



Mid-term Report

2015–2016 Projects

12 July 2016

Progress on Project Implementation

Sixteen new projects were launched on 1 July 2015 as part of the CEC's Cooperative Work Program under its 2015–2016 Operational Plan. These are part of the first set of projects and initiatives established under the CEC's 2015–2020 Strategic Plan.

Project implementation began in mid-August 2015 with the designation of project-specific steering committee members from all three countries and kick-off calls to develop project-level work plans. By mid-August 2015, 50% of projects had held their initial conference calls on project work. By early September 2015, this rate had increased to 87% of projects. Two projects (numbers 6 and 7) got underway only in late October 2015, due to delays in assembling fully trinational steering committees.

The Cooperative Work Program also includes the following initiatives: Tracking Pollutant Releases and Transfers in North America (PRTR), the North American Environmental Atlas, the North American Land Cover Monitoring System (NALCMS) and the Online Interactive Informational Platform for Climate Change. These initiatives follow an annual budget cycle, separate from the projects.

2015–2016 Projects



16 projects in the 2015–2016 Operational Plan

12/16 are new projects, with some drawing on previous work of the CEC

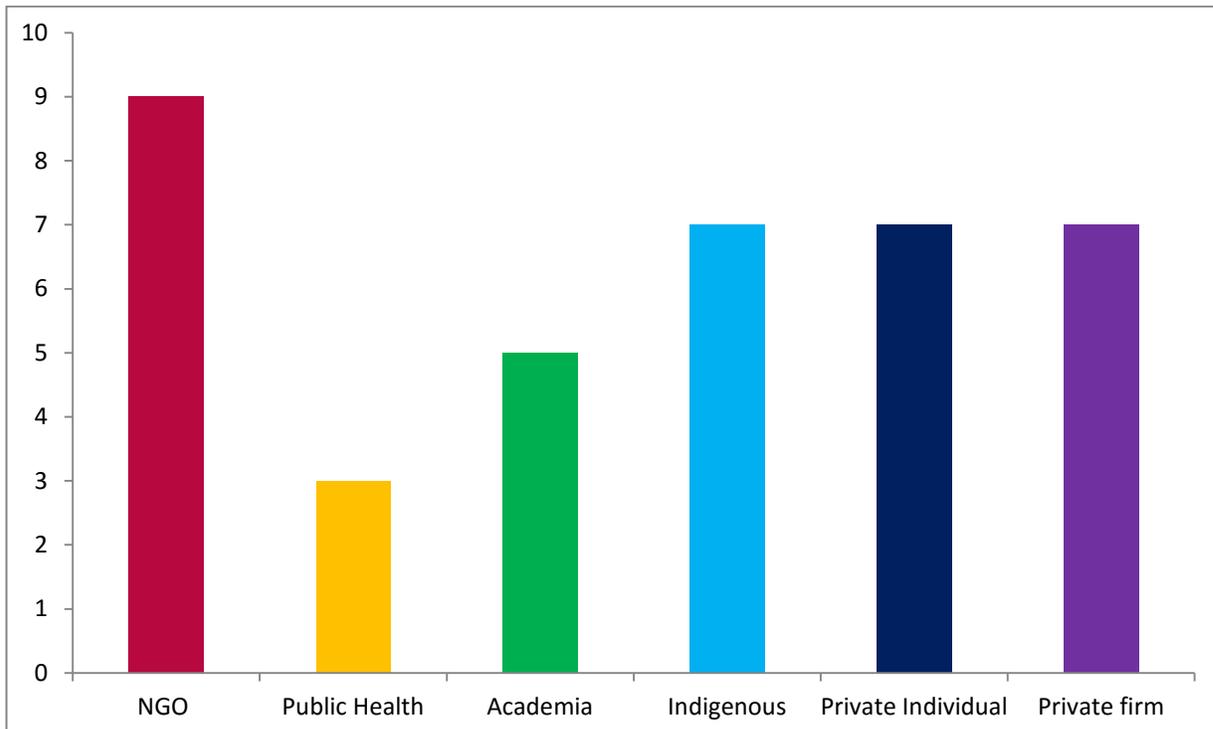
4/16 projects build on projects funded in the 2013–2014 Operational Plan

Steering Committees

Sixteen steering committees were formed in August 2015 to support the 2015–2016 CEC projects. Full steering committee membership for 14 of the 16 projects was confirmed by early September 2015. The remaining two projects had full membership by late October 2015. Steering committee members primarily represent Environment and Climate Change Canada, *Secretaría de Medio Ambiente y Recursos Naturales*, and the US Environmental Protection Agency. However, 14 of the 16 steering committees are good examples of trilateral cross-agency collaboration as they include experts from government agencies representing Energy, Forestry, Health, Transportation, Wildlife, National Parks, Fisheries/Oceans and Indigenous Affairs. Monthly trinational steering committee conference calls were conducted for most projects from 1 September 2015 through 30 June 2016.

Contracts

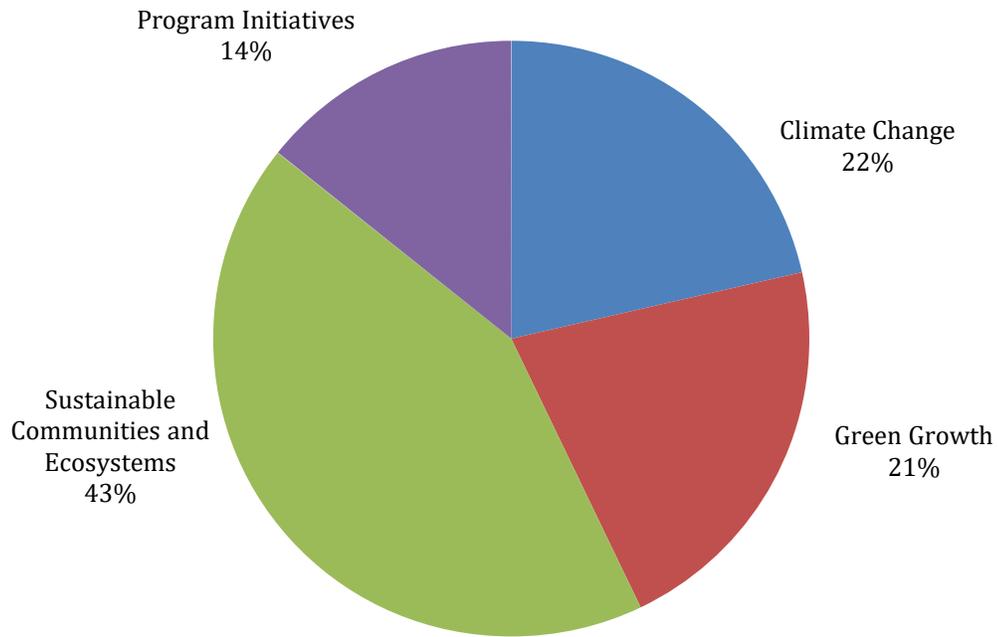
From 1 July 2015 to 30 June 2016, 38 contracts were signed for the 16 projects and 4 contracts for program initiatives (PRTR, Atlas and Land Cover). As shown in the chart below, the majority of contracts were signed with nongovernmental organizations (9), followed by indigenous groups (7) and private individuals and firms (7). CEC evaluation of completed contracts to date shows satisfaction rates of 95% for contractors' quality of work and 91% for timeliness.



