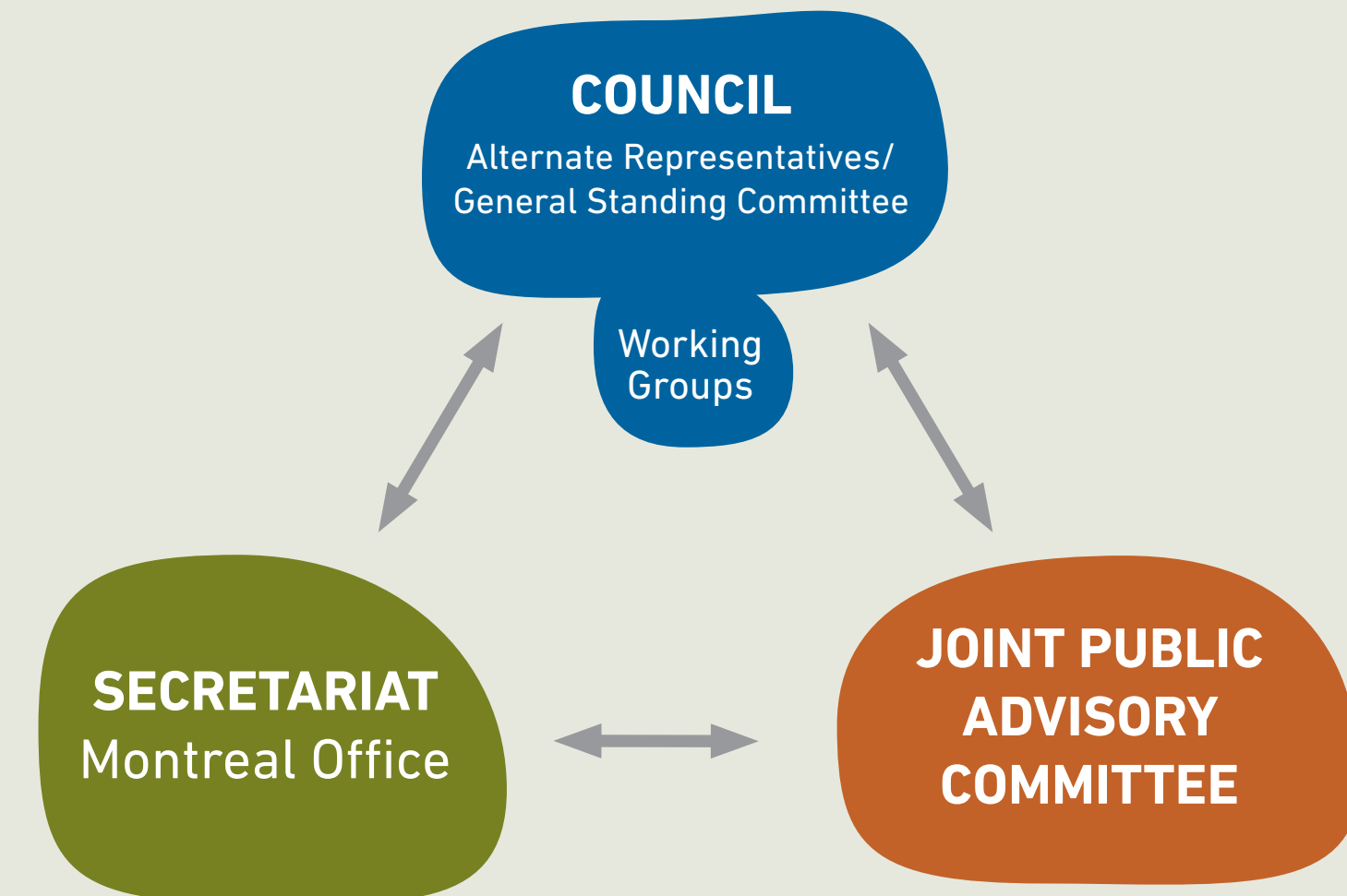
Executive Director

Commission for Environmental Cooperation

CEC Mission Statement

In the context of environmental, economic and social linkages among Canada, Mexico and the United States, the Commission for Environmental Cooperation (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.

The Three Constituent Bodies of the CEC



- **The Council:** 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 comprises nine volunteer citizens, three per country, from Canada, Mexico and the United States.
- **The Secretariat:** The Secretariat provides technical, administrative and operational support to the Council.

2022 Session of the CEC Council and JPAC Forum

14-15 July 2022

Each year, the environment ministers from Canada, Mexico and the United States gather at the CEC Council Session 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 15 July 2022, the CEC Council held its twenty-ninth Regular Session. The theme for the 2022 Council Session, “Community-led Environmental Education for Sustainable Development,” highlighted activities across North America that support a deeper understanding and broader awareness of key environmental concerns, from the perspective of communities directly impacted and working to develop and share best practices for adapting to a changing climate. The significance of this theme was timely, as it promoted the development of local and context-specific strategies as well as an international cooperative approach for managing and responding to environmental and socio-economic risks across the whole of society.

- **1,515 participants registered to attend the event either in-person or virtually (an increase of 86.6% compared to the number of last year’s registered participants).**
- **Attendance by self-identified youth and Indigenous peoples increased threefold when compared to the 2021 Council Session.**
- **When surveyed, 56% of attendees indicated the event had met their expectations while 35% said it had exceeded their expectations.**



Steven Guilbeault (left)

Minister of Environment and Climate Change Canada

María Luisa Albores González (center)

Mexico’s Secretary of Environment and Natural Resources

Michael S. Regan (right)

US Environmental Protection Agency Administrator

At the opening of the 2022 CEC Council Session in Mérida, Mexico.

