

<b>Project 13</b>	<b>Conserving the Monarch Butterfly and Promoting Sustainable Livelihoods</b>	<b>Responsible Project Manager at the CEC Secretariat</b>	
<b>Planned Allocation</b>	C\$85,000	<b>Working Group(s) associated with this work</b>	Biodiversity Conservation Working Group (BCWG)

## Objective of Project

The objective of this project is to complete, in 2010, the CEC's efforts to support implementation of the North American Monarch Conservation Plan (NAMCP).<sup>1</sup>

The fundamental goal of the NAMCP is to maintain healthy monarch populations and intact habitats throughout the migration flyway in North America. This effort is supported by a trilateral monarch butterfly protected-area network, flyway monitoring in Mexico, Canada, and the United States, and where possible, sustainable development activities that support the use of market forces to promote conservation of over-wintering and flyway habitat, supporting improved livelihoods in conjunction with local communities.

Accordingly, this project completes activities detailed in the CEC's 2009 Operational Plan that were postponed at the request of the project task group. The 2010 tasks described here are designed to complete this work and draw the CEC's direct contribution to this effort to an appropriate conclusion.

## Background

### *Project History and Foundation*

The development of the North American Monarch Conservation Plan was initiated in December 2006 at the Monarch Flyway Conservation Workshop in Mission, Texas, and furthered at the March 2007 *Foro Regional Mariposa Monarca* in Morelia, Mexico. This initiative—endorsed by the Trilateral Committee for Wildlife and Ecosystem Conservation and Management in

2007—is focused on conservation of the monarch butterfly and its migratory phenomenon throughout the trinational flyway.

Following CEC's Council Resolution 07-09<sup>2</sup> directing support to the existing multi-stakeholder collaborative effort to develop a North American Monarch Conservation Plan, the CEC hosted a trinational workshop and obtained input from an extensive list of experts from diverse backgrounds. In June 2008, the NAMCP was completed and delivered to Council. Since that time it has been distributed and cited widely in the monarch conservation community in North America.

This plan provides an updated account of the species and its current situation, identifies the main risk factors affecting it and its habitat throughout the flyway, and summarizes the current conservation actions taken in each country. It offers a list of key trinational collaborative conservation actions, priorities and targets to be considered for implementation by the three countries. Moreover, the NAMCP provides an agreed-upon comprehensive framework for leveraging and coordinating the diverse conservation actions taking place across all three countries of the flyway beyond the completion of this project in 2010.

The activities described here build on the Council Resolution and will complete CEC activities commenced in 2009 or earlier, specifically:

- delivery of the socio-economic study examining root causes of habitat pressure throughout the monarch flyway;

<sup>1</sup> [http://www.cec.org/Page.asp?PageID=924&ContentID=1398&AA\\_SiteLanguageID=1](http://www.cec.org/Page.asp?PageID=924&ContentID=1398&AA_SiteLanguageID=1).

<sup>2</sup>

[http://www.cec.org/Page.asp?PageID=122&ContentID=954&SiteNodeID=266&BL\\_ExpandID=&AA\\_SiteLanguageID=1](http://www.cec.org/Page.asp?PageID=122&ContentID=954&SiteNodeID=266&BL_ExpandID=&AA_SiteLanguageID=1).

- a training workshop to support ongoing monarch monitoring efforts, and improve exchanges of monitoring data and information trinationally; and
- scoping community-based activities in the Mexican overwintering sites, where sustainable economic approaches could assist in improving sustainable livelihoods while at the same time supporting conservation goals.

**Key Stakeholders, Resource Leveraging, Partnerships (to date)**

Key stakeholders in the implementation of this project include:

- government agencies: *Comisión Nacional de Áreas Naturales Protegidas* (Conanp), US Fish and Wildlife Service (US FWS), and Canadian Wildlife Service (CWS);
- local and state/provincial authorities;
- *Reserva de la Mariposa Monarca*—World Heritage Site, including local communities in the region of the over-wintering sites;
- Trilateral Committee for Wildlife and Ecosystem Conservation and Management;
- *Foro Regional Mariposa Monarca*;
- local and regional conservation groups; and
- scientists, schools and citizen conservation groups in all three countries.

**Rationale**

The monarch butterfly (*Danaus plexippus*), along with its migratory pattern unparalleled in nature, is an iconic species with considerable trinational significance—emblematic of the interdependence of North American ecosystems. The exceptional monarch migration phenomenon has attracted significant conservation effort and scientific attention, and was inscribed in 1983 on the IUCN Red List of Endangered Species. In July 2008, the UNESCO World Heritage Committee recognized the montane protected areas in Mexico, comprising the over-wintering sites of the monarch butterfly, as a World Heritage Site for precisely the same reasons—joining a distinctive list of 174 natural sites around the world of outstanding universal value.

