

Evaluating the Models for Working Together

Okanagan Water Board Workshop Running on Empty?

Water and Our Common Future
March 19, 2004

Presentation by:
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Executive Director



Fraser Basin Council

Presentation Outline

- **International Approaches**
- **Canadian Approaches**
- **Fraser Basin Council**
- **Barriers**
- **Factors for Success**
- **Principles**

“Water is not a commercial product like any other but, rather, a heritage which must be protected, defended and treated as such” (EU News, March 21, 2003)

“The politics of scarcity is giving way to the politics of sustainability. The myth of unlimited sources of new [water] supply...is yielding to the reality that existing supplies must be managed, protected and wisely allocated. Recognition is also spreading that water supply management...is part of the larger context of multiple purpose water resource and land management” (Platt and Morrill, 1997)



*INTERNATIONAL
APPROACHES*

International Approaches

- **Watershed Agencies**

- United Kingdom – Environment Agency/Planning Areas
- France – Water Agencies
- Australia – Integrated Catchment Management
- Africa – Catchment Management Agencies
- New Zealand – Regional Councils
- Rhine River – International Commission for the Protection of the Rhine
- Nile River – The Nile Basin Initiative
- Mekong River – Mekong River Basin Commission

International Trends

European Union – European Water Policy 2000 – Water Framework Directive

“[It is] The most significant legal instrument in the water field to emerge from Brussels for some time and will have a profound effect on how water is managed in Europe over the next 25 years.” (Chave, 2001).

The Murray-Darling Basin

- Spans four states in Eastern Australia
- Extends over 1.06 million square kilometers covering 14% of Australia
- Includes much of Australia's best farmland

The Murray-Darling Basin Initiative

The largest integrated catchment management program in the world.

The Murray-Darling Basin Agreement (1992):

“to promote and co-ordinate effective planning and management for the equitable, efficient and sustainable use of the water, land and other environmental resources of the Murray-Darling Basin”.

Key Elements of the Initiative

- the **Murray-Darling Basin Ministerial Council**, the *Initiative's* decision making forum.
- the **Community Advisory Committee**, which provides the Ministerial Council with advice and provides a two-way communication channel between the Council and the community..
- the **Murray-Darling Basin Commission** , the executive arm of the Ministerial Council which advises the Council and carries out its decisions.

The Murray-Darling Basin Commission Functions:

- to advise the Ministerial Council in relation to the planning, development and management of the Basin's natural resources;
- to assist Council in developing measures for the equitable, efficient and sustainable use of the Basin's natural resources;
- to coordinate the implementation of, or where directed by Council to implement, those measures; and
- to give effect to any policy or decision of the Ministerial Council.



PHILIPPINES-CANADA ENVIRONMENTAL AND ECONOMIC MANAGEMENT PROJECT (PCEEM)



**Department of Environment
and Natural Resources**

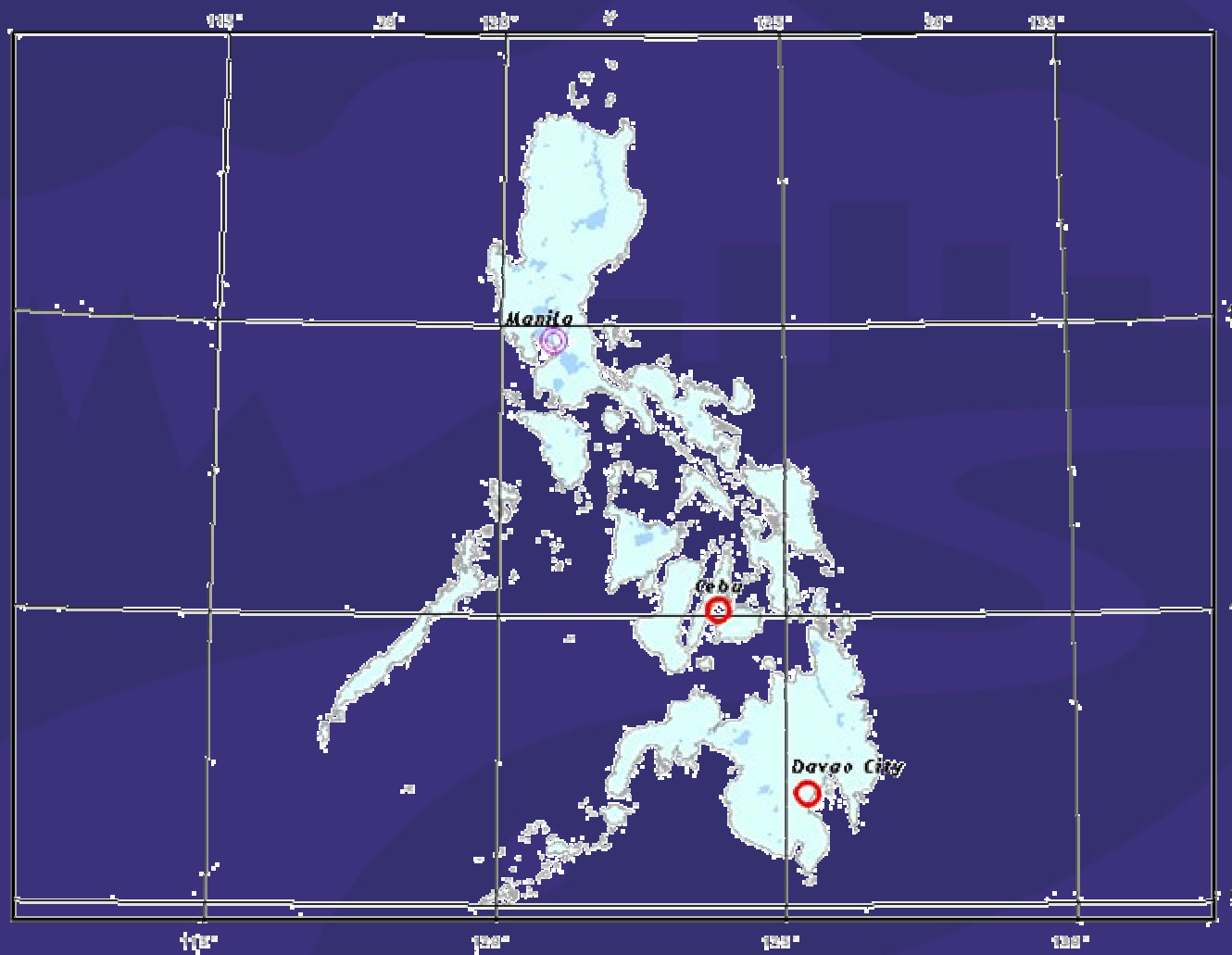


**Canadian International
Development Agency**



**SNC-LAVALIN
International**

PROJECT CENTRES



Project Goal

To promote effective governance in public and non-government sectors, with focus on environmental management.

Key Results or Impact

Improved management of environmental issues by public and non-government sectors, resulting to ecological health of the chosen watersheds.

Project Purpose

To contribute to the improvement of the management of the watershed ecosystems in Metro Cebu and Davao City

Key Results or Outcome

Watershed management and maintenance undertaken by self-sustainable, transparent, representative, accountable and multi-sectoral management boards in Metro Cebu and Davao City that are able to resolve conflicts.



