

Environmental Policy in the Canadian Federation

Challenges of Coordination in Combating Climate Change

**Presentation to Governments of the Mexican
Federation**

INAFED and The Forum of Federations

Peter Andre Globensky

The Federation and Climate Change

Themes and Challenges:

- **Climate Change: Defining Issue of our Generation - A Canadian Perspective**
- **An Introduction to Canada, the Canadian Federation and Management of the Environment**
- **Lack of National Political Leadership to Combat Climate Change in Canada**
- **Provincial and Municipal Initiatives on Climate Change**



Canada – The Demographics & Distinguishing Characteristics

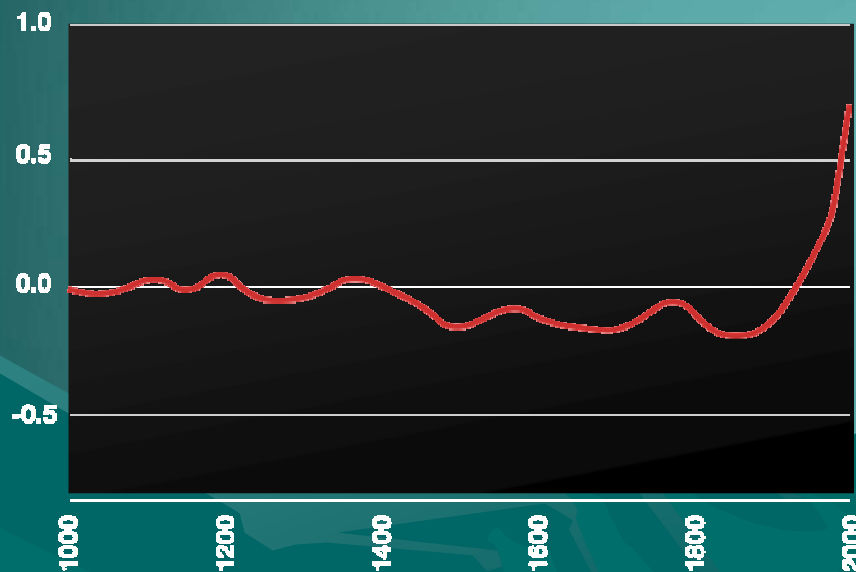
- An Urban Population – An Excess of Natural Resources: From Water to Trees to Oil – A Cold Climate !
- Population Growth will come exclusively from Immigration
- Language - Culture define Canada's History and Political Relationships

The Federation and Climate Change

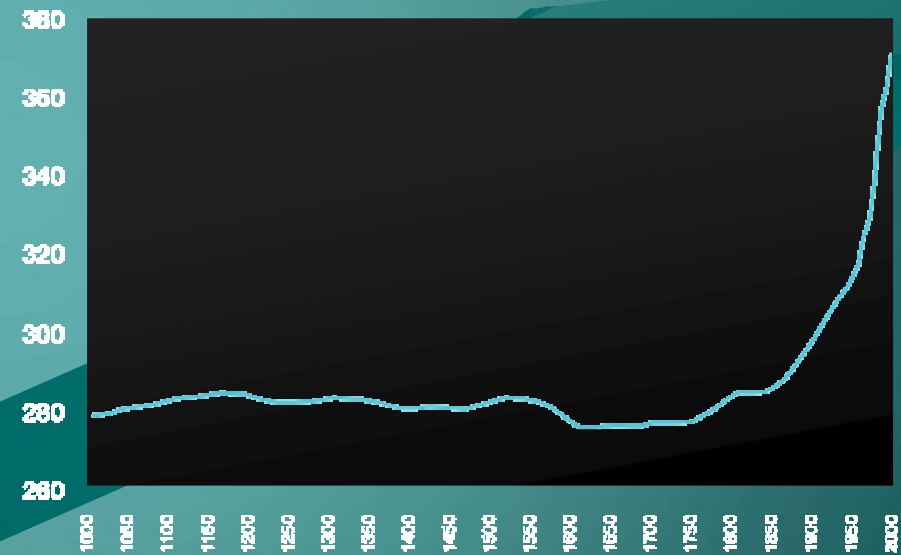
- **A Brief Review of the Challenge of Climate Change from a Canadian Perspective**

1000 Years of CO₂ and Global Warming

Temperature
(Northern Hemisphere)



CO₂ Concentrations





American Association for the Advancement of Science - 2007

- “The growing torrent of information presents a clear message: we are already experiencing global climate change. It is time to muster the political will for concerted action. Stronger leadership at all levels is needed. The time is now. We must rise to the challenge. We owe this to future generations.”

Illecillewaet Glacier



1898



1993

Portage Glacier

Alaska



1914



2004

Boulder Glacier

Glacier National Park



1932



1988

Argentina Upsala Glacier



1928



2004

Furka. Hôtel Belvédère und Rhonegletscher. 2200 m.

