XXIV Meeting of the Canada/Mexico/U.S. Trilateral Committee for
Wildlife and Ecosystem Conservation and Management
Victoria, Canada, April 8-12, 2019

Working Table: Ecosystem Conservation (ECWT)

Co-Chairs:

- **Alaine Camfield**, Manager, Priority Places Initiative, Canadian Wildlife Service / Environment and Climate Change Canada (ECCC), Canada
- **Isabel Hernandez**, Directora de Conservación de los Ecosistemas y Adaptación al Cambio Climático, Ecosistemas Instituto Nacional de Ecología y Cambio Climático (INECC), Mexico
- **Mitch Ellis**, Chief, Division of Natural Resources, National Wildlife Refuge System, U.S. Fish and Wildlife Service, United States

Facilitator:

- **Michael Gale,** U.S. Fish and Wildlife Service, Michael_gale@fws.gov, 571.982.2158 (cell)

Location:

Hotel Grand Pacific, 463 Belleville St, Victoria, BC V8V 1X3, Canada

The Ecosystem Conservation Working Table (ECWT) will meet in Room TBD.

Webex Connection Information:

Remote connection is available for presentations requiring remote participation. To connect to the audio, please use the information below (Please note we are limited to 20 lines – please advise the Facilitator, Michael Gale, Michael_gale@fws.gov if you plan to participate and for what items):

Conference Call:

Mexico	+001-866-295-6360
USA and Canada	866-692-3582
Passcode:	94563633#
WebEx Log-in	Meeting #: 747693185

Participant Join URL: http://www.mymeetings.com/nc/join.php?i=747693185&p=&t=c

Trilateral Committee Priorities for 2019

- Integrating Human Dimensions
- Technology Innovation for Conservation
- Connectivity (terrestrial)
- Adaptation to Ecosystem Change

Ecosystem Conservation Working Table Priorities for 2018-2019

- Island Conservation
- Grassland Conservation
- Monarch Butterfly Conservation

TUESDAY, April 9, 2019

9:00-9:20	**AGENDA ITEM 1: Welcome, Introductions, Adoption of the Agenda, 2017-18 Action Item Report (AIR)** **COLLABORATORS & CONTACTS:** Co-chairs and Facilitator – Alaine Camfield (ECCC), Isabel Hernandez (INECC), Mitch Ellis (FWS), Michael Gale (FWS) **DESCRIPTION:** Welcome and introductions of new and returning participants to the working table. Provide an orientation to the table's business for the week. Approval and adoption of the agenda. Report on major accomplishments or challenges from the Action Item Report (AIR) and any outstanding actions from the previous meeting. **BACKGROUND:** Standard agenda item to build consensus and ensure full participation. The AIR is used to record decisions and monitor progress. Working tables review the previous year's AIR at the beginning of each annual meeting. **REQUESTED SPECIFIC OUTCOMES**: ▪ Approval of any changes to the agenda. ▪ Adoption of the agenda. ▪ Monitor progress on action items and agreements. Identify issues and challenges in accomplishing action items.
9:20–9:35	**AGENDA ITEM 2: Country Updates** **COLLABORATORS & CONTACTS:** Co-chairs – Alaine Camfield (ECCC), Isabel Hernandez (INECC), Mitch Ellis (FWS) **DESCRIPTION:** Each country co-chair presents a short country report with relevant information to the ECWT, including any expectations for the week's proceedings. **BACKGROUND:** Standard agenda item to present and underline relevant events that have occurred in each of the three countries. **REQUESTED SPECIFIC OUTCOMES**: Information only. Countries should aim to provide an overview that gives context to the week's discussions.
9:35–9:55	*Theme: Trilateral Coordination for Ecosystem Conservation* **AGENDA ITEM 3:** Commission for Environmental Cooperation (CEC) Ecosystems Program Accomplishments **COLLABORATORS & CONTACTS:** Lucie Robidoux, Commission for Environmental Cooperation (CEC), and numerous others, including Environment & Climate Change Canada, *Secretaria de Medio Ambiente, Recursos Naturales* and U.S. Fish and Wildlife Service. **DESCRIPTION:** The Ecosystems Program of the CEC implements trinational collaborative projects involving government, local communities, NGOs and researchers, to support the conservation and management of terrestrial and marine ecosystems and

	wildlife. This session will overview current projects' accomplishments and invite discussion to identify opportunities for further collaboration. **BACKGROUND:** The CEC Ecosystem Program has a long-standing collaborative relationship with the EWCT, particularly in the areas of marine, grasslands, migratory bird and monarch butterfly conservation. The current two-year projects, coming to a close in June 2019, focus on conserving migratory shorebirds through community engagement, advancing monarch butterfly science for conservation, strengthening the adaptive capacity of Marine Protected Areas and building community solutions to marine litter. Each project has produced new knowledge, collaborations, tools and products, which are the results of and contribute to trinational collaboration and community engagement, and can inform similar efforts in the three countries. **REQUESTED SPECIFIC OUTCOMES:** • Exchange information to create connections between CEC Ecosystems projects, Trilateral objectives and ecosystem conservation work in the three countries. • Disseminate products and discuss ways to share them with partners. • Discuss opportunities for future trilateral collaboration
9:55–10:15	**AGENDA ITEM 4:** North American Committee on Cooperation for Wilderness and Protected Areas Conservation (NAWPA) Update **COLLABORATORS & CONTACTS:** Elaine Leslie, Chief, Biological Resources, U.S. National Park Service (on behalf of a wide range of collaborating partners involved with the NAWPA Committee); Gilles Seutin, Parks Canada; Ignacio Misfut March, CONANP; Adam Hanson, NAWPA Facilitator & Manager of Conservation Programs, WILD Foundation. **DESCRIPTION:** The North American Committee on Cooperation for Wilderness and Protected Areas Conservation (NAWPA) includes the land management agencies from Canada, Mexico, and the U.S. [FWS, BLM, NPS, USFS, Parks Canada, and the National Commission for Protected Areas (CONANP) of Mexico], and advances collaborative work among NAWPA members on shared priorities. Last year at the ECWT, a presentation was given on a NAWPA project regarding a Landscape Conservation Design (LCD) for Grassland Priority Conservation Areas (GPCA). This year, a general update on NAWPA activities, priorities, and projects will be shared. **BACKGROUND:** The North American Committee on Cooperation for Wilderness and Protected Areas Conservation (NAWPA) is a collaborative initiative that fosters the exchange of ideas, experiences, best practices, and innovative solutions on shared conservation opportunities at the North American continental scale and across multiple agencies and jurisdictions. NAWPA member agencies recognize that protected areas and wilderness play a critical role in conserving biodiversity and supporting human health and well-being. They provide recreation, education, and research opportunities and support the economy by providing resource benefits, ecosystem services, tourist destinations, and ecological resilience. **REQUESTED SPECIFIC OUTCOMES**: Share information between NAWPA and Trilateral ECWT—two distinct bodies both interested in trilateral collaboration for ecosystem conservation in North America.

10:15-10:30	*Break*
10:30-11:00	*Joint Session with Species of Common Concern Working Table* *<u>Theme</u>: Planning and Science for Species and Ecosystem Conservation* **<u>AGENDA ITEM 5</u>:** Shifting from Single Species to Multi-species and Ecosystem-based Approaches to Conservation in Canada **COLLABORATORS & CONTACTS:** Alaine Camfield, Environment and Climate Change Canada (ECCC), Lindsay Rodger (Parks Canada) **DESCRIPTION:** ECCC will provide an overview on the Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada. This new approach represents key strategic shifts in conservation from predominately single-species to more multi-species and ecosystem based approaches, and from broad, independent efforts to more targeted and collaborative efforts on shared priority places, species, sectors and threats. The Pan-Canadian Approach also shifts emphasis away from assessment and planning and focuses on increasing effort on implementing actions that achieve meaningful outcomes. The Government of Canada invested $1.35 billion in Budget 2018 in the Nature Legacy. With these funds the federal government will support nature conservation and protection, in partnership with others. This includes: conserving and protecting at least 17% of Canada's land and freshwater, protecting and recovering species at risk and their habitats and improving Canada's natural environment. Funding for the Nature Legacy will be in part through the Nature Fund, a $500 million dollar investment over five years which will be matched by philanthropic foundations, corporate, not-for-profit, provincial, territorial and other partners who will contribute at least an additional $500 million to raise a total of $1 billion for conservation action. There are two streams for the fund: spaces and species at risk. The spaces stream of the Canada Nature Fund will provide resources that will enable key partners and stakeholders to significantly advance progress toward Canada's biodiversity commitments. Under the species at risk stream, partners will contribute to the protection and recovery of species at risk and other biodiversity for priority species, places and sectors. Through innovative, multi-species and ecosystem-based initiatives, the Nature Fund will support priorities for action and build relationships with Indigenous peoples, other governments and organizations, industry and other resource users. Parks Canada will overview their site-based approach to Species at Risk action planning including developing and implementing multi-species action plans for Species at Risk, and provide some highlights of National Park efforts to scale up conservation success by working "at scale": ie, regionally, collaboratively across park administrative boundaries. In addition, they will outline their experience using the Open Standards for the Practice of Conservation as a conservation planning tool. **REQUESTED SPECIFIC OUTCOMES:** To share information on new approaches to species at risk conservation and best practices, and facilitate a discussion about integrating species at risk conservation and ecosystems conservation approaches.

