

Project 14	Conserving the Monarch Butterfly and Promoting Sustainable Livelihoods	Responsible Project Manager at the CEC Secretariat	Thomas Hammond
Planned Allocation	2009: C\$145,000 Completion of 2008 Outputs: C\$20,000 Total: C\$165,000	Working Group(s) associated with this work	Biodiversity Conservation Working Group (BCWG)

Objective of Project

The objective of this project is to support and facilitate ongoing implementation of the North American Monarch Conservation Plan (NAMCP).¹ 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, monitoring efforts along the flyway in Mexico, the United States, and Canada, 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.

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 further developed 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 trilateral flyway.

Following CEC's Council Resolution 07-09² directing support to the existing multi-stakeholder collaborative effort to develop a North American Monarch

Conservation Plan, the CEC hosted a trilateral workshop and obtained input from an extensive list of experts from diverse backgrounds. In June 2008, the NAMCP was completed and delivered to Council.

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 trilateral 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 2009.

The activities described here build on the Council resolution and delivery and completion of activities undertaken or currently underway in 2008, specifically:

- the completion of the North American Monarch Conservation Plan, and in particular the Table of Specific Actions contained within the Plan;
- delivery of the socio-economic study examining root causes of habitat pressure throughout the monarch flyway (final draft expected late Oct. 2008);
- training workshop to support ongoing monarch-monitoring efforts, and improve exchanges of monitoring data and information trilaterally; and
- scoping community-based activities in the Mexican overwintering sites, where sustainable economic approaches could assist in

¹ http://www.cec.org/pubs_docs/documents/index.cfm?varlan=english&ID=2300.

² http://www.cec.org/pubs_docs/documents/index.cfm?ID=2140&varlan=english.

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 (USFWS), 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 trilateral 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 2009 are designed to support ongoing implementation of the NAMCP through support to trilateral 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 through:

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 (Objective 7);
- 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 trilateral monitoring and assessment protocols (Objective 7);

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 (Objective 2); and

Trade and Environment

- promoting market-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 (Objective 9).

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

As noted above, the monarch butterfly is an iconic migratory species of unique trinational 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 trinational importance, as proposed by the trinational 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 is to build consensus around a shared conservation strategy for the monarch butterfly (i.e., the North American Monarch Conservation Plan) and assist in implementing those aspects of the plan that specifically benefit from coordinated, trinational effort. The trinational task group for this project has identified standardized monarch-monitoring efforts across North America, sharing of data from these efforts, and trinational collaboration towards critical habitat conservation in the Mexican over-wintering sites as the key areas for cooperation.

Linkages with Other CEC Projects

This project, particularly task 2, is linked to the work being undertaken in the Harnessing Market Forces (Conserving Biodiversity through Trade) project 5C—insofar as results from this task may be used as a case study example.

Activities and Outputs

Key Activities

Based on the priority actions identified in the North American Monarch Conservation Plan (NAMCP),³ key activities and outputs for 2009 are as proposed below.

- Analysis completed of existing (and past) projects in the area of the overwintering reserves that demonstrate success in linking sustainable development and livelihoods improvements to biodiversity conservation.
- Subset of existing projects selected from the above analysis for further investment.
- Ongoing training in standardized monarch-monitoring techniques undertaken, following from the results of the October 2008 monitoring training workshop.
- Needs assessment and system requirements analysis conducted—to support a collaborative, online approach to sharing and integrating monarch-monitoring data throughout North America.

Note: a final decision on these tasks will be made in early 2009 once results from the socio-economic survey, the *Foro Monarca*, and other inputs have been assessed.

Target Groups

Principle target groups for the 2009 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

³ As instructed by Council Resolution 07-09, the Secretariat coordinated stakeholder and expert meetings in December 2007 to facilitate 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.

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.

Leveraging

All proposed 2009 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 2009 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 2009.

Anticipated Outcomes and Performance Indicators

Direct Outcomes

- Increased knowledge of the socio-economic drivers affecting habitat of importance for the monarch butterfly and market-based opportunities that benefit conservation and economic development.
- 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.
- Support for targeted monarch-monitoring training activities, as identified in the Trilateral Monarch Butterfly Monitoring Workshop—October 2008.
- Increased participation of local communities in promoting local economic (sustainable development) initiatives that support conservation of critical monarch habitat.
- Improved understanding of needs and requirements to support collaborative sharing and integration of monarch-monitoring data.