2500 m

Aden pyramide bew
10. August 1906
13. Aug

Interlaken Poste restante

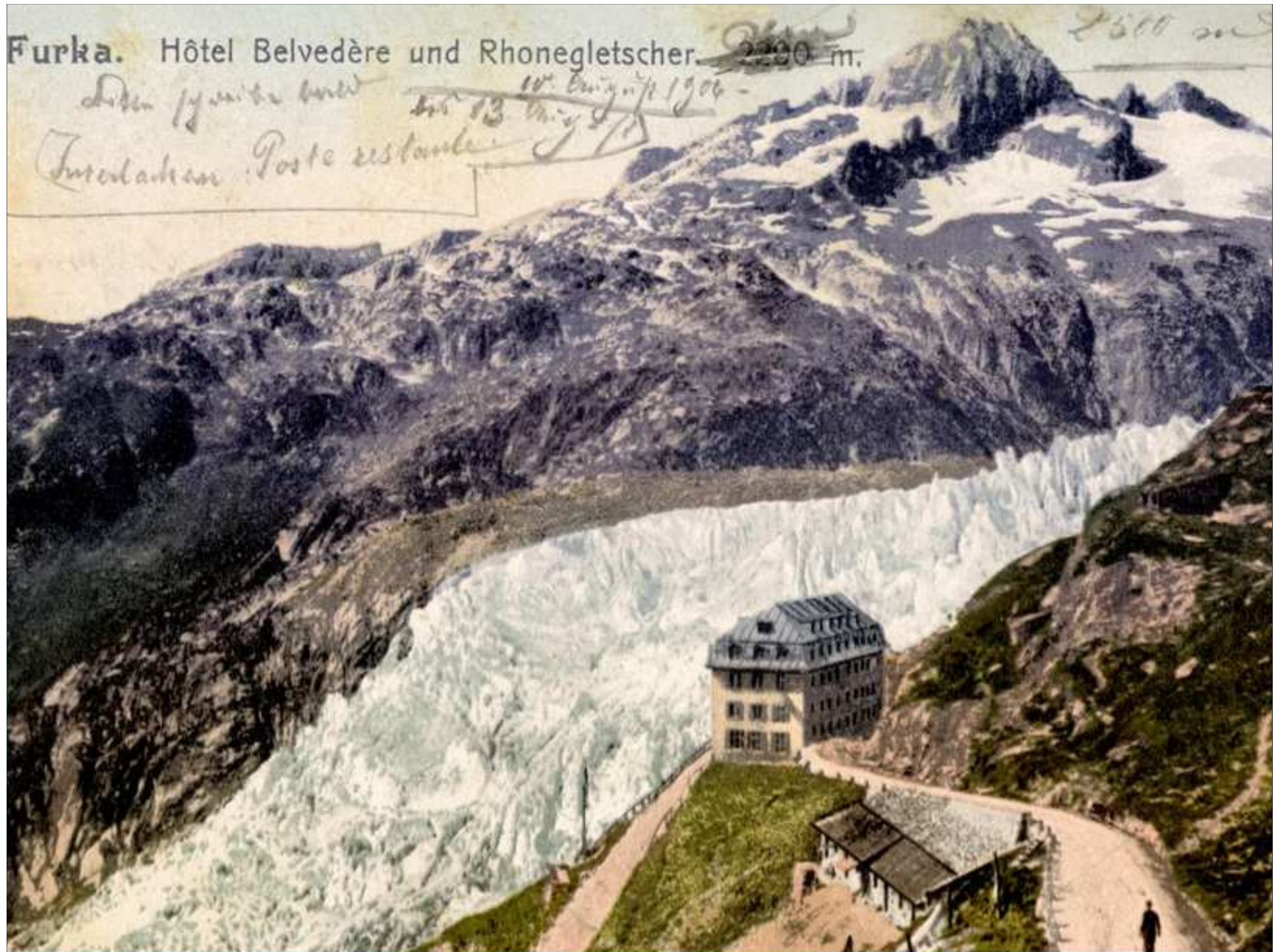






Photo courtesy Peter Essick/National Geographic Society



Source: Asahi Shimbun/Tetsuji Asano/AP

Villahermosa, Mexico

November 2, 2007



Photo: REUTERS/Tomas Bravo





AP Photo/Ed Andrieski

