PROJECT NAME: Advancing Pollinator Conservation throughout North America

1. **Project duration:** from January 2022 to December 2023 (24 months)

2. **Budget): C$497,000**

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:**
   Pollinators support the reproduction of 80% of wild vascular plants and 75% of crop species, and as such are crucial to food security, human well-being, and natural ecosystems. The number of pollinators has declined worldwide due to habitat loss and degradation, intensive agricultural management, pathogens, invasive species, climate change, and excessive use of agrochemicals, including pesticides. This decline requires urgent conservation actions and the engagement of stakeholders in different sectors.

   Recognizing the urgency to act together for pollinator conservation, Canada, Mexico, and the United States established foundations for regional collaboration on pollinator conservation through an initial project. Over two years, the project held targeted workshops and supported a literature review to inform the drafting of a first North American Pollinator Framework. Envisioned as a base on which to develop concrete actions in support of regional collaboration, the Framework includes a state of knowledge on pollinators in North America, recommendations for integrating human dimensions in conservation efforts, and priorities for collaborative action. The framework highlights the need for long-term, harmonized monitoring data to design and implement effective pollinator conservation strategies.

   Building on this foundation and the lessons learned from trinational collaboration on monarch conservation, as well as ongoing national efforts on pollinator conservation (including Mexico's National Strategy on Pollinators and its implementation plan, and Canadian and US efforts to strengthen national and international coordination), the three countries can now identify a path forward for collaboration. By sharing best practices and strategies to organize and mobilize native bee inventory and monitoring, this project will lay the foundations for more robust and standardized data repositories to inform conservation actions across the continent. In addition, the project will develop tools and communication materials to raise awareness about native bees and their importance, and to drive action through citizen science and community involvement.

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 incorporates new and emerging tools to address the lack and disparity of data that creates challenges for pollinator conservation. These tools harness the data available to better target resources for increased conservation returns. The project also involves a community engagement and communications component that will identify opportunities for action and stewardship to educate and work with stakeholders who might not be aware of the important role native bees play in their environment, their livelihoods, and their wellbeing.

6. **Explain how the project can achieve more impact through trinational cooperation:**
   Pollinators are of critical importance for food security and other ecosystem services, and each country in North America has initiatives in place to counter pollinator decline. Following on the example of the CEC's successful model of collaborative work on monarch conservation, the project will be a first step in implementing the recommendations of the North American Pollinator Conservation Framework, beginning with filling crucial knowledge and information gaps that are best addressed through collaborative action. Given the challenges associated with data collection and monitoring pollinators across the three countries, there is an opportunity to leverage existing national efforts to share knowledge and develop innovative tools to better target conservation actions. The project will also promote the exchange of lessons learned associated with the development of monitoring protocols and citizen science on native bee conservation.

7. **Describe how the project complements or avoids duplication with other national or international work:**
   While there are various local and national efforts to support the conservation of pollinators in Canada, Mexico, and the United States, trinational collaboration has been limited to date, with the exception of efforts exclusively focused on the monarch butterfly. The previous project initiated the process of building inclusive North American collaboration on pollinator conservation, and this project will build upon the strategies and knowledge gaps identified by stakeholders to support and link local and regional efforts.

8. **Describe how the project engages traditional ecological knowledge (TEK) experts or Tribal/First Nations/Indigenous communities, if applicable:**
   Across North America, there is a diverse collection of traditional ecological knowledge on pollinators, particularly as to how they relate to food production. In Mexico, Mayan people have an extensive ancestral knowledge on native bee management that could be included in this project. Indigenous and local communities will be engaged as applicable under the project's scope and timeline.

9. **Describe how the project engages new audiences or partners, if applicable:**
   The project will engage the general public through accessible and inclusive communications tools to raise awareness about the environmental, social, and economic benefits of native bees for communities, food production, and natural ecosystem functioning, and to spur action at the community level.