As part of the 29th Council Session, the CEC:

- Announced an additional US\$2 million to launch a new cycle of EJ4Climate grants that focus on projects supporting environmental education to build resilience to climate change. The EJ4Climate grant program supports underserved, vulnerable, and Indigenous communities in Canada, Mexico and the United States to help them prepare for climate-related impacts;
- Announced a C\$750,000 initiative to undertake work to support enhanced uptake of circular economy approaches with sustainable production and consumption patterns in North America;
- Announced a large-scale and multi-year initiative totaling C\$1 million to strengthen community resilience to climate change;
- Contributed C\$300,000 to support a JPAC-led initiative that will raise awareness in the three countries to advance sustainable forestry and responsible consumption of wood products;
- Endorsed a C\$300,000 TEKEG-led initiative to address threats to food security by increasing our understanding of traditional Indigenous practices and knowledge related to food systems;
- Showcased the winners of the 2022 CEC Youth Innovation Challenge from Canada, Mexico and the United States, who presented their innovative and tangible solutions to help communities recover from the COVID-19 pandemic.



Two public events were held in Mérida. The first was the JPAC Public Forum, entitled “Stories and Lessons Learned from North American Communities and Youth.” This hybrid session served as a platform to amplify the creative ways in which communities approach environmental education as they address common environmental challenges. Community leaders and youth representatives joined the forum to share lessons learned, demonstrate unique ways to address environmental issues, participate in an intergenerational dialogue, and further exemplify the important work of community action and empowerment.

JPAC Public Forum on Environmental Education:

“Round Table: Community-based Approaches to Environmental Education and Climate Action: Hearing from North American Communities”

Thursday 14 July | 14:30 PM (CDT)

#CEC29 | cec.vfairs.com



Virtual JPAC Public Forum 2022

Following the JPAC Forum, the event concluded with the Council Public Session, which provided an invaluable space for sharing information with the public, an opportunity for questions, comments and suggestions on the CEC’s trilateral work, and featured presentations from the 2022 Youth Innovation Challenge winners. The two events included both in-person and virtual participation, with broad representation of diverse groups of interested individuals and stakeholders from across North America.

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

During the 2022 Council Session, the ministers reaffirmed 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. Available at: http://www.cec.org/files/documents/council_statements/ministerial-statement-2022-en.pdf.



“The Government of Mexico has put forth concrete measures to realize environmental and social justice for all Mexicans, and we are convinced that the trilateral work propelled by the CEC will add to efforts to ensure the welfare of the sectors that are the poorest and most vulnerable to climate change in North America.”

—María Luisa Albores González, Mexico’s Secretary of Environment and Natural Resources

“Strong environmental cooperation among our three countries has never been more important. The impacts of climate change, from flooding to coastal erosion, dangerous heatwaves and wildfires pose a real threat to our health, safety and economic security. I am pleased to see that all parties are committed to ensuring that international environmental cooperation remains a top priority. I thank the other members in the CEC Council for supporting community-led solutions and working to advance sustainable development as we face these environmental challenges together.”

—The Honourable Steven Guilbeault, Minister of Environment and Climate Change Canada

“Advancing environmental justice and equity is vital for addressing the climate crisis both at home and abroad, and I am proud that the CEC is centering community engagement as part of our environmental agenda. The way to create long-term, sustainable solutions for our shared environmental challenges is from the ground up. I am committed to working hand in hand with communities, young people who are demonstrating incredible innovation, and our North American partners, to build a healthier, more equitable future for all people.”

—United States EPA Administrator Michael S. Regan

Turning the Vision into Action

The adoption of the **Strategic Plan 2021–2025** by the CEC Council on 26 June 2020 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 support a more effective implementation of the CEC's work.

Strategic Pillars

Clean Air,
Water, and Land

Preventing and
Reducing Pollution
in the Marine
Environment

Circular Economy
and Sustainable
Materials
Management

Shared
Ecosystems
and Species

Resilient
Economies
and Communities

Effective
Enforcement of
Environmental
Laws

Cross-cutting approaches

Innovative and Effective Solutions

Diverse and Inclusive Stakeholder Engagement and Public Participation

Throughout 2022, efforts were focused on the development of the following projects and initiatives that advanced the ambitious agenda of the five-year 2021–2025 Strategic Plan. In addition to the implementation of these projects, the Secretariat worked on the design of new projects and initiatives addressing such topics as environmental justice, circular economy, renewable energy, environmental education, early warning systems for extreme events, the resilience of Indigenous People's food systems, abandoned, discarded or lost 'ghost' fishing gear, and sustainable forestry and responsible consumption of wood products.



Cooperative projects



Reducing Marine Litter



The CEC continued its work to engage communities in reducing land-based marine litter at the local level by building public awareness about the issue and highlighting everyone's capacity to do their part to reduce marine litter. Litter capture devices were deployed in the Quad Cities region on the upper Mississippi River, and community engagement activities were held. The data collected from these activities will inform next steps, where communities will identify actions to reduce their land-based marine pollution. Planning for similar activities in Canada and Mexico was undertaken, where one community in each country will be the site of similar activities in 2023.

- **Trash capture devices were installed, and data were collected in Davenport, Iowa, United States.**
- **Community science activities and public events were held in the Quad Cities region (Iowa and Illinois, United States).**

Advancing Pollinator Conservation Throughout North America

The CEC launched this project in February 2022, continuing to build collaboration among pollinator conservation practitioners across the three countries. Experts met in October 2022 to explore how to develop more robust and standardized data repositories to inform native bee conservation actions across the continent. Communication approaches to raise awareness about pollinators and their importance were identified.

- In May, scoping workshops were held virtually to identify priorities for supporting native bee inventories and monitoring.
- A reference document for North American native bee inventories and monitoring practitioners was developed.



Enhancing Co-benefits of Marine Protected Areas



Launched in December 2021, this project is focused on strengthening adaptation capacity in marine protected areas (MPAs) and supporting an ecologically sustainable and socially inclusive North American network of MPAs. Recognizing the leadership role Indigenous and local communities can play in managing and conserving coastal and marine areas, the CEC is supporting events to promote knowledge sharing and capacity building among these communities. In September, the CEC supported the participation of Indigenous and community leaders from Canada and Mexico in the first US-Chile Workshop on Indigenous Community and Government Partnerships for Protected Area Management, a priority activity under United States-Chile cooperation on protected areas. The CEC also facilitated the planning of an Indigenous-led knowledge sharing session at the fifth International Marine Protected Areas Congress (IMPAC5), held in February 2023.