	AGENDA ITEM PRESENTOR(S) (include name and agency; indicate if presenting in-person or remotely)**:** Alaine Camfield, Environment and Climate Change Canada (ECCC); presenting in person, Lindsay Rodger (Parks Canada); presenting in person. **SUBMITTED BY** (include name and agency)**:** Alaine Camfield, Environment and Climate Change Canada (ECCC)
11:00-11:25	**AGENDA ITEM 6:** The Nested Hexagon Framework, a standardized yet flexible data aggregation and mapping tool to assist with planning and conservation efforts across North America. **COLLABORATORS & CONTACTS:** University of Kansas, Bill VanPelt (Arizona Game and Fish), Jen Mock Schaeffer (AFWA), Steve Hanser (USGS), **DESCRIPTION**: The Nested Hexagon Framework is a spatial data grid comprised of three nested and hierarchically referenced spatial mapping units (one sq. mile hexagons, 7 sq. mile cogs, and 49 sq. mile wheels). Each mapping units' identification number provides a reference to the units that it is a part of, and the units that are part of it. This numbering convention allows data entered at one scale to easily be related to data entered at the other scales. Furthermore, the Framework has an attribute table that can accept data from a wide variety of input layers in such a way that inputs are standardized to facilitate more effective searches and analysis. The standardized spatial and attribute schema of the Nested Framework captures key pieces of information from input data layers to convey the highlights, obscure (protect) specific spatial locations, and provide a reference back to the source data layer. **BACKGROUND:** The Nested Hexagon Framework was created to be compatible with the WAFWA westwide Crucial Habitat Assessment Tool that provides a summary ranking (1-6) of priority areas based on state policies and priorities. A reoccurring theme from CHAT user feedback was the lack of more specific information about what was is in a hexagon and why it was ranked the way it was. The creation of a multiscale framework compatible with the CHAT was identified as an opportunity by the University of Kansas as a way to address both the varying levels of spatial sensitivity concerns and the ability to combine attributes of different data to inform users of what was in an area. Since its creation in 2017, the Nested Hexagon framework has been used to summarize and present information for the western monarch conservation plan, black tailed prairie dog conservation strategy, bat priority areas. Additionally discussions are in progress with Nature Serve to use the Framework to summarize a new species richness layer they are finalizing as well as their expansive database of species occurrence data. **REQUESTED SPECIFIC OUTCOMES:** Consideration of the Framework as a standard spatial and attribute schema to reference data to that partner agencies and organizations are encouraged to integrate relevant data products to. **AGENDA ITEM PRESENTOR(S)** (include name and agency)**:** Michael Houts, University of Kansas.
11:25-11:30	*Break* (short – 5 min.)

11:30-11:50	*Theme: Landscape Conservation and Climate Change* **AGENDA ITEM 7:** Climate Change Adaptation at Parks Canada **COLLABORATORS & CONTACTS:** Elizabeth Nelson, Parks Canada **DESCRIPTION:** Dr. Elizabeth Nelson will provide an overview of Parks Canada's work on natural solutions to climate change, including their Adaptation Framework, adaptation workshops, risk assessments, climate summaries, and biodiversity adaptation tools and resources. **REQUESTED SPECIFIC OUTCOMES:** To share climate change adaptation approaches and tools, and to integrate tri-territorial best practices into Parks Canada's work. **AGENDA ITEM PRESENTOR(S)** (include name and agency; indicate if presenting in-person or remotely)**:** Elizabeth Nelson, Parks Canada, presenting in person
11:50-12:10	**AGENDA ITEM 8:** Corridor Design for Climate Change **COLLABORATORS & CONTACTS:** Patricia Koleff, Oscar Godínez Gomez, Angela P. Cuervo-Robayo, Diana Ramírez and Wolke Tobón, Tania Urquiza-Haas, CONABIO **DESCRIPTION:** Maintaining and restoring landscape connectivity has been proposed as one of the main strategies in order to minimize biodiversity loss in face of climate change and increasing habitat fragmentation. However, there are few connectivity models that identify corridors along climate gradients with less human transformation to facilitate species moving to track suitable climates. In this study, we identified least cost climatic corridors in México taking into account the climatic gradient, the Euclidean distance and the human impact between old-growth vegetation fragments. The model incorporates human impact through a resistance map representing the cost of displacement and evapotranspiration as climatic variable based on a baseline (1980-2009) and three future time periods (2015-2039, 2045-2069 and 2075-2099) for four Global Circulation Models: MPI-ESM-LR, GFDL-CM3, HADGEM2-ES and CNRMCM5 under two emission scenarios (Representative Concentration Pathways, RCP 4.5 and 8.5). The connectivity models using future climate projections were used to test the assumption that climatic gradients are maintained in the future. On average, more than 4,500 least cost climatic corridors were identified for each circulation model. There is a high spatial coincidence in the geographical orientation of future climatic corridors (overlap > 90%). Fewer corridors were identified in the north of the country where there is greater continuity of natural vegetation, while in the center and south of the country, the fragmentation of the landscape is greater, increasing the number of corridors. Climatic corridors will be prioritized based on principles of landscape ecology and indicators of human impact, vulnerability, exposure to climate change and importance for the conservation of biodiversity. **BACKGROUND:** Climate change has been recognized as one of the major drivers of biodiversity loss in recent years (Sala et al. 2000), due to a strong effect on demographic, geographic and ecosystem processes (Sala et al. 2000; Williams et al. 2007), acting synergistically with other environmental degradation factors, such as habitat loss, pollution, and overexploitation (Saunders et al. 1991). Promoting connectivity following

	climate gradients between protected areas and vegetation fragments across countries may facilitate species moving in order to track suitable climates in face of global change. **REQUESTED SPECIFIC OUTCOMES:** Identification of new partners and collaborators at a trilateral level. **AGENDA ITEM PRESENTOR:** Dr. Tania Urquiza Haas**,** CONABIO (remote)
12:10-13:30	*Lunch*
13:30-13:50	**AGENDA ITEM 9:** Building Collaboration and Capacity for Marine Protected Area (MPA) Managers on Climate Change Adaptation **COLLABORATORS & CONTACTS:** Gonzalo Cid, NOAA Marine Protected Areas Center; Lauren Wenzel, NOAA Marine Protected Areas Center; Lucie Robidoux, Commission for Environmental Cooperation; Pilar Jacobo, CONANP; Chantal Vis, Parks Canada. **DESCRIPTION:** The U.S. and CEC leads on marine issues will present (remotely and/or in-person) on the status and key results from the past two years of the North American Marine Protected Area Network (NAMPAN) activities, including the development of tools and capacity for MPA managers to address effective management in a changing climate. Presentations will be followed by discussion to identify opportunities for broader collaboration. **BACKGROUND:** CEC has been working for several years to strengthen collaboration and develop knowledge and tools to assist MPA managers in understanding and addressing climate impacts. This presentation will address: • Development of a Coastal Impact Mitigation and Adaptation Toolkit, to help managers identify and apply appropriate management actions, building on the Rapid Vulnerability Assessment Tool. • Establishment of the NAMPAN as an independent regional MPA network that can support ongoing collaboration among MPA managers, and the participation of UN Environment's North America Office as a coordinating partner. • Other efforts to strengthen collaborative partnerships in shared seascapes to address priority issues related to impact mitigation, adaptation and management effectiveness. Discussion with the group will focus on ways in which the coastal adaptation toolkit and the establishment of NAMPAN as an independent network can complement and support Trilateral objectives. This work fits under the Ecosystem Table's focus on advancing an ecosystem-based approach to conservation focused on transboundary cooperation in the management of protected areas. **REQUESTED SPECIFIC OUTCOMES:** • Update group on recent CEC MPA work. • Share completed products and discuss ways to share them with marine and coastal practitioners. • Discuss toolkit and NAMPAN, and ways in which they can best support Tri-lateral objectives.

