



CHARACTERIZING CHEMICALS IN COMMERCE

*North American
Commission for
Environmental
Cooperation*

Sound Management of
Chemicals (SMOC)
and
Environmental Monitoring &
Assessment (EM&A)

Presented by

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An aerial photograph of a rugged coastline. The land is covered in green vegetation and has a complex, mountainous terrain with many small valleys and ridges. The ocean is a deep blue, and the coastline is irregular with many small bays and peninsulas. The sky is a clear, light blue.

One **C**ontinent.
One **E**nvironment.
Three **C**ountries.
Multiple **E**cosystems.



In North America

- 430 million people
- Share 15 major ecosystems
 - Transboundary flow of air, water, species
 - continental
 - global
- Open economy
 - \$11 trillion goods/services
 - NAFTA – doubled trade since 1993



CEC's Chemicals Program

- Sound Management of Chemicals (SMOC) Program
 - North American Regional Action Plans (NARAPs): chlordane, DDT, PCBs, mercury, lindane, dioxins and furans
 - New direction being implemented, 2006
- Environmental Monitoring and Assessment (EM&A) Initiative
 - Capacity building
 - Human health monitoring
 - Atmospheric monitoring
 - Terrestrial & aquatic monitoring





Original Mandate: *Council Resolution 95-05*

- Regional cooperation: full range of chemical substances of mutual concern throughout their life cycles
- Initial priority: management and control of persistent and toxic substances (atmospheric transport)
- Decisions by consensus
- North American Regional Action Plans (NARAPs)



North American Regional Action Plans (NARAPs)

- Chlordane (1997-2003)
- PCBs (1996-2006)
- DDT (1997-2006)
- Mercury (1998-2010)
- Lindane and Other HCH Isomers (2006-2016)
- Dioxins, Furans, HCB (2006-2016)
- Environmental Monitoring and Assessment (2002- ongoing)



NARAP on Lindane

2002: Council Resolution 02-07

2003: Formation of Lindane Task Force

2003-2004: Information collection and stakeholder outreach

2005: Alternatives workshop

2005-2006: NARAP review

2006: Transmittal to Council (November)

2006: Begin implementation



NARAP on Dioxins, Furans and Hexachlorobenzene

- NARAP reflects new priorities
 - US NAC reassessment
- Monitoring activities:
 - Blood serum
 - Mexican lake sediments
 - Mexican ambient air monitoring
 - Compatibility with Canada/USA
 - 6 monitors funded by Canada
 - training of operators by CEC
 - 2 years of analysis by USEPA



SMOC's New Mandate

Council Resolution 06-09

- Re-aligning with existing domestic and international activities
 - Focus on sectors and groups of chemicals
 - HPV Chemicals of regional interest
 - Electronics and green procurement
- Involving stakeholders as partners
- Leveraging resources
- Helping Parties advance international objectives (SAICM, WSSD 2020 Goals)
- Cross-linking with other CEC programs



Making the new mandate operational

- Focus on chemical groups and industry sectors
 - Chemicals inventories
 - Compatible, comparable inventory chemicals in commerce, including HPV's
 - Maintain PBTS oversight
 - PFOS, PBDE's
 - Nanotechnology, Electronics, Greening Automotive sector
- Develop strategies that promote trilateral cooperation



Environmental Monitoring and Assessment (EM&A) Initiative

- NARAP on EM&A (2002)
- Information for decision-making
- Steering Committee work in key areas:
 - Capacity building
 - Human health monitoring
 - Atmospheric monitoring
 - Terrestrial and aquatic monitoring
 - Data management
 - Assessment



Role of EM&A Initiative

Regional Experts provide scientific advice for making environmental decisions from a NA perspective by:

- increasing **comparability, reliability, relevance, availability** of data and information on toxic substances in NA environment
- establishing **baselines, trends, effects** related to proposed control actions
- within the frameworks of **capacity building and international cooperation**
- **advising on emerging issues**



EM&A: Capacity Building

National Environmental Monitoring and Assessment Program in Mexico

- Proposal to Global Environment Facility (GEF) for funding support being developed for Mexican *Programa Nacional de Analisis y Montitoreo Ambiental* (PRONAME)
- Sustainable monitoring and assessment infrastructure to include:
 - Monitoring of PBTS at index and satellite sites across Mexico
 - Development of laboratory capacity: “centers of excellence”
- Linked to Mexico’s National Implementation Plan (NIP) for Stockholm Convention



EM&A: Human Health

Maternal Blood Monitoring Across North America

- First pregnancy moms (16 – 30 yrs)
- Samples analyzed in Canadian, US, Mexican labs
- Initial baseline data for PCBs, pesticides, toxic metals, dioxins & furans
- Capacity building elements
 - laboratory analysis
 - round robin QA/QC testing
 - peer reviewed publications
- Support from 3 Parties, CEC, and World Bank



EM&A: Atmospheric Deposition

- Ambient mercury in air (2002-2003)
- Wet deposition mercury (2004-2006)
- Six sites for Dioxins/Furans/HCB
- Persistent Organic Pollutants (POPs), e.g. DDT, PCBs
 - passive air and soil sampling
 - 2 yr study, 4 sites in southern Mexico (2002-2004)
 - 1 yr study, 11 sites (2005-2006)
- Acid deposition mapping in Mexico
 - Information collection and assessment



EM&A: Terrestrial and Aquatic Ecosystems

- Metals and POPs in remote lake sediment cores in Mexico
 - Reconstruction of historical deposition
- Metals and POPs in fish tissue samples from Mexico
- Contaminants in gull eggs and bivalves (planned)
- All projects include capacity building elements



Summary

Taking the new direction into account

- **SMOC program will:** foster tri-national collaboration for the sound management, throughout their life cycles, of the full range of substances of mutual concern, including trilateral aspects of HPV chemicals
- **EM&A project will:** provide *consistent, compatible, comparable* data for decision-making in North America; building capacity for sustained environmental monitoring and assessment with emphasis on Mexico