Today, the migration phenomenon of the monarch butterfly is threatened by destruction, degradation, and fragmentation of breeding and migration habitat in Canada, the United States, and Mexico, due to land conversion, herbicides, pesticides, and exotic plant invasion, and to deforestation of wintering habitat in Mexico. There is an urgent need for additional ecological and socio-economic information to better protect the monarch butterfly and its habitats, while supporting local socio-economic development.

**Fulfillment of Strategic Objectives**

Efforts in 2010 are designed to support ongoing implementation of the NAMCP through support to trinational monitoring efforts, and addressing the socio-economic imperatives driving habitat degradation in the over-wintering areas as priorities. Concomitantly, this project supports culmination of the CEC's ongoing efforts in this project and fulfillment of the CEC's 2005–2010 Strategic Plan. At its conclusion this project will have fulfilled specific objectives of that Strategic Plan in the following manner:

**Capacity Building**

- supporting coordination and building capacity among local, national and international agencies and NGOs involved in the conservation of monarch butterfly habitat and its migratory phenomenon;
- training and developing capacities at local and regional levels to assess the status of the monarch population, its habitat, and the environmental stressors, based upon long-term trinational monitoring and assessment protocols;

**Information for Decision Making**

- addressing information gaps in the understanding of North American decision-makers (particularly Conanp, USFWS, and CWS) regarding the underlying pressures on the monarch and its habitat throughout the entire flyway, and of the means to address them; and,

**Trade and Environment**

- promoting community-based activities that will reduce pressure on key monarch habitat, particularly in over-wintering areas, while at the same time improving livelihoods in local communities in the vicinity of these sites.

### ***North American Scope of the Project and Its Relevance to the Three Parties***

The monarch butterfly is an iconic migratory species of unique trilateral significance. All project tasks and activities outlined here are drawn from the North American Monarch Conservation Plan (as approved by the Parties) and are of unique trilateral importance, as proposed by the trilateral project task group.

Conserving the monarch over-wintering sites in Mexico, as well as working to improve foraging/breeding success along the entire length of the flyway, is of critical importance to maintaining viable monarch populations in North America. This project will support ongoing trilateral collaboration towards improving monarch monitoring efforts, sharing of data from these efforts, and contributing towards critical habitat conservation in the Mexican over-wintering sites.

Since the initiation of monarch butterfly conservation activities within the CEC in 1996, interest in conservation, education, and monitoring efforts has grown rapidly in North America—particularly among nongovernmental organizations (NGOs) and academia. There is now widespread recognition of the need for an integrated, continental strategy to protect and maintain key habitat along the monarch's flyway, while addressing the root causes of habitat deterioration.

#### ***CEC Niche and Value Added***

The CEC's role in this project over the long term has been to build consensus around a shared conservation strategy for the monarch butterfly (the North American Monarch Conservation Plan) and assist in implementing those aspects of the plan that specifically benefit from coordinated, trilateral effort – work which is now largely completed. The trilateral task group for this project has also identified standardized monarch monitoring efforts across North America as essential for the management of this species and its habitat. As such, the CEC is utilizing its considerable experience in the management and sharing of environmental data in trilateral efforts to improve collaboration in the access and use of these assets in support of conservation efforts for this species.

### **Activities and Outputs**

#### ***Key Activities***

Work described here concludes tasks initiated in 2009 but postponed due to recommendations from the project task group. All tasks are designed to complete this work and draw these to a logical conclusion in 2010. Tasks conform to priority actions identified in the North American Monarch Conservation Plan (NAMCP):<sup>3</sup>

- Funding of community projects in the Mexican over-wintering sites selected from the 2009 analysis;
- Ongoing training in standardized monarch monitoring techniques completed, following from the results of the October tri-national 2008 monitoring training workshop; and,
- Development of tools that improve access to monarch observational data for the scientific and conservation communities.

#### ***Target Groups***

Target groups for the 2010 tasks are federal and state/provincial governments, NGOs, and academic organizations involved in monarch butterfly monitoring initiatives, as well as community-based organizations involved in habitat conservation and socio-economic activities around key protected areas along the North American flyway.

#### ***Partners, Stakeholders***

Project stakeholders include the *Comisión Nacional de Áreas Naturales Protegidas* (Conanp), the US Fish and Wildlife Service, the Canadian Wildlife Service (i.e., the CEC Project Task Group), along with relevant state/provincial authorities. Also included are local/regional community groups and conservation organizations, as well as academia and citizen science groups in all three countries. The latter are primarily involved in scientific, monitoring and data collection efforts, as well as in habitat conservation activities.

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<sup>3</sup> As instructed by Council Resolution 07-09, the Secretariat coordinated stakeholder and expert meetings in December 2007 to assist in the development of the North American Monarch Conservation Plan. A wide array of experts, government agencies, NGOs and local and federal authorities participated in its development.

