International Dialogue on National Climate Assessments Session 1 presentation





## National Assessment of Climate Change Impacts and Adaptation in Canada: Nature, Scope and Purpose

Don Lemmen Climate Change Impacts and Adaptation Division Natural Resources Canada dlemmen@nrcan.gc.ca





#### **Past Science Assessments**

- Canada Country Study (1998) eight volumes (regions, sectors, cross-cutting issues)
- From Impacts to Adaptation: Canada in a Changing Climate (2008) – regions + international context
- Human Health in a Changing Climate (2008) significant research component

#### **Commonalities**

- all lead by federal government as part of non-core funding
- science assessments (as opposed to risk / vulnerability assessments)
- policy neutral
- focus on impacts and adaptation, not climate science (or attribution)
- products hard copy reports, web pdf & HTML





## **Ongoing and Planned Assessments**

- Update to 2008 Assessment report (2013/14) sectoral organization
- Sectoral Assessments (testing different approaches)
  - Coastal (2014/15)
  - Transportation (2015/16)
  - Mining (2015/16)
- Third National Assessment (2018?)
  - planning to begin once 2008 update is completed
  - likely (hopefully?) very different from previous

#### Note:

- again lead by federal government as part of non-core funding but with clear policy mandate
- more rigorous institutional arrangements (Adaptation Platform)





**2008 National Science Assessment: Purpose** – to provide a comprehensive and authoritative understanding of the state of knowledge regarding climate change impacts and adaptation in Canada.

#### Goals

- 1. Inform adaptation decision-making
- 2. Raise awareness
- 3. Contribute to capacity building

#### **Users**

- Policy and science advisors feed into decision-making processes
- Practitioners (engineers / planners)
- Industry
- University level instructors and students
- General public
- Media

#### How determined?

- Need identified at program level
- Scoping workshop, included lessons learned from other assessments
- National advisory committee involving all levels of government, aboriginal organizations, practitioners and NGOs (INTENDED USERS)

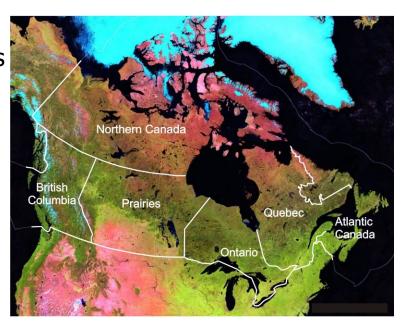




## 2008 National Science Assessment – approaches used

## Why a regional approach?

- Desire to increase political attention to issues
  - regions corresponded to provincial / territorial boundaries
- To that point attention to impacts and adaptation very uneven across Canada
- Regional approach also provides advantages for discussing cumulative impacts and maladaptive practices



## Why a science assessment?

- Deemed useful abundance of information sometimes conflicting little applied to country as a whole
- More straightforward to provide "national" perspective than other types of assessments
- Resource limitations

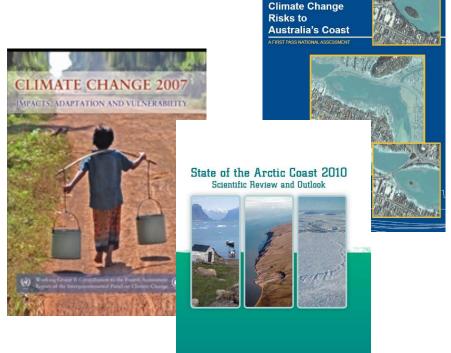




## **Explaining Science Assessments**

#### **Definition:**

Collective, deliberative processes by which experts review, analyze, and synthesize scientific knowledge in response to users' information needs relevant to key questions, uncertainties, or decisions (NRCNA, 2007).