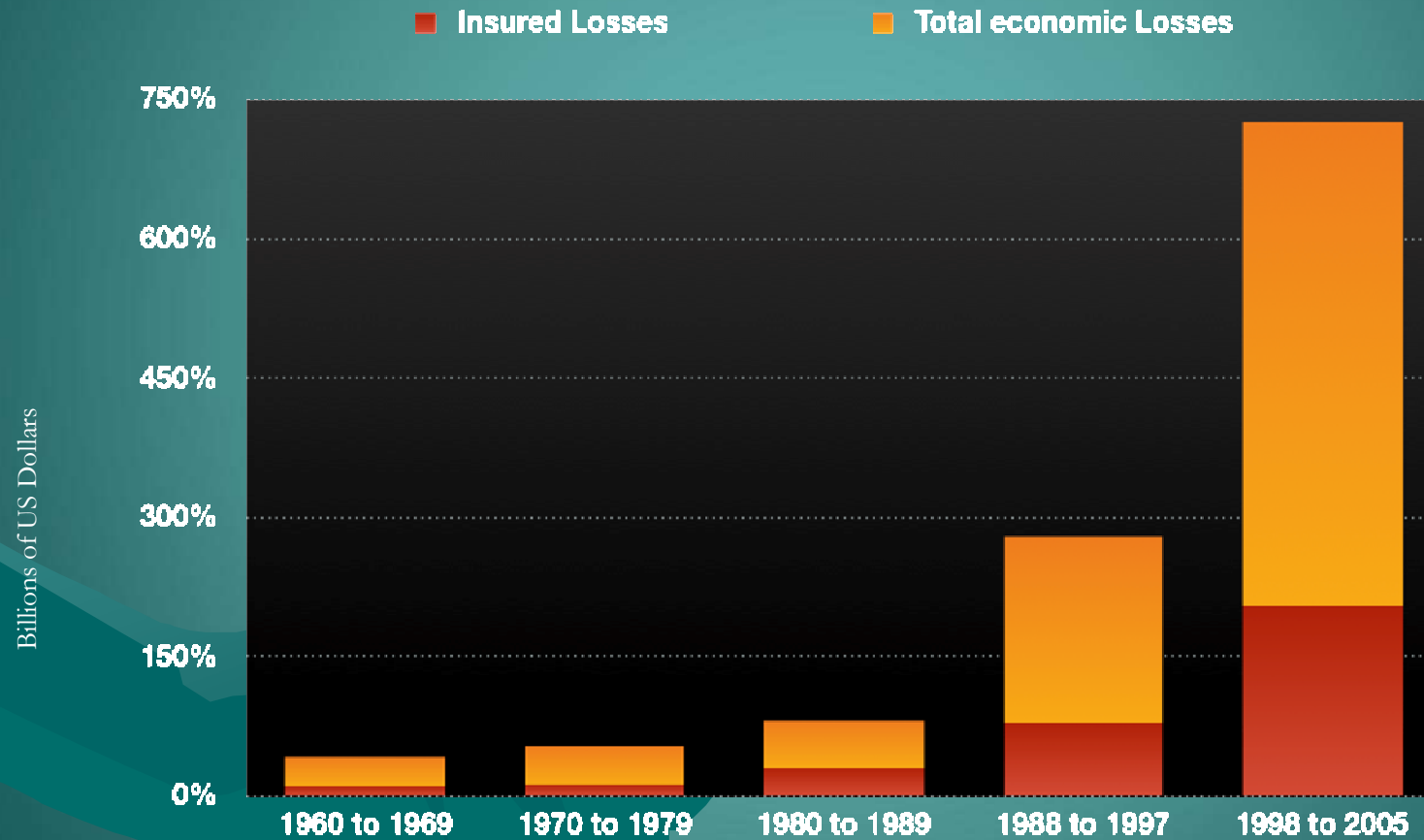




Photo credit: Mark Lynas

Great Weather and Flood Catastrophes

Losses in Billions of US Dollars

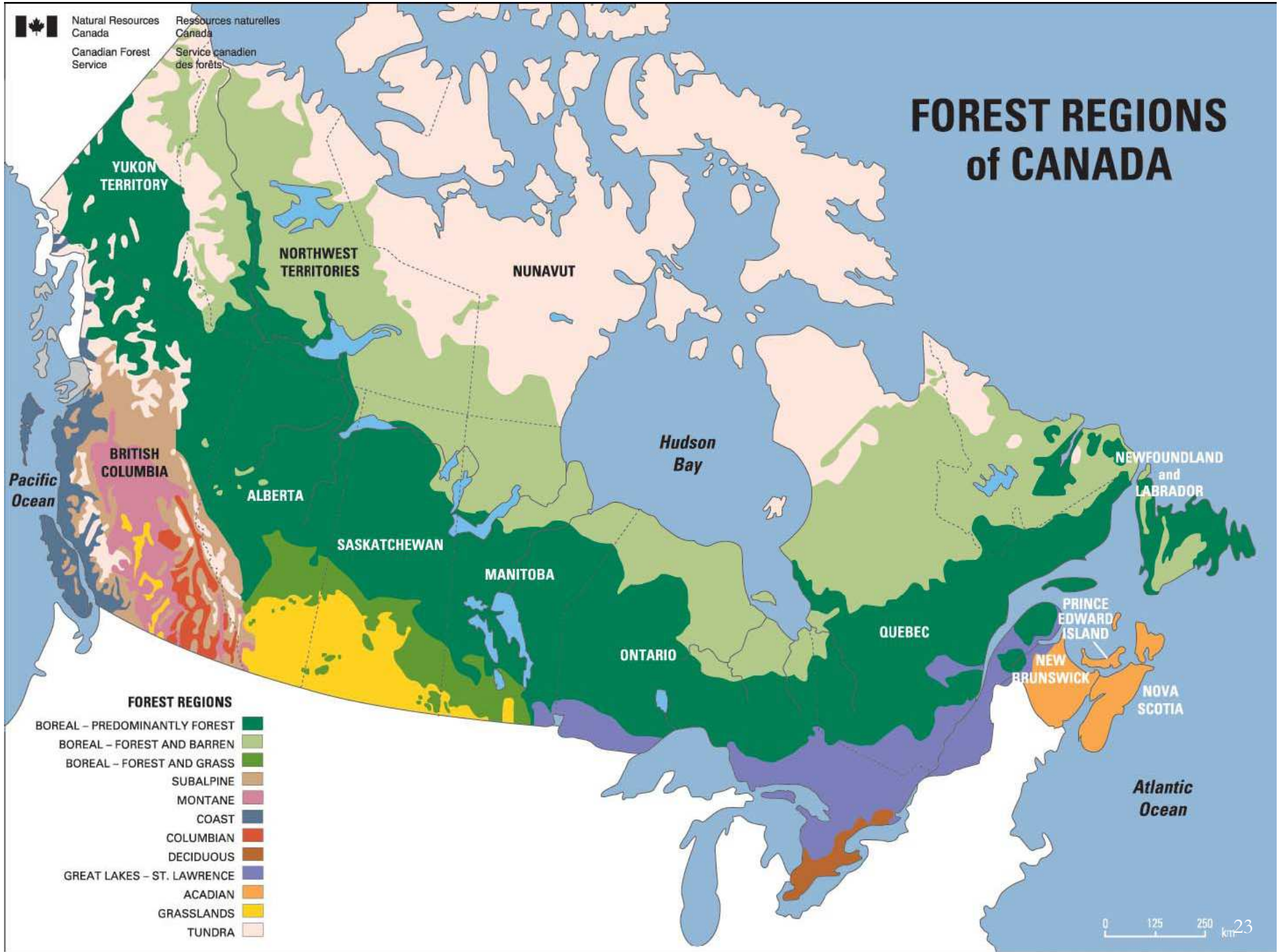


Source: Munich Re, Swiss Re. 2005 sigma Figures as of 12/20/05



Natural Resources Canada
 Ressources naturelles Canada
 Canadian Forest Service
 Service canadien des forêts