### ***Leveraging***

The 2010 activities are designed to build on existing trilateral networks and initiatives in monarch conservation—whether in ongoing monitoring efforts across all three countries or in linking directly with community-based projects designed to link conservation of key protected areas to sustainable development. In this way, implementation of 2010 activities leverages (and is leveraged by) ongoing activities, and will contribute to overall sustainability of outcomes.

### ***Outputs and Associated Timelines***

The table below provides detail on the specific tasks, outputs, and timelines for this project in 2010.

## **Anticipated Outcomes and Performance Indicators**

### ***Direct Outcomes***

- Consensus developed among key stakeholders regarding the most viable existing socio-economic activities that can support both species/habitat conservation goals and improved sustainable livelihoods;
- Increased participation of local communities in promoting local economic (sustainable development) initiatives that support conservation of critical monarch habitat;
- Training on monarch monitoring protocols in all three countries (completed); and
- Improved understanding of needs and requirements to support collaborative sharing and integration of monarch monitoring data.

### ***Performance Indicators***

- Identification of specific community-based projects/activities in the Mexican overwintering sites that best support the objectives and planned actions of the NAMCP; and
- Improved availability of comprehensive of monarch monitoring measured as absence/presence of monitoring data available for download from known research or conservation organizations/actors.

### ***Intermediate Outcomes***

- Improved trilateral collaboration on the assessment and continuous monitoring of the species, its habitat, and its stressors, throughout the flyway; and
- Improved understanding among parties and other stakeholders re best practices supporting sustainable economic activities that promote both habitat conservation practices.

### ***Performance Indicators***

- Number of protected areas and monarch conservation organizations in North America adopting the NAMCP to guide their conservation actions; and
- Success of trilateral monitoring efforts in improving overall understanding the status of monarch populations and the migration pattern.

### ***Final Outcomes***

- Adoption of effective trilateral strategies and programs to address monarch habitat loss and degradation; and
- Healthy monarch populations and conserved habitats throughout the North American migration flyway.

### ***Performance Indicators***

- Tracking of land use/land cover changes over time (net losses/gains) in key monarch migration and overwintering habitat; and
- Monitoring results indicating stable or growing populations of monarch butterfly populations along the flyway.

## **Timetable, Project Completion and Sustainability Beyond**

### ***Culminating Steps in Achievement of Program Objectives***

The action plan of the NAMCP represents a long-term conservation undertaking across all three countries in North America. Both past and current project results provide support for ongoing trilateral cooperation in support of the North American Monarch Conservation Strategy.

***Target End Date for CEC Involvement***

The year 2010 represents the conclusion of CEC-coordinated activities in support of the North American Monarch Conservation Plan (NAMCP).

***Sustainability Beyond 2010***

Project activity for 2010 will proceed as described herein and is designed to build on achievements of the Conserving the Monarch Butterfly Project over the past three years. Canada, Mexico, and the United States are already investing in a variety of monarch conservation initiatives across the flyway. It is expected that the lessons learned by the implementation of the NAMCP will allow the Parties and other relevant stakeholders to continue working together and using the NAMCP as a framework for targeted collaborative actions for the conservation of this species within North America.

The CEC has been instrumental in facilitating consensus building amongst the Parties and in the development of a common conservation strategy for the monarch butterfly. This process is now largely completed. Numerous national and continental conservation initiatives currently exist for this species, based in large part on the NAMCP. Finally, all efforts on improving monarch-monitoring data have been oriented toward ensuring continuity in collecting data and improving access to them for all interested parties.

**Communications**

The main target audiences of this project are: key government agencies (federal and state/provincial) involved in protected area and wildlife management, local communities, scientists, citizen conservation groups, and the interested public.

**Information Management**

All outputs planned for 2010 relate to building capacity with key project stakeholders. No print or electronic outputs designed for broad public consumption are planned for this implementation period.

## Implementation Plan

### PROJECT 13 – Conserving the monarch butterfly and promoting sustainable livelihoods

#### Objective:

- Complete the CEC's efforts to support implementation of the North American Monarch Conservation Plan