	• Discuss opportunities for future collaboration and next steps for trilateral collaboration. **SUBMITTED BY**: Gonzalo Cid, International Activities Coordinator, National Marine Protected Areas Center, NOAA - Office of National Marine Sanctuaries
13:50-14:10	**AGENDA ITEM 10**: Blue Carbon Ecosystems in México - **PLACEHOLDER** **COLLABORATORS & CONTACTS:** Isabel Hernandez (INECC) (presenter). Dra. Margarita Caso, Laura Gomez Aiza, Luisa Alejandra Dominguez, and Erwin Armando Marti, INECC. **DESCRIPTION:** It is internationally recognized that carbon capture of the atmosphere and its subsequent storage in the aerial and subterranean biomass of the vegetation are part of the needed strategies for adaptation and mitigation to climate change (Herrera 2017). The Intergovernmental Panel on Climate Change (IPCC) considers three ecosystems of blue carbon: mangroves, marshes and sea grass. In October 2018, Mexico hosted a workshop with specialists in coastal and marine ecosystems to know what is the state of the art of the scientific knowledge about blue carbon in Mexico. Specialists identified six ecosystems more than what IPCC mentioned, so INECC is considering nine blue carbon ecosystems: mangroves, flood forests, freshwater wetlands, marshes, coastal dunes, macroalgae, sea grass, coral reefs and open sea. All of them have some information that can help us to know how much carbon is stored in stock, but only three of them were studied about how much carbon contain the flows: mangroves, sea grass and open sea. Mangroves are the most studied ecosystems in both cases stocks and flows. Open sea is the less studied. Another subject was the methodologies to do the scientific work. There are a lot of different ways to do the calculations of carbon, and this fact makes it very difficult to compare the places even when we are talking about the same ecosystem. One of the principal challenges is the standardization of data. The other challenges include: • Multi-temporal and multiscale integration of the information collected from the field. • Prioritization of variables and ecosystems that are not yet well characterized. • Development / Publication of harmonized databases • Understanding more about geomorphology and freshwater and marine flows in order to get a better conservation • Work on coastal gradients of carbon, for example: wetlands-sea grass-coral reef. How is the flow among the different ecosystems, to understand how the activities in one ecosystem can affect others **BACKGROUND**: Coastal wetland ecosystems can capture carbon at rates higher than forests mature tropical forests, and the total carbon stores per square kilometer is greater than carbon stored in tropical forests (Murray et al., 2011). Despite the fact that the Blue Carbon habitats cover less than 0.5% of the marine surface, they store more than 50% of the total carbon in the ocean sediments. On the other hand, they constitute only 0.05% of the terrestrial vegetable biomass, but they store up to three times more carbon per unit area than any terrestrial ecosystem in the sediments (Pendleton et al. al., 2012; Howard et al.,

	2014). In the context of the 6th national communication of Mexico under the United Nations Framework Convention on Climate Change, we compile the information about blue carbon in Mangroves and Sea Grass. **REQUESTED SPECIFIC OUTCOMES**: Identification of new partners and collaborators at a trilateral level. **SUBMITTED BY:** INECC
14:10-14:40	**AGENDA ITEM 11:** Trilateral Island Initiative: Conservation and Restoration of the Islands of Canada, the United States, and Mexico **COLLABORATORS & CONTACTS:** Annie Little (USFWS), Patrick Nantel (Parks Canada), Gilles Suetin (Parks Canada), Federico A. Méndez (Conservación de Islas), Gregg Howald (Island Conservation), Humberto Berlanga (CONABIO), Eduardo E. Iñigo-Elias (Cornell Lab of Ornithology), Jennie Duberstein (FWS) **DESCRIPTION:** This agenda item focuses on a collaborative trilateral effort to conserve and restore marine island ecosystems, including seabird populations. Following the signing of the Letter of Intent (LOI) at the 2014 Trilateral Committee meeting, the three countries have been collaborating on multiple issues of shared interest related to island conservation. We will update the Ecosystem Conservation Working Table on the status of current collaborative efforts, including ongoing projects, workshops, exchanges, and efforts to promote the LOI. We will highlight in particular the 2019 Trilateral Committee priorities as it relates to conservation efforts on island ecosystems within the three countries. **BACKGROUND:** In the last five years, several bilateral and trilateral island restoration projects were initiated. In order to further encourage coordination and collaboration on island projects, a Trilateral Island Working Group was created in 2012. This group developed the LOI that was signed by the three countries at the 2014 Trilateral Meeting in Querétaro, Mexico. The LOI documents that the three countries intend to engage in cooperative bilateral and trilateral activities to promote sustainable environmental policies and practices in support of island conservation. The Working Group will discuss achievements, priorities, and updates of recent collaborative efforts related to island conservation. **REQUESTED SPECIFIC OUTCOMES:** We seek continued endorsement for collaborative conservation efforts on islands in Canada, United States, and Mexico. **AGENDA ITEM PRESENTOR(S):** Annie Little (USFWS) and representatives from Canada and Mexico (TBD) **SUBMITTED BY:** Annie Little, USFWS
14:40-15:00	**AGENDA ITEM 12:** A Multi-stakeholder Approach to Implement the National Strategy on Invasive Alien Species **COLLABORATORS & CONTACTS:** Patricia Koleff & Ana Isabel González, Viviana Reyes Gomez, CONABIO-México; Georgia Born-Schmidt, & Jordi Parpal Servole,

	PNUD-México; Eduardo Rendón Hernández, Erika Alarcon Chavira, Sayra Rosio Espindola Barrientes, CONANP-México, Mariam Latofski Robles & Federico Méndez Sánchez, GECI-México **DESCRIPTION:** Since the end of 2014 the Mexican government has been executing the multi-stakeholder Project "Enhancing National Capacities to Manage Invasive Alien Species (IAS) by Implementing the National Strategy on IAS", under a GEF grant and the guidance of UNDP. The project is carrying out actions at the national level as well as at 15 pilot sites in collaboration with more than 16 institutions-mostly governmental -but also NGO and academics. This has resulted in a remarkable cooperation of agencies in the environmental sector with those in aquaculture, forestry and agriculture as well as other productive sectors on national level. A continuous dialogue with the public and a wide range of stakeholders has been established through several outreach material and activities. It also has led to regional collaboration efforts in North and South America. **BACKGROUND:** Based on previous collaborations in the past Trilateral meetings, as well as different bilateral efforts to exchange information, the issue of Alien Invasive Species has been identified as a crosscutting issue among the different tables. **REQUESTED SPECIFIC OUTCOMES:** To present the results of the implementation of the Mexican Invasive Species Strategy through the GEF Funded project **AGENDA ITEM PRESENTOR:** Dr. Ana Isabel González Martínez **SUBMITTED BY:** CONABIO, PNUD, CONANP, GECI
15:00-15:30	*Break*
15:30-15:50	**AGENDA ITEM 13:** Natural Capital in National Atlas of Vulnerability to Climate Change in Mexico **COLLABORATORS & CONTACTS:** Margarita Caso Chavez, Daniel Iura Gonzalez, INECC (remote presenter) **DESCRIPTION:** In order to carry out the "initiatives and measures aimed at reducing the vulnerability of natural and human systems to the real or expected effects of climate change", which is how the IPCC defines the adaptation process, it is first necessary to identify specifically the vulnerability, through three guiding questions: 1) What causes the problem (climate threat as increase or decrease in temperature or precipitation) ?; 2) Who or what is impacted by the problem? and, 3) Where does the problem occur? The objects of analysis are 1. Economic activities, 2. Infrastructure, 3. Population and 4. Natural Capital, the latter is being developed and currently presents a problem "Change in the potential distribution of endemic species, priority and at risk of extinction " In this problematic the changes to non-analogous climatic conditions of the potential distribution of 206 species are presented, included in some risk category in NOM-059-SEMARNAT-2010 (DOF, 2010) and priority species for conservation (DOF, 2014). Of the species analyzed, 157 are animals (65 birds, 46 reptiles, 28 mammals, 17 amphibians and 1 insect) and 49 are plants (3 conifers, 4 ferns and 42 of general groups).