FOREST REGIONS of CANADA

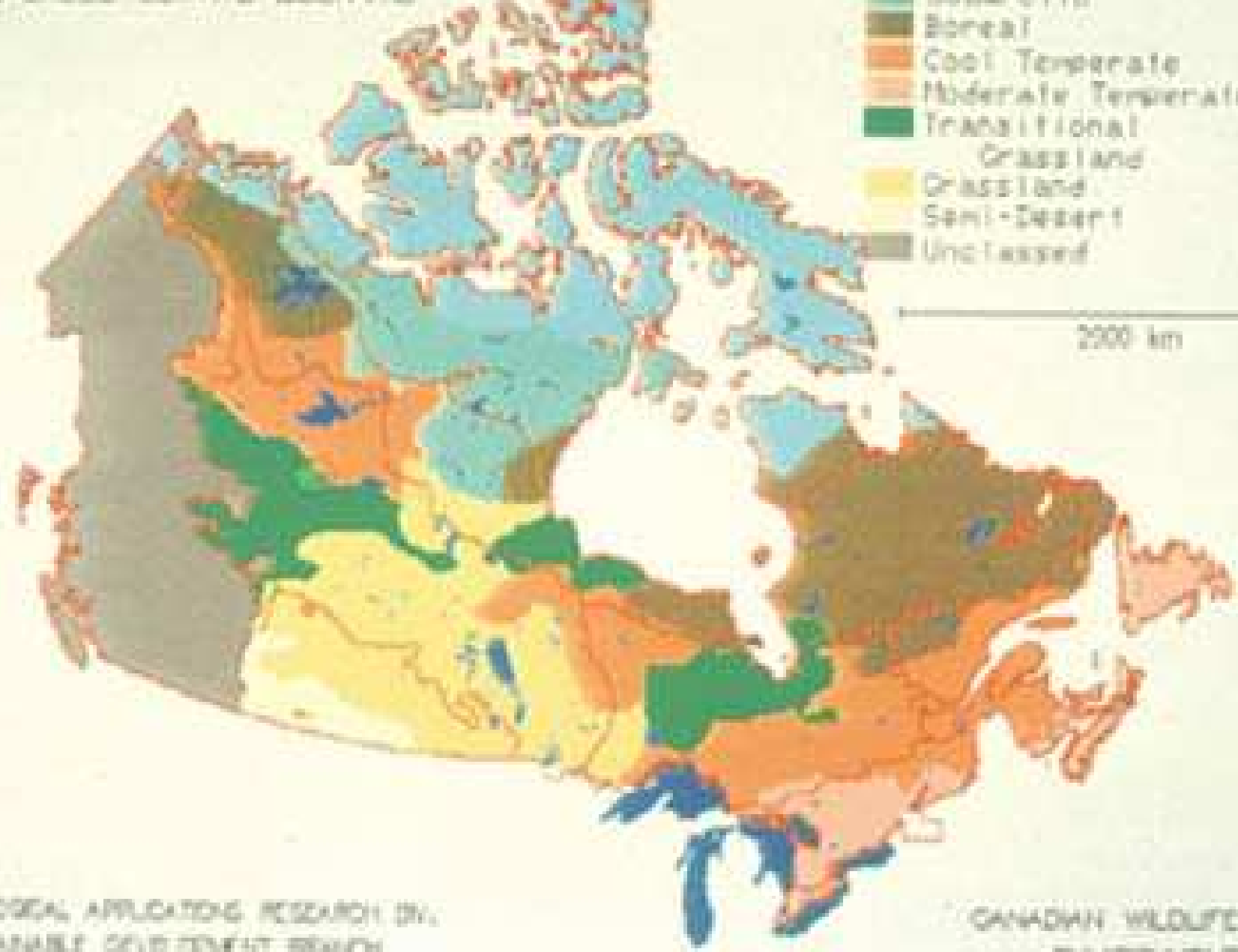


FOREST REGIONS

- BOREAL – PREDOMINANTLY FOREST
- BOREAL – FOREST AND BARREN
- BOREAL – FOREST AND GRASS
- SUBALPINE
- MONTANE
- COAST
- COLUMBIAN
- DECIDUOUS
- GREAT LAKES – ST. LAWRENCE
- ACADIAN
- GRASSLANDS
- TUNDRA

PROJECTED ECCLIMATIC PROVINCES GENERATED FROM DISCRIMINANT ANALYSIS USING GISS 2x002 CLIMATE SCENARIO

- Ecoclimatic Provinces
- Arctic
 - Subarctic
 - Boreal
 - Cool Temperate
 - Moderate Temperate
 - Transitional
 - Grassland
 - Semi-Desert
 - Unclassed



