

Principle Researcher(s) & Affiliations

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Research Field

Environmental Indicators
Geospatial Mapping
Digital Technologies
Rural Development

Student Involvement

5 Research Interns

5 In-Class Projects: climate change & infrastructure risk, tree age classes in old growth management areas, forestry roads in community watersheds, invasive fish mapping, wetland mapping

Partners & Collaborators

The RDI received input from a multi-stakeholder advisory committee throughout the project. Several additional technical advisors also contributed data and guidance on indicator development.

Funding Sources

BC Real Estate Foundation
Columbia Basin Trust (RDI funder)

Project Period

From: (Month/Year)	January 2014
To: (Month/Year)	May 2014
Funder Contribution	\$50,000
RDI Contribution	\$240,000
Partner In-kind	\$10,000
Total	\$300,000

State of the Environment July 2014

Piloting Best Practices & Digital Technologies in the Columbia Basin-Boundary Region

The purpose of the State of the Environment project was to improve the scope and availability of environmental information and related research in the Columbia Basin-Boundary region of BC. More specifically the primary objectives of the project were to:

- explore the landscape of environmental and sustainability research and planning in the Columbia Basin Boundary region
- expand the scope of existing State of the Basin environmental indicators
- develop a web-based geospatial portal to provide easy access to information that supports informed decision-making and collaboration
- build the capacity of environmental stakeholders to support data collection efforts, use the web-based portal, and link research to sustainability planning and implementation

This project served to advance research and development aspects of the State of the Basin / Digital Basin Initiative and the Employment Lands project's integrated economic-environmental analysis of the region's 'wealth generating' lands inventory.

An exploration of the research and planning landscape resulted in the addition of over 50 regional environmental research documents to the RDI's online Research Repository and the release of the Integrated Community Sustainability Planning in the Columbia Basin-Boundary report. Efforts aimed at the development of environmental indicators and the online geospatial web-based portal resulted in 28 environmental data layers, including 16 new layers. Knowledge mobilization efforts focused on decision-making capacity building included the engagement of over 100 regional environmental stakeholders; the development of 14 reports, videos and training documents including a literature review on environmental indicators, a series of Trends Analysis Briefs, and Digital Basin training videos; and the delivery of 13 presentations to regional audiences. Future RDI evaluation efforts will include a focus on better understanding the impact of the State of the Environment project on policy and planning initiatives in the region.

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STRUCTURED ABSTRACT

Introduction: Rural regions struggle with a relative deficiency of reliable research on which to base planning decisions. Compounding problems around insufficient data collection resources result in challenges assembling research from various distinct sources, and making that research available to a geographically disperse audience. The RDI sought to improve the quality and accessibility of environmental research in the region and build the capacity of stakeholders to make use of this research.

Methods: Using the State of the Basin initiative as a platform for information sharing, the State of the Environment project involved researching and developing 16 new indicators of regional environmental well-being. Development of these indicators was informed by a literature review and through input from an advisory committee and several additional technical advisors. While some indicator research was shared through a traditional reporting format, significant efforts were made to make detailed information and source data available digitally for public access and use. Development of the Digital Basin, an online geospatial portal providing maps, graphs, reports, and data tables, fulfilled this objective. The RDI used various knowledge mobilization methods (including workshops, user guides, videos and presentations) to build the capacity of regional environmental stakeholders to make use of the Digital Basin and the information it provides access to. Throughout all stages of the project, existing reports and tools relating to the Columbia Basin-Boundary environment were assembled and uploaded to the RDI's online Research Repository, further improving the accessibility of regional environmental research.

Results: Basin-Boundary environmental stakeholders expressed strong support for the RDI's efforts to improve data collection and sharing activities in the region, evidenced by the willingness of stakeholders at local and provincial scales to contribute to the project. Initial response to the Digital Basin as a decision-making tool has been very positive. Future efforts will continue to focus on mobilizing resulting knowledge and understanding its impact on regional policy and planning decision-making.

Practical Applications: Research was shared in many forms, with the intent of satisfying the needs of a broad audience. Residents will gain a greater appreciation for the state of well-being in their community through the brief and graphic Snapshot Report, local government representatives will appreciate the in-depth discussion of indicators provided through the Long Report, and planners will appreciate the detailed data and maps made available through the Digital Basin. As one of the most comprehensive and interactive web-mapping applications ever attempted in Western Canada, the Digital Basin, represents a significant improvement to the regional research setting.

PUBLICATIONS/PRESENTATIONS/REPORTS

Select publications and presentations (for a full list, contact the RDI):

- Environmental Indicators Literature Review: Developing the RDI's Environmental Research Pillar (Spring 2013)
- State of the Basin Snapshot Report (Fall 2013)
- State of the Basin Long Report (Fall 2013)
- State of the Basin Perceptions of Well-Being Report (Fall 2013)
- Growing Season Trends Analysis (Winter 2014)
- Stream Health Trends Analysis (Winter 2014)
- Community Watersheds Trends Analysis (Winter 2014)
- Using Digital Technologies in the Field Video (Summer 2013)
- Digital Basin Quick Start Guide Video (Winter 2014)
- State of the Environment Presentation to the Columbia Mountains Institute of Applied Ecology (Spring 2013)
- State of the Basin Presentation to the Columbia Basin Trust Symposium (Fall 2013)
- Protected Areas Presentation to the BC Protected Areas Research Forum (Winter 2014)
- Digital Basin Presentation to the Columbia Basin Watershed Network (Spring 2014)
- Digital Basin Workshop Series (6 sessions, Spring 2014)
- Digital Basin Booth at the Columbia Basin Environmental Educators Expo (Spring 2014)

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