Number of Contracts, by Sector: 1 July 2015–30 June 2016

Meetings

From 1 July 2015 to 30 June 2016, 12 project-related and 2 program initiative meetings were held. Their distribution by theme is shown in the chart below. The large number of meetings held by the Sustainable Communities and Ecosystems projects reflects mandates within the projects to build partnerships and consult widely with stakeholders. To date, meeting survey data show a 95.3% satisfaction rate for meeting content and facilitation.



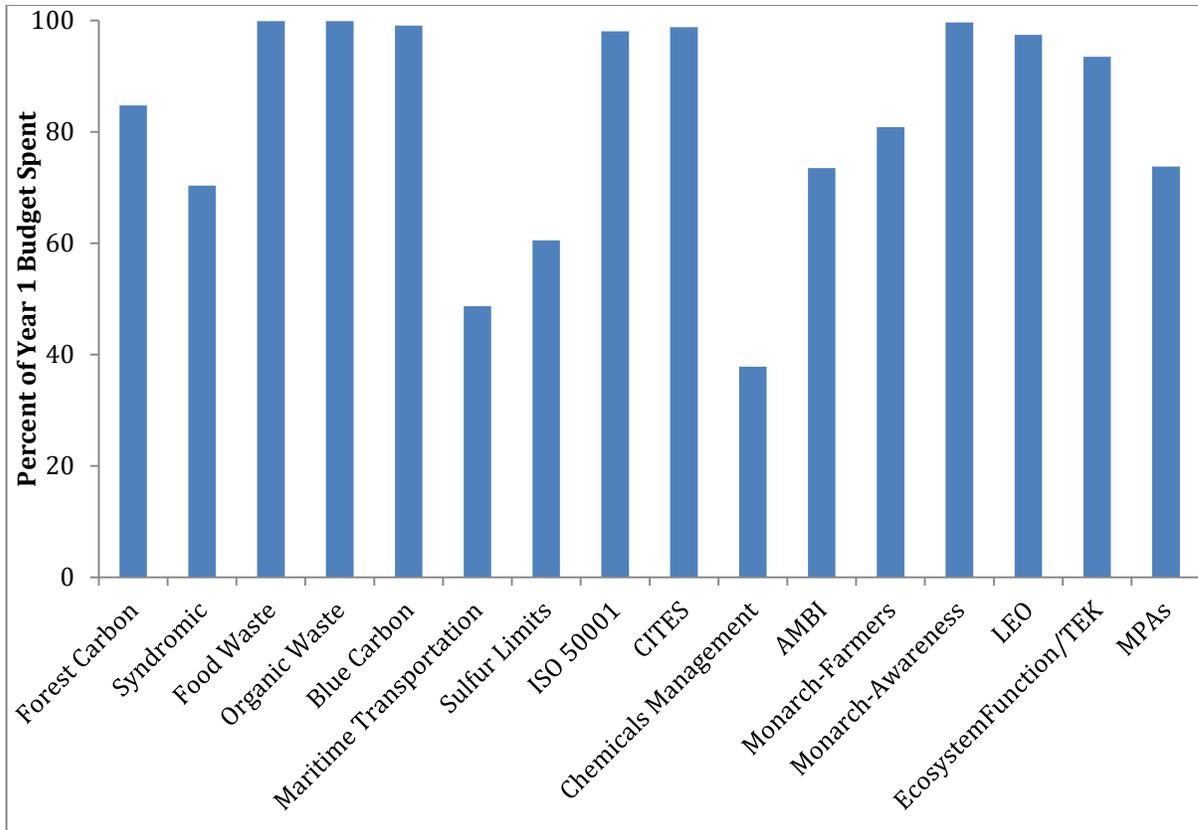
Percentage of Meetings: 1 July 2015–30 June 2016

Project Deliverables

Progress on project deliverables is summarized by project in Annex 1. Overall, 25 publications from the 16 projects will be subject to our Quality Assurance process. The majority of these, 72%, are expected to be completed (including translation) by June 2017.

Budget

Budget expenditures from 1 July 2015 to 30 June 2016 were on track for most projects. New financial rules allowing for Year 1 budgets to be spent in Year 2 for activities still under development will help with spending all funds by 30 June 2017. Although several projects currently lag in disbursement of budgeted funds (see chart below), significant disbursements on these projects will occur by early August 2016. Overall, 83% of the first year's project budget was spent.



Year 1 Project Budget Spending by 30 June 2016

Performance Measures

Performance measures, identified in each project description, are being assessed quarterly according to SMART (specific, measurable, achievable, relevant and time-bound) objectives. These will be reported at the end of the 2015–2016 Operational Plan.

Progress to date on project-related short-term project outcomes, deliverables and budget expenditures is summarized in Annex 1.

ANNEX 1: Status Report of 2015-2016 Operational Plan Projects

Each project has project-specific performance measures that are reported upon project completion every two years. The performance measures include clear targets and reporting periods for each project outcome, using a SMART (specific, measureable, achievable, relevant and time-bound) approach. These measures assess the long-term project outcomes (i.e., by the end of projects), which ensures the success of various initiatives and contribute to the attainment of strategic priorities. The short-term outcome status (at halfway point), project outcomes, output status and budget status for each project is found below.

Project 1: Integrated Modeling and Assessment of Climate Change Mitigation Options in the North American Forest Sector

Short-term Outcomes (at halfway point)	Mid-term Status
Enhanced understanding in all three countries of carbon dynamics and GHG balances in forest ecosystems and harvested wood products (including landfills) and product substitution.	At the halfway mark, the strategic landscapes for each country (2 per country) have been selected and data compilation is underway to run 3-4 mitigation options for each landscape for the period 2016-2050. Mitigation options include re-forestation, improved management, more long-lived harvested wood products (i.e. wood in buildings) and biofuels. A meeting of forest carbon experts was held 8-10 March 2016 to share the challenges and opportunities in each of the three countries. At the meeting, a work plan to develop several trilateral tools to enable the analyses of options in each country was agreed upon. The key consultants working with the three national forest services have been recruited and have already made significant progress.
Identification of possible climate change mitigation options and scenarios.	
Tools and associated input data sets for selected landscapes in all three countries that will enable analyses of mitigation options in the forest sector	
The project initiation workshop will contribute to enhanced understanding among science and policy communities about the potential role of forest sector mitigation options.	
Project Outcomes (by project end)	SMART Project Objectives
Enhanced understanding among science and policy communities about carbon dynamics and GHG balances in forest ecosystems and harvested wood products (including landfills) and product substitution and possible climate change mitigation options and scenarios.	By June 2017, information is synthesized and policy-relevant recommendations are provided on forest carbon dynamics and GHG balances from 6 selected strategic landscapes with regards to different mitigation activities.
Application of carbon budget models for the analysis and assessment of current/historic and future GHG balance and climate change mitigation options in the forest sector in specific regions of high interest in North America.	By June 2017, models are run on ecosystem carbon accounting and on harvested wood products to quantitatively analyze the mitigation options identified for the 6 selected strategic landscapes.
Spatial information about the impact of natural disturbances, land cover, and land-cover change on forest carbon in specific regions of high interest in North America to provide decision-makers and land managers with some of the data needed to make policy and management decisions. Design of mitigation options requires an understanding of risks associated with natural and human-caused disturbances.	By June 2016, all required data for the model, about the impact of natural disturbances, land cover and land-cover change on forest carbon is developed and combined with spatial information to run the necessary models for the 6 selected strategic landscapes.
Improved understanding and quantification of reducing emissions through use of forest products, which provides a more complete assessment of the	By June 2017, more complete information (new synthesis report and enhancements to others) on carbon sequestration in harvested wood products is available to