CANADIAN APPROACHES

Canadian Approaches

- **Canada – Constitution Act**
- **Canada Water Act**
- **Federal Water Policy**

“The federal government endorses an integrated approach to planning and development of water resources...Increasingly, watersheds are becoming the preferred spatial unit for water resource planning. It is an approach that makes sense at any scale of planning...”(Environment Canada, 1987).

Canadian Approaches

- **British Columbia – Freshwater Strategy 1999; Watershed Restoration 1994-2002; Living River (pending)**
- **Alberta – Water Act 1999; Framework for Water Management Planning 2001; Water for Life 2003**
- **Saskatchewan – Watershed Authorities Act, 2001; Saskatchewan Network of Watershed Stewards, 2000**
- **Manitoba – Watershed Conservation Districts, 1972**
- **Ontario – Conservation Authorities, 1946**
- **Québec – Water Policy, 2002**
- **Nova Scotia – Drinking Water Strategy, 2002**

Analysis

- **Federal Water Policy is not actively promoted**
- **Watershed planning recently endorsed**
- **Ontario Conservation Authorities have a long tradition and experience – a review by Conservation Ontario has revealed many lessons learned**
- **Triggers – water allocation; drought; degraded water quality; contaminated drinking water; flooding**
- **Multi-stakeholder, collaborative approach embraced**

The Grand River

- A Canadian Heritage River
- Southern Ontario's largest watershed (7000 km²)
- Almost a fifth of the watershed is still largely natural, and of outstanding recreational and educational value
- 78% of the watershed is in agricultural use

*The Grand River Conservation
Authority's business is:*

Watershed Management

- Reducing Flood Damages
- Improving Water Quality
- Providing Adequate Water Supply
- Protecting Natural Areas
- Watershed Planning

**Recreation & Environmental
Education**

Vision

The vision is one of leadership in ensuring a healthy and sustaining relationship between the natural environment of the Grand River watershed and the demands on this environment by all forms of life.

Mission

The mission is to work with partners to conserve the natural processes and resources that support a safe and healthy environment for future generations in the Grand River watershed.

The Saskatchewan River Basin

- International watershed; 3 prairie provinces
 - Covers 4 ecological regions;
 - 1,220 km long; 435,000 sq. km
- More than 3 million people, mostly urban
 - 30% of the Nelson River is from the Saskatchewan River Basin
 - Prairies water-rich in the North only



The Mission

Promoting watershed sustainability through awareness, linkages and stewardship.

An environmental citizenship program to increase awareness, knowledge and commitment to sustaining the basin

Develop and implement projects with the assistance from stewards across the Basin

Governance/management

- Partners' Board - geographic/sector diversity
- Program Staffing - 1.5 person years
- Registered Non-Profit Charity
- Managing partner: Meewasin

Funding

- Some sustaining grants
- Memberships
- Project grants
- Fee for Service

The Bow River

- The Bow River is part of the South Saskatchewan River system.
- The Bow River is the largest tributary of the South Saskatchewan River accounting for about 21 percent of the drainage area that flows into the South Saskatchewan River.
- The Bow River has a drainage area of approximately 25 000 km².
- In 2001, approximately 1,050,090 people lived in the Bow River basin and by 2011 population is expected to reach approximately 1.14 million.

Mission and Purpose

The Bow River Basin Council Society (BRBC) is a multistakeholder charitable organization dedicated to conducting activities for the improvement and protection of the waters of the Bow River Basin, considering:

- riparian zones
- aquatic ecosystems
- quality and quantity of water,
- and effects of land use on surface and groundwater.

12 Member Board of Directors

Board Members are elected

2 from each of the following 6 categories

- Commercial and Industrial Members
- Licensee Members
- Municipal Government Members
- Non-profit Interest Groups and Academia
- Members
- Regulatory, Administrative and First Nations Members
- Individual Public Members

Issues and Initiatives

- Emerging Water Quality Issues in the Bow River Basin
- State of the Bow River Basin Report
- Protecting Riparian Areas
- Upper Elbow Project
- Urban Stormwater Management Project
- South Saskatchewan River Basin Water Management Plan

The background is a dark blue gradient. It features a stylized, lighter blue illustration of a river estuary. In the upper part, there are rolling hills or mountains. Below them, a river flows from the left towards the right, where it widens into an estuary. In the foreground, a large fish is depicted, swimming towards the right. The fish's body is curved, and its eye is visible. The overall style is clean and modern, using shades of blue.

**Fraser River Estuary
Management Program
[FREMP] 1985-2004**



Fraser River Estuary Management Program FREMP

- FREMP is a partnership for integrated management working toward sustainability
- FREMP emphasizes co-operative 'made-in-the-region' policy solutions
- FREMP coordinates the environmental review of project proposals that can affect the environment

Partners in FREMP

- Environment Canada
- Fisheries and Oceans Canada
- British Columbia Ministry
of Water, Land and Air Protection
- Greater Vancouver Regional District
- Fraser River Port Authority
- North Fraser Port Authority

FREMP Achievements

- FREMP Estuary Management Plan [EMP]: *A Living, Working River* 1994
- EMP endorsed by FREMP municipalities
- Area Designation Agreements
- Sediment Budget to manage dredging
- Habitat classification and GIS capability
- Indicator Monitoring Report on the Estuary Management Plan 2001

Estuary Management Plan Actions

- Environmental Protection
 - Water Quality Management
 - Fish and Wildlife Habitat
- Human Activities
 - Navigation and Dredging
 - Log Management
 - Industrial and Urban Development
 - Recreation

The Fraser River Basin





Fraser Basin Council

The background is a dark blue gradient. It features a stylized landscape with mountains in the upper half, a city skyline in the middle, and a large, faint silhouette of a fish in the lower half. The text is centered over the landscape.

Fraser Basin Council's

Origins

Pre 1992 Challenges

- *Decline in Fish Stocks*
- *Unacceptable Pulp Mill Effluents*
- *Limited Sewage Treatment*
- *Lack of Coordinated Planning and Management*

Pre 1992 Responses

- *Canada's Green Plan*
- *The Fraser River Action Plan*
- *New Provincial Government Initiatives
(e.g. Land & Resource Management Planning,
Environmental Assessment Legislation)*
- *The Fraser River Cities Coalition*
- *The Fraser Basin Management Program Start-up
Committee*

1992 - 1997

- *The Fraser Basin Management Board*
- *The Charter for Sustainability*
- *The Fraser Basin Council*



Fraser Basin Council's *Mandate & Structure*

What is the Fraser Basin Council?

- *A fully autonomous not-for-profit, non-governmental organization*
- *Trans-partisan and non-political*
- *A unique organization with a unique model of governance*
- *Formed in 1997 to implement the Charter for Sustainability*
- **Consensus Based Decision-Making**

The Fraser Basin Council: A Unique Collaborative Governance Model

- *A balanced and flexible partnership,
comprised of:*
- *“4 Orders” of Canadian Government
(Federal, Provincial, Local, First Nations)*
- *+*
- *Private Sector*
- *+*
- *Civil Society*

Fraser Basin Council Board Structure

36 Director Board:

- **Federal Government (3)**
- **Provincial Government (3)**
- **Local Government (8)**
- **First Nations (8)**
- **Regional Civil Society Representatives (10)**
- **Basin-Wide Civil Society Representatives (4)**

Fraser Basin Council Board of Directors and Staff

June 2003



Fraser Basin Council

How is the Fraser Basin Council Financed?