Syncrude Oil Sands Mine

Alberta, Canada

Photo: David Dodge, The Pembina Institute

Oil Sands Mine



Carbon Emissions Per Person 2004

- Metric Tonnes

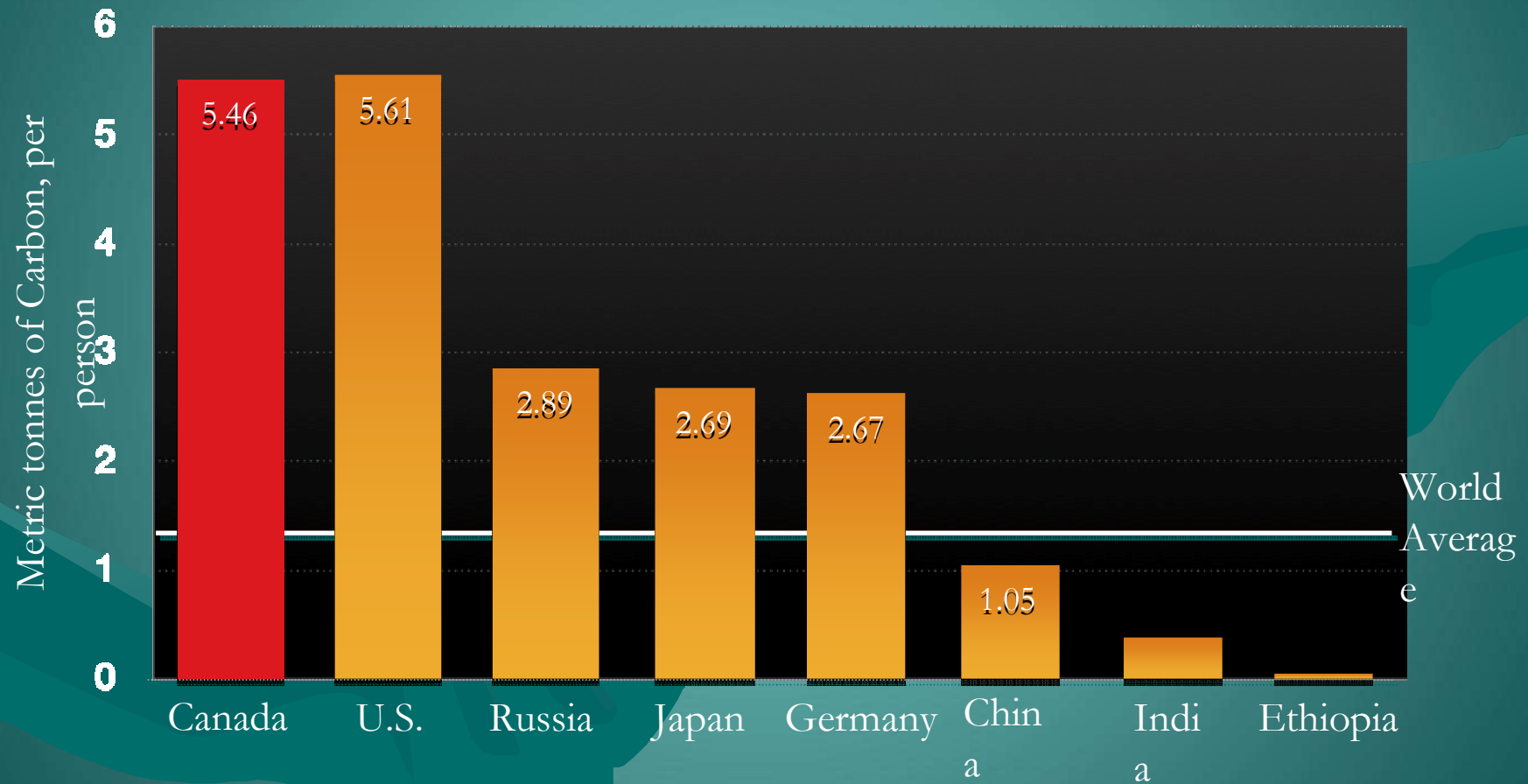




Photo: Arne Naevra/Naturbilder

Canada – The Demographics & Distinguishing Characteristics

5 Constitutionally-Defined Levels of Government

- 2 senior levels of government: federal government and 10 provincial governments and 3 Territorial governments
- Municipal governments
- 625 + Indigenous governments

Evolution of Environmental Responsibility in Canada

- Canadian Constitution: No explicit assignment of authority for environmental management
- Provinces control public lands and natural resources - have considerable authority over land, water and stationary-source air pollution

Evolution of Environmental Responsibility in Canada

- National government authority over coasts and fisheries, navigable waters, criminal law, emergencies threatening public health and safety, trade
- Concurrency has been one of the defining dynamics – but adds much complexity

Evolution of Environmental Responsibility in Canada

- All five levels of government in Canada have exclusive or shared responsibility for environmental management and regulation
- Environment cannot be sole responsibility of one jurisdiction within a federal state

The Creation of Intergovernmental Institutions for Environmental Management

- Intergovernmental institutions to enhance environmental management in a federal system: The Canadian Council of Ministers of the Environment
- 1964 - The creation of the Canadian Council of Resource and Environment Ministers
- Council comprised of 14 Ministers of the Environment and Chief Executive Officer of the agency - meet twice yearly

The Creation of Intergovernmental Institutions for Environmental Management

- Harmonizing environmental legislation, policies and programs across the country
- Developing national environmental objectives and standards ensure consistent national level of environmental quality
- Improve the linkages between domestic and international policies

The Creation of Intergovernmental Institutions for Environmental Management

- Ministers set priorities, broad policy, research and program objectives for organization
- Canada-wide Accord on Environmental Harmonization
- Establishment of Canada-wide standards: Ambient air quality - Mercury emissions – Ground Level Ozone and Particulate Matter - Dioxins and furans emissions – bio-accumulative substances
- Required Implementation Plans

The Federation and Climate Change

A Failure of CCME – A Failure of the Federation

- Lack of Vision, Leadership and Follow-Up
- Complete Absence of a Coordinated National Strategy
- National, Provincial and Territorial Interests and Strategies at Odds with Each Other



The Federation and Climate Change

- The Kyoto Protocol: 6% below 1990 levels
- Repudiation of Kyoto Treaty
- Current Federal target: 17% below 2005 level by 2020
- Currently - approximately 38% above 1990
- Majority vote in Parliament / The Climate Change Accountability Act
- Federal approach = Intensity Targets and sector-by-sector



The Federation and Climate Change

- “The Threat of Economic Dislocation”
- Through Copenhagen and Cancun and “Waiting for the Americans”
- Protecting resource development, in particular the Alberta Tar Sands – largest single emitter of GHG in the future.

The Federation and Climate Change

Climate change was “based on tentative and contradictory scientific evidence. It focuses on carbon dioxide which is essential to life, rather than upon pollution. . . The oil and gas industry will be crippled. . . Kyoto is essentially a socialist scheme to suck money out of wealth-producing nations.”

Then Leader of the Opposition and Current Prime Minister of Canada, The Right Hon. Stephen Harper

Oil Sands Upgrader Plant

Alberta, Canada

Photos: David Dodge, The Pembina Institute



A different approach?????