- Indigenous and community leaders from Canada, Mexico and the United States met to share, develop and advance solutions that support involvement of Indigenous communities in MPA management.
- Planning for an Indigenous-led session on Indigenous Approaches to Marine and Coastal Conservation at IMPAC5 also took place.



Grasslands Conservation and Migratory Birds



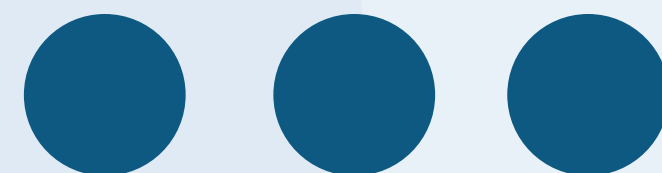
Launched in November 2021, this project is supporting central grasslands conservation by facilitating opportunities for inclusive and diverse collaboration, providing information on the human dimensions of grasslands conservation and developing a collaborative framework for monitoring grasslands change. The CEC is working in collaboration with the Central Grasslands Roadmap team to increase the engagement of Indigenous and local community members from previously underrepresented or absent groups in the Roadmap process. As part of the work to gain a better understanding of the human dimensions of grasslands conservation, surveys of ranchers, landowners, and producers in Canada and Mexico were produced to complement similar work done in the United States.

- **Representatives from underrepresented groups were newly engaged in the Central Grasslands Roadmap process through participation in the Central Grasslands Roadmap Summit and associated events.**
- **Surveys of ranchers, landowners and producers from the three countries are now available to inform a broader analysis of the human dimensions of central grasslands conservation.**

Nature-based Solutions to Address Flooding in Coastal Cities

The CEC continued work on this project launched in November 2021 to promote capacity building for coastal communities to manage flood risk through implementing solutions that rely upon or mimic ecosystem benefits and services. In May, a series of multidisciplinary scoping workshops were held virtually to identify priority areas for practitioners. Based on these workshops, the project began developing synthesis reports on, respectively, identifying the co-benefits from using nature-based solutions (NBS), monitoring NBS efficacy, and retrofitting existing infrastructure for NBS.

- NBS practitioners from each country have gained a basic awareness of the urban coastal NBS landscape across North America, including highlighted projects and peers
- Synthesis reports are in development to help overcome gaps and barriers to the broader implementation of NBS in coastal cities in North America.



Trilateral Data Exchange System on the Import and Export of Hazardous Waste

– maintenance, implementation, testing, and launch of US-Mexico application programming interface (API) exchange in production



Launched in December 2021, this project follows up on the OP19-20 project to update and modernize the trilateral Notice and Consent Electronic Data Exchange (NCEDE) system for hazardous waste-related import and export data. The current framework has supported efforts by Mexico and the United States to ensure the operation of their application programming interface (API) exchanges and provide support and maintenance to the system. In August 2022 the system became fully operational and both countries were successfully transmitting notices while continuing to monitor the system for disruptions. The CEC also facilitated talks between the United States and Canada to develop a shared API project of their own, as well as the continuation of trilateral discussions aiming to optimize and update commonly used data catalogs, and to incorporate regulatory changes on cross-border movements between the three countries.

- The system between Mexico and the United States became fully operational in the production environment.
- The group continued close monitoring of this operation to address any issues that could occur.

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

Launched in November 2021, this project seeks to improve the capacities of the three countries to enforce the Convention on International Trade in Endangered Species (CITES) for timber species. In 2022 the CEC gathered information from enforcement and government officials in the three countries to assess similarities and differences between national legislation, regulations, and processes for implementing CITES for timber species, and developed recommendations for an agenda to provide training, including information on novel tools and risk assessment, that would enable enforcement officers to better determine if a timber import has a high risk of being illegal. The CEC also identified laboratories in the region that possess adequate forensic and research capacity for the identification of wood products and took preliminary steps to form an Alliance of Laboratories to harmonize databases, share reference samples, and facilitate accurate, rapid and expedient species identification of timber evidence.

Additionally, the CEC initiated work with experts that will be part of different activities to inform the implementation of CITES source code Y and conducting Non-Detriment Findings (NDFs) in order to contribute to better implementation of the CITES worldwide.

- In December 2022, the CEC produced a report that compiles relevant national legislation, regulations, and processes for implementation of CITES by enforcement officers in North America. The report:
 - compiles information from 67 government officials in the three countries.
 - provided input to define the objectives and needs of an upcoming training on novel identification tools for border inspectors and for government officials working with enforcement and the implementation of the CITES¹.


1. Training celebrated in April, 2023 in Ottawa.

EcoInnovation Network – Transition

In 2019, the CEC launched the EcoInnovation Network (EIN) to promote the creation and interconnection of innovation centers at academic institutions across North America and provide tools for youth and communities to further green growth through entrepreneurship, innovation and sustainable design. In December 2021 a follow-up project was launched to support and ensure the proper transition of the EIN's financial, operational and governance responsibilities from the Commission to the EIN members, partners, and the initial managing institution, the University of Waterloo, and to build the necessary operational and financial capacity for the EIN to continue its efforts in the future.



Ecolnnovation Network – Transition



In May 2022, the CEC and University of Waterloo signed a memorandum of understanding formalizing their longstanding relationship and collaboration on sustainable solutions for complex environmental challenges. Thus, in 2022 CEC and the University of Waterloo worked together to transition the management of the Ecolnnovation Network to the University, which will host the EIN until December 2023. Accordingly, during the first half of the year, the members of the EIN met and exchanged ideas to identify needs and priorities and took the necessary legal and administrative steps to start building a self-sustaining network. During the second half of the year a transition workplan was developed identifying key areas and activities for the formal transition to take place during 2023.

- To guarantee an efficient transition process, the EIN members reached important agreements to generate impact through:
 - the programs and services that the EIN can offer,
 - the definition of centralized efforts to promote and support youth in the region,
 - membership strategy and agreements, and
 - guidelines of a strategy for sustainability and financing.
- In parallel, the CEC and the University of Waterloo finalized the proper legal and administrative documentation to support the full and formal transition of EIN governance from the CEC to the University of Waterloo.