- *Core funding currently shared on a 1/3 basis among Federal, Provincial and Local Governments*
- *Additional contributions from corporations, foundations and individuals*
- *Fee for Service work*
- *Bi-annual State-of-the-Fraser Basin Conferences*

Typical Fraser Basin Council Roles

- Catalyst
- Impartial Facilitator
- Jurisdiction and Conflict Resolution Agent
- Sustainability Educator
- Resource in Support of Informed Dialogue & Decision-Making

Rationale for Collaborative Leadership

- **Multi-disciplinary and multi-interest collaboration is mandatory in order to find integrated solutions to sustainability problems**
- **Capitalizing on existing competencies of others is more cost-effective than developing such competencies internally**
- **Transparent and inclusive decision-making that seeks to address concerns of those affected typically:**
 - **Gives rise to more complete and enduring solutions**
 - **Reduces the likelihood of conflict and interventions later**
 - **Promotes more harmonious communities**
 - **Enhances public trust in governments and the private sector**

Charter for Sustainability





A Vision for the Fraser Basin:

“Social well-being supported by a vibrant economy and sustained by a healthy environment.”



Fraser Basin Council

Fraser Basin Council's

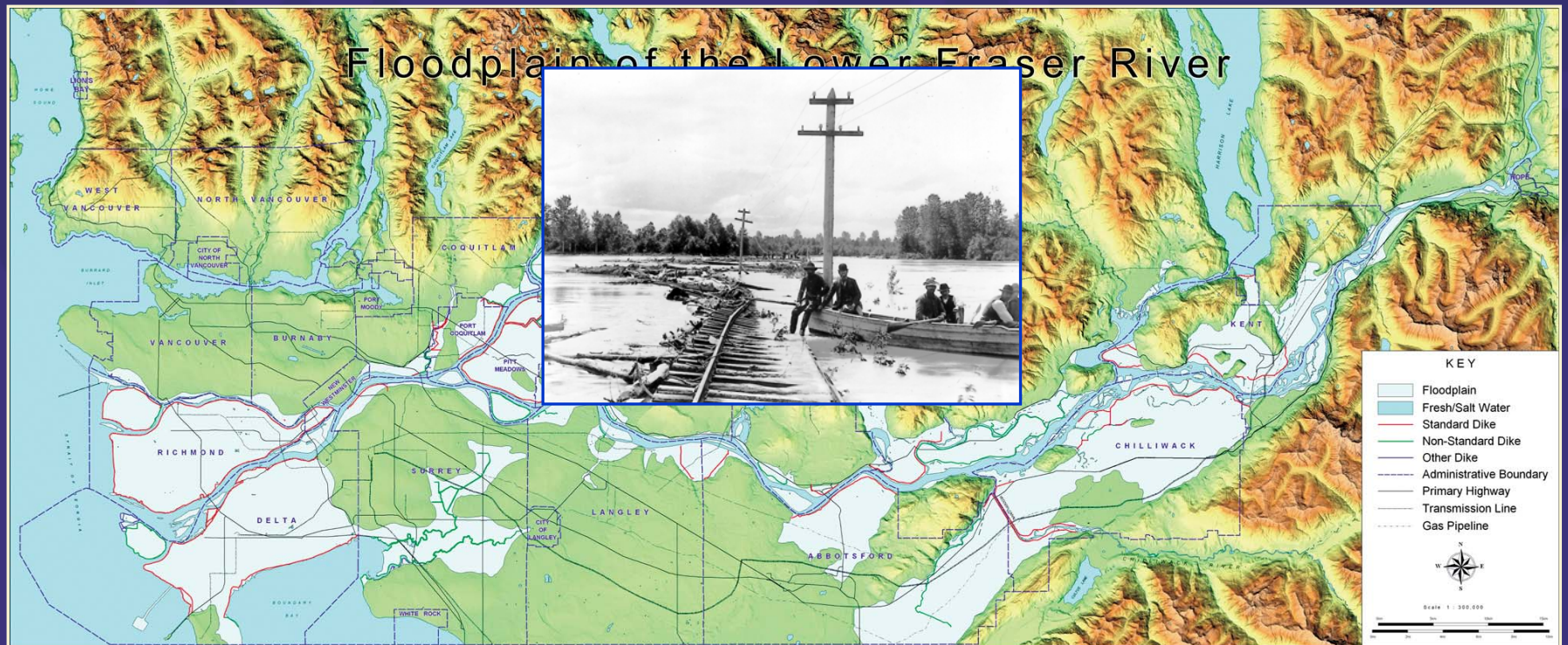
Work

- *Problem Solving*
- *Reporting*

Getting Ready for “The Big One”

Issue: We are unprepared for the next major Fraser River flood

Floodplain of the Lower Fraser River



River Management

Issue: Rising Riverbed threatens human safety



Waterborne Debris Management

Issue: Fraser River debris trap funding instability

LOWER MAINLAND & B.C. THE VANCOUVER SUN, THURSDAY, SEPTEMBER 4, 2003 B7

Leaking float forces passenger plane back to dock

BY KIM PEMBERTON
VANCOUVER SUN

A Twin Otter floatplane carrying 11 passengers had to return to its dock in Coal Harbour Wednesday after one of its floats began taking on water. West Coast Air owner Allan Baydala said the incident occurred as the crew of the aircraft prepared to take off on a flight to Victoria.

The aircraft was never airborne and passengers were able to disembark by stepping from the listing lane directly onto the dock.

Baydala said his company has never had an incident like this and he wonders if it was caused by the float being damaged by debris in the water. "It's very unusual for a float to take on water and

AIR SAFETY | Mechanical problem, thought to have been caused by debris in water, prevents takeoff of West Coast Air Twin Otter

cause the aircraft to list ... The floats are very reliable, very sturdy."

The Transportation Safety Board of Canada is investigating the incident, which occurred about 9 a.m.

"It's a very reliable and very common aircraft," said the Bill Yearwood, the board's regional aviation manager. "Clearly, it's an unusual event. Those aircraft land in the harbour every half hour."

He said the last incident involving a Twin Otter was in 2000.

West Coast Air was also investigated by the transportation safety board a year earlier. A Beaver aircraft owned by the company struck a small boat near Canada Place on Sept. 26, 1999, injuring one passenger on the boat. The safety board concluded the pilot did not see the boat in time to avoid the collision and his ability to see was reduced by the glare of the sun on the water.

It also found that while the boat operator knew aircraft operated in the harbour area, he didn't know he was in the designated landing area.

One of the recommendations was that water landing areas be marked with buoys.