“The costs of efficient and effective action to combat climate change and ameliorate its effects are well below the harmful costs to the economy which can be avoided by such action, and are outweighed by the potential growth and development which such actions are likely to achieve.”

-----Minister of Finance and Minister of Environment and Natural Resources – National Government of Mexico

The Federation and Climate Change

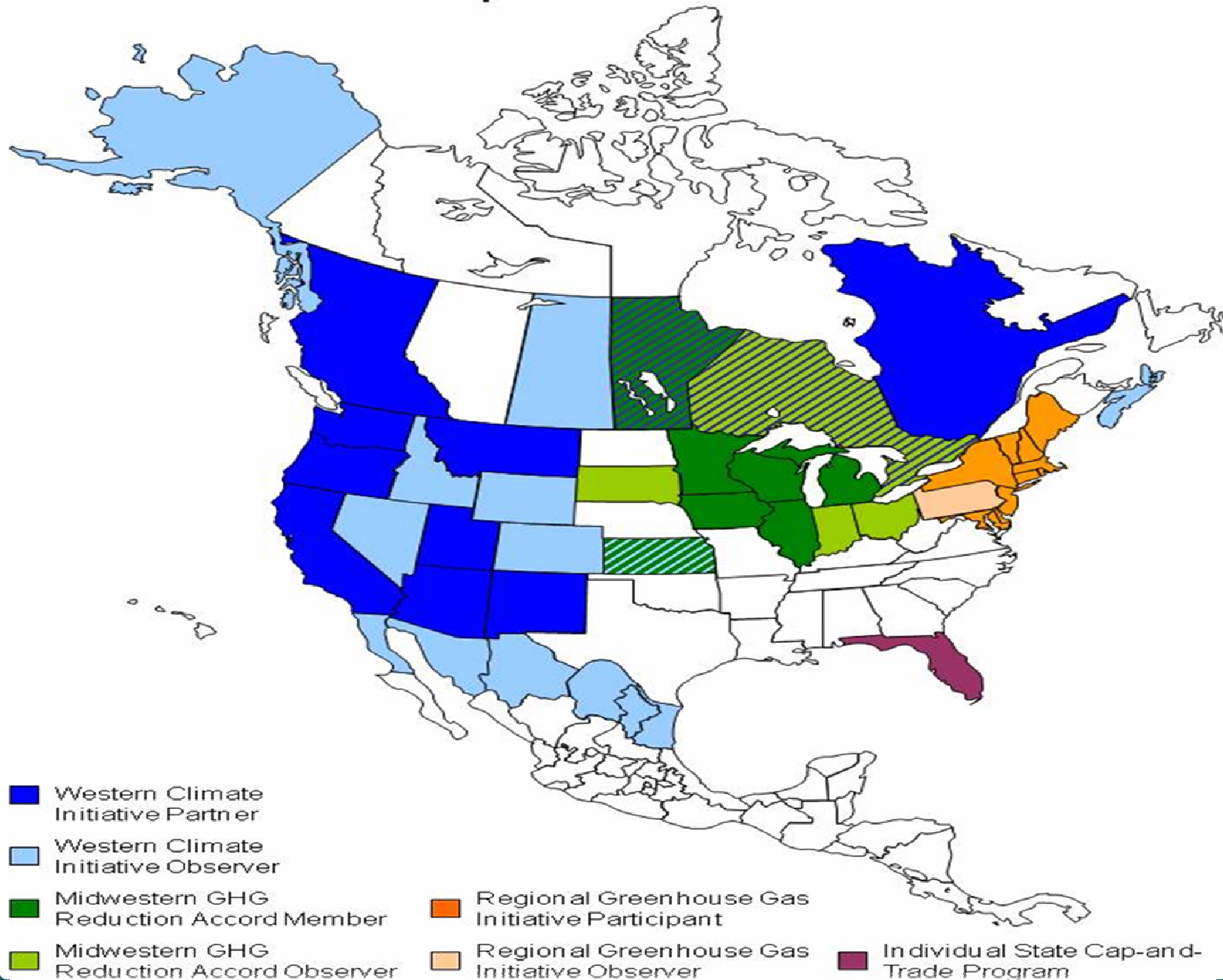
- Provincial Initiatives Emerging across Canada
- Quebec and Ontario to Develop Cap and Trade
- British Columbia and Quebec initiated Carbon Tax
- Manitoba committed to a cap and trade system
- Federal response to emphasize CO₂ capture and storage

The Federation and Climate Change

Numerous Regional Initiatives

- Wisconsin and Manitoba Accord on GHG reductions
- New England Governors – Eastern Canadian Premiers
- Western Climate Initiative

North American Cap-and-Trade Initiatives



Municipalities and Climate Change Coordinating Mechanisms

- Federation of Canadian Municipalities - Partners for Climate Protection
- International Council for Local Environmental Initiatives – Cities for Climate Protection
- Commission of Environmental Cooperation (NAFTA) – 13 Cities Initiative

Committed Canadian Municipalities as of March 2008



Brantford	Duncan	Kingston	Nanaimo (City)	Regina	Swan River
Burlington	East Gwillimbury	Kitchener	New Glasgow	Revelstoke	The Blue Mountains
Brockton	Edmonton	Langley (City)	New Westminster	Richmond	The Pas
Burnaby	Edmundston	Langley	Newmarket	Richmond Hill	Thunder Bay
Calgary	Fernie	Lantzville	Oakville	Rimbey	Toronto
Caledon	Fort Simpson	Laval	Okotoks	Saanich	Tracadie-Sheila
Canmore	Fort Smith	Lethbridge	Ottawa	Sackville	Vancouver
Canso	Fredericton	Lions Bay	Paradise	Saint Andrews	Victoria
Cantley	Gander	London	Peel (Region of)	Saint John	Virden
Cowichan Valley	Gibsons	Lunenburg	Okanagan	Sainte-Adèle	Waterloo
Central Kootenay	Grand Prairie	Maple Ridge	Perth	Saskatoon	W. Vancouver
Charlottetown	Guelph	Markham	Perth South	Scugog	Welland
Chelsea	Vancouver	Marystown	Peterborough	Smithers	Whistler
Clare	Halifax	Miramichi	Pickering	South Frontenac	White Rock
Cochrane	Halton Region	Mission	Pictou	Spruce Grove	Whitehorse
Windsor	Winkler	Winnipeg	Wolfville	Woodstock	Yellowknife
York					