	BACKGROUND: The ANVCC is a tool to strengthen the decision-making in the planning of development in Mexico, the climatic conditions that have changed and will continue to change in the future. The ANVCC is constituted in such a way that it allows, through a structured and systematic set of maps, to show the territorial utility in the face of climate change, the climatic problem, the climatic problem, the orientation oriented towards climate change. **REQUESTED SPECIFIC OUTCOMES**: Identification of new partners and collaborators at a trilateral level. **SUBMITTED BY:** INECC
15:50-16:10	**AGENDA ITEM 14:** Technology for Conservation: Satellite Forest Monitoring System (SaMoF) **COLLABORATORS & CONTACTS:** José Armando Alanís-de la Rosa (remote presenter) and Oswaldo Carrillo-Negrete, CONAFOR **DESCRIPTION:** In the context of REDD+, spatial data on deforestation and afforestation/reforestation is typically collected through satellite data; land use changes can also be monitored through a satellite forest and land monitoring system. Many countries are developing national capacities to conceptualize, design and implement such systems as part of their efforts for gather data input for formulating national greenhouse gas inventories, forest reference emission levels, measuring, reporting and verifying REDD+ results and reporting achievements towards their Nationally Determined Contributions (NDC) in order to support domestic efforts to improve forest management and forest conservation. National Forest Commission of Mexico has been developing its own Satellite Forest Monitoring System (SaMoF), which is a set of processes and tools to produce cartography and information on forest cover and its changes over time. SaMoF system is aimed to: (i) assess deforestation rates, degradation, recovery, reforestation, afforestation, and other transitions; and (ii) produce information to report achievements towards REDD+ and NDC commitments related to mitigation and adaptation to climate change. SaMoF includes 6 processes aimed to produce maps of coverage and changes in coverage, which includes: (i) Institutional arrangements; (ii) calibration; (iii) Pre-processing; (iv) Processing; (v) Post-processing; and (vi) assessment of thematic accuracy. **BACKGROUND:** Deforestation and forest degradation are the second leading cause of global warming, responsible for about 15% of global greenhouse gas emissions, which makes the loss and depletion of forests a major issue for climate change. Reducing emission from deforestation and forest degradation, and foster conservation and sustainable management of forest and enhancement of carbon stocks (REDD+) may play a significant role in climate change mitigation and adaptation, yield significant sustainable development benefits, and generate a new financing stream for sustainable forest management in developing countries. If cost-efficient carbon benefits can be achieved through REDD+, increases in atmospheric CO_2 concentrations could be slowed, effectively buying much needed time for countries to move to lower emissions technologies. Against this backdrop it is obvious that functional monitoring and verification systems are a fundamental requirement in REDD+ implementation. Satellite remote sensing

	technologies are currently widely tested and suggested as a tool in REDD+ monitoring, assessment and verification. **REQUESTED SPECIFIC OUTCOMES**: Identification of partners and collaborators for improving utilization of remote sensing in forestry in the context of REDD+. **SUBMITTED BY:** National Forestry Commission (CONAFOR)
16:10-16:30	**AGENDA ITEM 15:** Improving Trustworthiness in Scientific Products through Traceability **COLLABORATORS & CONTACTS:** Sky Bristol, Core Science Systems, U.S. Geological Survey (USGS) (remote presenter); Mike Frame, Science Analytics and Synthesis, USGS **DESCRIPTION:** The U.S. Geological Survey (USGS) works to build an ever evolving suite of data and information that characterizes and helps to understand complex earth systems, how they are changing over time, and how they respond to management actions. The National Biogeographic Map is one of our latest efforts, designed within the Core Science Systems mission area where we work to map the earth from the geology, hydrography, topography, and now information on habitats and species. This new map and its underlying data infrastructure seeks to help answer questions about where species are well protected, where they are less protected, where particular vulnerabilities exist, and what strategies might be used to address threats to biodiversity. **REQUESTED SPECIFIC OUTCOMES:** Share information between the three countries and create a space for discussion about the use of innovative technology for wildlife conservation and management.
16:30-16:50	**AGENDA ITEM 16:** Conservation Science and the Digital Age – A 21st Century Approach **COLLABORATORS & CONTACTS:** Texas Parks and Wildlife Department, New Mexico Department of Game and Fish, New Mexico State University, Lady Bird Johnson Wildflower Center, Geospatial Advisory Council-Southwest Section of the Wildlife Society. **DESCRIPTION:** This is an overview of the types of technology being used and applied in their respective fields of study by conservation professionals and citizen scientists, and the approaches to engaging the future conservation professional through technology. **BACKGROUND:** The sheer amount of mobile applications available to the wildlife and conservation professional can be overwhelming at times. But much like binoculars, radio collars, and field journals, mobile apps are the tools of the 21st century biologist. Mobile apps can play a key role in data collection, including data associated with field-based mapping of natural resources, and citizen science. These applications can both provide access to and allow for recording of large quantities of data with efficiency and accuracy. Our goal is to highlight several mobile applications and technologies, using real world

	practices, to increase awareness and help interested conservation professionals select the applications best suited to their needs. **REQUESTED SPECIFIC OUTCOMES:** To foster continental communication on the innovative work by conservation professionals and the impact of the use of technology and to explore collaborations in these emerging technologies. **PRESENTOR:** Jason A. Estrella, Texas Parks and Wildlife Department (remote). **SUBMITTED BY:** Maria Araujo, Texas Parks and Wildlife Department
16:50-17:10	**AGENDA ITEM 17:** Tracking Ecosystems with DNA Technologies **COLLABORATORS & CONTACTS:** Drs. Adriana Radulovici, Paul Hebert (Centre for Biodiversity Genomics, University of Guelph, Canada) **DESCRIPTION**: Recent advances in DNA sequencing and computational biology mean that DNA-based identification systems will soon make it possible to track global changes in the species composition of ecosystems, revealing the impacts of global warming and other human-induced change. To achieve this capacity, the International Barcode of Life (iBOL) Consortium, an alliance of 30+ nations, will soon launch BIOSCAN, a 7-year, $180 million research program with three key goals. It will extend the DNA barcode reference library to more than 2 million species; it will ascertain species assemblages at 2,500 sites spanning half the world's ecoregions; and it will reveal previously hidden species interactions through symbiome analysis. This talk overviews the ways in which this information will contribute to biodiversity conservation. **BACKGROUND**: Sixteen years ago, it was proposed that short sequences from standardized segments of the genome (i.e. DNA barcodes) could discriminate species, enabling the identification of any specimen regardless of its life stage. Canada launched a national barcode network in 2005 and an international consortium (iBOL) in 2010. Within five years, iBOL had completed BARCODE 500K, a $120 million program which delivered coverage for 500,000 species. Because of its speed, low cost, and reliability, DNA barcoding has rapidly gained application in fields ranging from deterring food fraud and trade in endangered species to environmental impact assessments and biodiversity conservation. The Centre for Biodiversity Genomics (CBG) at Guelph has now received more than $100 million to develop and staff the core facility required to support this global research program. The increasing sophistication of its analytical and informatics platforms means the CBG can now barcode 10,000 single specimens daily while also analyzing many bulk samples. As a result, it will play a central role in supporting BIOSCAN, an effort that will lay the foundation for a global bio-surveillance system that will provide the detailed information required to inform decision-making in support of biodiversity conservation. **REQUESTED SPECIFIC OUTCOMES:** Share information on DNA-based identification approaches with applications for ecosystem conservation. Introduce the Centre for Biodiversity Genomics as well as the International Barcode of Life Consortium and its new project, BIOSCAN. Facilitate discussion on best practices, capacity enhancement, and the potential role of DNA technologies for conservation.

	AGENDA ITEM PRESENTOR(S): Dr. Adriana Radulovici (Centre for Biodiversity Genomics, University of Guelph, Canada), presenting in person. **SUBMITTED BY:** Drs**.** Adriana Radulovici and Paul Hebert (Centre for Biodiversity Genomics, University of Guelph, Canada).
19:00-20:00	Dinner (*on your own*)

WEDNESDAY, April 10, 2019

9:00–11:00	Commission for Environmental Cooperation (CEC) Joint Session on the Sustainable Trade of CITES Species
11:00-12:30	*Lunch*
12:30-13:00	*Joint Session with Migratory Birds Working Table* ***Mainstreaming Grassland Bird Conservation*** **<u>AGENDA ITEM 21 (MB 14)</u>: Next Steps for Mainstreaming Grassland Bird Conservation** **COLLABORATORS & CONTACTS:** Humberto Berlanga (CONABIO), Ken Richkus (FWS), Charles M Francis (CWS), J. Ryan Zimmerling (CWS), Arvind Panjabi (Bird Conservation of the Rockies) **DESCRIPTION:** Grassland birds remain one of the highest priority conservation issues from a tri-national perspective: many species of birds spend their whole life cycle travelling between Canada, USA and Mexico, but are experiencing dramatic population declines. A workshop is being planned for later in 2019. **BACKGROUND:** The Chihuahuan grasslands remain a conservation concern for the Trilateral Committee because several rapidly declining grassland birds are dependent upon these habitats for their survival. These habitats are threatened by conversion of rangelands to irrigated crops, which also affects the livelihood of ranchers and threatens the water resources in the region. Mainstreaming conservation of these habitats has the potential to benefit both birds and people. The mainstreaming concept engages multiple sectors (e.g., agriculture, water, biodiversity) in an effort to find common solutions that benefit all parties in the region. Mainstreaming can create a sense of responsibility not just from the conservation partners but also from other government and industry partners. A workshop is being planned for 2019 to bring together these diverse sectors to explain the conservation urgency – both for birds and for people – and to work together to seek common solutions. **REQUESTED SPECIFIC OUTCOMES**: Discuss last minute issues related to the 2019 workshop (topics to be covered) and ensure all appropriate participants (from all three nations) are identified. **AGENDA ITEM PRESENTOR(S):** Humberto Berlanga

