



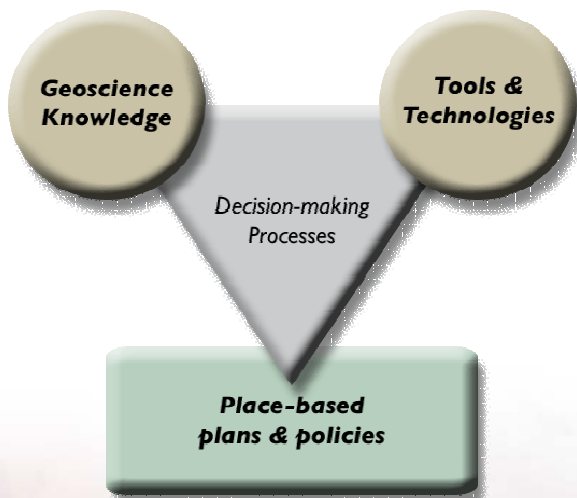
# Pathways Project

## What is the Pathways Project?

Every day local governments and planning agencies make decisions affecting the vulnerability and scarcity of natural resources, the safety and resilience of communities in areas exposed to natural hazards, and the interaction of human and natural systems that influence regional sustainability. The *Pathways Project* is developing methodologies and tools to promote the use of geoscience knowledge in support of place-based planning and policy development.

### Our role

We develop modelling tools and information technologies to make geoscience knowledge relevant and accessible to local and regional decision-making processes. Through these efforts we promote the development of place-based plans and policies, which are both informed by leading expertise and grounded in local understanding.



### Geoscience Knowledge

Natural Resources Canada has developed several areas of expertise that are critical for place-based planning and policy development. In the *Pathways Project* we advance geoscience knowledge and methodologies related to the stewardship of groundwater resources and the assessment of risks from natural hazards, as well as scenario-based strategies for achieving regional sustainability.



## Sustainable Development Through Knowledge Integration

### Tools & Technologies

We continue to develop and refine modelling tools for integrating and interpreting geoscience knowledge for use in decision-making processes. We are also developing web-based workspace applications where planners, policy-makers and community partners can share knowledge and expertise, improving both the quality and credibility of the information that informs planning and policy development.

### Decision-making Processes

We engage in local and regional decision-making processes where our geoscience knowledge, modelling tools and information technologies can support place-based planning and policy development. Our goal is to support planners and policy-makers as they make critical planning and resource management decisions on the ground.

### Current case studies

To date we have focused on case studies in southern British Columbia. For example:

- We are collaborating with provincial and local government agencies to improve the stewardship of groundwater resources in the **Gulf Islands** and the **Okanagan Basin**;
- We are part of a multi-agency initiative to explore risk scenarios and strategies for mitigating natural hazards along the **Sea to Sky corridor**; and
- We are supporting regional efforts to explore sustainable development scenarios and strategies in the Georgia Basin through our involvement in the **Georgia Basin Futures Project**.

### For more information

To learn more about the *Pathways Project*, please contact:

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- Murray Journeay (Research Scientist, 604-666-1130).





# Pathways Project

## Project highlights



### Sustainable Development Through Knowledge Integration

#### Integrated decision support

The *Pathways Project* is developing a deliberation and decision support system that builds on emerging information technologies and the interoperability standards of the Canadian Geospatial Data Infrastructure and the Open GIS Consortia. These technologies will provide an integration platform for coupling distributed information, knowledge resources and scenario-modelling tools in support of collaborative, place-based planning and policy development.

#### Hazard mitigation planning

Local and regional governments in British Columbia are responsible for developing hazard mitigation and emergency response strategies for their respective jurisdictions. The *Pathways Project* is developing frameworks for evaluating vulnerability and risk scenarios for natural hazards, and for optimizing mitigation policies and planning strategies.



#### Groundwater resource management

The *Pathways Project* is working with academic and professional partners to expand a suite of groundwater models to derive an assessment of aquifer vulnerability and sustainable yield. Our goal is help local and regional governments better understand hydrogeological information and incorporate it into planning and policy development.

#### Integrated sustainability planning

There is a growing demand for new strategies to integrate sustainability planning and decision-making processes along the urban-rural interface, both across geospatial scales and jurisdictional boundaries. The *Pathways Project* is developing methodologies for nesting and integrating scenario-modelling tools and for enhancing the process of collaborative place-based planning.