Performance Indicators

- Identification of projects/activities that best support the objectives and planned actions of the NAMCP.
- Adoption of a North American monitoring framework and “toolkit” by monarch sister sites, NGOs, citizen conservation groups and local communities.

Intermediate Outcomes

- Improved trilateral collaboration on the assessment and continuous monitoring of the species, its habitat, and its stressors, throughout the flyway.
- Improved understanding among parties and other stakeholders re best practices supporting sustainable economic activities which promote both habitat conservation and improved livelihoods, including improved local understanding and involvement to take advantage of existing trade mechanisms in North

Performance Indicators

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

Final Outcomes

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

Performance Indicators

- Tracking of land use/land cover changes over time in key monarch migration and overwintering habitat.
- Monitoring results 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. Through “trainer of trainers” in monarch-monitoring techniques and in working with community-based organizations in developing business plans for sustainable, monarch-friendly enterprises during the final year of implementation, however, project results will provide support for ongoing trilateral implementation of the action plan.

Target End Date for CEC Involvement

The year 2009 represents the conclusion of CEC coordinated activities in support of the North American Monarch Conservation Plan (NAMCP). Any future CEC coordinated work in this area may result from priority setting during the 2010–2015 strategic planning cycle.

Sustainability Beyond

The activities outlined here are designed to build on achievements of the Conserving the Monarch Butterfly Project over the past four years. Canada, the United States, and Mexico 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.

In addition, the accumulated achievements of this project will both contribute to and inform the development of the next five-year strategy of the CEC and the Biodiversity Conservation Program—providing guidance for focusing continued Secretariat action in this area (if required), which effectively leverages the unique niche and value added of the CEC.

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 2009 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 14 – Conserving the monarch butterfly and promoting sustainable livelihoods						
Strategic Objectives: <ul style="list-style-type: none"> Strengthen capacities to conserve species and habitat of common concern, by building stakeholder capacity for planning, monitoring and management Enhance North American trade in green products and services, with a view to improving environmental protection, promoting sustainable use of biodiversity, removing trade barriers and utilizing market-based approaches 						
2009 Tasks	Key Outputs	Timing	Expected Outcomes	Beneficiaries (Reach)	Budget (C\$)	Future Activities
1. Analysis completed of existing (and past) projects in the area of the overwintering reserves that demonstrate success in linking sustainable development and livelihoods improvements to biodiversity conservation.	Project comparative analysis (matrix of projects/activities) and final report.	June 2009	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.	Working Group members, BCWG members.	\$20,000	Completion of all tasks outlined here represents the culmination of effort in this project within the current CEC Strategic Plan. Future effort in delivery of the NAMCP assisted by the CEC will be predicated on the results of the development of the CEC Strategic Plan 2010–2015.
2. Subset of existing projects selected from the above analysis for further investment. Develop a plan of action to address key issues arising from socio-economic study of the monarch flyway and issues	Consensus/decision on selection of projects for further investment agreement on conditions for distribution of resources. Development of action plan review results of socio-	May 2009	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	Local communities neighboring monarch over-wintering sites in Mexico, including government and local agencies involved in monarch conservation.	\$40,000	

PROJECT 14 – Conserving the monarch butterfly and promoting sustainable livelihoods**Strategic Objectives:**

- Strengthen capacities to conserve species and habitat of common concern, by building stakeholder capacity for planning, monitoring and management
- Enhance North American trade in green products and services, with a view to improving environmental protection, promoting sustainable use of biodiversity, removing trade barriers and utilizing market-based approaches

2009 Tasks	Key Outputs	Timing	Expected Outcomes	Beneficiaries (Reach)	Budget (C\$)	Future Activities
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—through, for example, campesino-to-campesino capacity-building activities.	economic survey and preliminary results from study to develop business plans to support market-based approaches (see next task below).		mechanisms in North America.			
3. Needs assessment and system requirements analysis conducted—to support a collaborative, online approach to sharing and integrating monarch-monitoring data within North America.	Needs assessment analysis and final report business plan(s) for alternative, community-based enterprises that support improved livelihoods and conservation.	Jan–Aug 2009	Clarity, consensus achieved regarding needs and requirements to support collaborative sharing (including integration) of monarch-monitoring data. Improve local understanding to identify and take advantage of trade-related activities that achieve mutual benefits for local economies and the environment/biodiversity.	Field-based offices of national and (where appropriate) state/provincial-level wildlife agencies, as well as citizen science groups and relevant academic institutions in all three countries.	\$20,000	As determined by success of any such business plans and activity. To the extent such enterprise may be market-based, it is not assumed that the CEC would be involved in any ongoing commercial manner. Other future engagement would follow the parameters under consideration by the BCWG and TEWG, pursuant to the