	SUBMITTED BY: Co-chairs – Humberto Berlanga (CONABIO), Ken Richkus (FWS), J. Ryan Zimmerling and Charles M Francis (CWS), Arvind Panjabi (Bird Conservation of the Rockies)
13:00-13:15	**AGENDA ITEM 22 (MB 15)**: **America's Grassland Conference** **COLLABORATORS & CONTACTS:** Greg Butcher (USFS) and Arvind Panjabi, Bird Conservancy of the Rockies **DESCRIPTION:** Item is to coordinate trilateral participation in the 2019 America's Grasslands Conference **BACKGROUND:** Every other year, the National Wildlife Federation puts on America's Grasslands Conference. The 2019 America's Grasslands Conference: Working Across Boundaries co-hosted by The National Wildlife Federation, North Dakota Grazing Lands Coalition, and North Dakota State University will be held August 20-22, 2019 in Bismarck, North Dakota. The conference serves to connect producers, researchers, educators, and other stakeholders through three days of talks, discussion sessions, field trips and more. U.S. Forest Service expects to help pay for travel for 5 participants from Chihuahua, Mexico, and two from the Southern Cone of South America. **REQUESTED SPECIFIC OUTCOMES:** The Bird Table should consider endorsing this conference and encouraging all interested in the conservation of grassland birds in the 3 countries to attend. It may not be too late to reach out to the organizers to add specific events to the agenda. **SUBMITTED BY:** Greg Butcher, U.S. Forest Service gsbutcher@fs.fed.us
13:15-13:30	**AGENDA ITEM 23 (MB 16):** North American Grasslands Alliance (NAGA) and Trilateral Grasslands Strategic Conservation **COLLABORATORS & CONTACTS:** Michael Gale, U.S. Fish and Wildlife Service; Lucie Robidoux, Commission for Environmental Cooperation (CEC); **DESCRIPTION:** The idea of a North American Grasslands Alliance (NAGA) was a continental partnership to advance grassland conservation and sustainable use through collaborative action. NAGA was envisioned to be an alliance of government agencies, landowners and conservation groups, non-government organizations, and other interest groups working together to protect and sustainably use native grasslands. The goal of NAGA was to lay a path forward for a continentally integrated planning and management approach to achieve lasting sustainability of the uniquely shared terrestrial ecosystem of grasslands. The presentation will overview the NAGA model and facilitate a discussion regarding trilateral coordination on grasslands conservation in consideration of this approach. **BACKGROUND:** In 2013, the Commission for Environmental Cooperation (CEC) published *North American Grasslands Alliance: A Framework for Change*, as part of a project beginning in 2011 entitled *North American Grasslands: Management*

	Initiatives and Partnerships to Enhance Ecosystem and Community Resilience. The framework for NAGA was developed through a participatory process coordinated by the CEC (including 72 participants from three countries). In addition to the NAGA Framework, the project also produced an online tool to host and disseminate almost 100 beneficial management practices (BMPs) from ranchers, conservation organizations, government, and academic bodies in Canada, Mexico, and the U.S. **REQUESTED SPECIFIC OUTCOMES**: Inform a conversation about trilateral grasslands conservation efforts and whether the Trilateral Committee could serve as a platform for establishing the NAGA as outlined in the framework published by CEC. **SUBMITTED BY**: Michael Gale, Special Assistant, U.S. Fish and Wildlife Service
13:30-13:45	*Break*
13:45-14:15	**<u>AGENDA ITEM 24 (MB 17):</u> Eight Migratory Bird Joint Ventures Assessing and Planning for Connectivity of Native Grassland Ecosystems for Birds and Other Wildlife Across the Central Grasslands of North America** **COLLABORATORS & CONTACTS:** Kevin Barnes, U.S. Fish and Wildlife Service; Andy Bishop, Rainwater Basin Joint Venture; Mike Carter, Playa Lakes Joint Venture; Dan Casey, Northern Great Plains Joint Venture; Jim Devries, Prairie Habitat Joint Venture; Jennie Duberstein, Sonoran Joint Venture; Sean Fields, Prairie Pothole Joint Venture; Jim Giocomo, Oaks and Prairies Joint Venture; Ken Kriese, U.S. Fish and Wildlife Service; and Aimee Roberson, Rio Grande Joint Venture. **DESCRIPTION:** In an effort to stabilize population declines of grassland-dependent birds, eight Migratory Bird Joint Ventures whose geographies contain temperate grasslands from Canada to Mexico have come together, in partnership with ConocoPhillips, to collaborate on conservation opportunities. These eight Joint Ventures – Prairie Habitat, Prairie Pothole, Northern Great Plains, Rainwater Basin, Playa Lakes, Oaks and Prairies, Rio Grande, and Sonoran – are collaborative, geographically focused, public-private partnerships that conserve habitat for the benefit of birds, other wildlife, and people. We have taken initial steps to expand the Strategic Habitat Conservation model across the eight Joint Ventures, with support provided by ConocoPhillips, Natural Resources Conservation Service, the Farm Service Agency, and other partners. Our eight Migratory Bird Joint Ventures are currently discussing the possibility of developing a comprehensive strategy for conservation of North America's central grasslands, which would include several tangible products. The first product, already underway, will be a geospatial landcover data layer that shows vegetation communities from Canada to Mexico and will include developed lands, undisturbed grasslands, planted grasslands, trees, shrublands, and wetlands. The Prairie Pothole Joint Venture has led efforts in collaboration with ConocoPhillips, U.S. Department of Agriculture, and the seven other Migratory Bird Joint Ventures to assess the state of undisturbed native grasslands across the Great Plains and Chihuahuan Desert regions of North American (central grasslands). To date, we have compiled the necessary datasets and have completed the first phase of

	analysis which entails a deductive process to remove all likely tilled land, areas of development, large water bodies, and forested regions across the study area; the remaining regions are potentially undisturbed lands. We estimate that approximately 49.25% of the study region is potentially undisturbed. Estimates vary spatially across the central grasslands, and generally are greater in the southern Joint Ventures. We have initiated the second remote sensing phase to assess the remaining potentially undisturbed land across the study area using 10 m resolution imagery. This will enhance the thematic resolution of the layer, as we attempt to classify native and non-native grasslands, as well as other pertinent major cover classes, such as shrubland. The Joint Ventures are considering how to integrate collective habitat goals and will likely identify a subset of priority grassland bird species to guide conservation delivery using Geospatial Species Distribution Models for different species and grassland communities. Additional information that will go into the assessment includes a grassland conversion assessment and a conservation estate layer showing where conservation programs have been implemented. We are discussing the development of a threats assessment to identify vulnerable grasslands, as well as a projection of grassland loss. Together, these products will help prioritize vulnerable grasslands important to priority species. Finally, we hope to work together on a report that outlines potential programmatic options and costs associated with implementing this work at the levels necessary to sustain populations of priority grassland birds. **BACKGROUND:** The work of the Migratory Bird Joint Ventures is guided by national and international bird conservation plans, including the North American Waterfowl Management Plan, Partners in Flight Landbird Conservation Plan, United States Shorebird Plan, and North American Waterbird Conservation Plan. We use the Strategic Habitat Conservation model to undertake conservation of priority birds and habitats, from planning and modeling to implementing on-the-ground conservation. The North American central grasslands, from Canada to Mexico, are among the most threatened ecosystems in the world. The soils and climate make this region one of the most productive agricultural regions in the world, and as a result, extensive areas of native grasslands across central North America have been lost due to agricultural land conversion and unsustainable grazing practices. This began in the 1800s and continues to escalate with the demand to feed a growing world population, advances in genetically modified crops, biofuel technology, and expanded distribution of electricity to rural areas that enable increased groundwater pumping for irrigation of crops in arid regions. For example, in the northern Great Plains where the most intact grasslands remain, agricultural conversion is happening five times faster than grasslands can be protected. The rate of agricultural conversion in northern Mexico is also alarming. As a result of this land use change, populations of birds that depend on grasslands have declined significantly. If things continue at the current rate, some species may become extinct in the next 50 years. **REQUESTED SPECIFIC OUTCOMES:** ● Discuss important issues, information, resources, and partners to consider in this effort. ● Discuss potential sources of financial and institutional support for the development and implementation of a central grasslands conservation strategy. ● Continued support by the parties of the Trilateral Committee and Work