effectiveness of forestry mitigation options.	the three countries to inform decision makers and stakeholders.
Deliverables	Deliverables Status
Synthesis report: Assessment and reporting of mitigation options in the forestry sector of North America.	Work in progress on compilation and modeling of data from 6 selected strategic landscapes in the three countries, to inform the synthesis report. The synthesis report will be outlined at a technical meeting in August 2016 and will be developed in the subsequent months.
Document with quantitative estimates of impacts of mitigation scenarios on ecosystem carbon stocks and harvested wood products carbon stocks, relative to a baseline, for the selected landscapes.	Work in progress on data compilation and modeling for the quantitative estimates of impacts of mitigation scenarios. Three to four mitigation options are being considered for each of the selected strategic landscape.
Technical reports on parameters, data (inventory and harvested wood products) and activity datasets for forest models required to run mitigation scenarios including for selected strategic landscapes.	Technical reports will be developed once data compilation and modelling has been completed.
Technical report on user-friendly, standard estimates of benefits from substituting wood products for other materials and fossil fuels.	Technical report will be developed once data compilation and modelling has been completed.
Budget	Budget Status
Y1: C\$180,000; Y2: C\$180,000; Total: C\$360,000	85% of Year 1 budget spent

Project 2: Helping North American Communities Adapt to Climate Change: A Pilot Syndromic Surveillance System for Extreme Heat

Short-term Outcomes (at halfway point)	Mid-term Status
Pilot communities from Canada, US and Mexico identified and engaged in project.	At the halfway mark, work is underway for the development of a guide for designing and implementing syndromic surveillance systems for extreme heat in North America. The communities of Ottawa, Detroit and Hermosillo are being supported to enhance their capacity to monitor, in real-time, health outcomes related to extreme heat events.
Needs identified through a literature review and through a survey on the use of syndromic surveillance systems.	
A better understanding of the relationship between extreme heat and health outcomes through data collection and statistical analysis in the selected communities.	
Groups and populations vulnerable to extreme heat in the selected communities identified and mapped.	
Enhanced capacity of each participating community through the design and development of a pilot syndromic surveillance system for heat.	
Project Outcomes (by project end)	SMART Project Objectives
Pilot syndromic surveillance system (or expansion of existing ones to include real-time monitoring for Extreme Heat Events (EHEs)) implemented in 3 communities in Canada, US and Mexico.	By December 2016, select communities in Canada, Mexico and the United States will enhance or establish pilot real-time syndromic surveillance systems for extreme heat events.
Knowledge sharing on developing syndromic surveillance for heat, including lessons learned from the three case studies and detailed information about each database used in the project, and reduction of environmental health risks and better situational awareness in each participating community through the use of an operational pilot syndromic surveillance system for EHEs.	By June 2017, share knowledge and lessons learned relative to the 3 case studies on the implementation of syndromic surveillance systems for EHEs.
Deliverables	Deliverables Status
Establishment of a pilot real-time syndromic surveillance system for EHEs in communities in Canada, Mexico and the US.	3 communities have been selected: Ottawa, Ontario; Detroit, Michigan; Hermosillo, Sonora
Workshop to present the 3 systems to partners and other communities.	Scheduled to take place in May 2017
A guidance document outlining the pilot project methodology, protocols for the collection and communication of real-time data, outcomes, and lessons learned.	A contract is in place to develop a guide for designing and implementing syndromic surveillance systems for extreme heat.
Budget	Budget Status
Y1: C\$205,000; Y2: C\$195,000; Total: C\$400,000	70% of Year-1 budget spent

Project 3: North American Initiative on Food Waste Reduction and Recovery

Short-term Outcomes (at halfway point)	Mid-term Status
Draft report to consolidate knowledge and information on the current status of food waste reduction and recovery efforts in the three countries (including information on the impact of food waste reduction and recovery on reducing short-lived climate pollutants).	At the halfway mark, the project has developed a research method and signed a contract for the development of a foundational report and white paper. Work is underway to establish a network of North American stakeholders and experts. A stakeholder workshop is being planned for spring 2017 to gather further public input on options and best practices for food waste reduction. A clearinghouse mechanism is being developed to share best practices and policy recommendation for stakeholders across North America from this project and the organic waste project.
Network of experts involved in food waste reduction and recovery in the three countries.	
Draft report on the current status of efforts and varied methodologies to measure, track and report on food waste and recovery.	
Draft report on best practices to support food waste reduction.	
Draft white paper to identify gaps, challenges, recommendations and strategies to advance food waste reduction and recovery in North America.	
Project Outcomes (by project end)	SMART Project Objectives
Foundational information on food waste reduction is consolidated.	By June 2017, knowledge and information on the current status of food waste reduction and recovery efforts in NA (including all targeted sub-topics) is consolidated and available.
Strategies and approaches are developed to encourage food waste reduction and recovery in several key sectors in NA.	By June 2017, opportunities and strategies to enhance food waste reduction and recovery in NA are developed based on a consensus reached among government experts and stakeholders.
Stakeholders and the public have access to information on food waste reduction and recovery in NA.	By June 2017, a mechanism is initiated for ongoing sharing of knowledge on food waste reduction and recovery in NA.
Deliverables	Deliverables Status
Report characterizing: 1) Food waste status, policies, incentives, stakeholders and linkages to short-lived climate pollutants; 2) Food waste reduction monitoring and reporting approaches via case studies and definitions; and 3) Case studies of practices in food waste reduction.	A contract with Tetra Tech was signed to prepare a comprehensive foundational report and white paper on this topic. First complete draft report and white paper are due on October 2016.
Set of initial opportunities and strategies.	
Clearinghouse mechanism or online information sharing platform.	Discussions are being held on information-sharing, networking of North American stakeholders and experts and possible clearinghouse mechanisms.
Budget	Budget Status
Y1: C\$230,000; Y2: C\$230,000; Total: C\$460,000	100% of Year-1 budget spent