Municipalities and Climate Change

Canadian Initiatives

City of Sudbury – Located in northern Ontario

- Forestry and Mining as economic drivers
- City calculation of \$ 400 million on energy costs, vast majority of which left the city
- Invest in energy conservation, local renewable energy
- Climate change plan = economic development plan with goal of 50% local energy production

Municipalities and Climate Change

Canadian Initiatives

St. Johns, Newfoundland and Labrador

- Participated in PCP program using 1994 baseline
- Reduction target of 20% city hall – 6% city below 1994 baseline
- Began building retrofit, anti-idle bylaw, LED lights , methane capture, waste reduction and separation, community education
- 500 year rain event

Municipalities and Climate Change

Canadian Initiatives

Calgary, Alberta

- Continuous monitoring of electricity use, transportation fuel consumption, solid waste and sewage volumes, etc.
- 700 building retrofits saving \$7 million in energy costs
- 37 wind turbines will power city operations - light rail transit system runs on wind
- 50% reduction in corporate emissions in Kyoto



Municipal Initiatives on Climate Change

- \$500 million - Green Municipal Fund
- Infrastructure assistance
- Capacity Building and Sharing Best Practices
- Solar Installation for heat and energy – 50 homes in Okotoks, Alberta

Municipalities and Climate Change Actions Within Municipal Control

- Retrofit buildings – retrofit fleets and energy management - emergency and service vehicles – traffic and street lights (LED) – green procurement – sustainable density planning – building codes – anti-idle bylaws – energy conservation – landfill waste management - energy conservation – recycling and composting – community education.



Municipalities and Climate Change

Suggested Strategies

- Creation of a GHG Emissions Inventory and Forecast
- Setting Emission Reduction Targets
- Developing a local Action Plan (integrate local issues - air quality, transit, energy management into climate action plan)

Municipalities and Climate Change

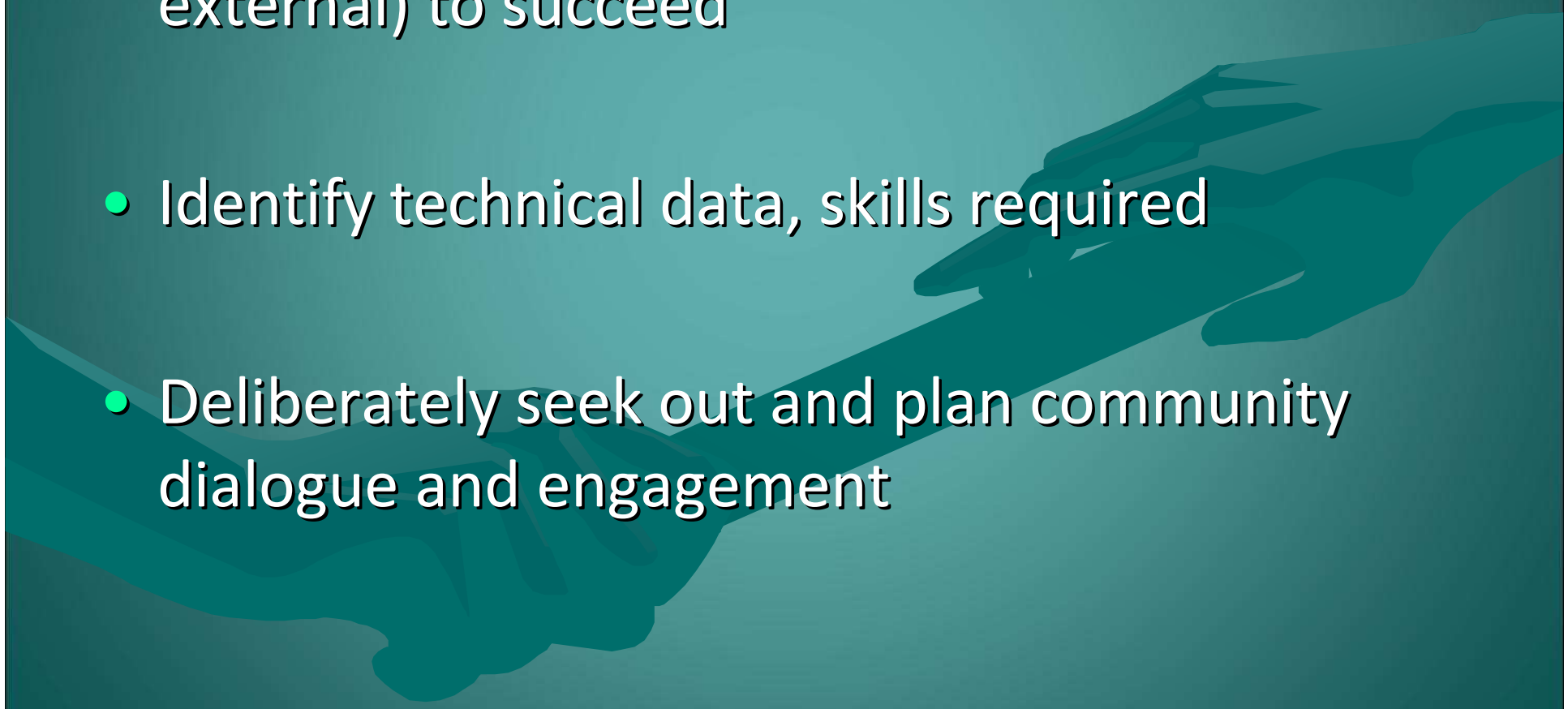
Suggested Strategies

- Implementation through activities with clear, sequenced steps – achievable and measureable
- Monitor Progress, Report Results, Use Adaptive Management
- Lobby Senior Levels of Government