PROJECT 14 – Conserving the monarch butterfly and promoting sustainable livelihoods**Strategic Objectives:**

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2009 Tasks	Key Outputs	Timing	Expected Outcomes	Beneficiaries (Reach)	Budget (C\$)	Future Activities
						project, "Conserving Biodiversity through Trade."
4. Training workshop undertaken utilizing "campesino-to-campesino" approaches to promote alternative sustainable economic activities, as identified in task 2 above.	Local "landowners" from pilot communities trained via participants from neighboring communities on the use of sustainable land-use practices.	Jun–Dec	Increased number of "land owners" from pilot communities participating in sustainable practices.	Local communities neighboring monarch over-wintering sites in Mexico, including government and local agencies involved in monarch conservation. Local authorities, local communities, conservation groups.	\$35,000	T.b.c., as per the North American Monarch Conservation Plan. Note: Task carried over from 2008 (as previously approved). Results of the recently completed 5th <i>Foro Monarca</i> and socio-economic survey will guide implementation of this task.
5. Ongoing training in standardized monarch-monitoring techniques undertaken, following the results of the October 2008 monitoring training workshop. Targeted support where necessary to local training efforts stemming from the	Local training and capacity building workshops organized by relevant agencies of Canada, the US, and Mexico—including trinational cooperation where required.	Jan–Dec 2009	Local capacity for planning and implementing standardized monitoring techniques improved, including overall management of this species of trinational concern.	Field-based offices of national and (where appropriate) state/provincial-level wildlife agencies, as well as citizen science groups in all three countries.	\$30,000	Follow-up monitoring training workshops are tentatively planned in all three countries during 2009. No further activities are planned after the conclusion of this project in December 2009.

PROJECT 14 – Conserving the monarch butterfly and promoting sustainable livelihoods						
Strategic Objectives: <ul style="list-style-type: none"> Strengthen capacities to conserve species and habitat of common concern, by building stakeholder capacity for planning, monitoring and management Enhance North American trade in green products and services, with a view to improving environmental protection, promoting sustainable use of biodiversity, removing trade barriers and utilizing market-based approaches 						
2009 Tasks	Key Outputs	Timing	Expected Outcomes	Beneficiaries (Reach)	Budget (C\$)	Future Activities
October 2008 Trinational Monarch Monitoring Workshop.						
Total Cost: \$145,000						
Completion of 2008 Outputs (publishing, translation, editing, layout of document/information products submitted for QAPP review prior to 31 December 2008): \$20,000. QA#08.48 – Socio-economic assessment of the underlying trade-related pressures on the monarch and its habitat and means to address them. Note: Approximately \$20,000 was reserved in 2008 to support the Quality Assurance Process (QAP), translation, and eventual publication of the Socio-Economic Survey. The draft report of the Survey will be reviewed by the monarch task group, appointed by the BCWG in late 2008, and a recommendation will be made by this group whether to submit this document for QAP. Should a decision be made not to submit this report for QAP, the allocated budget will be rolled into task 2 above.						
Performance Measurement Indicators: <ul style="list-style-type: none"> Number of protected areas and monarch conservation organizations in North America adopting the NAMCP to guide their conservation actions. Adoption of a North American monitoring framework and “toolkit” by monarch sister sites, NGOs, citizen conservation groups and local communities. Number of business plans initiated (or developed) to support sustainable development projects, as above. Success of trinational monitoring efforts in improving overall understanding the status of monarch populations and the migration pattern. Tracking of land use/land cover changes over time in key monarch migration and overwintering habitat. Monitoring results of monarch butterfly populations along the flyway. 						Key Partners: Government protected-area and wildlife agencies, local NGOs, citizen science organizations.