#### Science Assessments are:

Scientific reports

Critical analyses of knowledge Focused on issues of concern Intended to inform decision-making Science Assessments are not:

**Policy, guidance or best practice documents** 

Literature reviews

Fully comprehensive reports

**Intended to direct decision making** 





## 2008 National Science Assessment – approaches used

#### Sources of Information\*

- peer-reviewed published literature
- grey literature
- local / practitioner knowledge

includes traditional (Aboriginal) knowledge

\* - failed miserably in getting authors to expand beyond "climate change" literature

#### Likelihood and Confidence

- use common-sense language rather than prescribed expressions
- confidence strongest where projections are consistent with historic trends and/or well established relationships



#### **2008 National Science Assessment**

## What we did right / well

- Focus on what we know
- Chapters start with key findings (4-5 points) of relevance to decisionmaking
- Use of Case Studies to provide detailed information
- Synthesis Report takes a concise, storyline approach

#### Where we could have done better

- Timing
- Products
- Communication planning and implementation
- Monitoring / documenting impact





# **2012-2016 Assessments – Responsibilities and Governance**

#### Authors

(Leads and Contributors)

1-3 leads per chapter
Contributing authors as needed
Leads coordinate writing teams,
draft and revise text and
participate in meetings

National Industry /
Professional Associations

## Adaptation Platform

Science Assessment WG

Provide input and review Develop supplementary products
Promote and disseminate

LEAD – Natural Resources Canada

Federal government

#### CCIAD Secretariat

 Coordination, logistics, support and science editing

> Provincial / Territorial governments

Academics

## **Advisory Committee**

Help shape and guide process Involved throughout (from scoping to report release)

Research
Organizations

#### Reviewers

(Expert and Government)

Review drafts for accuracy, content, credibility and messaging
Several reviewers per chapter Solicited reviewers (not self identified)





## The Adaptation Platform provides the structure to enhance collaboration

#### **Professional Organizations**

Regulatory bodies, Financial services, Engineers, Planners

#### **PTs/Regions**

P/T Governments, Regional Adaptation **Collaboratives** 

#### **Federal Departments**

NRCan, AAND, TC, EC, DFO, others

- Mechanism for bringing together knowledge, capacity & financial resources
- Expanding the tent
  - + industry, financial sectors
  - + federal departments
- Each participating organization brings its own resources, priorities and mandate

#### **National Industry Associations**

Energy, Mining, Forestry, **Transport** 



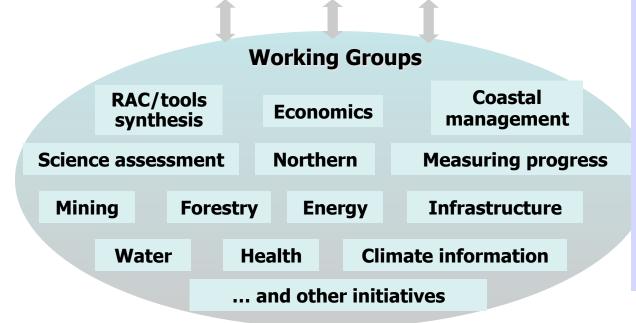
# Channelling diverse sources of knowledge into focused action

## **The Adaptation Platform**

#### **Platform Plenary**

Senior-level representatives from PT governments, federal departments, professional organizations industry associations

Assesses opportunities for action in targeted areas



Directly convenes information experts with differing backgrounds, skills perspectives, and training who together create new products, approaches distribution networks or solutions that more effectively assist decision-makers





### **Lessons learned**

- Need to develop clear definitions of target audience(s) and scope early in assessment process
- As policy / economic / other context can change while assessment is being developed, assessment should be structured to inform these drivers but not be dependent on them
- Nobody reads the whole report! Need to find ways to draw readers beyond the "backyard" interest
- Planning and coordination of communication and product release is critically important – and can be challenging
- Gradual dissemination percolate through peer networks can be effective but takes time



## **Challenges**

#### Governance

- Supporting a sustained (and sustainable) assessment process in the absence of core funding
- Expanding <u>ownership</u> of the process beyond federal government

#### Content

- Ensuring scientific rigour
- Communicating uncertainty
- Delivering relevant information across spatial scales

#### Resources and capacity

#### **Products**

- Conveying findings in innovative ways use of new media
- Developing products targeted towards specific audiences (partnership with national associations?)



