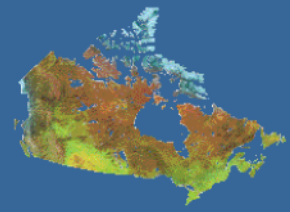
UNFCCC Workshop on Gaps and Challenges in Implementation of Risk Management Approaches



The application of risk management tools in Canada

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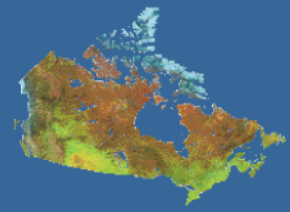
Background



Objective: To better prepare Canada's engineering community to address adaptation to climate change in the design, building, operation and decommissioning of infrastructure.

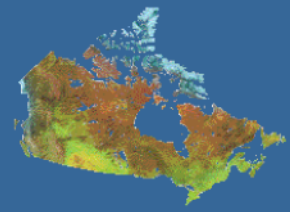
Project lead: Engineers Canada

- Licenses Canada's 160,000 engineers
- National organization with provincial/territorial Associations/Ordre

Context:

- 2004 Board of Directors approved a climate change plan
- 2006 established the Public Infrastructure Engineering Vulnerability Committee (PIEVC)
- 2007 survey of engineers: 80% said CC will affect decisions but didn't currently factor it into their work *(largely due to insufficient information, tools and techniques)*

Structure



PIEVC Expert working groups

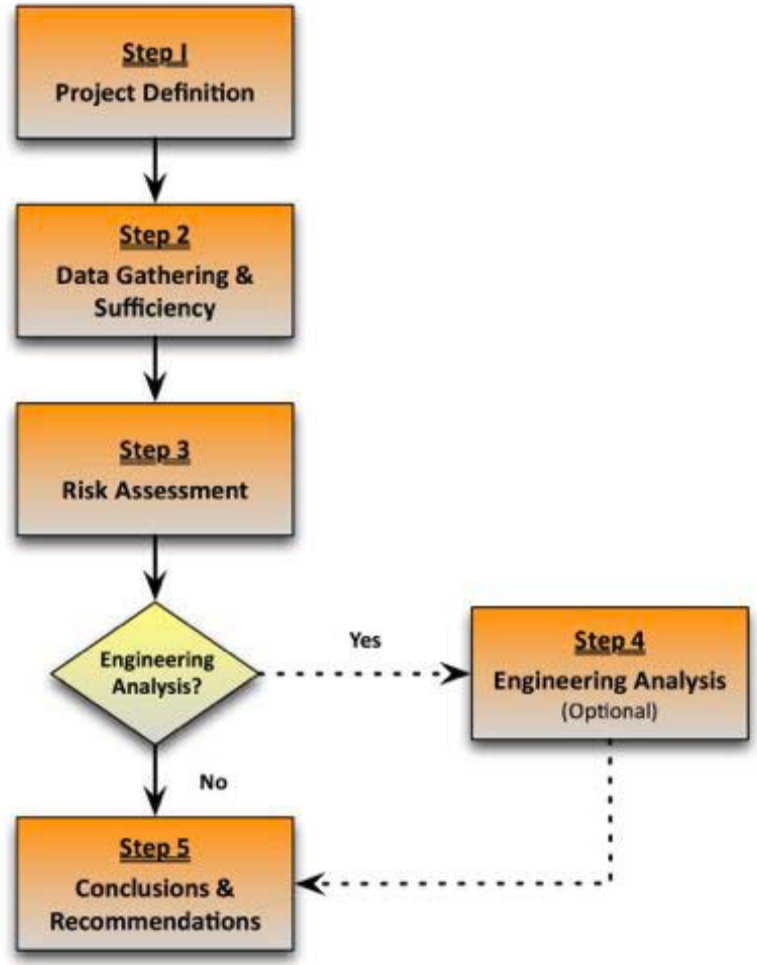
- Water resources
- Wastewater and storm water
- Transportation & related infrastructure
- Buildings

Tasks

- *Support to case studies in sector*
- Assessment of results across case studies
- Recommendations

The PIEVC Protocol

- 5 step process
- Involves owners, managers, operators
- Assesses risk to infrastructure from an engineering perspective
- *Workshop an important part of step 3*