Project 4: North American Initiative on Organic Waste Diversion and Processing

Short-term Outcomes (at halfway point)	Mid-term Status
Draft reports to consolidate knowledge and information regarding the current situation for organic waste diversion and processing in the three countries, and identification of factors that have led to successful organic waste diversion and processing initiatives in NA and other OECD countries.	At the halfway mark, the project has developed a research method and signed a contract for the development of a foundational report and white paper. Work is underway to establish a network of North American stakeholders and experts. A series of webinars is being developed to take further public input on options and best practices on organic waste reduction. A clearinghouse mechanism is also being developed to share best practices and policy recommendation for stakeholders across North America from this project and the organic waste project.
Information on the impact of organics diversion and processing (current and potential) on reducing short-lived climate pollutants.	
Network of experts involved in organic waste diversion and processing in the three countries.	
A draft white paper identifying barriers, opportunities and potential solutions related to increasing organic waste diversion and processing capacity in NA.	
Project Outcomes (by project end)	SMART Project Objectives
Foundational information on organic waste diversion and processing is consolidated.	By June 2017, knowledge and information on the current status of organic waste diversion and processing in NA is consolidated and available.
Strategies and approaches are developed to encourage organic waste diversion and processing in several key sectors in NA.	By June 2017, barriers, opportunities and policy options for organic waste diversion and processing are developed based on a consensus reached among government experts and stakeholders.
Stakeholders and the public have access to information on organic waste diversion and processing in NA.	By June 2017, a mechanism is initiated for ongoing sharing of knowledge on organic waste diversion and processing in NA.
Deliverables	Deliverables Status
Report characterizing: 1) organic waste status and diversion and processing programs and facilities 2) policies, regulations, best practices and factors contributing to success of organic waste diversion and processing, 3) impact of organic waste diversion and processing on current and potential reductions in short-lived climate pollutants.	A contract with ERG was signed to prepare a comprehensive foundational report and white paper on this topic. First complete draft report and white paper are due on November 2016.
Set of initial barriers, opportunities and policy options.	
Clearinghouse mechanism or online information sharing platform.	Discussions are being held on information-sharing, networking of North American stakeholders and experts and possible clearinghouse mechanisms.
Budget	Budget Status
Y1: C\$120,000; Y2: C\$245,000; Total: C\$365,000	100% of Year-1 budget spent

Project 5: North American Blue Carbon: Next Steps in Science for Policy

Short-term Outcomes (at halfway point)	Mid-term Status
Application of a harmonized protocol, with site-specific methods and an agreed-upon terminology to map seagrass meadows.	At the halfway mark of the project, a harmonized protocol to map seagrass meadows has been agreed upon. Work is underway to map and measure seagrass extent and carbon along the Pacific coast of the US and Canada, and the Yucatan Peninsula in Mexico. A draft market-based methodology to include blue carbon habitats in the voluntary carbon market will soon be reviewed by the Steering Committee. Work is also underway to analyze existing national conservation policies and market-based mechanisms in the three countries regarding the inclusion of blue carbon.
Comprehensive analysis and improved understanding of the notion of coastal system permanency as it relates to the development of a conservation methodology to conserve threatened coastal wetlands through market-based mechanisms and other opportunities.	
Facilitated trinational communication and information exchange among the scientific and policy communities, through a workshop.	
Project Outcomes (by project end)	SMART Project Objectives
Shared geospatial data and maps of seagrass meadows in all three countries, in specific priority regions. Shared carbon data on seagrass carbon storage (in soils) and sequestration (in plants).	By June 2017, geospatial data and maps of seagrass meadows, including data on carbon storage and sequestration, for 5 new priority sites, are produced.
Shared conservation methodology to conserve threatened wetlands, through market-based mechanisms and other opportunities.	By December 2016, a greenhouse gas offset methodology for tidal wetland conservation for Verified Carbon Standard (VCS) verification is developed.
Enhanced understanding, through shared lessons and analyses, in all three countries, of the federal, international and market-based opportunities for blue carbon integration into existing or potential policies across North America.	By November 2016, analyses for Canada and Mexico on existing federal and international policies and market-based opportunities to integrate blue carbon conservation and restoration, as well as a report on shared lessons among the three countries are made publicly available.
Facilitated trinational communication and information exchange among the scientific and policy communities, through a stronger North American Community of Practice for Blue Carbon.	By June 2017, the number of experts participating in CEC work since Phase 1 of the project, with an increased focus on seagrass-mapping experts and seagrass-science experts has increased.
Deliverables	Deliverables Status
Geospatial data and map sets for 5 priority sites, including data on extent of seagrass area, carbon storage and sequestration.	Data from 7 selected priority sites is being collected and analyzed.
A greenhouse gas offset methodology document for tidal wetland conservation, to enable the protection of threatened wetlands, and thus secure avoided-emissions credits for habitats that are threatened by coastal development.	The draft methodology is under review by experts.
2 policy reports, one for Canada and one for Mexico (US analysis already available); and one shared-lessons report	Work is in progress on policy analysis in Canada and Mexico. The reports will be completed in October/November 2016.
Database of experts participating in a North American Community of Practice for Blue Carbon, identified by the three countries as subject-matter experts	A list of blue carbon experts has been compiled, including scientists participating in blue carbon research in the three countries.
Budget	Budget Status
Y1: C\$305,000; Y2: C\$315,000; Total: C\$620,000	99% of Year-1 budget spent

Project 6: Reducing Emissions from Goods Movement via Maritime Transportation in North America (Phase II)

Short-term Outcomes (at halfway point)	Mid-term Status
Stakeholder understanding of the needs and benefits of reducing ship emissions and the establishment of a Mexican Emissions Control Area (ECA).	<p>At the halfway mark, on 18 May, the CEC Secretariat held a consultation meeting with members of Semarnat, USEPA, Transport Canada, and key Mexican agencies including: Foreign Affairs, INECC, Communications and Transport, Navy, Health, Fisheries, PEMEX, and Energy to exchange information on the implementation of ECA in North America and compliance with fuel standards, the progress on Mexico's ratification of MARPOL Annex 6, and to coordinate activities with the CEC project. A series of stakeholder consultations meetings are being planned to support the Mexico's proposal to establish an ECA, as well as work on evaluating and exchanging information on technologies to assess compliance with IMO fuel standards. Combining the activities and leveraging resources from the two projects has resulted a lower cost of implementing the project.</p> <p>Note: Project activities are being reevaluated based on Mexico's timeline for ratification of MARPOL's Annex 6.</p>
Project Outcomes (by project end)	SMART Project Objectives
Stakeholder understanding of the needs and benefits of reducing ship emissions and the establishment of a Mexican ECA.	By 2017, relevant stakeholders understand the health and environmental benefits of reducing maritime shipping emissions and are aware of available best practices.
A common understanding and support from relevant North American stakeholders regarding additional actions to reduce air pollution from ships, such as through a Mexican ECA.	
Relevant North American stakeholders understand the available best practices and technologies to reduce ship emissions.	
Mexico submits an ECA designation proposal to the IMO.	By 2017, Mexico submits an ECA designation proposal to the IMO.
Mexico develops an ECA implementation strategy.	By 2017, the implementation strategy for an ECA in Mexico, adjacent to the existing US-Canada ECA is completed.
Deliverables	Deliverables Status
Meetings/workshops with key agencies, to learn about implementing policies and regulations to address ship emissions.	First stakeholder workshop held on May 18, 2016. Forty individuals, representing twelve key Mexican agencies participated in the meeting.
Workshop of key North American stakeholders, including government agencies, industry and NGOs.	A contract to conduct this activity is being processed
Presentation (workshop or webinar) on best practices and technologies for conventional pollutant emission control in an ECA for the shipping sector (e.g. lower sulfur fuels, use of LNG technologies).	A contract to conduct this activity is being processed.
Final IMO ECA proposal.	Draft IMO proposal under review by Mexican Government.