Transforming Recycling and Solid Waste Management in North America

In November 2021, the CEC launched a four-year project to accelerate the uptake of circular economy and sustainable materials management practices to transform North American recycling and solid waste management. In 2022, the CEC commenced three milestone studies on plastic, bioplastics and paper/cardboard waste to evaluate the current state of their recycling infrastructure in North America, to identify opportunities and barriers in enhancing secondary material markets and trade, and to highlight emerging technologies, sustainable materials design pathways and best practices.

- The three milestone studies were designed and started development. They are scheduled to be finished in 2023 and will provide important input for the latter stages of the project, which is to focus on the development of tools and resources, piloting and building connections between all the relevant stakeholders.



Preventing and Reducing Food Loss and Waste



Continued outreach, enhancement and promotion of CEC-related products and stakeholder engagement

Building on the previous food loss and waste-related CEC projects and the materials developed within them (ranging from a toolkit for educators and a practical guide for businesses and organizations, to educational videos and topic-focused microsites), the Secretariat has continued efforts to raise awareness of this issue and foster the use of CEC resources and stakeholder involvement and public participation to reduce food loss and waste in North America.

- Several complementary products were developed to further raise awareness on the topic, as well as to promote the use of the tools and resources available online (education related project component and measurement related project component):
 - social media videos,
 - infographics featuring one case study per country.
 - These tools are also instrumental in the outreach efforts with stakeholders and the involvement of the CEC in international and national food loss and waste-related events.
- The CEC also supported numerous stakeholders on the use of CEC resources and awareness-raising, including local governments, businesses and education organizations among others.

Advancing Supply Chain Transparency for Chemicals in Products

The goal of this project, launched in July 2022, is to foster collaboration among North American countries to improve supply chain transparency (SCT) and enhance governments' ability to identify and prevent products containing chemicals of concern, or chemical substitutes of concern (e.g., regrettable substitution), from entering or re-entering the economy. The information derived from this project will also help industry build resilient supply chains that respond to consumer demand for safer products and information on their chemical composition.

- The project plan was presented in the Asia-Pacific Economic Cooperation's Chemical Dialogue (APEC CD) meeting and at Mexico's National Chemical Industry Association's (*Asociación Nacional de la Industria Química*, ANIQ) Environmental Health and Safety Seminar.
- A work plan was developed for the assessment of SCT practices.



Communities for Environmental Justice Network (CEJN)

The CEJN project, which was developed during 2022, aims to create a network of Indigenous, local, vulnerable, disadvantaged, and/or underserved communities that have environmental justice concerns, in order to increase local capacity to collect, deepen and disseminate community-based expertise, lessons learned, and guidance related to climate change. Through the network, participating members will contribute to the facilitation of learning and knowledge exchange processes, in particular traditional ecological knowledge and practices, and develop a virtual resource library, with the goal of strengthening the climate adaptation, mitigation and other capacity building of Indigenous, local, and vulnerable communities in Canada, Mexico and the United States. Implementation of the project is expected to begin in 2023.



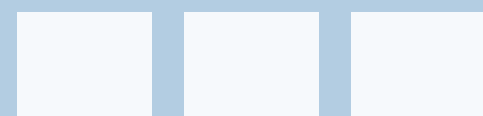


Council-supported Initiatives



Indigenous Approaches to Freshwater Management in North America

Launched in March 2022, this initiative seeks to document Indigenous approaches to freshwater management in North America and make lessons learned available to the public through an online portal on the CEC website that will be launched at the end of 2023. This initiative includes a series of case studies identified by the Traditional Ecological Knowledge Expert Group (TEKEG), a knowledge dialogue to complement the case studies which took place in the fall of 2022, and a workshop with water experts on potential opportunities to apply TEK to the CEC's operations and policy recommendations, scheduled to take place in the fall of 2023.



Air Quality Improvements for Environmental Justice

In October 2022, the CEC launched this initiative to build collaborative partnerships with communities facing disproportionate environmental harm or risk thereof, to address poor air quality due to black carbon and particulate matter emissions. This initiative will also deploy low-cost air quality sensors to increase public awareness of and access to air pollution information, and to supplement the air quality information for national networks. The initiative was presented in 2022 in the context of UNEP's International Day of Clean Air for Blue Skies during a joint event, entitled "Actions on Air Quality in North America." The project was initiated by discussions and selection of potential collaborative partnerships with communities to implement the activities.



Addressing Ghost Gear in North America

Launched in December, this initiative aims to reduce abandoned, lost or discarded fishing gear (ALDFG), or “ghost gear,” in North American waters. In collaboration with the Ocean Conservancy and the cross-sectoral Global Ghost Gear Initiative (GGGI) and through capacity building workshops, the project will engage local communities to prevent, reduce and retrieve ghost gear developing best practices and building knowledge to advance responsible management of active and end-of-life fishing gear.





Transitioning Remote Communities to Renewable Energy

During 2022, the CEC developed an implementation workplan for this initiative, under which the CEC will develop case studies of best practices from across North America on transitioning communities to cleaner, more affordable and reliable sources of clean energy that will improve environmental conditions, enhance energy security and promote self-sufficiency and community ownership of energy generation projects. These case studies will be integrated into a “Multi-stakeholder Platform for Transitioning Remote Communities to Renewable Energy,” developed by the International Renewable Energy Agency (IRENA), and which will serve as a global communications platform on the topic of energy transition for remote communities.



Climate Adaptation Initiative

The objective of this initiative is to advance responsive and adaptive capacities of the three countries, in managing extreme weather and climate events that affect community health, safety and socio-economic and environmental well-being, through improved coordination of early warning systems, adaptation planning and emergency management, and by supporting innovative nature-based climate adaptation solutions. A key goal is to improve effective procedures for communication and collaboration among and within the three countries to help prevent and reduce the impacts of extreme events and protect affected communities. Trilateral discussions to define the activities under this initiative began in September 2022.

