

PROJECT NAME: Strengthening Evidence-Based Collaborative Monarch Butterfly Conservation

1. **Project duration:** from January 2025 to March 2026 (14 months)
2. **Budget): C\$180,000**
3. **Short statement of the issue(s) under this topic, need/gap identified; the project objective(s) and activities to address the issue; and expected outcomes and benefits/beneficiaries:**

The monarch butterfly population has experienced a significant decline over the last few decades, with the second lowest wintering population size¹ ever recorded during the 2023–2024 wintering season. This decline highlights the urgent need for coordinated, evidence-based conservation efforts. The Trinational Monarch Conservation Science Partnership (TMCSP), established by Canada, Mexico, and the United States, in response to the record-low wintering population size observed in 2013/2014, has played a crucial role in addressing monarch conservation challenges collaboratively. However, the TMCSP's capacity to convene and act has been constrained, following the conclusion of CEC-funded Monarch projects in 2019.

At a strategic planning meeting convened by Mexico's Secretariat of Environment and Natural Resources (Semarnat), and National Commission of Protected Natural Areas (Conanp) in February 2024, the TMCSP identified several priorities for conservation efforts, including conservation and restoration of habitat (wintering grounds, migration corridors and breeding grounds) and addressing the impacts of climate change and pesticides. These evidence-based priority conservation themes were then presented at the XVIII Trilateral Committee for Conservation and Management of Wildlife and Ecosystems meeting and the North American Intergovernmental Committee on Cooperation for Protected Areas Conservation meeting in April and May 2024, where it was agreed to continue efforts in monarch conservation and explore further actions. These priorities must now be translated into proposed actions that can be delivered by conservation practitioners across North America.

The project will convene the TMCSP and other key conservation actors within targeted virtual meetings, where they will take stock of evidence-gathering efforts and draw lessons from their implementation and results. Inclusive collaborative action will be

¹ In the context of the monarch butterfly, this refers to the total area (measured in hectares) occupied by wintering colonies in their overwintering forests in Mexico. This metric helps assess the health of the population, with smaller surface areas indicating a decline in numbers. For the wintering season of 2023–2024, the area occupied was 0.9 hectares, marking the second-lowest recorded since systematic monitoring began in 1993.

(Source: <https://www.gob.mx/conanp/prensa/disminuye-la-presencia-de-mariposas-monarca-en-los-bosques-mexicanos-de-hibernacion>)

further supported through a joint, in-person meeting to identify needs, barriers and opportunities related to on-the-ground monarch conservation, evidence-based priority actions, and a unified approach to addressing them.

As a result, the project will help guide future conservation strategies and support the ongoing efforts of the Trinational Monarch Conservation Science Partnership and monarch conservation practitioners working for the recovery of monarchs in North America.

4. Select the strategic pillar(s) from the 2021–2025 Strategic Plan that the project addresses:

- ☐ Clean Air, Land and Water
- ☐ 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

5. Describe how the project uses strategic, cross-cutting approaches in its implementation: Innovative and Effective Solutions and/or Diverse and Inclusive Stakeholder Engagement and Public Participation (including gender and diversity effects and opportunities, and youth):

The project will organize both virtual and in-person meetings to foster collaboration and evidence-sharing among diverse stakeholders, including government agencies, NGOs, academic partners, and agricultural and other private sectors, to address habitat conservation and connectivity, effects of climate change and pesticide use, and to help prioritize strategic evidence-based conservation actions for the monarch butterfly. This strategic convening will support broad participation and the inclusion of various perspectives in developing monarch conservation priorities. By facilitating inclusive discussions and integrating feedback from a wide range of participants identified by the project's steering committee and relevant partners (including representatives from academia, ENGOS, and government), the project will address diversity considerations and promotes effective collective action to enhance conservation outcomes.

6. Explain how the project can achieve more impact through trinational cooperation:

Through trinational cooperation, the project can significantly enhance its impact on monarch butterfly conservation. Each country has its own initiatives, expertise and legal framework for monarch conservation, but the multi-generational migration of this animal over long distances across the continent demands a collaborative approach, to support an evidence-based, coherent, complementary suite of actions along the migratory path that will help protect and leverage national investments in conservation.

Including national agencies presents an opportunity to develop an approach that aligns with national priorities and promotes cross-sectoral collaboration within each country. By facilitating the exchange of information, identifying best practices, and aligning conservation efforts, the project seeks to explore opportunities for efficient use of resources and collaborative action, building on initiatives and relationships developed under previous CEC work and contributing to unified progress in conserving monarch butterflies across North America.

7. Describe how the project complements or avoids duplication with other national or international work:

While many national and local initiatives in Canada, Mexico, and the United States address monarch butterfly conservation, active trilateral collaboration has been relatively limited in recent years. This project will build on the groundwork laid by previous efforts focused on monarch and pollinator conservation, complementing existing initiatives by linking and enhancing local and regional activities (to be identified through the project) without duplicating them. It aims to leverage the unique strengths and insights from various national programs to create a cohesive, trilateral approach, ensuring that efforts are integrated and optimized for greater impact.