	Groups for collaborative conservation efforts for the central grasslands of North America. **AGENDA ITEM PRESENTER(S):**Aimee Roberson, Rio Grande Joint Venture, American Bird Conservancy (in person), Sean Fields, Prairie Pothole Joint Venture, U.S. Fish and Wildlife Service (remotely), Kevin Barnes, U.S. Fish and Wildlife Service (remotely) **SUBMITTED BY:** Aimee Roberson, Rio Grande Joint Venture, American Bird Conservancy
14:15-14:30	**<u>AGENDA ITEM 25 (MB 18)</u>: Trinational Actions to Support Monarch Butterfly Conservation – An Overview** **COLLABORATORS & CONTACTS:** Ryan Drum, United States Fish and Wildlife Service; Ignacio J. March Mifsut, Comisión Nacional de Áreas Naturales, Greg Mitchell, Environment and Climate Change Canada (ECCC)/ and Georgina O'Farrill and Lucie Robidoux, Commission for Environmental Cooperation (CEC). **DESCRIPTION:** The Trinational Monarch Conservation Science Partnership (TMCSP) will speak to some of the new trinational research priorities identified at two recent Trinational Monarch and Pollinator Science Meetings held in Montreal and Mexico City, discuss domestic research priorities and progress for the conservation of monarch butterflies, and highlight key research results from a recent CEC grant directed at filling science gaps with respect to monarchs and pollinators. **BACKGROUND:** In 2007, the CEC Council instructed the Secretariat to support a multi-stakeholder collaborative effort to develop a North American Monarch Conservation Plan (NAMCP). The action plan was published in 2008 and includes among other elements, a list of key trinational collaborative conservation objectives and actions. Since then, trilateral collaboration for monarch conservation has expanded to include High-Level Working Groups in each country, a shared short-term biological target for the eastern population, and a robust TMCSP. **REQUESTED SPECIFIC OUTCOMES:** • Exchange of information and fuller understanding of challenges and opportunities in each country • Discuss the use of trilateral science coordination for conservation of the Monarch butterfly as another model for thinking about grasslands conservation and science coordination in North America. **SUBMITTED BY:** Georgina O'Farrill & Lucie Robidoux (CEC), Michael Gale and Ryan Drum (USFWS), Ignacio March (Conanp), Greg Mitchell and Keith Hobson (ECCC)
14:30-15:00	**<u>AGENDA ITEM 26 (MB 19)</u>: Towards a full annual cycle, coordinated strategy for Tri-national grassland bird conservation** **COLLABORATORS & CONTACTS:** Tammy VerCauteren, Maureen (Mo) Correll, Bird Conservancy of the Rockies; Jim Giocomo, Oaks and Prairies Joint

	Venture (OPJV); Aimee Roberson, Rio Grande Joint Venture; Scott Somershoe, U.S. Fish and Wildlife Service; Association of Fish and Wildlife Agencies (AFWA). **DESCRIPTION:** Bird Conservancy of the Rockies (BCR), along with partners, will host a multi-stakeholder workshop in 2020 to examine existing priorities, programs and capacities, identify gaps and needs, and create a shared roadmap for coordinated conservation across the central North American grasslands involving NGOs, landowners, industry, foundations, academia and government agencies. Prior to the workshop and with support from AFWA, OPJV will conduct a survey and gap analysis of existing conservation programs by states and other actors in the region. At the workshop, we will discuss the results of the OPJV survey and the first-ever Integrated Population Model (IPM) for a grassland songbird, the Baird's Sparrow (*Centronyx bairdii*). The IPM will use 9 years of demographic and abundance data collected on the breeding and wintering grounds in Mexico, Canada and the U.S., as well as broad partner input, to help identify limiting factors and simulate the effects of various scenarios on population growth. By engaging and leveraging resources across all stakeholders, we will create a shared roadmap for coordinated grassland bird conservation by aligning efforts to better address limiting factors across the full life cycle through a science-based, coordinated approach. **BACKGROUND:** Grassland bird populations have been declining for decades. Despite recent conservation attention, many species continue to decline, especially those that migrate between the western Great Plains and Chihuahuan Desert. As with many migratory birds, specific drivers of population declines for most individual grassland species are poorly understood due to incomplete knowledge of their lifecycle and potential limiting factors they may encounter throughout the year. Therefore, conservation strategies and programs have generally not addressed known limiting factors and instead have focused on locally relevant habitat conservation and management, primarily on the breeding grounds. However, recent advances in non-breeding ecology, including wintering distribution, abundance and habitat requirements, land cover trends and migratory patterns, coupled with seasonal demographic rates from across the annual cycle, now permit a more holistic view of grassland bird conservation needs. This information is being synthesized in a full annual cycle Integrated Population Model for the Baird's Sparrow, a species typical of the Great Plains-Chihuahuan Desert grassland bird guild. **REQUESTED OUTCOMES:** Endorsement of the 'grassland roadmap summit." **SUBMITTED BY:** Arvind Panjabi, Bird Conservancy of the Rockies
15:00–15:30	*Break*
15:30-15:50	**AGENDA ITEM 27:** U.S. National Park Service Updates: Bison Conservation, Condor Restoration, Grassland Restoration, Landscape-scale work **COLLABORATORS & CONTACTS:** Elaine F.Leslie, Chief, Biological Resources, U.S. National Park Service (presenter) **DESCRIPTION:** An overview will be given of species conservation initiatives of the National Park Service in the U.S.

	REQUESTED SPECIFIC OUTCOMES: To share information of species-focused conservation supporting larger ecosystems.
15:50-16:10	**AGENDA ITEM 28:** Parks Canada Agency Updates: Plains Bison Conservation, Greater Sage Grouse Recovery, and Grassland Restoration **COLLABORATORS & CONTACTS:** Lindsay Rodger, National Manager, Species Conservation, Parks Canada Agency (presenter) **DESCRIPTION:** An overview will be given of species at risk recovery initiatives of the Parks Canada Agency, focusing on plains bison, greater sage grouse, and related grassland restoration initiatives. **REQUESTED SPECIFIC OUTCOMES:** To share information regarding species-focused conservation and recovery efforts and supporting ecosystem restoration work.
16:10-16:40	**AGENDA ITEM 29**: Private Lands Conservation in North America **COLLABORATORS & CONTACTS**: Dave Walker, Farm Conservation Programs Manager, USFWS (facilitator); José Eduardo Ponce Guevara, Acting Director for Priority Species Conservation, National Commission for Natural Protected Areas (CONANP); and Robin Bloom, SARPAL Coordinator, Canadian Wildlife Service. **DESCRIPTION**: Conservation on private lands, in particular working with farmers, ranchers, and other agricultural producers, is a critical component of any broad grasslands conservation strategy. The NAGA proposal puts working with ranchers at the center of its strategy of grasslands conservation while keeping working lands working. This presentation will provide an overview of private lands conservation programs in North America with perspectives from all three countries, along with a facilitated discussion around how to incorporate private lands conservation programs into trilateral efforts and initiatives. **BACKGROUND**: In 2015-2016, the CEC supported a two-year project, entitled, "Engaging Farmers and Other Landowners to Support Monarch Butterfly and Pollinator Conservation" with the goal to promote habitat restoration and enhancement in key breeding grounds and migration corridors of the monarch butterfly in Canada, Mexico, and the United States. Since much of the breeding habitat has been lost to agriculture and other land development, this project reaches out to farmers, land-owners, communities and organizations in the three countries to provide practical, tested guidance about how to create and maintain monarch-friendly habitat. This will also contribute to the conservation of other native pollinators on land under agricultural production. This conversation builds upon that work. **REQUESTED SPECIFIC OUTCOMES**: Building off the work of the CEC, discuss potential opportunities for trilateral collaboration with regards to engaging farmers, ranchers, and other producers in grasslands conservation, as part of a larger trilateral grasslands conservation effort.
19:00-20:00	Dinner (*on your own*)

THURSDAY, April 11, 2019

9:00-9:20	*Theme: Trilateral Collaboration for Monarch Butterfly Conservation* **AGENDA ITEM 30:** Mexico Domestic Update on Monarch Conservation **COLLABORATORS & CONTACTS:** and Gloria Tavera (CONANP) (remote presenter) and Ignacio Mifsut (CONANP) **DESCRIPTION:** An update will be provided on domestic efforts for the conservation of the Monarch butterfly in Mexico, including information about the country's high-level working group and efforts to support enhanced science, research, and monitoring, both in the overwintering grounds and throughout the monarch's migration in Northern Mexico. **REQUESTED SPECIFIC OUTCOMES:** To share information on national-scale planning and conservation efforts in Mexico. To identify areas of collaboration between the three countries with regards to monarch conservation.
9:20-9:40	**AGENDA ITEM 31:** Canadian Domestic Update on Monarch Conservation **COLLABORATORS & CONTACTS:** Judith Girard, Environment and Climate Change Canada (ECCC), Greg Mitchell (ECCC). **DESCRIPTION:** ECCC will provide update on current status of Monarch in Canada, including background on the Assessment, Listing and Recovery Planning Process and upcoming steps under the Species at Risk Act. **BACKGROUND**: Monarch is currently listed as Special Concern under the federal Species at Risk Act (SARA). In 2016, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) reassessed the Monarch as Endangered. The Government of Canada sought input from the public on the proposed status change, and is currently compiling these comments and undertaking an impact analysis for the uplisting. Based on these, the government may then decide to uplist the status of the Monarch from Special Concern to Endangered on the List of Wildlife Species at Risk set out in Schedule 1 of SARA, or refer the matter back to COSEWIC for further information or consideration. If Monarch is uplisted, protection prohibitions apply automatically on federal land, and a Recovery Strategy, including identification of critical habitat, is legislated to be completed within one year of listing. **REQUESTED SPECIFIC OUTCOMES:** To share information on the Canadian listing and recovery planning processes and the approximate timeline for next steps. **AGENDA ITEM PRESENTOR(S)** (include name and agency; indicate if presenting in-person or remotely)**:** Judith Girard, (ECCC), Greg Mitchell (ECCC); presenting in person **SUBMITTED BY:** Judith Girard, (ECCC)