Outputs to date

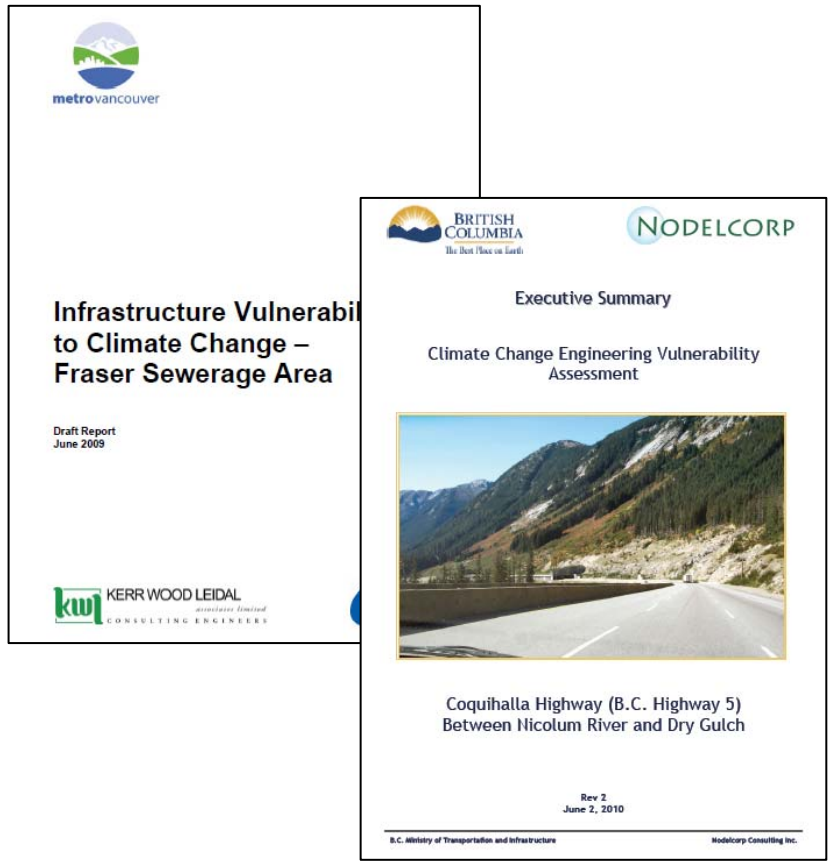
27 Case studies
- 16 in progress

15 training workshops

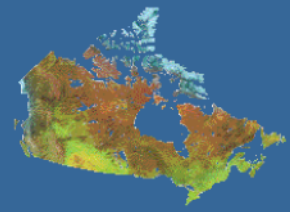
582 people trained

1st national assessment of the engineering vulnerability of infrastructure

Protocol improvements

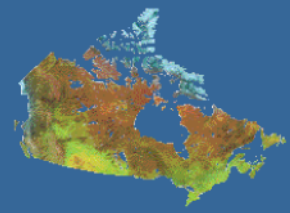


International Activities



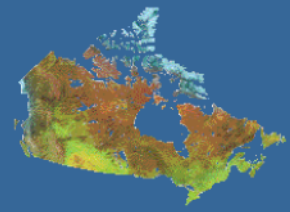
- World Federation of Engineering Organizations
  - Side events at UNFCCC meetings
- Training Workshop in Recife, Brazil (March 24, 2010)
- Costa Rica Project
  - In partnership with the College of Engineers and Architects of Costa Rica (CFIA), support by Canada (DFAIT)
  - Infrastructure study and capacity building
  - 3 year agreement with CFIA for use and sub-licensing of the Protocol in Costa Rica
- Training event in Honduras, March 2011
- Potential project in Honduras

Lessons learned: Protocol



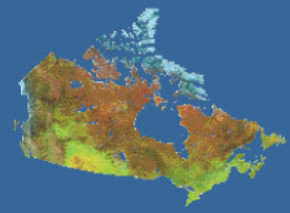
- Usable with available information (climate, *infrastructure*)
- Structured and accepted method important to engineers
- *Process engages local knowledge to provide "real-world" picture (workshop)*
    - *Peer to peer training and support* – important elements
    - training designed and delivered by engineers
    - case studies-small advisory groups include at least one person who has applied the Protocol in that field
- Focus on 4 key areas of infrastructure helped build expertise and confidence in application