TOM LEE Music Back to School



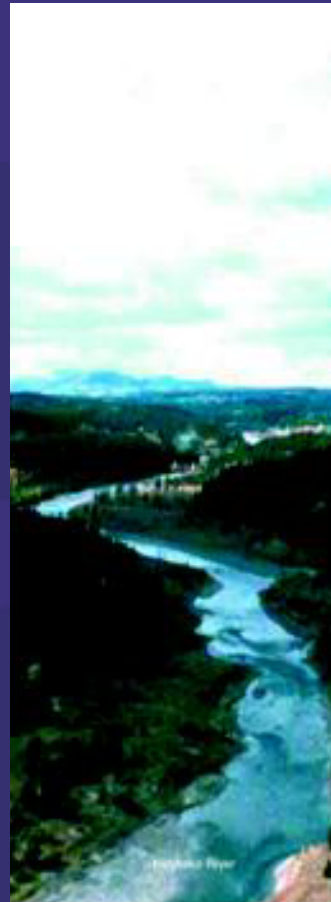
Drinking Water Protection

Issue: Is Drinking Water being provided in a safe and cost effective manner?



Nechako Environmental Enhancement

Issue: The need for a more natural flow regime



Nutrient (Manure) Management

Issue: Excessive manure disposal on farmland is contaminating groundwater

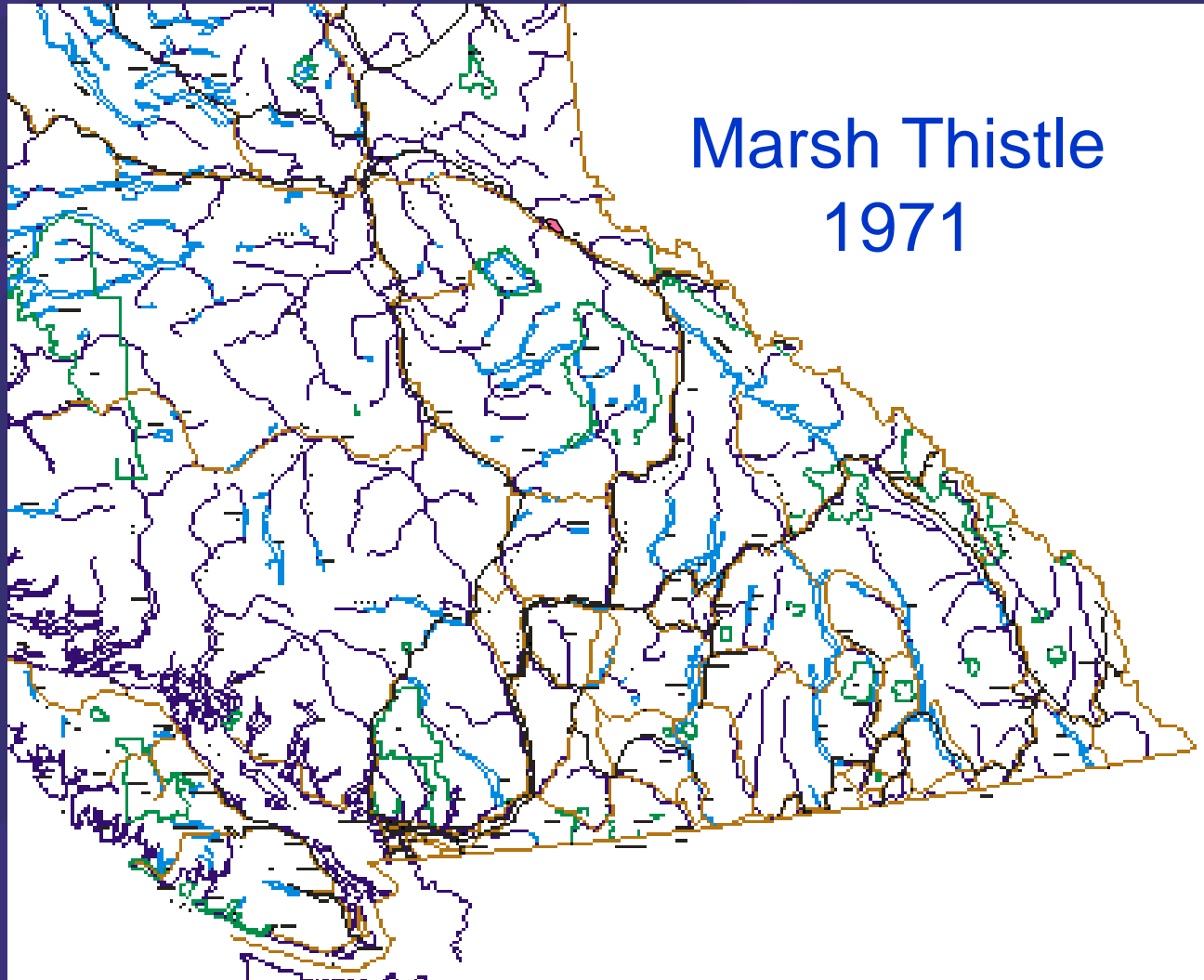


Invasive Plants

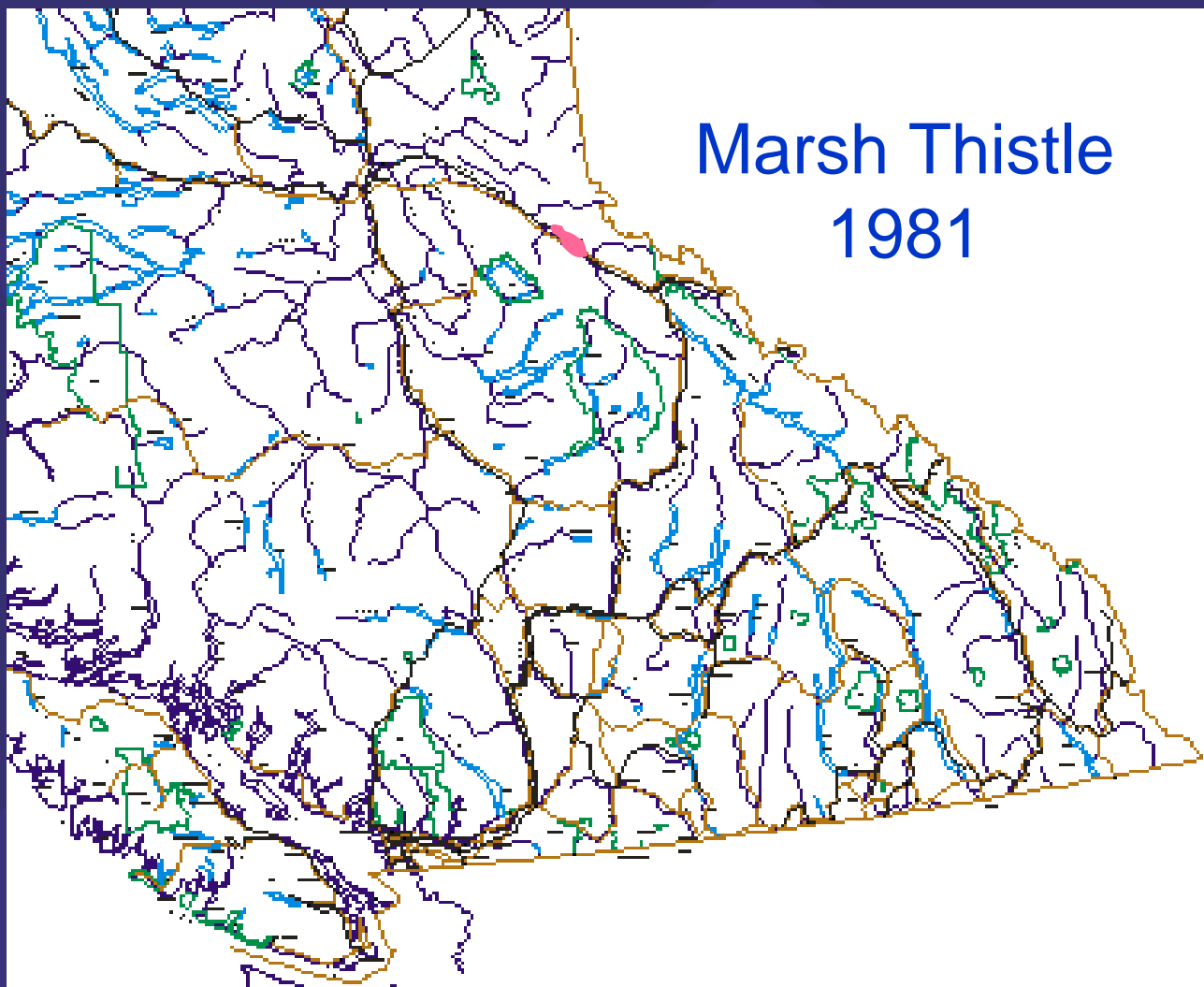
Issue: The uncontrolled spread of invasive plants will devastate BC's economy and environment