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, Agriculture and Agri-Food Canada, Parks Canada	Canada
Conabio, Semarnat, , Conanp, Sader	Mexico
USFWS, USGS, US Dept of Agriculture	United States
Other organizations/individuals	**Country**
NGOs	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	**Share strategies to organize and mobilize native bee inventory and monitoring across North America**	
Activity 1 **Budget** **C$60,000**	Share best practices for native bee inventories and monitoring through an emerging North American community of practice	
Output(s)	- Virtual workshop on native bee inventories and monitoring with experts from North America - Workshop report, including case studies, protocols, and/or best practices for native bee monitoring	
Expected results, performance measures	- Information to develop inventories and monitoring protocols is available to practitioners - Community of practice is established to share knowledge on native bee monitoring	
Baseline (current status), if known	- Strategies and methodologies for native bee inventories and monitoring exist in some parts of North America	
Target (by project end)	- A workshop report including case studies, protocols, and/or best practices on native bee inventories and monitoring is published	
Subtask 1.1	Hold a virtual workshop to share case studies, available protocols, and insights on native bee inventories and monitoring with experts from across North America	mid 2022
Subtask 1.2	Develop a collection of case studies, available protocols, best practices, and the information drawn from the workshop to serve as a reference for practitioners	late 2022 – early 2023
Activity 2 **Budget** **C$247,000**	Develop strategies and tools to organize and prioritize native bee inventories and monitoring in Canada, Mexico, and the United States	
Output(s)	- Workshop on geospatial decision-making tools with experts from North America - Geospatial decision-making tools, such as the National Bee Distribution Tool, updated and customized to meet North American needs - Geospatial priorities for native bee inventories and monitoring mapped for each country	
Expected results, performance measures	- Experts from Canada, Mexico, and the United States are introduced to geospatial decision-making tools (such as the National Bee Distribution Tool) - Updated geospatial decision-making tools customized for North American users is available	

	- Geospatial priorities for native bee inventories and monitoring have been discussed and can be identified	
Baseline (current status), if known	- The National Bee Distribution Tool is in development, with use in the United States. Geospatial tools for pollinators are currently in development in Mexico.	
Target (by project end)	- A geospatial decision-making tool has been customized for North American users - Priorities for native bee inventories and monitoring are identified for the three countries - At least two experts per country are able to use geospatial decision-making tools, such as the National Bee Distribution Tool	
Subtask 2.1	Hold workshop to introduce North American experts to geospatial decision-making tools, such as the National Bee Distribution Tool, and to explore expanded functions that would be useful to organize inventories and monitoring efforts	late 2022
Subtask 2.2	Support further development of geospatial decision-making tools, such as the National Bee Distribution Tool, as needed	early 2023
Subtask 2.3	Hold workshop to share updates to geospatial decision-making tools, such as the National Bee Distribution Tool, and to pilot mapping and identifying geospatial priorities for each country	mid 2023
Subtask 2.4	Produce report on how geospatial decision-making tools, such as the National Bee Distribution Tool, was applied and leveraged during the workshops to identify geospatial priorities for inventories and monitoring	mid-late 2023
OBJECTIVE 2	**Develop tools and communication materials to drive action**	
Activity 3 **Budget** **C$190,000**	Communicate the environmental, social, and economic benefits of native bees for communities, food production, and natural ecosystem functioning.	
Output(s)	- Communications tools and materials communicating the importance of native bees, as well as pollinators as a public good - Communications material piloted in 3 communities	
Expected results, performance measures	Communications tools and materials are available in three languages to communicate the importance of native bees, as well as pollinators as a public good, and how North Americans can take action	

Baseline (current status), if known	- Communication materials on pollinators in general is available in the three countries - Public awareness of native bees and their co-benefits is limited	
Target (by project end)	- Communications tools and materials communicating importance of native bees are available to stakeholders - Target audiences in pilot communities have an increased awareness of native bees and their importance	
Subtask 3.1	Scoping workshop with Project Steering Committee and relevant experts to determine target audience (e.g., producers, urban gardeners, communities adjacent to national parks), key messages, and calls to action	early 2022
Subtask 3.2	Create communications materials based on available information to educate target audience on the existence and importance of native bees for nature and people and pollinators as a public good.	mid-late 2022
Subtask 3.3	Develop and implement communications/educational material in 3 pilot communities (1 per country)	early-mid 2023

12. Describe <u>post-project</u> expected impacts:

Expected impact (by when: month, year)	**SMART performance measure(s)**
By December 2025, a North American community of practice has knowledge and references to develop effective inventories and monitoring strategies	Evidence that practitioners in the three countries are implementing innovative or new inventories and monitoring strategies
By December 2025, practioners have the knowledge to leverage a geospatial tool to prioritize and organize monitoring efforts	Evidence that the National Bee Distribution Tool is being used to prioritize and target monitoring resources
By December 2025, communities and partners are using CEC communication tools to help communicate the importance of native bees as a public good	Evidence based on surveys that pilot communities and target audiences are better informed on the public good provided by native bees