Final strategy, including timeline and lead contacts for each involved agency/stakeholder.	A contract to conduct this activity is being processed.
Budget	Budget Status
Y1: C\$115,000; Y2: C\$135,000; Total: C\$250,000	49% of Year-1 budget spent

Project 7: Enhancing North American Enforcement of the IMO Maritime Fuel Sulfur Limits

Short-term Outcomes (at halfway point)	Mid-term Status
Enhanced awareness of the need and ways to monitor compliance with and enforce the IMO's ECA and global sulfur standards	<p>At the halfway mark, on 18 May, the CEC Secretariat held a consultation meeting with members of Semarnat, USEPA, Transport Canada, and key Mexican agencies including: Foreign Affairs, INECC, Communications and Transport, Navy, Health, Fisheries, PEMEX, and Energy to exchange information on the implementation of emission control areas in North America and compliance with fuel standards, the progress on Mexico's ratification of MARPOL Annex 6, and to coordinate activities with the CEC project. A series of stakeholder consultations meetings are being planned to support the Mexico's proposal to establish an ECA, as well as work on evaluating and exchanging information on technologies to assess compliance with IMO fuel standards. Combining the activities and leveraging resources from the two projects has resulted a lower cost of implementing the project.</p> <p>Note: Project activities are being reevaluated based on Mexico's timeline for ratification of MARPOL's Annex 6.</p>
Understanding of common elements of, and differences among, the relevant compliance and enforcement systems in the CEC countries	
Initial description of available compliance monitoring technologies and information security measures	
Project Outcomes (by project end)	SMART Project Objectives
Enhanced awareness of the need and ways to monitor compliance with and enforce the IMO's ECA and global sulfur standards	<p>By 2016, relevant stakeholders are aware of the needs and ways to monitor compliance, best practices, and the compliance and enforcement in the three countries.</p>
Understanding of common elements of, and differences among, the relevant compliance and enforcement systems in the CEC countries	
Initial description of available compliance monitoring technologies and information security measures	
Proposals for coordinated North American information gathering, analysis, and exchange processes and tools to enhance compliance monitoring and enforcement	<p>By 2017, standardized gathering and exchange of information on compliance with the IMO ECA sulfur standard in North America is promoted.</p>
Deliverables	Deliverables Status
Stakeholder workshop	<p>First stakeholder workshop held on May 18, 2016. Forty individuals, representing twelve key Mexican agencies participated in the meeting.</p>
Summary report of workshop containing information related to the actual state of compliance and enforcement in the three countries	<p>A contract to conduct this activity is being processed.</p>
Draft white paper containing recommendations on how Mexico could enhance its sulfur compliance assurance and enforcement regime	<p>A contract to conduct this activity is being processed.</p>
Workshop to review available options related to monitoring technologies to assist with compliance and enforcement.	<p>A contract to conduct this activity is being processed.</p>
Standardized inspection checklist	<p>A contract to conduct this activity is being processed.</p>
Framework and procedures for trilateral exchange of sulfur compliance information drafted.	<p>A contract to conduct this activity is being processed.</p>

Budget	Budget Status
Y1: C\$125,000; Y2: C\$125,000; Total: C\$250,000	61% of Year-1 budget spent

Project 8: Accelerating Adoption of ISO 50001 and Superior Energy Performance® (SEP) Program Certifications in North America

Short-term Outcomes (at halfway point)	Mid-term Status
Four professionals trained as Certified Practitioner in Energy Management Systems (CP EnMS)	At the halfway mark, nine companies and 19 industrial facilities have joined the project. The first of three in person training sessions for companies and co-trainers took place in Mexico City on 25-29 April 2016 (Mexican cohort) and in Brockville, Ontario on 3-5 May 2016 (US/Canadian cohort). Monthly webinars are being delivered and additional in person trainings are planned for October 2016 and April 2017.
Three professionals qualified to train end users on ISO 50001 and/or SEP	
Fifteen pilot programs established; three cohorts of five facilities; one cohort-training series in each country: Canada, Mexico and the US	
Project Outcomes (by project end)	SMART Project Objectives
Increased number of trainers in ISO 50001 and SEP	By December 2016, pool of trainers in Canada, Mexico and US has been increased to ensure local long-term support for ISO 50001 and SEP training.
Establishment of ISO 50001 and/or SEP pilot companies in Mexico, Canada and the US	By December 2016, pilot companies commit to adopt ISO 50001 and the SEP programs in North America.
Showcase harmonized ISO and SEP efforts in NA	By June 2017, lessons learned from the pilot program are shared across North America.
Deliverables	Deliverables Status
Training sessions for EnMS Practitioners (CP) to become trainers	A contract with Georgia Institute of Technology was signed to conduct the training program of EnMS practitioners and companies; 6 Mexican energy management professionals received coaching on how to train companies in Mexico City (25-26 April 2016) 5 energy management professionals attended the first training session with companies as co-trainers (2 Mexicans, 2 US and 1 Canadian).
Training sessions on ISO 50001/SEP implementation to pilot companies	The first training sessions took place in Mexico City, 27-29 April 2016 (Mexican cohort) and in Brockville, Ontario, 3-5 May 2016 (US/Canadian cohort); A total of 26 and 14 company representatives received the training at the US/Canada and Mexican sessions, respectively.
Company case studies on benefits of pilot program	To be completed (May 2017)
Information disseminated at outreach events	The training program was presented at several high level international meetings.
Budget	Budget Status
Y1: C\$80,000; Y2: C\$220,000; Total: C\$300,000	98% of Year-1 budget spent

Project 9: Strengthening conservation and sustainable production of selected CITES Appendix II species in North America