8. Describe how the project engages traditional ecological knowledge (TEK) experts or Tribal/First Nations/Indigenous communities, if applicable:

The project recognizes the existence of traditional ecological knowledge (TEK) related to monarch butterflies and their conservation across North America. Engagement with communities and their TEK experts will be incorporated as applicable, ensuring that their perspectives and insights are considered in the conservation efforts. This approach will be adapted based on the scope and specific needs of the project, aiming to enrich the conservation strategies with diverse and culturally relevant knowledge, informed by past CEC work looking at monarch-related TEK.

9. Describe how the project engages new audiences or partners, if applicable:

The project aims to bring together a range of participants, including government agencies, local conservation organizations, academic researchers, landowners, and community groups, who may not have previously collaborated on monarch conservation. This inclusive approach helps to expand the network of partners and foster new relationships, enhancing the collective effort to address conservation challenges and driving broader involvement in monarch butterfly conservation.

10. Identify the designated partner agencies or organizations committed to implementing this project, as well as other organizations that could be involved, or benefit from it, including through outreach efforts, collaborations or partnerships (e.g., federal agencies, other levels of government, academia, NGOs, the private sector, civil society, and youth):

Lead agencies or organizations	Country
Environment and Climate Change Canada	Canada
Semarnat, Conanp	Mexico
USFWS	United States
Trinational Monarch Conservation Science Partnership	Canada, Mexico, United States
Other organizations/individuals	Country
Other federal organizations	Canada, Mexico, United States
NGOs (e.g. Monarch Joint Venture)	Canada, Mexico, United States
Provincial and state agencies	Canada, Mexico, United States
Local/ municipal/ regional authorities	Canada, Mexico, United States
Community partners	Canada, Mexico, United States
Academic experts	Canada, Mexico, United States

11. In the following table, describe: the project objective(s) and the activities and subtasks planned to achieve the objective(s); the corresponding outputs, expected results and how they will be measured (performance measures); baselines (if known) and targets by end of the project; and the timeline and budget:

OBJECTIVE 1	Facilitate effective collaboration and evidence gathering for monarch butterfly conservation
Activity 1 Budget C\$120,000	Conduct virtual and in-person meetings of the Trinational Monarch Conservation Science Partnership and other relevant groups
Output(s)	- Summary reports from virtual and in-person meetings
Expected results, performance measures	- Enhanced understanding of current conservation status, efforts, needs, and priorities (e.g. Monarch Blitz; climate change scenarios; co-benefits with pollinators conservation; data sharing; habitat loss, pesticides, and climate change; priority actions and places; shared commitments; future science, monitoring and data priorities, mobilizing urgent conservation actions) (<i>specifics to be determined through project implementation</i>) - Strengthened collaboration among partners

Baseline (current status), if known	- TMCSP last met in February 2024, for the first time since 2019, producing a general report	
Target (by project end)	- Virtual meetings of the TMCSP and other groups (international or national, at least 4 in total) - Joint in-person meeting of groups involved in virtual meetings	
Subtask 1.1	Host virtual meetings to discuss status, lessons learned, and conservation needs	January – September 2025
Subtask 1.2	Organize an in-person meeting to outline conservation priorities and action plans (linked to other monarch conservation event, if possible)	June 2025
Subtask 1.3	Prepare and distribute comprehensive meeting report to participants	February – October 2025

OBJECTIVE 2	Develop and refine priority areas for action in support of monarch butterfly conservation	
Activity 2 Budget C\$60,000	Identify and agree on evidence-based priority areas for monarch butterfly conservation actions	
Output(s)	- Outline of priority evidence-based conservation actions - Documentation of input and feedback from stakeholders - Geospatial priorities “anchor sites” for continental-scale connectivity and resiliency of the migration phenomenon	
Expected results, performance measures	- Evidence-based trinational conservation priorities and proposed actions - Updated Mexican action plan	
Baseline (current status), if known	- Existing priorities are either outdated or could benefit from updates given new evidence.	
Target (by project end)	- Finalized outline and documented set of priority areas for conservation action with timelines and ready for implementation	
Subtask 2.1	Draft priority areas for conservation action based on virtual and in-person meeting outcomes	January – June 2025

Subtask 2.2	Coordinate feedback and finalize the priority areas for action	June – October 2025
Subtask 2.3	Publish and disseminate the final outline of priority areas for conservation action	November 2025 – March 2026

12. Describe post-project expected impacts:

Expected impact (by when: month, year)	SMART performance measure(s)
By December 2026, the Trinational Monarch Conservation Science Partnership will have developed and endorsed actionable evidence-based conservation priorities and strategies for monarch butterfly conservation.	Evidence of documented conservation priorities and strategies that have been agreed upon by all three countries.
By December 2026, stakeholders across Canada, Mexico, and the United States will have increased collaboration on monarch butterfly conservation efforts.	Evidence of new international involvement in collaborative actions, projects or initiatives.
By December 2026, the Trinational Monarch Conservation Science Partnership will have a refined and actionable set of priorities and tools to guide future conservation efforts.	Evidence of finalized priority areas and tools being used in ongoing or new conservation initiatives, with feedback from stakeholders showing improved alignment and effectiveness in conservation planning.