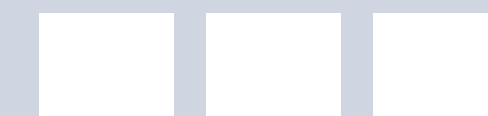


Other initiatives



Other initiatives that began design or development during 2022, and for which titles are still to be determined, include:

- Supporting circular economy in North America
- Environmental education initiative for community-led ecosystem conservation
- Strengthening of community early warning systems for extreme precipitation in the North American region
- Resilience of Indigenous People's food systems
- Advancing responsible purchasing of wood products





Providing Tools for Decision-Makers



Tracking pollutant releases and transfers in North America

A key goal of the North American Pollutant Release and Transfer Register (NAPRTR) initiative is to provide enhanced access to comparable PRTR data for use by policymakers, nongovernmental organizations, industry, academia and the general public. It does so through the compilation, presentation and analysis of PRTR data and information in the *Taking Stock* report series and the *Taking Stock Online* website and searchable database. In 2022, analyses of data for offsite transfers to disposal were completed for presentation in the latest *Taking Stock* report, published in Spring 2023. Other activities under the NAPRTR Initiative include stakeholder engagement through public meetings to discuss PRTR data access and concerns about industrial pollution, working with the three national PRTR programs on data quality and comparability, and collaboration with the automotive manufacturing sector and supply chain on a voluntary “Pollution Prevention Challenge.” More information can be found 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 (NALCMS) is an ongoing collaborative initiative between the CEC and the Governments of Canada, Mexico and the United States and their respective mapping agencies to monitor land cover and its changes over time. Land cover refers to the classification of surface cover on the ground, whether forest, urban infrastructure, bodies of water or agricultural land, etc., helping to distinguish between natural and anthropogenic features.

During the year, NALCMS maps were downloaded more than 300 times from the North American Environmental Atlas, and the NALCMS products were cited at least 25 times in published scientific articles and five times in book chapters, and theses/dissertations. This year, NALCMS was working toward assembling and harmonizing the new version of the North American land cover data from national data, for publication in early 2023. NALCMS is available at <www.cec.org/NALCMS>.



North American Environmental Atlas



CEC's North American Environmental Atlas is a collection of map layers that allow the visualization of various environmental aspects, such as terrestrial and marine ecological regions, climate zones, as well as protected areas across the three countries. The Atlas compiles and harmonizes accurate geospatial data for North America, which are used by decision-makers, land managers, conservation organizations, scientific researchers, and international organizations to research, analyze, and manage environmental issues.

During 2022, the CEC published three layers with up-to-date official data from Canada, Mexico, and the United States: North American Forests, North American Population Density, and North American Political Boundaries. During the year, the Atlas website was visited more than 11,000 times. The Atlas is available at www.cec.org/Atlas.



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cec.org

Joint Public Advisory Committee Comité Consultivo Público Conjunto Comité consultatif public mixte



Andrew Rhodes
Foreign Affairs Ministry

Outcome of Joint Public Advisory Committee (JPAC) Activities

In 2022, JPAC led three public consultations on ways to strengthen new trilateral projects under the CEC's cooperative work program:

1. Advancing Supply Chain Transparency for Chemicals in Products
2. Air Quality Improvements for Environmental Justice
3. Communities for Environmental Justice Network (CEJN)



In 2022, JPAC submitted three letters of Advice to Council, recommending that Council:

1. Take measures to resolve issues regarding the CEC's status in Mexico and to ensure sufficient protection of CEC officials while in Mexico. [Advice to Council No. 22-01]
2. Consider—in implementing its proposed project on supply chain transparency for chemicals in products—challenges regarding the existence, availability, and accessibility of information on chemicals in products and various approaches to promoting greater supply chain transparency, including building upon existing initiatives and research to avoid duplication. [Advice to Council No. 22-02]
3. Consider, in implementing its proposed project on air quality improvements for environmental justice, challenges regarding capacity and resource availability for vulnerable and underserved communities and regarding data collection as well as the importance of environmental education and supporting existing efforts. [Advice to Council No. 22-03 (and 23-01)]

JPAC members engaged with experts and members of the public on best practices, challenges and opportunities for trilateral cooperation at two Public Fora this year. The first was held on **14 July in Mérida**, one day before the Council Session, which highlighted environmental education initiatives led by Indigenous and local communities from across North America. During the July Public Forum, panelists underscored the importance of developing partnerships with private and federal sectors and of consulting with elders. They also stressed the importance of social recognition of the value of natural resources for conservation efforts. In terms of needs, the panelists identified the following:

1. Project financing, investment, and capacity building
2. Social and governmental recognition of the importance of projects
3. Data availability and data collection
4. Changing human behavior regarding environmental consciousness
5. Enforcement of laws and regulations
6. Lack of Indigenous representation in decision-making
7. Encouraging and involving youth participation in projects

The event also included an Intergenerational Round Table, which highlighted the importance of:

1. Including Traditional Ecological Knowledge in current policies to address climate change
2. Investing in quality educational programs for kinds and youth
3. Acknowledging that disasters do not affect everyone equally
4. Sharing and applying knowledge between different sectors
5. Supporting local NGOs with funding and financing
6. Creating policies that emphasize projects that help to reduce (natural) risks
7. Improving data collection related to the natural losses that are due to disasters

In December 2022, JPAC held its Public Forum on the Role of Ports in Fighting Climate Change: “Moving the needle toward industry decarbonization.” This JPAC hybrid forum served as a platform to bring together stakeholders from all sectors to discuss the role of ports, as well as to identify the building blocks that could support accelerated decarbonization of the North American economy. Industry representatives, NGOs, government representatives, and academia joined the forum to discuss green ports and green shipping corridors, as well as the social and environmental justice dimensions of port activities and their transition toward industry decarbonization.

A total of 518 participants, both in-person and online, attended the event.



The second Public Forum, held on **1 December in Halifax**, focused on the various roles of maritime ports in advancing climate mitigation. Three key recommendations were included in the JPAC Advice for the Halifax Meeting:

1. Create a Permanent CEC Initiative on Ports and Climate Change
2. Create a North American Ocean-Climate Action Plan
3. North American Agreement on the Use of Low and Zero-Emission Fuels

Key findings from all four panels can be found here: <http://www.cec.org/files/documents/records_discussion/jpac-summary-record-22-02-en.pdf>.