Municipalities and Climate Change Challenges – Opportunities

- Municipal elected official as champion / principle advocate
- Create interdepartmental / cross departmental authority to coordinate and encourage
- Designate senior staff person and hardwire into institutional structure

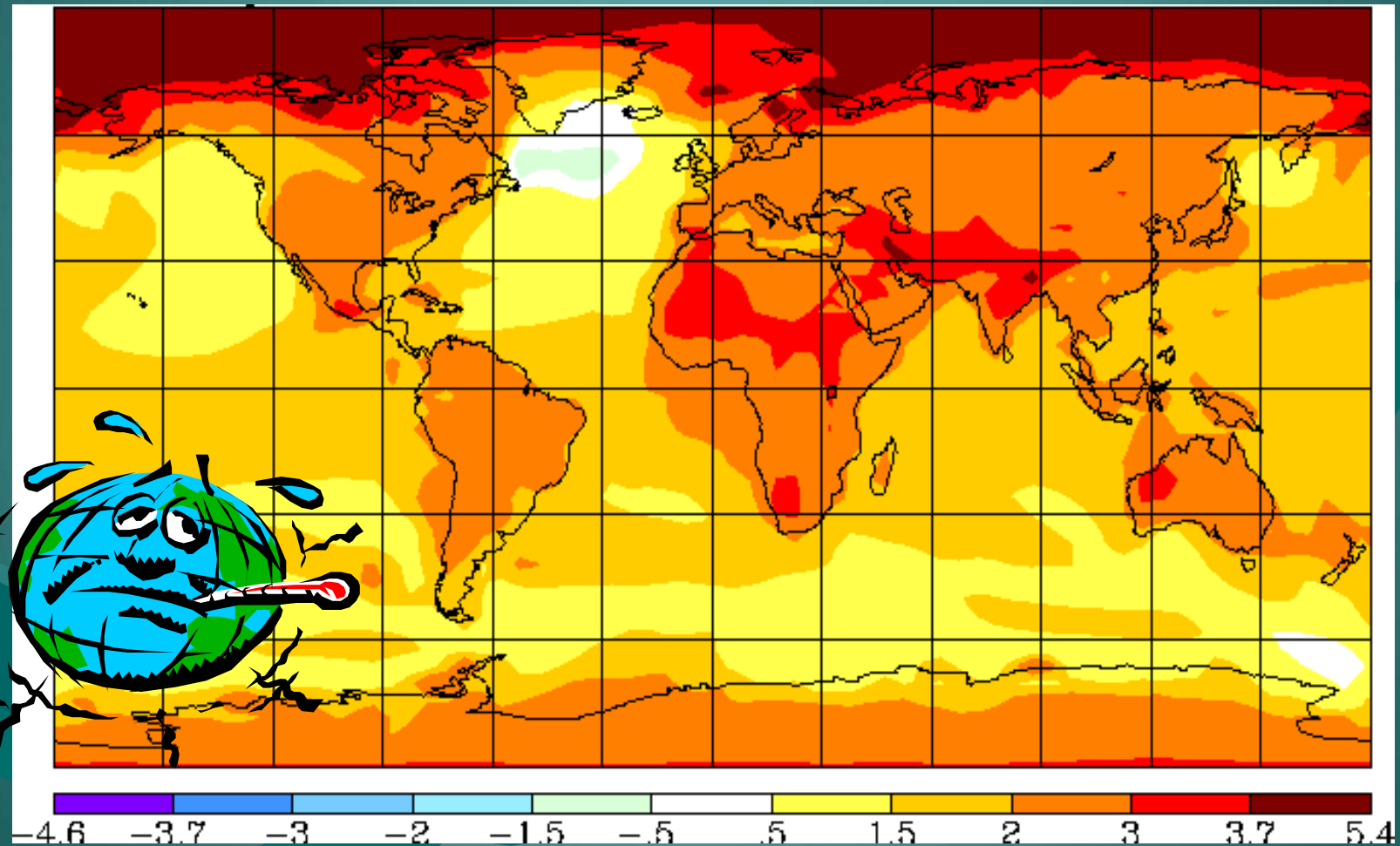
Municipalities and Climate Change Challenges – Opportunities

- Identify resources required (internal and external) to succeed
 - Identify technical data, skills required
 - Deliberately seek out and plan community dialogue and engagement
- 
- A stylized illustration of two hands shaking, rendered in shades of teal and green, positioned in the lower right quadrant of the slide. The hands are shown in a firm grip, symbolizing agreement or partnership.

Municipalities and Climate Change Challenges – Opportunities

- Develop public – private partnerships (private sector, universities, other governments, NGOs)
- Due to challenge of initial-cost management -
Actively pursue external resources (property taxes and gas taxes in Canada)
- **Develop strong business case (cost of not acting exceeds cost of acting)**

Mean Surface Air Temperature (°C) Doubling of CO₂



Source :NASA/Goddard: <http://data.giss.nasa.gov/efficacy/index1.html>. The original simulations were undertaken for a paper, in the Journal of Geophysical Research (*in press*) by J. Hansen et al.



A Final Quote. . . .

“ The challenges presented by climate change are evidently of impressive magnitude, and in many cases the impacts are now inevitable. The fundamental strategic decision thus consists not in the need to confront the inevitable, but in discovering the best way to do so.”

- - *The Economics of Climate Change in Mexico*

Dr. Luis Miguel Galindo