2010 Tasks	Key Outputs	Timing	Expected Outcomes	Beneficiaries (Reach)	Budget (C\$)	Future Activities
1. Funding of community projects selected from the 2009 analysis Note – this task addresses issues arising from the socio-economic study of the monarch flyway and issues arising from the 5th <i>Foro Monarca</i> , with respect to identifying sustainable economic approaches to support conservation efforts and the improvement of local livelihoods and capacity-building activities.	Consensus/decision on selection of projects for further investment, and agreement on conditions for distribution of resources  Note – this is in completion of the 2009 task.	March 2010	Understanding among parties improved, re: best practices supporting sustainable economic activities that promote both habitat conservation and improved livelihoods, including improved local understanding and involvement to take advantage of existing trade mechanisms in North America	Local communities neighboring monarch over-wintering sites in Mexico, including government and local agencies involved in monarch conservation	\$30,000	
2. Development of tools that improve access to monarch observational data for the scientific and conservation	Development of prototype web-based data portal that provides access to monarch observational data	Jan–Aug 2010	Clarity, consensus achieved regarding needs and requirements to support collaborative sharing (including integration) of monarch monitoring data.	Field-based offices of national and (where appropriate) state/provincial-level wildlife agencies, as well as citizen science groups	\$20,000	

<b>PROJECT 13 – Conserving the monarch butterfly and promoting sustainable livelihoods</b>						
<b>Objective:</b> <ul style="list-style-type: none"> <li>Complete the CEC's efforts to support implementation of the North American Monarch Conservation Plan</li> </ul>						
<b>2010 Tasks</b>	<b>Key Outputs</b>	<b>Timing</b>	<b>Expected Outcomes</b>	<b>Beneficiaries (Reach)</b>	<b>Budget (C\$)</b>	<b>Future Activities</b>
communities	<p>for the scientific and conservation communities, in conjunction with MonarchNet</p> <p>This task in 2009 underscored the importance of improving access to monitoring data for this species. The current task will complete this work in 2010 and ensure access to monitoring data by conservation partners beyond the conclusion of CEC support.</p>		Improve access and use of scientific monitoring data for the long-term management of this species of common concern	and relevant academic institutions in all three countries		

<b>PROJECT 13 – Conserving the monarch butterfly and promoting sustainable livelihoods</b>						
<b>Objective:</b> <ul style="list-style-type: none"> <li>Complete the CEC’s efforts to support implementation of the North American Monarch Conservation Plan</li> </ul>						
<b>2010 Tasks</b>	<b>Key Outputs</b>	<b>Timing</b>	<b>Expected Outcomes</b>	<b>Beneficiaries (Reach)</b>	<b>Budget (C\$)</b>	<b>Future Activities</b>
3. Training workshop undertaken utilizing “campesino-to-campesino” approaches to support alternative sustainable economic activities (participants drawn from task 1 above)	<p>Community project managers from local communities trained by participants from neighboring communities on the use of sustainable land-use practices</p> <p>Note – this is in completion of the 2009 task.</p>	Jan-Feb 2010	Increased number of “land owners” from pilot communities participating in sustainable practices	<p>Local communities neighboring monarch over-wintering sites in Mexico, including government and local agencies involved in monarch conservation</p> <p>Local authorities, local communities, conservation groups</p>	\$13,000	
4. Ongoing training in standardized monarch monitoring techniques, following from the results of the October trilateral 2008 monitoring training workshop	<p>Local training and capacity building workshops organized by relevant agencies of Canada, the US, and Mexico—including trilateral cooperation where required</p> <p>This task draws to a close work initiated but not concluded in 2009. It includes support for translation and editing of existing documents requested</p>	Sept 2010	Local capacity for planning and implementing standardized monitoring techniques improved, including overall management of this species of trilateral concern	Field-based offices of national and (where appropriate) state/provincial-level wildlife agencies, as well as citizen science groups in all three countries	\$22,000	



<b>PROJECT 13 – Conserving the monarch butterfly and promoting sustainable livelihoods</b>						
<b>Objective:</b> <ul style="list-style-type: none"> <li>Complete the CEC’s efforts to support implementation of the North American Monarch Conservation Plan</li> </ul>						
<b>2010 Tasks</b>	<b>Key Outputs</b>	<b>Timing</b>	<b>Expected Outcomes</b>	<b>Beneficiaries (Reach)</b>	<b>Budget (C\$)</b>	<b>Future Activities</b>
	by the project task group but not envisioned when the 2009 project description was developed.					
<b>Total Cost: \$85,000</b>						
<b>Performance Measurement Indicators:</b> <ul style="list-style-type: none"> <li>Identification of specific community-based projects/activities in the Mexican overwintering sites.</li> <li>Improved availability of comprehensive monarch monitoring measured as absence/presence of monitoring data available for download from known research or conservation organizations/actors.</li> <li>Number of protected areas and monarch conservation organizations in North America adopting the NAMCP to guide conservation actions.</li> <li>Success of trinational monitoring efforts in improving overall understanding the status of monarch populations and the migration pattern.</li> <li>Tracking of land use/land cover changes over time (net losses/gains) in key monarch migration and overwintering habitat.</li> <li>Monitoring results indicating stable or growing populations of monarch butterfly populations along the flyway.</li> </ul>						<b>Key Partners:</b> Government protected-area and wildlife agencies, local NGOs, citizen science organizations