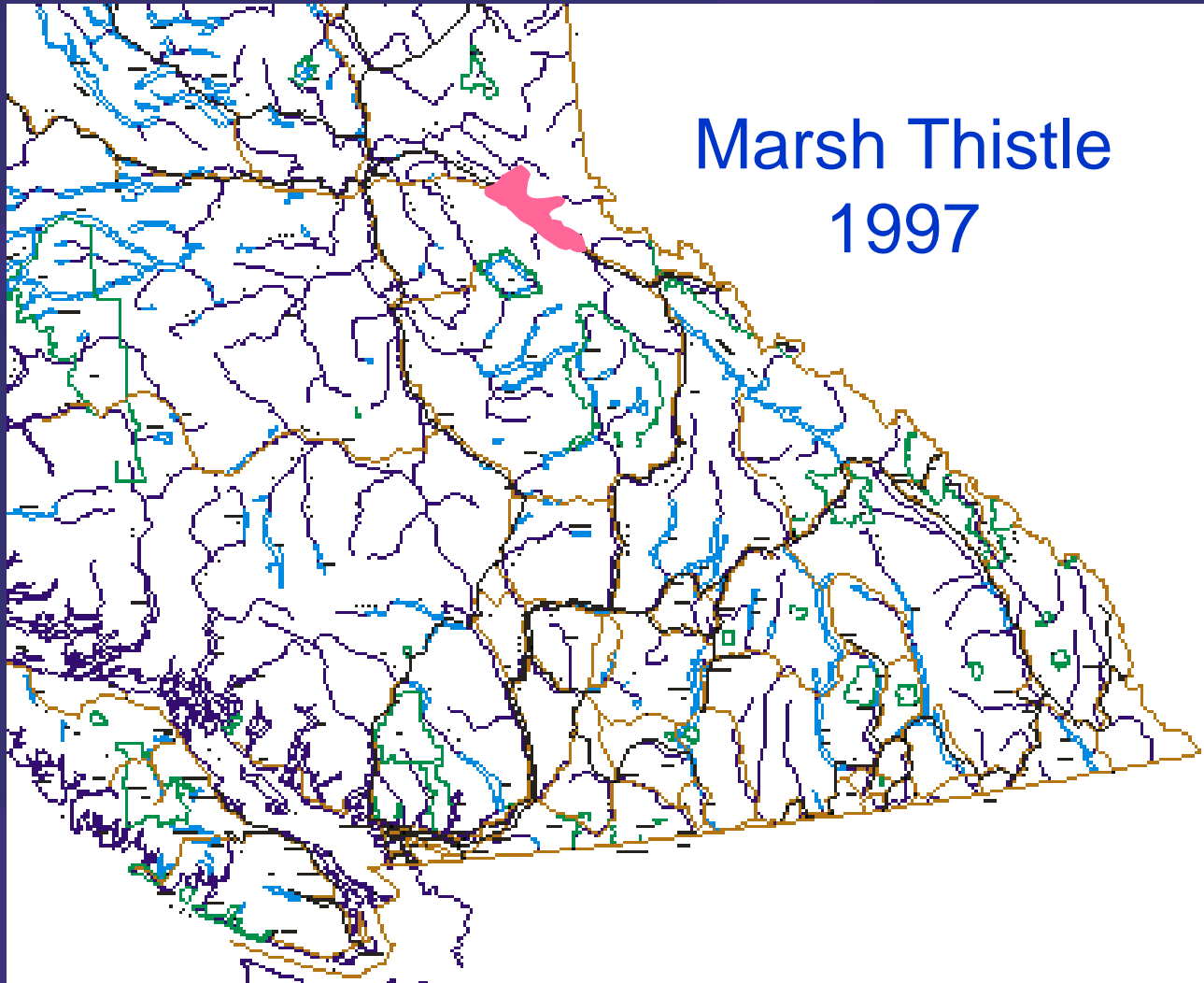
History of Marsh Thistle



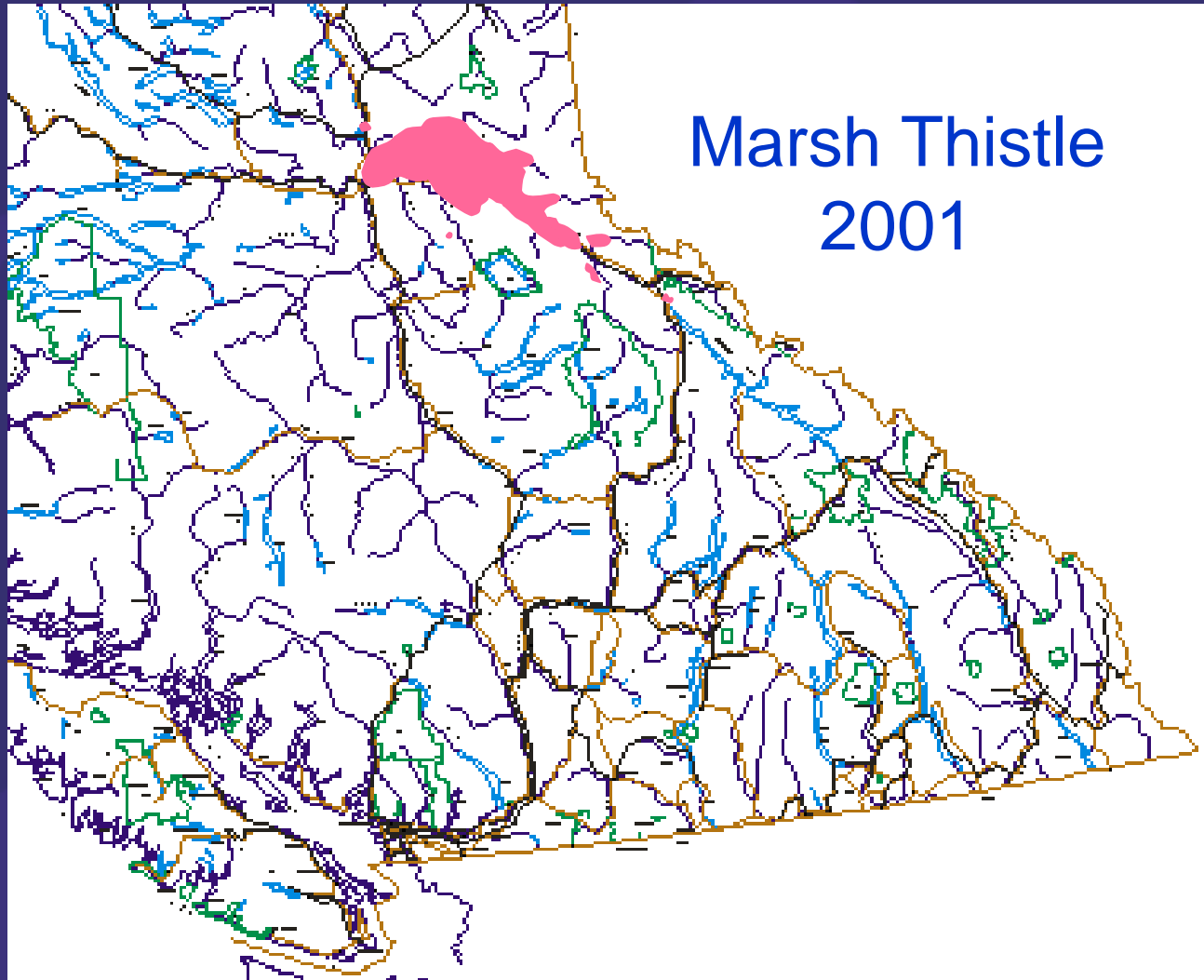
History



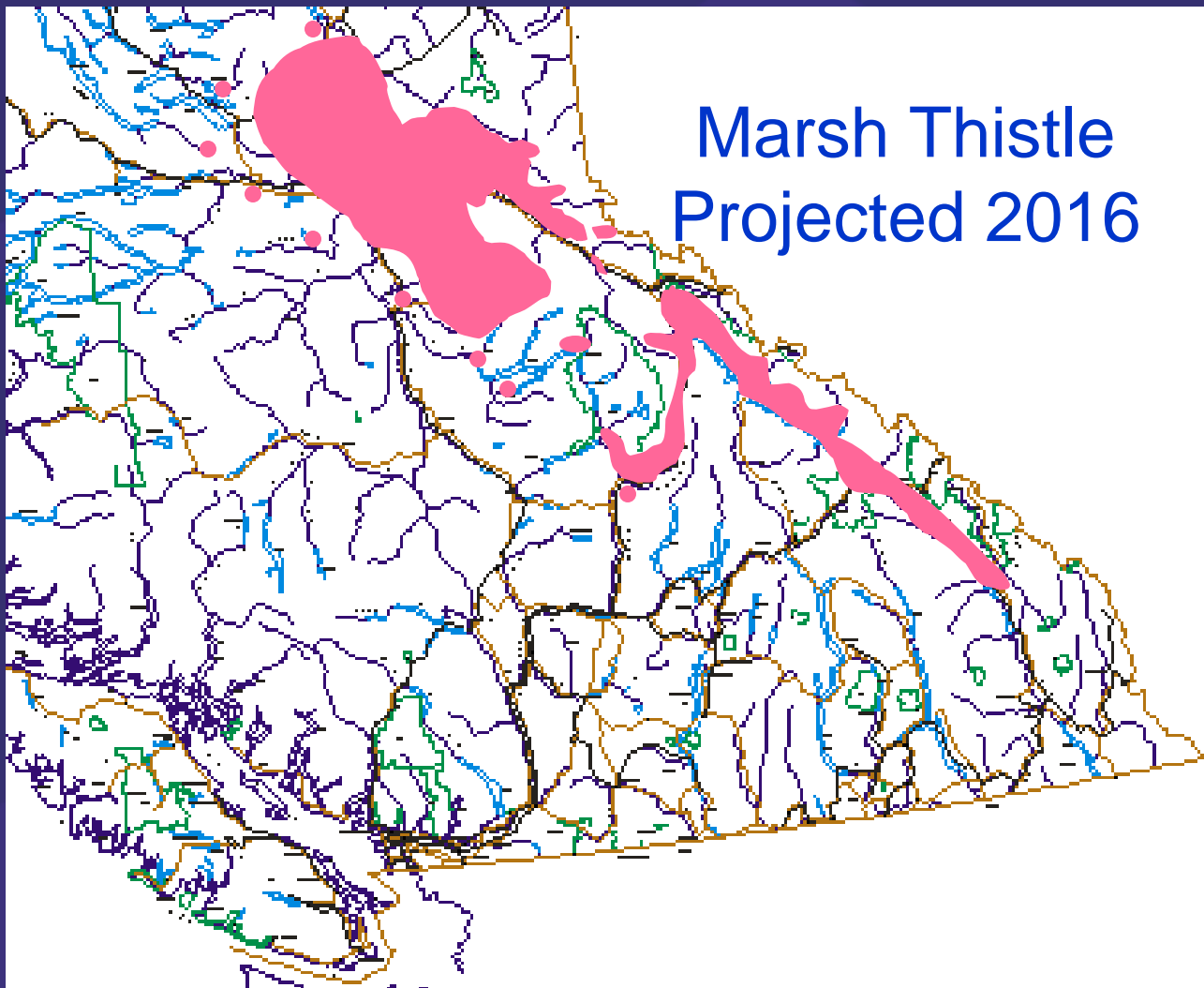
History

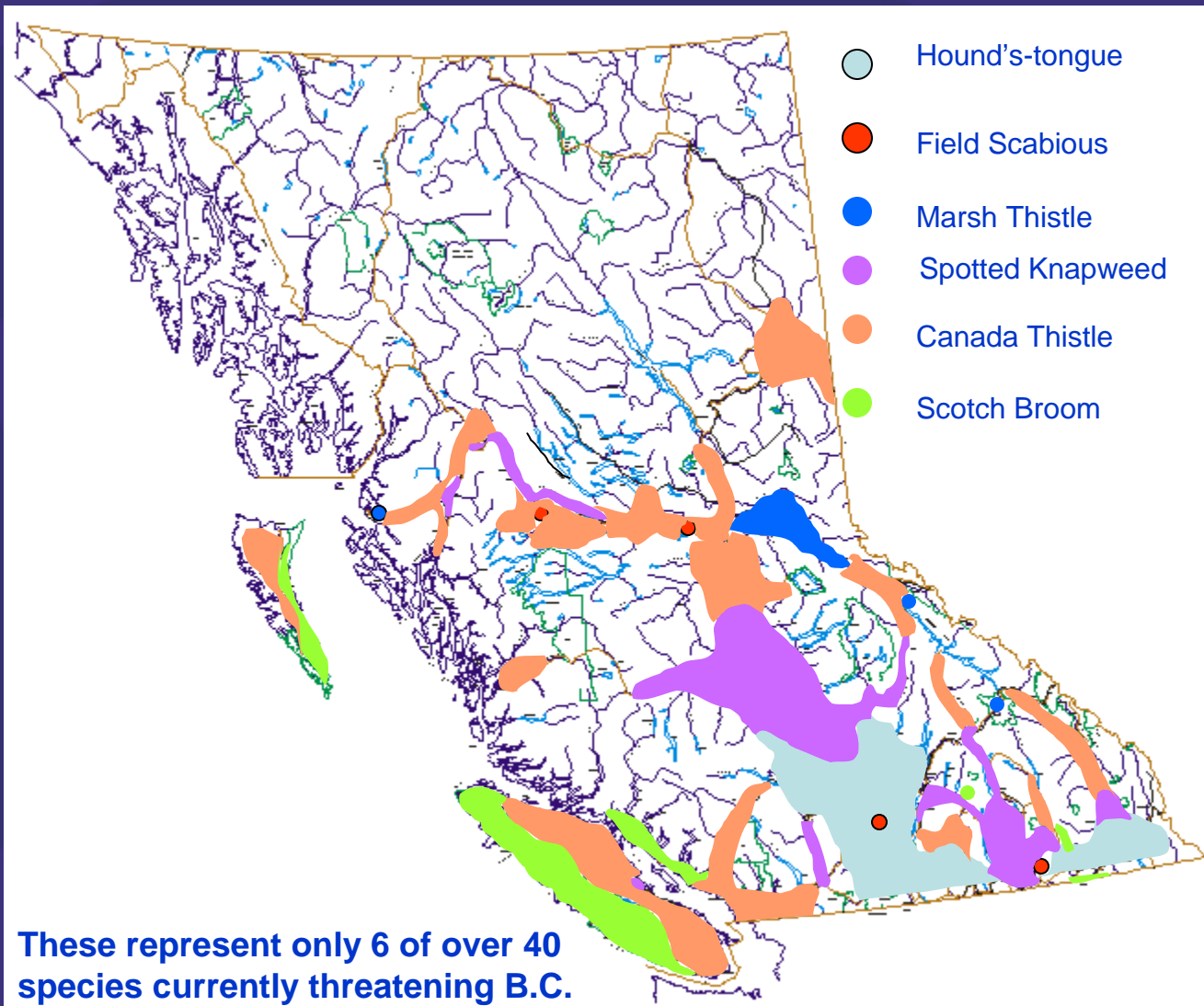


Present



Future?





Health - Animals



Plant induced birth defects



St. John's-wort photosensitization

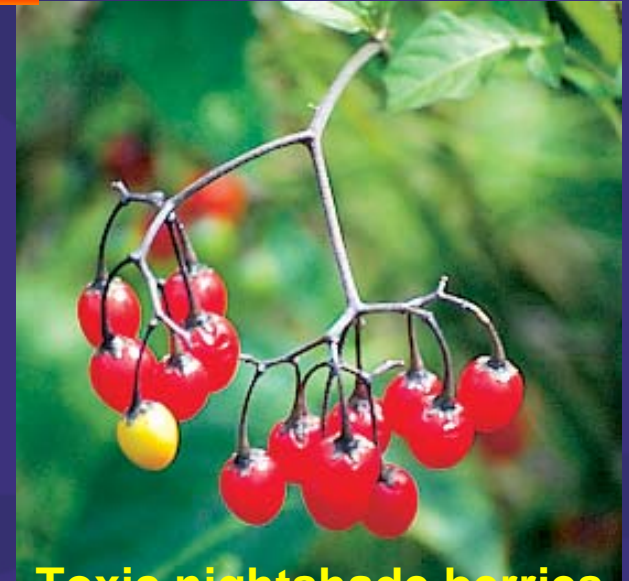


Cumulative liver damage

Health & Safety - Human



Giant hogweed – skin burns



Toxic nightshade berries

UGA1148090



Corridor site lines

Hay fever

Allergies



Poison ivy blisters

Enhancing Aboriginal / Non-Aboriginal Relationships

Issue: Sustainability depends on positive working relationships among aboriginal and non-aboriginal communities.



Measuring & Reporting on Basin Sustainability

Issue: How is the Basin doing, and how can we work together to make it more sustainable?

Fraser Basin Council

ASnapshot on Sustainability
STATE OF THE FRASER BASIN REPORT JANUARY 2003

SUSTAINABILITY INDICATORS

- POPULATION 4**
- HEALTH 5**
- EDUCATION 6**
- HOUSING 7**
- COMMUNITY ENGAGEMENT 8**
- ACRONAL AND NON-ACRONAL RELATIONSHIPS 9**
- WATER QUALITY 10**
- AIR QUALITY 11**
- RIVERS AND WILDLIFE 14-15**
- ECONOMIC EMPLOYMENT 16**
- ECONOMIC DEVELOPMENT 17**
- CORPORATE SOCIAL RESPONSIBILITY 18**
- FORESTS AND FORESTRY 19**
- AGRICULTURE 20**
