

Fish and Wildlife in a Changing Climate: Options for Future Management Practices.

Victoria, BC, June 1-2, 2009

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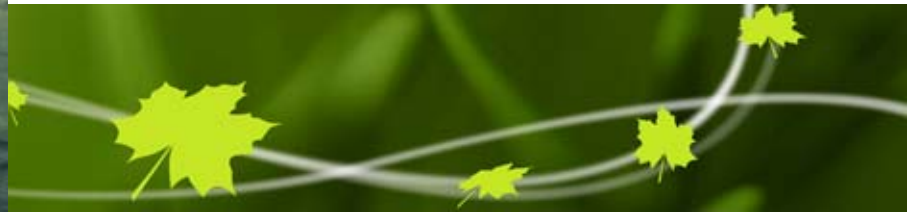
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*Canada-USA-Mexico Trilateral Committee for Wildlife and
Ecosystem Conservation and Management:
Plenary on
Wildlife and Climate Change Adaptation
12 May 2009 - Miami, FL*



**Dr. Kathryn Lindsay
Habitat & Ecosystem Conservation
Canadian Wildlife Service
Environment Canada
Ottawa**



Trilateral Structure

- **Purpose:** Facilitate coordination and cooperation for wildlife and ecosystem conservation and management across the three countries
- **Members:** Freshwater and Marine Fish and Wildlife agencies and Parks and Protected Areas agencies in each country
- **Observers:** NGOs (e.g. WWF, Wilderness Foundation), CEC Biodiversity Conservation Working Group
- **Working Tables:**
 - Executive
 - Ecosystem Conservation
 - Migratory Birds
 - Species of Common Concern
 - Law Enforcement
 - CITES
- **Workplanning:** three year timeline
- **Meetings:** annually in May; Canada is hosting in 2010
- **Website:** www.trilat.org



Climate Change & Resulting Effects for Canada

- **Changes in climate are evident in every region of Canada – especially notable in the Arctic**
 - Warmer air and water temperatures; longer growing season
 - Link between area of forest burned and summer air temperatures
 - Reduction in snow area & duration; longer-ice free periods on lakes & rivers
 - Changes in permafrost distribution
- **Projected changes in climate include:**
 - Warming in all seasons but greatest in winter and spring
 - Changes in the timing, amount and type of precipitation (snow or rain)
 - Increase in disturbance (fire, invasives, pests, e.g. mountain pine beetle)
- **Key concerns include**
 - rate and magnitude of change
 - effects of extreme events will challenge our capacity to cope or adapt



Climate Change & Resulting Effects for Canada

- **Relative to other ecosystems, climate change is expected to have greater impacts on**
 - Arctic (tundra, sea ice)
 - Prairie wetlands and rivers (changes in rain, snow and glacial melt)
 - Coastal ecosystems (squeezed by sea-level rise)
 - Mountain tops (shrinking area and no where to disperse to)
- **Species' phenology, productivity, migratory patterns and ranges are changing**
 - earlier leaf-out and flowering
 - declines in condition of some polar bear populations
 - species range expansions northward



Key Messages – Dr. Jessica Hellman, U Notre Dame

- GHG reduction is a cornerstone of conservation and wildlife protection
- Climate change will exacerbate other threats to biodiversity and ecological impacts will be widespread
- Spectrum of conservation options under climate change:
 - “established” conservation biology; managing for resistance/resilience; use of corridors to facilitate species shifts; managed relocation; ex situ conservation
- Important to use and fund adaptive management approaches
- Need to consider the human dimension:
 - What kind of a world do we want to live in?
 - Where is it reasonable to take risks?
 - How much are we willing to invest to help wildlife “adapt” to climate change?



Key Messages – Canada

- **Adaptation work for wildlife is still largely at the “ideas” stage**
- **Continued investment in research and monitoring is vital** to improve our ability to detect and predict effects of climate change and other stressors, and to guide adaptation strategies and actions
- **Need to “mainstream” climate change adaptation for wildlife**
- **Take action now**; proceed with measures that have benefits now as well as for reducing climate change effects (i.e. co-benefits)
- **Encourage multi-scale and cross-jurisdictional research and planning**
 - to understand and accommodate shifts in species and ecosystems
 - to maintain the productive capacity of the continent for species at risk, waterfowl & other migratory birds and their habitats
- **Protected areas are an integral component of a continental adaptation strategy**



Key Messages – USA

- **Proposed that Trilateral champion the development of a NA Wildlife and Climate Change Adaptation Strategy**
- **We are at a time of “Conservation in transition”**
 - Cannot simply repeat conservation successes of the past
 - Must rapidly develop capacity to envision and deliver conservation based on scientific understanding of today and predictions of species needs tomorrow
 - Must be rigorous in the practice of adaptive management
 - Need objectives (e.g. species targets) to measure effectiveness
 - Need to be prepared to make difficult choices
- **USFWS Strategic Plan in prep.** – includes mitigation and adaptation
- **Need to think about how to slow the rate of change to enable species to adapt** (e.g. plugging drains in coastal refuges to keep out rising sea levels)
- **“Conservation Cooperatives” emerging** (e.g. Northern Rockies)



Key Messages – Mexico

- **Proposed that the Trilateral create a Climate Change and Wildlife Working Table as a cross-cutting issue**
- **Special climate change program in Mexico to be released June 5th**
- **Current adaptation strategy focus on local to state-level action plans**
- **Need to prioritize policy options; looking for co-benefits**
- **Listed biodiversity conservation principles related to climate change**
- **Conducting species and habitat vulnerability assessments** (particular concern for endemic/endangered species, coastal wetlands, grasslands)
- **Important to connect global long-term climate strategies with concrete local near-term benefits**



Key Messages – Plenary Breakout Groups

Policy and Planning

- **Trilateral should produce a Wildlife and Climate Change Adaptation resolution** that can be used to represent wildlife conservation issues at the full range of climate change-related fora in each country and abroad and that can be used for reporting out on progress and assessing the need to adapt

- **Supported a Trilateral role in championing the development of a NA Wildlife and Climate Change Adaptation Strategy**
 - Facilitate cross-border movement of science-related materials
 - Link to other initiatives e.g. CEC Biodiversity Conservation Working Group

- **MX proposal for separate Working Table (WT)**
 - Better addressed as a standing work plan item within existing WTs with key messages compiled across WTs as a policy and planning resource from the Trilateral on wildlife and climate change adaptation and mitigation

Key Messages – Plenary Breakout Groups

Science Needs

- Need to develop an information-sharing capacity (e.g. clearinghouse) on wildlife and climate change adaptation
- Ecological modeling is an important tool for informing policy and programs

Monitoring and Assessment

- Establish a working group to develop a 5-year action plan
- Identify early and often funding strategies for monitoring (including public-private partnerships)
- Selection of key indicators can be informed by modeling

Building Resilience and Managing for Change

- Reviewed Millenium Ecosystem Assessment principles
- Need planning by eco-units instead of jurisdictions
- Need baselines for restoration
- Vulnerability assessments of species and habitats is important
- Future scenarios development can help guide management decisions



Key Messages – Plenary Breakout Groups

Education and Outreach

- Communication by multimedia important; funding and skill sets lacking within agencies
- Climate change is a new “lens” for conservation; needs to be part of environmental outreach and education programs in all three countries
- Direct connection to human dimensions an important component of change behaviour

Coordination and Cooperation among Agencies

- Supported the creation of a new WT
- Need tracking tool for commitments made by countries
- Both modeling and monitoring of change perspectives important
- Need to build a coalition with players typically absent from conservation fora (e.g. human health and well being, agriculture, water quality)