JPAC also hosted a workshop from **29 April to 1 May in Tlalmanalco**, with Indigenous and youth participants, which served as a precursor to the July Public Forum in Mérida. The workshop had three fundamental objectives:

1. To identify shared values to guide our environmental work in the three countries;
2. To discuss key themes that should be addressed during the 2022 CEC Council Session in Mérida, and help promote public participation leading up to the event; and
3. To reflect on experiences related to sustainable production, circular economy, traditional ecological knowledge, and community participation, and address environmental justice issues.

Organized by the CEC, in collaboration with Centli (*Centro para la Sustentabilidad Incalli Ixcahuicopa*), the workshop was attended by the Director of the International Affairs Coordinating Unit (*Unidad Coordinadora de Asuntos Internacionales*) of the Ministry of the Environment and Natural Resources (*Secretaría de Medio Ambiente y Recursos Naturales*—Semarnat) and the Alternate Representative from Mexico to the CEC Council, as well as by members of the Sustainable Development Training Center (*Centro de Capacitación para el Desarrollo Sustentable*—Cecadesu), the CEC Secretariat, representatives from the Traditional Ecological Knowledge Expert Group and members of the Joint Public Advisory Committee.

Also in attendance were representatives of fifteen Mexican organizations representing ten states in Mexico, as well as from the *Universidad Nacional Autónoma de México* (UNAM), the *Tecnológico Universitario de Valle de Chalco*, and the *Universidad Autónoma Metropolitana* (UAM), including its dean.

More information can be found at <www.cec.org/jpac>.





Public Participation, Stakeholder Engagement, and Community Action



Traditional Ecological Knowledge

The Traditional Ecological Knowledge Expert Group (TEKEG) provides advice on integrating traditional ecological knowledge and Indigenous perspectives into the CEC's work and policy recommendations. At the 2022 Council Session and JPAC Public Forum in Mérida, the three countries endorsed a new TEKEG-led initiative to address threats to food security by increasing our understanding of traditional Indigenous practices and knowledge related to food systems.

The TEKEG has also been working closely with the Secretariat to continue implementing the project “Indigenous Approaches to Freshwater Management in North America.” On 22 November 2022, the TEKEG held an online knowledge dialogue entitled “Application of Indigenous Knowledge in Water Management: Models of Best Practices,” which highlighted cases from across North America that demonstrate the importance, use and application of Indigenous knowledge, tools, approaches and methods in the context of freshwater management.

The knowledge dialogue provided an opportunity for sharing experiences related to water management with a traditional knowledge focus.

- **The online Knowledge Dialogue was led by the TEK Expert Group and a total of 273 people joined the event.**
- **Survey participants were asked to select the reasons that motivated them to join the online Knowledge Dialogue. A high percentage of them (75.8%) indicated they wanted to learn more about Traditional Ecological Knowledge.**

More information can be found at <www.cec.org/about/traditional-ecological-knowledge-expert-group/>.

Supporting Youth Engagement

On 15 February 2022, the CEC launched the sixth edition of the Youth Innovation Challenge (YIC) with the theme “Innovation towards COVID-19 Recovery: Inclusive Solutions for Resilient and Sustainable Communities.” More than 100 solutions were submitted for the 2022 YIC and the Council selected three winners (one per country) whose solutions addressed: a circular economy perspective to the agro-industry as an alternative to conventional waste management; an innovative solution to build a bridge between the fishing and agriculture industries; and an initiative in the form of a community sewing workshop that offers low-cost and energy-efficient alternatives to the wastefulness of fast fashion mass production. The 2022 YIC winners presented their solutions at the Council Public Session.



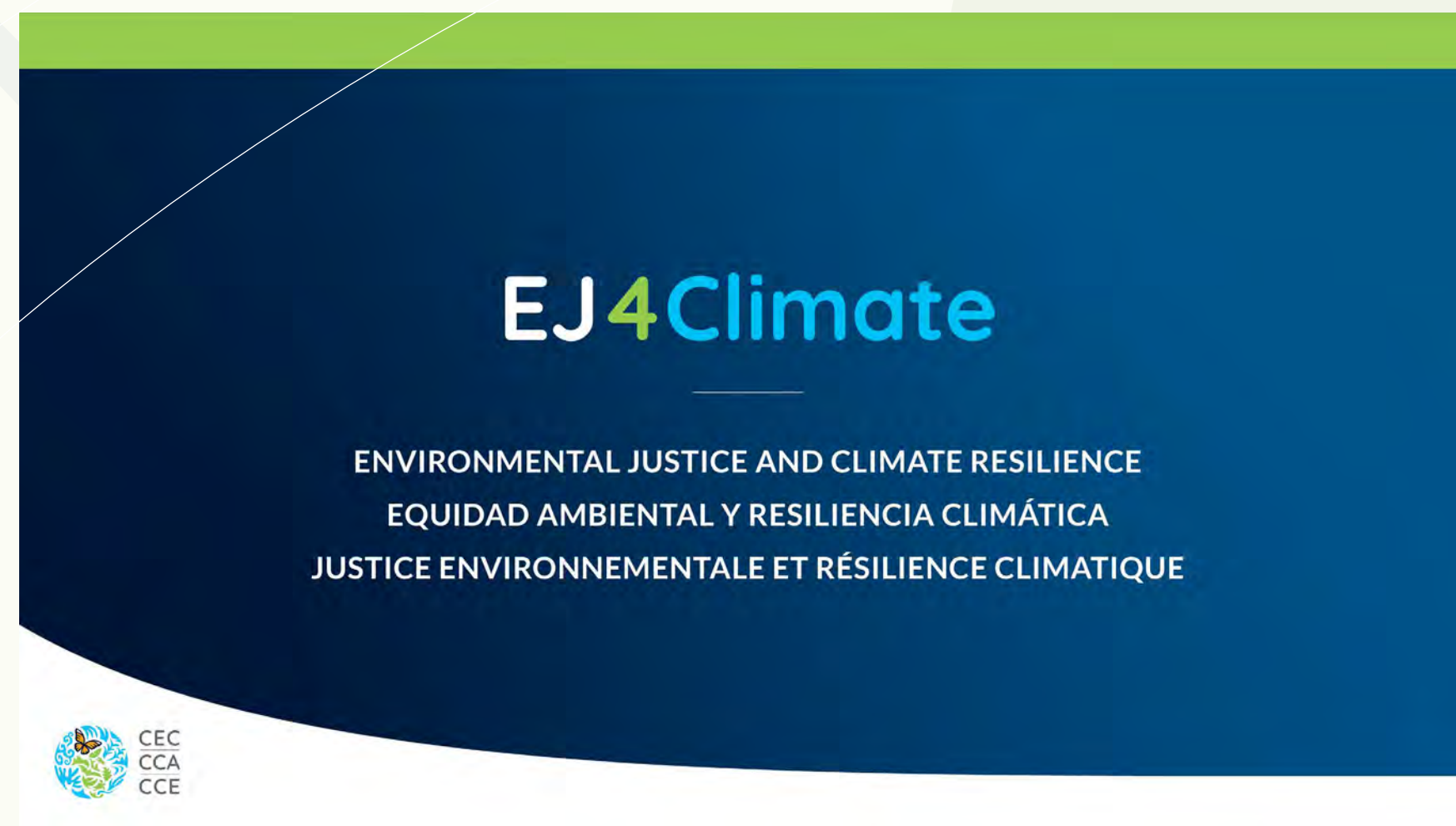
In addition, nine young people (three per country) were invited to attend the Council Session. These youth participants, alongside the Youth Innovation Challenge winners from 2020, 2021 and 2022, participated in a networking event, reflected on the CEC’s 2021–2025 Strategic Plan and offered recommendations and ideas for youth inclusion under the CEC’s mandate, with special attention to the cross-cutting strategic approach to diverse and inclusive stakeholder engagement and public participation. These recommendations will inform future efforts to strengthen youth engagement at the CEC.