Short-term Outcomes (at halfway point)	Mid-term Status
Prioritized list of species of common regional interest validated by regional CITES authorities	A study to narrow the species of common regional interest was completed. 56 species, included in five species groups, were selected: sharks, timber, turtles, parrots, and tarantulas. A consultant was selected to conduct comprehensive analysis and develop action plans for the selected species. A stakeholder workshop is being planned for fall 2016 to gather stakeholder input on draft action plans.
Report of the comprehensive analysis of the value and production chains of the agreed-upon species of regional interest. The report will include recommendations to improve the sustainable production and consumption of the concerned species, through legal and traceable trade.	
Establishment of an action plan for each of the species agreed to under Phase 1, with specific goals, activities and progress indicators (among others to be defined)	
Stakeholders' workshop to gather feedback on proposed actions plans	
Launch of action plans at the regional level, which might cover, inter alia: generation of scientific information and technology exchange, cooperation between ex situ and in situ conservation and production, training and capacity building, market incentives, communication and awareness campaigns, strengthening of management schemes.	
Project Outcomes (by project end)	SMART Project Objectives
Prioritized list of species of common regional interest validated by regional CITES authorities is created	By December 2015, a prioritized list of highly traded CITES Appendix II species of common regional interest has been created.
Report of the comprehensive analysis of the value and production chains of the agreed-upon species of regional interest. The report will include recommendations to improve the sustainable production and consumption of the concerned species, through legal and traceable trade.	By July 2016, for each priority species, a portrait of the value and production chains, including recommendations to improve sustainable production and consumption, is made publicly available.
Establishment of an action plan for each of the species agreed to under Phase 1, with specific goals, activities and progress indicators (among others to be defined)	By October 2016, for each priority species, an action plan is trilaterally approved.
Launch of action plans at the regional level, which might cover, inter alia: generation of scientific information and technology exchange, cooperation between ex situ and in situ conservation and production, training and capacity building, market incentives, communication and awareness campaigns, strengthening of management schemes.	By November 2016, implementation of action plans for each priority species has begun.
Six-month assessment of the launch of action plans at the regional level (considering an adaptive management approach, as needed).	By May 2017, a six-month assessment of progress-to-date on the implementation of action plans is produced.
Deliverables	Deliverables Status
List of priority Appendix II species of common regional interest	A report of 56 Appendix II species of regional interest was completed in February 2016. The species fall within five groups: sharks, timber, turtles, parrots, and tarantulas.
Report on the comprehensive trade analysis of priority species	A contract was signed in June 2016 to develop comprehensive analyses and action plans of the selected species. A meeting will be held in Ottawa,

	ON, 15 August 2016, with the steering committee to review the draft comprehensive report and recommended actions.
Action plans for each priority species	A stakeholder workshop is being planned for fall 2016 to gather stakeholder input on draft action plans.
Launch of action plans	To be completed (May 2017)
Progress report	To be completed (May 2017)
Budget	Budget Status
Y1: C\$65,000; Y2: C\$235,000; Total: C\$300,000	100% of Year-1 budget spent

Project 10: Greening of Chemicals Management in North America

Short-term Outcomes (at halfway point)	Mid-term Status
<p>Through the completion of Task 1 (see below), the three countries will have a better understanding of how mercury trade statistics are generated in each country.</p> <p>The scoping phase of Task 2 will provide a greater understanding of the technical issues surrounding exposure to and release of chemicals, due to their migration from products, and increase the region's analytical capacities in this area.</p>	<p>A draft report on North American mercury trade statistics has been completed and is under review. The final report will be completed in late 2016. This will assist the North American countries in improving reporting under the Minamata Convention. A literature review of methods for testing the presence and migration of chemicals and pilot testing on the migration of flame retardants from furniture will start this month. Terms of reference are being drafted to support training activities for Mexican government laboratories to analyze perfluorinated chemicals.</p>
Project Outcomes (by project end)	SMART Project Objectives
<p>Obtain a better understanding of how mercury trade statistics are generated in each country, and assess gaps and discrepancies in the information that could impact reporting under the Minamata Convention.</p>	<p>By December 2016, the three countries have information to assess and improve reporting under the Minamata Convention.</p>
<p>The completion of Task 2 specific information will be generated relating to the migration of chemicals from products. Government officials have an increased understanding of the ability of chemicals, with identified human health and/or ecological hazards, to migrate from manufactured items and of exposure pathways (specific chemicals and manufactured items of focus will be determined, based on highest priorities of the three countries).</p>	<p>By June 2017, the three countries will further their understanding of the migration of selected chemicals from manufactured items to humans and/or to the environment.</p>
Deliverables	Deliverables Status
<p>Report identifying data gaps and discrepancies in mercury trade statistics, causes and recommendations for improving the comparability of existing data and methodologies used to report mercury trade statistics</p>	<p>Draft report on North American statistics database available.</p>
<p>Report on results from tests of the migration of chemicals from products</p>	<p>Contract for literature review and initial pilot testing on the chemical from products in preparation.</p>
<p>Training workshop for laboratory analysts on testing methods for migration of chemicals of concern in manufactured products.</p>	<p>Terms of reference in preparation</p>
Budget	Budget Status
<p>Y1: C\$165,000; Y2: C\$360,000; Total: C\$525,000</p>	<p>37.83% of Year-1 budget spent</p>

Project 11: Arctic Migratory Birds Initiative (AMBI)—the Americas' Flyway Action Plan

Short-term Outcomes (at halfway point)	Mid-term Status
Sites on Atlantic and Pacific flyways are identified as being critical for the conservation of the two species and that provide a good fit for subsequent linking to other sites.	<p>At the halfway mark, key sites for target species (Red Knot and Semipalmated Sandpiper) have been identified. The Atlantic and Pacific flyway sites that will engage in the reserve network have been chosen. For the Atlantic Flyway, they include: Moose Cree First Nation (southwestern James Bay), Bay of Fundy, Delaware Bay and Georgia Barrier Islands. For the Pacific Flyway, they include: Copper River Delta (Alaska), Willapa Bay (Washington), and Bahía de Todos Santos (Baja California).</p> <p>Local community engagement in developing site-specific action plans is beginning at all sites.</p> <p>Lastly, Arctic shorebird breeding habitat resilient to climate change is being identified, along with the migratory connectivity between the sites.</p>
Local communities are engaged in developing site-specific conservation action plans and initiate efforts to forge linkages among sites.	
Project Outcomes (by project end)	SMART Project Objectives
Sites are identified	<p>By June 2016, North American sites known to host >1% of the estimated population of Semipalmated Sandpipers and Red Knots are identified.</p> <p>By June 2016, landscape-scale locations in the Canadian and US Arctic where suitable breeding habitat for SPS and RK is expected to persist past 2070 are identified.</p>
Local communities are engaged	By June 2016, local communities are engaged in developing site-specific action plans and initiate efforts to forge linkages among selected sites.
Conservation actions are implemented	By June 2017, conservation actions applicable within the project timeline are implemented.
The people at WHSRN sites in all three countries are linked and benefiting from the strength of their participation in networks	By June 2017, people in all linked sites are actively sharing information and producing conservation actions.
Deliverables	Deliverables Status
Report listing eligible sites	Final report received and shared with the steering committee.
Report on Arctic locations	Progress report received, draft report to be presented in early July with final report due in August 2016.
3 Community-level action plans	5 draft action plans received, implementation to begin July 2016.
Reports showing results of action plan implementation	Expected in spring 2017.
An Atlantic Flyway Network and a Pacific Flyway Network of communities stewarding a common resource	Foundations for both networks have been set through a CEC-led meeting and conference calls. Ongoing work is expected to bring these two networks to life by the end of the project.
Budget	Budget Status
Y1: C\$245,000; Y2: C\$230,000; Total: C\$475,000	73.4% of Year-1 budget spent

Project 12: Engaging Farmers and Other Landowners to Support Monarch Butterfly and Pollinator Conservation