9:40-10:10	**AGENDA ITEM 32:** United States Domestic Update on Monarch Conservation **COLLABORATORS & CONTACTS:** Charles Wooley, U.S. Fish and Wildlife Service (USFWS), and William Moritz, Midwest Association of Fish and Wildlife Agencies (MAFWA) **DESCRIPTION:** USFWS will provide update on the status of monarch conservation in the United States, including updates on the species status assessment and Endangered Species Act listing process, and an overview of domestic conservation efforts. MAFWA will provide an update on state-led conservation and planning efforts under the Mid-American Monarch Conservation Strategy. **REQUESTED SPECIFIC OUTCOMES:** To share information on national-scale planning and conservation efforts in the United States, along with updates on the listing process. **SUBMITTED BY** (include name and agency)**:** Ryan Drum (USFWS)
10:15-10:30	*Break*
10:30-10:45	*Theme: Human Dimensions in Ecosystem Conservation* **AGENDA ITEM 33**: Social Participation in the construction of ENAREDD+ (National Estrategy for REDD+ in Mexico) **COLLABORATORS & CONTACTS:** Francisco Aureliano Moreno Rodríguez, CONAFOR (remote presenter), Mariana Martinez Leal, Abril Salgado Paz, CONAFOR **DESCRIPTION:** The ENAREDD + is a proposal of inter-institutional coordination that seeks to ensure the articulation of the investments that are carried out in the rural sector, and that requires the active participation of society, in specific owners, possessors and inhabitants of forest ecosystems. The public consultation of the National REDD + Strategy marks a national reference in the subject of participation and consultation citizen, specifically indigenous peoples. The construction of the consultation plan was achieved thanks to the contributions and the valuable effort of representatives and members of indigenous peoples and communities, local communities, civil society, academia, business organizations and government agencies. The public consultation of the ENAREDD + was based in the right of participation of indigenous peoples that is established on the following principles: The consultation is carried out prior to carrying out the measures that are intended to be implemented; The appropriate public is people who is directly affected by the measure and who consent to make the consultation; The consultation is carried out in conditions of free participation, without coercion and that it is carried out in good faith, which guarantees that the content of the consultation is not deceived and the information provided is related to the measure that is intended to be implemented.

	The participation results are presented by chapters corresponding to each of the seven components consulted; these chapters show the number of comments received, their classification into sub-topics, a brief interpretation for each of the components and finally the comments, all of these strengthen the construction of the National REDD + Strategy. **BACKGROUND:** The Political Constitution of the United Mexican States, specifically its article 2, section B, in conjunction with the laws secondary and special; and international treaties to which Mexico is a party, establishes the obligation of the State to develop procedures for participation and consultation, emphasizing the participation of different social groups, as indigenous peoples and communities interested in the formulation, development, control and evaluation of the instruments of planning, in order to take into account their recommendations and proposals. **REQUESTED SPECIFIC OUTCOMES:** To present the results of the implementation of the construction of ENAREDD+ (National Estrategy for REDD+ in Mexico).
10:45-11:00	**AGENDA ITEM 34:** Programs of Adaptation to Climate Change in Natural Protected Areas: An Instrument for the Improvement of Livelihoods and the Conservation of Ecosystems. **COLLABORATORS & CONTACTS:** Pilar Jacobo, CONANP, Sofía García PNUD-México (remote presenter) **DESCRIPTION:** The National Commission of Natural Protected Areas (CONANP) and the United Nations Development Program (UNDP), through the GEF-Resiliencia project since 2014, have generated a strategy to increase resilience in ANP. The GEF-RESILIENCIA project is in its last year of execution, and was the first biodiversity and climate change project in Mexico. Its objective is theory, is that by strengthening the management and effectiveness of protected areas, the resilience of biodiversity is increased.One of the main actions of the project has been the design and elaboration of Climate Change Adaptation Programs for ANP complexes. A PACC, is a planning instrument at the landscape level, where a technical / climatic analysis is carried out to identify the relevant ecosystem goods and services for the adaptation of people. The conclusion of the PACC are adaptation measures based on ecosystems, designed and validated in a participatory and multisectoral manner. The focus of these instruments is Adaptation Based on Ecosystems, understanding that the natural protected areas and the environmental services they provide, are fundamental elements and natural solutions to reduce the vulnerability of ecosystems and people. Under this approach, the link between climate change and biodiversity conventions is evident, including meeting several Aichi goals (5,10, 11, 14), developing activities linked to Mexico's NDC related to ecosystem-based adaptation, the ECO-RRD of the Sendai framework, and the SDGs Objectives (13, 14 and 15). The added value of the PACC developed in the project, are the following points: 1. Participation and intersectoral and multiscalar coordination (local to regional) 2. Recognition of good practices at the community level for the design of adaptive strategies

	3. Increase the AbE approach 4. Methodological advances to improve the consideration of aspects of connectivity 5. Consideration of the gender approach in development. 6. Mainstreaming Disaster Risk Reduction based on ecosystems. 7. Advances in the design of a framework for the Monitoring and Evaluation of adaptation measures 8. Strengthening of climate governance in territories with a landscape approach 9. First PACC of Marine Protected Areas, innovation, as it is the first of its kind. During 2019, based on these instruments at the landscape level, 12 adaptation measures will be implemented in terrestrial, coastal and marine areas, which will have important lessons learned to feed national instruments that will be under construction, such as the National policy of Adaptation and the advances to the NDC of adaptation. Another of the main results of the project will be a methodology for preparing PACC, revised, piloted and adjusted. This methodology will be an important contribution for its replication in other NPAs, other regions and other countries. **BACKGROUND:** Natural Protected Areas (PNAs) are spaces destined for the conservation of natural ecosystems, their value is incalculable in order to cope with the adverse effects of climate change: they are large reservoirs of carbon, have a high biodiversity and provide environmental services that favor the development of productive activities that benefit both the communities that inhabit them and society in general. In the ANP of Mexico, approximately 3 million people live, owners and / or holders of land, who perform productive activities as part of their livelihoods. **SUBMITTED BY:** CONANP
11:00-11:30	**AGENDA ITEM 35**: Integrating Human Dimensions into Ecosystem Conservation in Canada **COLLABORATORS & CONTACTS:** Karen Keenleyside, Protected Areas Establishment and Conservation Directorate, Parks Canada, and Susan Preston, Canadian Wildlife Service, Environment and Climate Change Canada **DESCRIPTION:** This session will focus on a key element of the human dimension of conservation – what motivates people to act. It will provide an overview of evidence from Canada and around the world that helps us understand the factors that most influence positive conservation attitudes and behaviours. Examples of Canadian programs that are generating and using that evidence will be provided, including selections from the federal-provincial-territorial Canadian Nature Survey, methodological guidance in the Ecosystem Services Toolkit, the Kids and Nature education program, and Parks Canada's outreach, engagement, and citizen science programming. **BACKGROUND:** The success of our efforts to conserve biodiversity in the long term, whether in Canada, the United States, Mexico, or globally, will continue to be influenced by the means and degree to which people connect with and care about nature. In an increasingly urbanizing and technologically-driven world, we need to be