North American Partnership for Environmental Community Action

The North American Partnership for Environmental Community Action (NAPECA) is a CEC grant program that engages and supports local and Indigenous communities. In 2022, 10 environmental initiatives aimed at supporting community-based recovery from the COVID-19 pandemic received CEC grants. 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 (12 to 24 months). The launch of the next NAPECA Call for Proposals is expected for the end of 2023. More information is available at www.cec.org/napeca.



EJ4Climate Grant Program: Environmental Justice and Climate Resilience



In September 2021, the CEC launched EJ4Climate, a US\$2 million grant program to support underserved, vulnerable, and Indigenous communities across North America that are preparing for climate-related impacts. The program welcomed proposals for projects that support community resilience to climate change, yield tangible and equitable benefits for local communities by addressing or adapting to climate change impacts, consider local knowledge and apply it to an innovative action or solution, and build partnerships that respond to community-identified challenges. In March 2022, 15 community projects from across North America received CEC grants.

In September 2022, the CEC launched a second cycle of funding focusing on projects that integrate community-led environmental education in support of environmental justice and community resilience to climate-related impacts. In early 2023 grant recipients were announced and project implementation began. More information is available at <<http://www.cec.org/grant-programs/ej4climate/>>.

The Submissions on Enforcement Matters Process (SEM)



What is the SEM process?

The Submissions on Enforcement Matters (SEM) process was created under Articles 14 and 15 of the NAAEC and is now governed by Articles 24.27 and 24.28 of the USMCA for all submissions received after 1 July 2020. The SEM process allows a resident or entity established in North America to file a submission asserting that Canada, Mexico and/or the United States is failing to effectively enforce its federal environmental law. Filing a submission can lead to an independent fact-finding investigation by the CEC Secretariat and the publication of a factual record that examines the issues raised.

From 1994 to the end of 2022, the Secretariat has received a total of 107 submissions: 33 concerning Canada, 58 concerning Mexico, 14 concerning the United States, and two concerning both Canada and the United States. The Secretariat has published 24 factual records to date.

In 2022 the CEC received three new submissions and continued to process six others. In three cases, the Secretariat determined the submission met the criteria established in Article 24.27(2) of the USMCA and requested a response from the concerned government Party in accordance with Article 24.27(3). The Secretariat concluded action on the *Playa Hermosa* submission after reviewing Mexico's response. The Secretariat informed the Council that the *Vaquita Porpoise* and *North Atlantic Right Whale* submissions warrant the development of factual records and completed draft factual records for the *Metrobus Reforma* and *City Park* submissions. By the end of 2022, the Secretariat was still awaiting a Council decision on whether to prepare a factual record on the *Hydraulic Fracturing in Nuevo Leon* and *Loggerhead Turtle* submissions.

The three new submissions relate to the following: Mexico's alleged failure to enforce its environmental laws to protect the coastal ecosystem of Playa Hermosa in Ensenada, Baja California; Mexico's alleged failure to enforce its environmental laws to assess the environmental impacts of the *Tren Maya* project in Quintana Roo; and Mexico's alleged failure to enforce its environmental laws to uphold water quality standards and ensure pollutants remain within legal limits in the Madin Dam Basin near Mexico City.

More information can be found at <www.cec.org/submissions>.






Improving Access to Information for Decision-Makers

The CEC's online library, data tools and resources provide the public with access to high-quality environmental information and resources, including scientific reports, databases, and maps, to support the efforts of government officials, the private sector, academic and research institutions, nongovernmental organizations, and communities relative to environmental research and management.

Activities in 2021 will focus on improving accessibility and readability of the online library and the upkeep and expansion of CEC's trinational datasets and maps, including Taking Stock Online, the North American Environmental Atlas, and the North American Land Change Monitoring System (NALCMS). The list of activities and budgets for these initiatives are presented in Appendix II.



Key engagements during 2022 included:

Throughout the month of March, the CEC co-hosted, along with the University of Waterloo Faculty of Environment, the second edition of the Green Entrepreneurship Workshop Series, which invited entrepreneurs to learn from a multidisciplinary group of researchers, entrepreneurs and youth to advance sustainability through entrepreneurship. A total of 1477 participants registered for the event series, representing 85 countries apart from Canada, Mexico and the United States.