- ENERGY 21**
- FRASER RIVER FLOODING 22**

Report measures health of the Fraser Basin: How's the patient doing?

Achieving a sustainable Fraser River Basin is a critical challenge facing the 2.8 million British Columbians who live, work and play in all regions of the Basin. In 30 years, the population in the Fraser Basin is expected to reach 4 million. Managing this growth in ways that enhance the Basin's social, economic and environmental health and wealth is an important responsibility and urgent priority for us all.

The Fraser Basin Council was established in 1997 with a mandate to ensure that the decisions we make now about the Fraser Basin will protect and advance its economic, environmental and social sustainability into the future.

A vital part of the Council's mandate is to measure progress towards sustainability in the Basin. Over the past two years, the Council has worked in partnership with government, non-government, private sector and community groups to develop a set of "sustainability indicators" that comprise this State of the Fraser Basin Report: A Snapshot on Sustainability.

This report provides a kind of medical check-up for the Fraser Basin. The Council has run some tests designed to see how the health of the Basin is doing. While the general health of the patient is pretty good, the report identifies some critical issues and priorities that must be taken to ensure a more sustainable Basin. It provides some insight on where we are making progress and where we need to focus more attention and action. Hopefully it will also lead to greater public awareness and understanding of sustainability issues and actions that we can take to make sustainability a way of life for us all.

The report includes an analysis and discussion of trends for all three components of sustainability – social or community, environmental and economic. Indicators are presented for 18 topics areas that comprise the report, providing a baseline for tracking trends and future reporting on the sustainability of the Basin.

(See Page 3 for more information on the scope of the report.)

"Sustainability means living and managing our activities in a way that integrates social, economic, environmental and institutional considerations to meet our needs and those of future generations."

From the Rockies to Richmond, Fraser River Basin is home to most in BC

British Columbia's Fraser River Basin – it's one of the most beautiful, prosperous and healthy places on earth. If you are reading this, you are probably one of the 2.8 million people who live, work and play in the Basin – but you may not know it.