Short-term Outcomes (at halfway point)	Mid-term Status
Guidelines and other materials that capture beneficial management practices for restoring and managing Monarch habitat.	At the halfway mark, a compendium of Monarch conservation information for landowners has been drafted. A user-friendly Web version will be developed starting in fall 2016. A partnership meeting for northern Mexico habitat conservation was held in Monterrey, Mexico, 11-13 May. A similar meeting for northern United States and Canada habitat is expected to take place in fall 2016.
Workshop, webinar, and full-day short course curriculum developed and outreach events scheduled throughout the Monarch range.	
Project Outcomes (by project end)	SMART Project Objectives
Development, compilation and distribution of best practices for Monarch habitat restoration and management	By June 2016, beneficial management practices (BMP) for Monarch habitat restoration are compiled.
Compilation and dissemination of country-specific information on incentives of private landowners that would promote adoption of Monarch conservation beneficial practices	By June 2016, country-specific information on incentives available to support private landowners in the implementation of Monarch conservation BMP are compiled.
Agency staff in the three countries will be trained to provide technical assistance to the target audiences	By June 2017, agency staff in the three countries are trained to provide technical assistance to landowners.
Established partners in Canada, the United States and Mexico (governmental, nongovernmental, local communities) participate in regional, national, and continental networks	By June 2017, established partners in the three countries are participating in regional, national, and continental networks in a coordinated manner.
Identification and sharing of existing pilot projects and actions at the regional, national, and continental scales	By June 2016, existing pilot projects and actions at the regional, national, and continental scales are compiled.
Development of a user-friendly Web portal, and all relevant materials posted	By June 2017, compiled information on BMP, incentives and pilot projects for Monarch habitat restoration and management are available on a website.
Workshops/short courses delivered to participants in the target audiences (farmers, ranchers, other landowners, and agency staff)	By June 2017, workshops/short courses are delivered to participants in the target audiences (farmers, ranchers, other landowners, and agency staff).
Development and dissemination of guidelines and other materials that capture beneficial management practices for restoring and managing Monarch habitat through network of agriculture agencies, regional and state Conservation Districts, Monarch Joint Venture partners, and sustainable agriculture contacts	By March 2017, outreach material on beneficial management practices for supporting Monarch habitat is developed. By June 2017, outreach material on beneficial management practices for supporting Monarch habitat is disseminated through agriculture agencies, regional and state Conservation Districts, Monarch Joint Venture partners, and sustainable agriculture contacts.
Deliverables	Deliverables Status
Distribution of BMP to the SC	Final report received and shared with the steering committee.
Distribution of the incentives to the SC	Final report received and shared with the steering committee.
Number of staff trained	Training is to take place in Y2.
Established partners in the three countries in a harmonized manner	A partnership workshop for southern part of the flyway has taken place; a workshop for northern part will take place in fall 2016. Partnership building will evolve through Y2 activities.
Distribution of the pilot projects to the SC	Final report received and shared with the steering

	committee.
Launch of webportal	Webportal to be developed and launched in Y2.
Number of workshops	Workshops to take place in Y2.
Outreach kit developed	Outreach kit to be developed in Y2.
Outreach material made available to contacts for dissemination (breakdown by contacts/stakeholder group)	Outreach material to be made available following its development in Y2.
Budget	Budget Status
Y1: C\$150,000; Y2: C\$150,000; Total: C\$300,000	80.8% of Year-1 budget spent

Project 13: Monarch Butterfly Flyway: Communication, Participatory Conservation, and Education Programs Throughout the Migratory Route

Short-term Outcomes (at halfway point)	Mid-term Status
<p>A trilateral communication strategy has been developed for the Trinational High Level Working Group for the Conservation of the Monarch Butterfly Migratory Phenomenon (TWG) that includes the following:</p> <ul style="list-style-type: none"> a. a communication strategy that includes messages related to traditional ecological knowledge, b. clearly defined target audiences, and c. citizen- and local community-based initiatives. 	<p>At the halfway mark, two synthesis reports of monarch-related traditional ecological knowledge revealed very little available information in the three countries. A Communication and Partnership Workshop on the Monarch Butterfly was held 22-26 February 2016 in Mexico City. This workshop included joint meetings with the Trilateral Science Partnership and USFWS High-Level delegation, and a Monarch Reserve visit. A draft communications strategy is evolving and an assessment of monitoring protocols and development of educational and awareness programs are starting up.</p>
<p>Efforts to coordinate citizen- and local community-based initiatives have been supported.</p>	
<p>Review of experiences and best practices has been conducted.</p>	
Project Outcomes (by project end)	SMART Project Objectives
<p>A trilateral communication strategy has been developed among the three countries, including key messages relative to each country, indigenous knowledge, and trilateral priorities related to the conservation of the Monarch flyway</p>	<p>By March 2017, a trilateral communication strategy (including key messages for each country, indigenous knowledge, and trilateral priorities) is available to the Trinational High Level Working Group for the conservation of the Monarch butterfly migratory phenomenon (TWG).</p>
<p>Information gathered and synthesized from traditional ecological knowledge is available</p>	<p>By June 2016, a synthesis report on traditional ecological knowledge related to the Monarch is available.</p>
<p>Efforts to coordinate inventory and monitoring protocols have been undertaken</p>	<p>By June 2017, an assessment of the inventory and monitoring protocols for Monarch is available.</p>
<p>Best practices, novel approaches, and priorities for educational and awareness programs in the three countries have been compiled and are publicly available</p>	<p>By June 2017, best practices, novel approaches, and priorities for educational and awareness programs in the three countries have been compiled and are publicly available.</p>
Deliverables	Deliverables Status
<p>Communications strategy including key messages and trilateral priorities</p>	<p>Draft trilateral strategy under discussion, communications lead for each country are being selected. An update will be presented at workshop in fall 2016</p>
<p>Synthesis report on TEK</p>	<p>Final reports received and shared with the steering committee. Report synthesizing results across the three countries to be delivered in early fall 2016.</p>
<p>Assessment report</p>	<p>Assessment of protocols will take place in Y2.</p>
<p>Compilation of practices and programs (collating information)</p>	<p>Compilation of practices for educational and awareness programs will take place in Y2. A workshop to inform the work will take place in November 2016.</p>
Budget	Budget Status
<p>Y1: C\$135,000; Y2: C\$165,000; Total: C\$300,000</p>	<p>100.0% of Year-1 budget spent</p>

Project 14: Local Environmental Observer Network (LEO)