In May 2022, the CEC signed a memorandum of understanding (MoU) with the Faculty of Environment of the University of Waterloo to formalize the long-standing relationship and collaboration on sustainable solutions for complex environmental challenges. This MoU recognizes the need to share the mutual benefits that may be derived from coordinated actions for the transition of the EcoInnovation Network to become self-sustaining.

From 27 July to 7 August, the CEC carried out the sixth edition of the International Monarch Monitoring Blitz, inviting people across North America to look for milkweed plants and examine them for monarch eggs, caterpillars, chrysalises and butterflies. This year's Blitz received enthusiastic participation, surpassing the rates of previous years with a new record of more than 2,600 participants from across 75 states, provinces and territories in North America. This support resulted in nearly 6,000 observations. The Monarch Blitz is a partnership effort among seven organizations across North America.

On 7 September 2022, the CEC, the World Resources Institute and the United Nations Environment Programme North America co-hosted a dialogue with experts and representatives from the governments of Canada, Mexico and the United States to celebrate the International Day of Clean Air for Blue Skies, under the theme "The Air We Share." This event showcased and shared the progress of the collective efforts to reduce air pollution in North America and emphasized the need to continue convening experts, policymakers and stakeholders for dialogue on how to strengthen future collaboration to close the gap on air pollution in North America and beyond.



On 29 September 2022, the CEC and the UN Food and Agriculture Organization North America co-hosted a Twitter chat to celebrate the International Day of Awareness of Food Loss and Waste. This effort invited the public, food loss and waste practitioners, experts and engaged communities to rethink the ways we produce, handle and consume our food. Together, participants shared actions and solutions to prevent and reduce food loss and waste. This effort had an online outreach of 3.41 million people, with 641 tweets/retweets.

On November 9th, the CEC participated at the 2022 United Nations Climate Change Conference (COP27) and hosted an event titled, “Canada, Mexico and the United States Working Together on Climate Adaptation Solutions for North America,” to provide vital information for delegates, representatives of Indigenous communities, and other countries to design and implement regional, collaborative, science-based mitigation and adaptation projects.

From December 7th to 19th, the CEC attended the fifteenth Conference of the Parties (COP15) to the UN Convention on Biological Diversity (CBD) and participated in several events, being able to showcase CEC work on food loss and waste, supporting youth engagement by increasing the visibility of the Youth Innovation Challenge winners, and engaging with partner organizations in a closed session on communication and stakeholder engagement.

CEC Communications

The CEC made great strides in advancing our communications and visibility objectives throughout 2022. With the resumption of in-person events, notably the July Council Session and JPAC Public Forum in Mérida, the September Clean Air for Blue Skies event in Washington, and hosting and participating in events at the climate and biodiversity COPs in November in Egypt and Montreal in December, the CEC is leveraging its role and showcasing its long trajectory and experience as a key international organization and forum for cooperative environmental leadership.

This resurgence has been accompanied by unprecedented traditional media coverage at the CEC – tripling media hits from 2021 and increasing **739%** over 2020 levels. The CEC also enjoyed significant gains on social media, increasing our total followers across our channels to nearly **48,500** followers by the end of 2022. Thankfully, this growth has not come at the expense of audience engagement; our newsletter open rates have increased to a rather respectable **34.1%**. All this increased visibility has reinforced success in our key campaigns, such as the EJ4Climate and NAPECA grant programs, the International Monarch Monitoring Blitz and the Youth Innovation Challenge and, in turn, the CEC's success in these communications and outreach campaigns and initiatives have continued to further reinforce our success, visibility and recognition as a player of key regional and global relevance.

Measuring Performance and Reporting on Progress

The planning and performance framework activities at the CEC are powerful mechanisms to strengthen environmental governance. Evaluation of the CEC's work must also account for the different benefits generated from its focus on public participation and stakeholder engagement. To take these into consideration, during 2022 the CEC refined its approach to measuring performance and defining how projects and initiatives help deliver on the Strategic Plan 2021–2025 priorities through the definition of operational and strategic performance indicators for all project and cross-cutting activities. The CEC has also improved its data collection methods, including through user-based evaluations, which allow the integration of a wide diversity of voices and help bring about improvements and positive change to existing practices.

In 2022, the CEC also initiated the long-term impact assessment of CEC's Youth Innovation Challenge, the NAPECA grant program, and the past CEC Local Environmental Observer (LEO) Network project. These results will feed into the planning and design of future CEC work.

During 2022, the CEC also published its 2022 Operational Plan detailing the activities of the CEC for the year as well as the associated budgets, available at: <http://www.cec.org/files/documents/operational_plans/operational-plan_2022.pdf>) as well as its Annual Report 2021, available at: <http://www.cec.org/files/documents/annual_reports/2021-annual-report-en.pdf>.

2022 Expenses

DELIVERABLES

Cooperative Projects	1,005,003
North American Partnership for Environmental Community Action (NAPECA) and EJ4Climate	2,191,652
Submissions on Enforcement Matters	320,479
Tracking Pollutant Releases and Transfers in North America (PRTR)	150,557
CEC Interactive Platforms	70,800

TOTAL DELIVERABLES 3,738,490

INSTITUTIONAL SUPPORT AND MAINTENANCE

Council Support	332,734
JPAC Support	340,387
TEK Expert Group Support	32,807
Communications and Outreach	371,234
Stakeholder Engagement and Partnership Development	267,998
Information System Infrastructure Maintenance	88,211
Strategic and Operational Planning	73,397

TOTAL INSTITUTIONAL SUPPORT AND MAINTENANCE 1,506,768

ADMINISTRATIVE AND MANAGEMENT

Salaries, Benefits and Professional Development	3,657,133
Operating Expenses	950,565
External Administrative Support	328,305
Relocation/Orientation, Recruitment	222,227
Executive Director's Office	60,062

TOTAL ADMINISTRATIVE AND MANAGEMENT 5,218,292

TOTAL EXPENSES 10,463,550

As per financial statement 10,463,550

Less loss on exchange (1,356,109)

Expenses 9,107,441

(All figures in Canadian dollars)



COMMISSION FOR
ENVIRONMENTAL
COOPERATION