The Fraser Basin – the area drained by the Fraser River and its many tributaries – is the site of Great Britain and almost as large as the State of California. Stretching 1377 kilometres from the Rockies to Richmond, the Basin covers more than 25% of BC and is home to nearly two out of every three British Columbians.

Prince George, Vanderhoof, Grouse, Williams Lake, Kamloops, Uxbridge, Chilliwack, Abbotsford, Surrey, Delta, Coquitlam, Vancouver, Whistler and many other cities and towns are all located in the Fraser Basin.

For thousands of years, the Basin has been home to Aboriginal peoples including the Haisla, Gitksan, Nuxalk, Nuu-chi-nulth, Kwakwaka'wakw, Skeena, St'at'imc, Tshilhqan, Carle and Okanagan speaking First Nations. The sustainability of both Aboriginal and non-Aboriginal communities in the Basin is critical to the long-term health of the Basin as a whole.

Economic activities in the Basin account for 80% of the province's gross domestic product. Its forests cover nearly three times the area of New Brunswick, and its farms, ranches and orchards comprise half of all BC's agricultural lands. There are eight major producing mines, as well as some of the province's – and the world's – most spectacular natural beauty and recreational opportunities.

From the Rockies to Richmond, Fraser River Basin is home to most in BC

The Basin also boasts one of the world's most productive salmon river systems, supporting five salmon species and 65 other species of fish, including steelhead and sturgeon. The Fraser and its tributaries comprise BC's most productive and important breeding and overwintering area, and the mouth of the river is particularly recognized as a globally significant estuary. Hundreds of species of birds, reptiles, amphibians and mammals, not to mention trees, plants and insects, form the basis of the Basin's diverse ecosystems.

The Fraser River Basin, it's a very special place and worth taking care of.

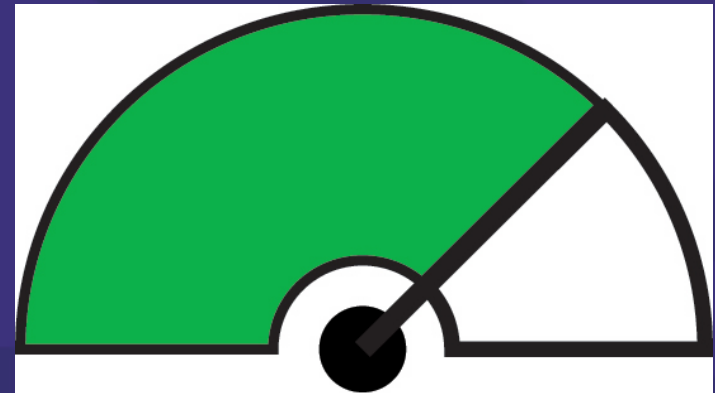
(See Page 2 and 3 for a snapshot of the Fraser Basin.)

Social well-being supported by a vibrant economy and sustained by a healthy environment

Sustainability Gauges



GETTING WORSE



GETTING BETTER



UNCERTAIN

Institutional Considerations

**People Working Together:
A Few Keys to Success**

Prerequisites for Successful Partnerships

- **All parties willing to come together in good faith**
- **Hard positions replaced by informed perspectives**
- **“Egos parked at the door”**
- **Common interest in achieving sustainable solution**
- **Commitment to delivering on the outcomes and decisions**
- **Commitment to dialogue and “win-win” outcomes**

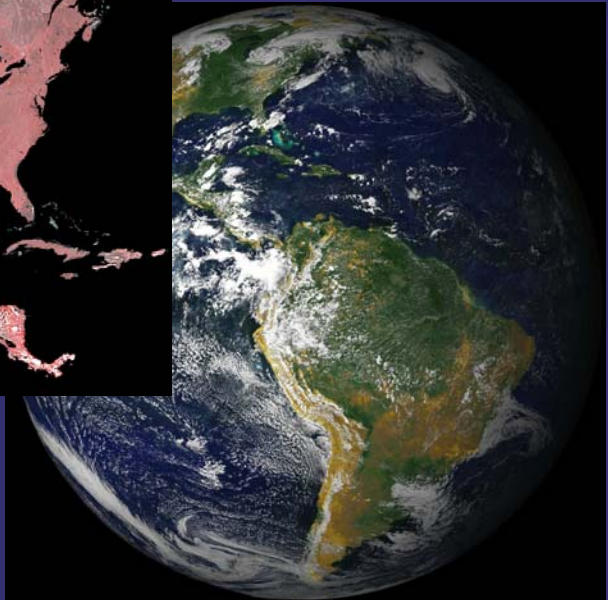
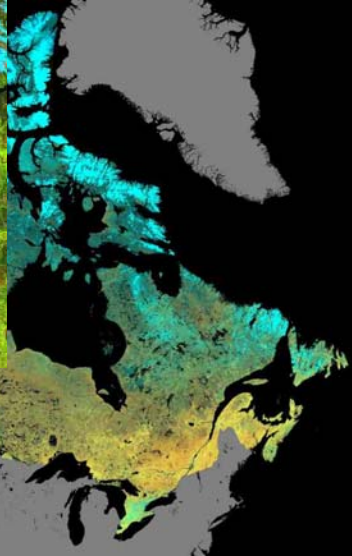
Moving from Debate to Dialogue

DEBATE:

- 1. Assuming that there is only one right answer and you have it***
- 2. Listening only to try to find flaws in the logic of the speaker***
- 3. Defending your assumptions (louder if they are weak)***
- 4. Criticizing the other person's point of view***
- 5. Seeking an outcome that agrees with your position***

DIALOGUE:

- 1. Assuming that others have something to add to the process***
- 2. Listening with empathy as a basis for understanding and respect***
- 3. Bringing up your assumptions for discussion and examination. Helping others to surface their own assumptions***
- 4. Re-examining all points of view, looking for common ground***
- 5. Acting creatively. Finding/discovering new possibilities, creating new opportunities***



Barriers

- Lack of sustainable funding
- Excessive bureaucracy
- Weak environmental legislation
- Lack of up-to-date watershed data and useful decision-support tools
- Lack of technical expertise and/or technical assistance

Barriers

- **Politics, competing interests and societal inequalities**
- **Fragmentation of responsibilities among agencies**
- **Resistance to change**
- **Lack of monitoring and evaluation procedures**
- **Unrealistic expectations**

Factors for Success

- Political Endorsement
- Enabling Legislation
- Sustainable Funding
- An Integrated Inter-Disciplinary Approach
- Clear Visions, Goals, Objectives and Action Items
- Good Data, Appropriate Technical and Analytical

Factors for Success

- Skills, and Useful Decision-Support Tools
- A Common Language for Decision-Making
- Shared Action Plan, Incentives to Undertake Action;
Community Successes
- Public Involvement and Partner Collaboration
- Dynamic leadership

Principles

- Clear decision-making framework that looks across scales and that is based on the best scientific and technical information available.
- An adaptive, participatory approach with the authority to make decisions at the lowest level.
- A wide range of legal, economic, social and communication tools and approaches (Tellus Institute 2003).



THANK-YOU

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