Short-term Outcomes (at halfway point)	Mid-term Status
The primary short-term output will be signature of an MOU(s) containing work programs, training plans, and outreach strategies to launch a new, pilot LEO chapter.	At the halfway mark, a contract is in place with the Alaska Native Tribal Health Consortium for the adaptation of software applications, technical assistance and capacity-building activities, related to the implementation of LEO Network hubs in Canada and Mexico. A Mexican hub is being established in collaboration with the <i>Grupo de Ecología y Conservación de Islas</i> in Baja California. Two Canadian hubs are being established in collaboration with the First Nations Health Authority in British Columbia, and the Department of Environment of the Government of Northwest Territories.
Project Outcomes	SMART Project Objectives
Introduce and expand the Local Environmental Observer (LEO) Network to Canada and Mexico.	By June 2017, LEO Network hub in Canada and Mexico (at least one in each country) is established (soft launch in December 2016).
Improved access of TEK environmental observations that have been verified and can be used in decision-making and scientific processes; increased availability of technical assistance to indigenous communities to address environmental issues; increased mapping of environmental observations.	By June 2017, expand to Canada and Mexico the community of LEO environmental observers and increase the availability of TEK--based observations.
Deliverables	Deliverables Status
LEO network chapter in each country	Collaboration agreements with Grupo de Ecología y Conservación de Islas in Baja California, Mexico and First Nations Health Authority in B.C. Canada are in place for the establishment of a LEO network hub.
Training sessions for chapters and communities on LEO system	To be scheduled after onsite training at Canadian and Mexican hubs.
Training sessions for trainers in Canada and Mexico on LEO system	Onsite training at Mexican LEO hub scheduled for August 2016; training at Canadian hub planned for November 2016 in British Columbia and February 2017 in Northwest Territories.
Document identifying collaborators relative to the assessment of environmental observations	Planned for second year of activities.
LEO system that includes observations from Canada and Mexico	Initial observations expected after completion of initial training sessions.
Budget	Budget Status
Y1: C\$125,000; Y2: C\$125,000; Total: C\$250,000	97.4% of Year-1 budget spent

Project 15: Using Ecosystem Function and Traditional Ecological Knowledge Together to Build Resilience and Adapt to Climate Change in North America

Short-term Outcomes (at halfway point)	Mid-term Status
Awareness created about functionality and vulnerability assessment concepts and their utility in focusing management and monitoring; as well as exchange of technical information and local knowledge through the coordination of workshops on these concepts in the US, Mexico and Canada.	At the halfway mark, adaptation planning methodologies based on ecosystem function and traditional ecological knowledge were presented and their application in communities observed at two workshops in California (November 2015) and Tabasco (March 2016). One community in Canada and one in Mexico have been selected as pilot sites that will be developing and applying ecosystem function-based tools, using knowledge and methodologies from the three countries relevant to each community. Work at the Mexico/Tabasco site has begun. Work at the Canada site is expected to begin in summer 2016, with a site visit planned for September 2016.
Experts and local stakeholders share and gain knowledge at workshops in selected study areas in Mexico and Canada, about water management tools used at the community level in the three countries.	
Project Outcomes (by project end)	SMART Project Objectives
Awareness created about functionality and vulnerability assessment concepts and their utility in focusing management and monitoring; as well as exchange of technical information and local knowledge through the coordination of workshops on these concepts in the US, Mexico and Canada.	By December 2016, all project team members have shared an initial set of technical information and local knowledge, and agreed to an initial workplan.
Experts and local stakeholders share and gain knowledge at workshops in selected study areas in Mexico and Canada, about water management tools used at the community level in the three countries.	By June 2016, at a selected site in Canada and in Mexico, experts and local stakeholders will have shared knowledge on community-based management.
Assessment of risks and opportunities in designated Mexican and Canadian study areas, using traditional ecological knowledge and other information to understand functions related to potential ecological condition throughout a water catchment; and assessment of vulnerabilities of communities to projected climate change	By April 2017, site teams have developed assessments of risks and opportunities using traditional ecological knowledge and other information to understand function related to ecological condition under climate change.
Case study reports, assessments, and study-area adaptive management plans, including monitoring indicators.	By June 2017, study-area adaptive management plans (including monitoring indicators) are produced.
Deliverables	Deliverables Status
Workplan developed, integrating vulnerability assessment/management, functionality concepts and local knowledge	Workplan for the project was developed.
Site-specific workplans developed (one per site)	Workplan for the pilot site in Mexico completed; workplan for the pilot site in Canada under development.
Site-specific assessments of risks and opportunities completed	Assessments will take place in Y2.
Plans available to site teams	Adaptive management plans will be developed in Y2.
Budget	Budget Status
Y1: C\$150,000; Y2: C\$100,000; Total: C\$250,000	94.5% of Year-1 budget spent

Project 16: Marine Protected Areas: Strengthening Management Effectiveness and Supporting Coastal Community Resilience

Short-term Outcomes (at halfway point)	Mid-term Status
Cooperation among MPA managers within the framework of Marine Park Partnerships	At the halfway mark, a workshop on Marine Park Partnerships has taken place, where climate change-related actions and tools developed in Mexico and the United States were presented. Pacific coast MPAs participating in the project have been identified. A common vulnerability assessment tool at the habitat-level for each MPA, with a focus on seagrass habitats where possible so as to link with the CEC Blue Carbon project, is being developed. This tool will be shared with MPA managers starting in fall 2016. MPA managers and stakeholders will work on species of common interest at seascape level across the MPAs in early 2017.
Identification of common threats at seascape and local levels of their impact on resources	
Identification of sustainable economic activities at each pilot site that have a positive impact on MPA conservation	
Identification of and contact made with community partners in pilot sites	
Promotion of effectiveness measures through climate-smart approaches that take into account the needs of local economies and interactions between indigenous communities, coastal resources, and eco-cultural restoration (both for social and ecological value)	
Promotion of sustainable fishing, traditional, and nature-based activities through North American cross-sectorial partnerships	
Project Outcomes	SMART Project Objectives
MPA managers in at least two selected seascapes have implemented collaborative activities within the framework of Marine Park Partnerships.	By June 2017, managers in at least two selected seascapes have implemented collaborative activities within the framework of Marine Park Partnerships.
Resource vulnerabilities and potential adaptation actions have been identified using climate-smart guidelines for MPA managers in pilot sites, with a primary focus on fisheries, nature-based recreation, and traditional activities.	By December 2016, vulnerabilities and potential adaptation actions have been identified using climate-smart guidelines in two pilot sites, with a primary focus on local economic activities.
Sustainable economic activities related to fisheries, traditional indigenous resource use, and nature-based recreation have been identified, and potential vulnerabilities and adaptation actions have been identified.	By June 2017, at each site, sustainable economic activities, potential vulnerabilities and adaptation actions have been identified.
At least three workshops have been organized in the pilot seascapes, with participation from key community members, indigenous community leaders, and local businesses.	By April 2017, key local stakeholders are engaged in pilot site-based partnerships
Development of recommended management actions for MPAs in the two seascapes have been identified for consideration in future MPA management plan and operational plan updates.	By June 2017, management actions for the two sites have been identified for consideration in future MPA management plan and operational plan updates.
Deliverables	Deliverables Status
Creation of partnerships based on MPAs that work to address problems at the seascape-level through identification of common threats, impacts and opportunities	A workshop to set the foundations for partnership building took place in January 2016. Partnership building will evolve through Y2 activities.
Completion of pilot vulnerability assessment of	Pilot vulnerability assessments will take place in fall

MPAs, including assessment of sensitivity, exposure, and adaptive capacity	2016.
Report on the vulnerability of economic activities to potential climate change impacts	Work will take place in Y2.
Three workshops (one trilateral workshop and one workshop per site)	Workshops will take place in Y2.
Management actions for the two sites	Actions will be identified through the work in Y2.
Budget	Budget Status
Y1: C\$150,000; Y2: C\$100,00; Total: C\$250,000	73.8% of Year-1 budget spent