	innovative in finding ways to engage new audiences and help them develop a sense of connection, support, and care for nature. A growing body of evidence demonstrates that exposure to nature, whether in national parks or urban environments leads to a variety of positive outcomes for people and nature. People tend to be happier, healthier, and more productive, creative, active and engaged in community and civic life when nature is a meaningful part of their lives. They are also more likely to care about and take positive action for nature. These outcomes are illustrated, for example, in the results of the Canadian Nature Survey. This knowledge is leading organizations around the world to scale up efforts to connect people with nature. Canada is playing an active role in facilitating this global effort through the #NatureForAll initiative, a global network of more than 300 partner organizations, including dozens in Canada, the United States and Mexico. Human dependence on nature extends through personal well-being and experience to security and even life support, and yet the cumulative effects of human activity have resulted in significant biodiversity loss and degradation of ecosystems. One way of understanding nature's contributions to people is through the lens of "ecosystem services". The Ecosystem Services Toolkit was developed by federal, provincial, and territorial governments in Canada to provide technical guidance to support greater understanding and analysis of how people depend on nature, and how policy and decision-making can be better informed on these issues. **REQUESTED SPECIFIC OUTCOMES:** • Participants from all three countries more deeply understand the importance of policies and programs that facilitate human connectedness with nature • Participants are encouraged to engage with the #NatureForAll network to share best practices for strengthening human-nature relationships • Participants are encouraged to use the Ecosystem Services Toolkit to help integrate analysis of nature's many contributions to society in a wide array of policy and decision processes **AGENDA ITEM PRESENTOR(S)** (Karen Keenleyside, Parks Canada Agency and Susan Preston, Environment and Climate Change Canada; presenting remotely)**:** **SUBMITTED BY** (Karen Keenleyside, Parks Canada Agency and Susan Preston, Environment and Climate Change Canada)
11:30-12:00	**AGENDA ITEM 36**: Integrating Human Dimensions into Monarch Conservation Planning and Evaluation **COLLABORATORS & CONTACTS:** Dr. Christine Browne, Social Science Team Lead, Natural Resource Program Center, U.S. Fish & Wildlife Service (USFWS) **DESCRIPTION:** This presentation will provide an overview of the systematic process utilized by the USFWS to identify the social, political, and economic factors (the human dimensions) critical to Monarch butterfly conservation, including direct and indirect threats; thereby underscoring the critical need for integrating human

	dimensions into assessing and addressing conservation issues for improved biological outcomes. In other words, it will not only be important for information sharing on monarch status and conservation, it will also demonstrate the importance of integration of human dimensions science and application across conservation issues. **BACKGROUND:** The U.S. Fish & Wildlife Service has adopted a systematic, socio-ecological approach to its national monarch conservation efforts – integrating social and biophysical sciences in a bona fide way. In order to better understand the impacts of monarch conservation strategies and activities, the agency conducted a situation analysis to not only identify the biophysical threats to monarchs, but also the social factors directly and indirectly affecting monarch populations. The results of the analysis currently serve as the foundation for the development of the U.S. Fish & Wildlife Service National Monarch Conservation Evaluation Plan to examine the impacts of its strategies and related activities. When implemented, this formal evaluation will allow the Service to be transparent and explicit in sharing its conservation successes and challenges. Sharing this process will help obtain feedback and foster discussion of further opportunities for cooperation and collaboration. **REQUESTED SPECIFIC OUTCOMES:** • To further develop understanding of human dimensions and its contribution to improving conservation planning and evaluation. • To foster information sharing between countries on the utility and integration of human dimensions and monarchs specifically. • To receive feedback from other countries on the Service's assessment of the monarch conservation context and current conservation strategies. **AGENDA ITEM PRESENTOR(S)** Dr. Christine Browne, Social Science Team Lead, Natural Resource Program Center, U.S. Fish & Wildlife Service
12:00-13:30	*Lunch*
13:30-14:00	*Theme: Trilateral Collaboration for Monarch Butterfly Conservation (cont.)* **AGENDA ITEM 37**: Trinational Collaboration to Support Monarch Butterfly Conservation (CEC) **COLLABORATORS & CONTACTS:** Ryan Drum and Michael Gale (U.S. Fish and Wildlife Service), Greg Mitchell & Keith Hobson (Environment & Climate Change Canada), Ignacio March (Comisión Nacional de Areas Naturales Protegidas, Mexico), Victor Sanchez Cordero (Instituto de Biología, UNAM), Maxim Larrivée, Denis Lepage and André-Philippe Drapeau Picard (Montreal Insectarium), Nickolay Hristov (Winston-Salem State University), and Georgina O'Farrill and Lucie Robidoux (Commission for Environmental Cooperation). **DESCRIPTION:** Throughout North America, researchers, local, state and federal government agencies, NGOs and citizen science organizations, have been working for over 10 years towards the conservation of the monarch butterfly (*Danaus plexippus)* and its habitat along its migratory routes. The CEC will share key trinational collaborative efforts supported during 2018-2019 including a presentation by Nickolay Hristov (Winston-Salem State University) on *"The use of LiDAR (Light*

	Detection and Ranging) techniques to assess monarch butterfly overwintering populations" and a presentation by Maxim Larrivée, Denis Lepage and André-Philippe Drapeau Picard (Montreal Insectarium) to showcase the *Trinational Monarch Knowledge Network*, all examples of applying technological innovation for conservation. **BACKGROUND:** In 2007, the Commission for Environmental Cooperation (CEC) Council instructed the Secretariat to support a multi-stakeholder collaborative effort to develop a North American Monarch Conservation Plan (NAMCP). The action plan was published in 2008 and includes among other elements, a list of key trinational collaborative conservation objectives and actions. Since then the CEC has supported collaborative efforts to promote the conservation of the monarch butterfly and its habitat along its migratory flyways http://www.cec.org/more/cec-monarch-work. As part of its current operational plan (2017-2018), the CEC is building on past and ongoing initiatives and working on a Monarch Butterfly and Pollinator Conservation project, focused on advancing science and actions to conserve the monarch butterfly and other pollinators by strengthening trinational cooperation and knowledge. **REQUESTED SPECIFIC OUTCOMES:** • **Share** current collaborative efforts in four main research priority areas (natal origins, overwintering sites, nectar resources and climate change), highlighting those that emphasize the use of technology and innovation for conservation • **Highlight** the development of the Trinational Monarch Knowledge Network, an open source platform for monarch and milkweed data in North America • **Discuss** relevant opportunities to promote further collaborations and partnerships for monarch conservation in Canada, Mexico and the U.S. **AGENDA ITEM PRESENTOR(S)** (include name and agency; indicate if presenting in-person or remotely)**:** • *Nickolay Hristov* (remote presentation); Winston-Salem State University • *Maxim Larrivée*, *Denis Lepage* and *André-Philippe Drapeau Picard* (remote presentation); Montreal Insectarium • *Georgina O'Farrill*; Commission for Environmental Cooperation **SUBMITTED BY** (include name and agency): Ryan Drum and Michael Gale (U.S. Fish and Wildlife Service), Greg Mitchell & Keith Hobson (Environment & Climate Change Canada), Ignacio March (Comisión Nacional de Áreas Naturales Protegidas, Mexico), Victor Sanchez Cordero (Instituto de Biología, UNAM) and Georgina O'Farrill and Lucie Robidoux (Commission for Environmental Cooperation).
14:00-14:20	**AGENDA ITEM 38**: Trinational Monarch Conservation Science Partnership **COLLABORATORS & CONTACTS:** Ryan Drum, United States Fish and Wildlife Service; Ignacio J. March Mifsut, Comisión Nacional de Áreas Naturales, Greg Mitchell, Environment and Climate Change Canada (ECCC) **DESCRIPTION:** The TMSCP will speak to some of the new trinational research priorities identified at two recent Trinational Monarch and Pollinator Science

	Meetings held in Montreal and Mexico City, discuss domestic research priorities and progress for the conservation of monarch butterflies, and highlight key research results from a recent CEC grant directed at filling science gaps with respect to monarchs and pollinators. **REQUESTED SPECIFIC OUTCOMES:** To share information and results, and facilitate a discussion about continued support for the TMSCP and if this model could be applied to pollinators and other migratory species. **AGENDA ITEM PRESENTOR(S)** (include name and agency; indicate if presenting in-person or remotely)**:** Ryan Drum, United States Fish and Wildlife Service; Ignacio J. March Mifsut, Comisión Nacional de Áreas Naturales, Greg Mitchell, Environment and Climate Change Canada (ECCC); presenting in person.
14:20-15:00	**AGENDA ITEM 39:** Finalize EWCT Program of Work **COLLABORATORS & CONTACTS:** Co-chairs and Facilitator – Margarita Caso (INECC), Mitch Ellis (FWS), Alaine Camfield (ECCC), Michael Gale (FWS) **DESCRIPTION:** Summarize week's proceedings. Prepare Action Item Reports (AIRs). Discuss any remaining issues and closeout remarks from the three co-chairs.
15:00-15:30	*Break*
15:30-17:00	**EXECUTIVE TABLE:** Co-Chairs Report to Executive Table Co-Chairs **COLLABORATORS & CONTACTS:** Co-chairs – Alaine Camfield (ECCC), Isabel Hernandez (INECC), Mitch Ellis (FWS) **DESCRIPTION:** EWCT Co-Chairs will present highlights from the week's discussions, including major themes and action items. **REQUESTED SPECIFIC OUTCOMES:** • Highlight a summary from the discussions at the ECWT • Present any proposals or outcomes for consideration by the Executive Table
17:00	**Adjourn**
18:30	Closing Dinner