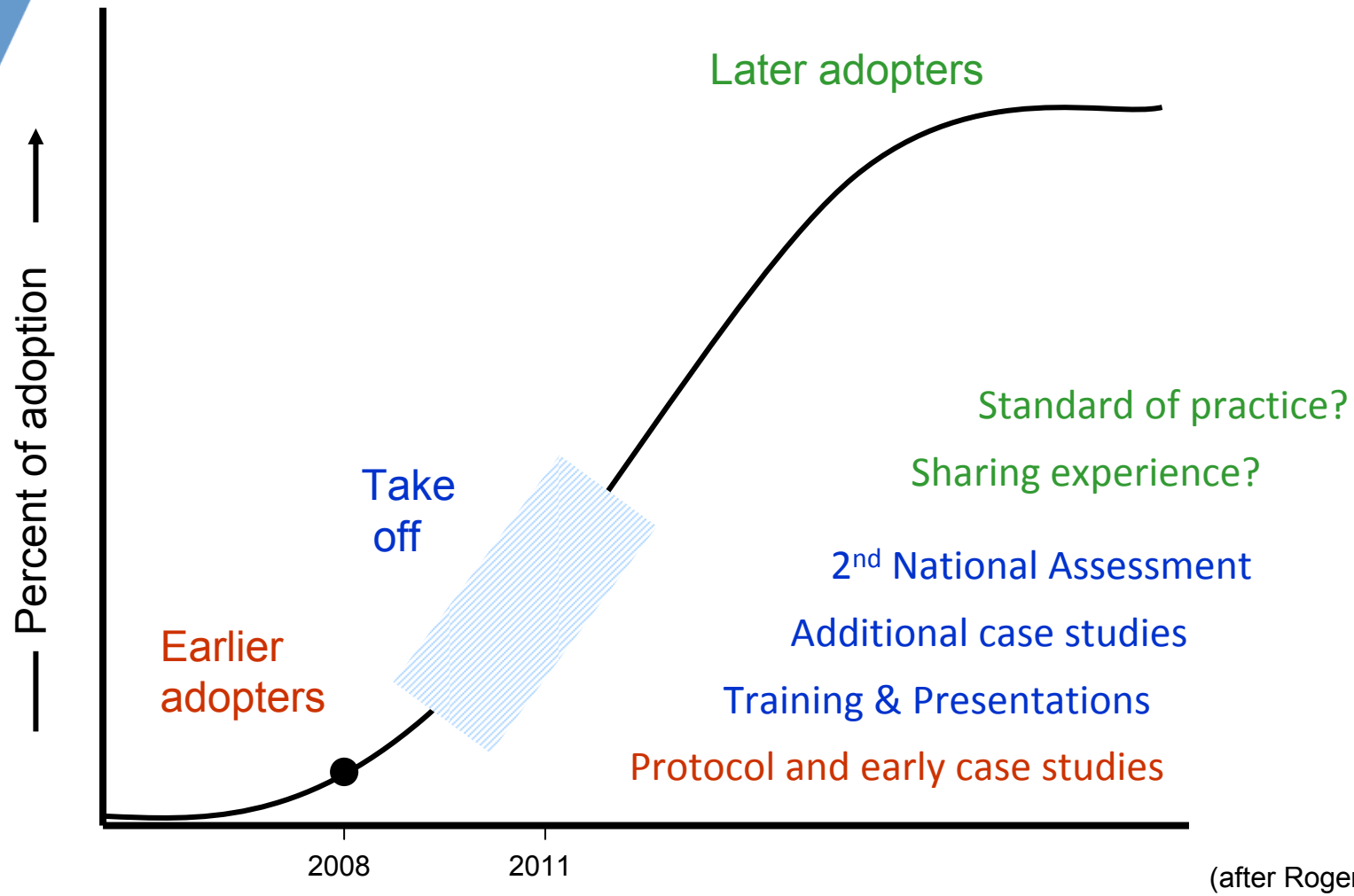
Lessons Learned: Implementation



- Greatest success when incorporated into plans and strategies as they develop
  - e.g. Metro Vancouver Liquid Waste Management Plan
- It's still risk management
  - Highway study found risks due to culvert size
  - Too expensive to retrofit, will change size as maintenance done
- Need to repeat messages (e.g. maintenance is important)
- Owners/managers need to understand basis for analysis so they can support recommendations up the line

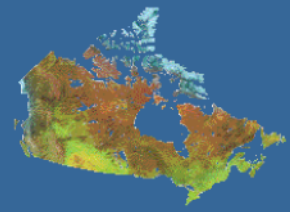
Diffusion of the Protocol





(after Rogers, 2003)

Contacts



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For more information about the PIEVC Protocol

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