

ABMI Overview

Biodiversity — Everyone's Business

Biodiversity encompasses Alberta's living resources and is the foundation of healthy ecosystems. The ecological goods and services provided by biodiversity include products such as lumber, cereal crops, and the creation, maintenance, and restoration of Alberta's ecosystems. Among other things, biodiversity is responsible for purifying our air and water, ensuring the productivity of our agriculture and forest lands, and regulating our climate. Strong economies and communities depend on healthy environments.

The ABMI — For All Albertans

Albertans are familiar with a range of well-accepted indicators that describe the condition of our economy and others that measure the state of our health. No such broadly-accepted indicators are available to describe the condition of the province's living resources.

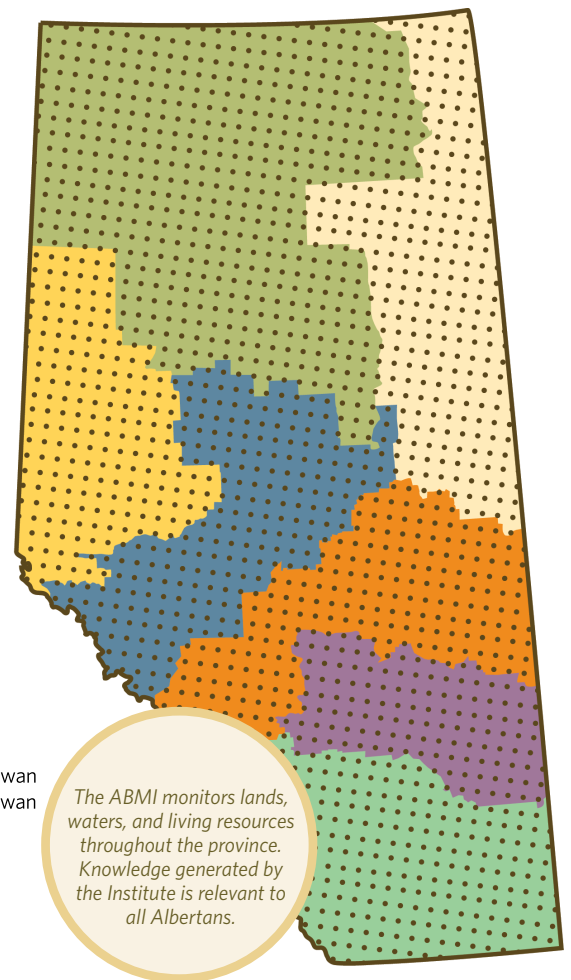
The Alberta Biodiversity Monitoring Institute (ABMI) measures and reports on the state of land, water, and living resources across the province using scientifically-credible indicators of environmental health. The ABMI measures and reports on more than 2500 species and habitats at 1656 sites across the province. Data and knowledge generated by the ABMI are value-neutral, independent, and publicly accessible.

Adding value to the data collection activities is core to the ABMI mission. Raw information is converted into knowledge and applied to resource management.

LEGEND:

- | | |
|-------------------|----------------------|
| ■ Lower Peace | ■ Upper Peace |
| ■ Upper Athabasca | ■ Red Deer |
| ■ Lower Athabasca | ■ North Saskatchewan |
| ● ABMI sites | ■ South Saskatchewan |

0 25 50 100 150 200 Km





Scope of ABMI
Business Activities

Independent Governance

The ABMI is a not-for-profit society that is arms-length from government, industry, and environmental groups. The society is member based. An eight person Management Board oversees the operations. The Board includes senior management representatives from the agriculture, forestry, energy, academic, research, environmental, and government sectors.

The ABMI is jointly delivered through the University of Alberta, Alberta Innovates Technology Futures, the Royal Alberta Museum, and the Alberta Conservation Association.

Scientific Integrity

The ABMI is built on a foundation of high-quality science. In order to ensure continued excellence in science, the ABMI has established an independent Scientific Committee composed of world-class experts in the field of biodiversity monitoring and conservation. At every step, the ABMI is committed to peer review by the greater scientific community.

Filling a Clear Need

The ABMI provides cost-effective indicators that act as a common yardstick for establishing clear management goals and tracking performance against those goals. Knowledge produced by the Institute is:

1. Relevant at a regional and provincial scale.
2. Fundamental to Watershed Planning, the Cumulative Effects Management System, and the Land-use Framework.
3. Key to sustainable oil sands development.
4. Used to fulfill Alberta's commitment to the National Forest Inventory.
5. Key to the Water for Life strategy.
6. Essential to ensuring a sustainable legacy for future generations.

The ABMI program is a world-class monitoring system of which every Albertan can be proud.

Q & A — ABMI Core Report

The Status of Biodiversity in the South Saskatchewan Planning Region

1 What is the purpose of this report?

This report uses credible, scientific data to establish a regional baseline of the status of biodiversity in the South Saskatchewan Planning Region (SSPR).

2 What is the Alberta Biodiversity Monitoring Institute?

The Alberta Biodiversity Monitoring Institute (ABMI) is an independent, value-neutral scientific organization that measures and reports on the health of Alberta's biodiversity and wildlife.

The ABMI helps establish baselines and regional outcomes for biodiversity under land-use plans, and then tracks performance against those outcomes. Today, the ABMI is the most rigorous and broadly-supported biodiversity monitoring program in the world.

3 Why produce a report for the SSPR?

The ABMI produces a series of Core Reports that are designed to be a standardized set of reports that will be reproduced on regular, cyclical basis. We produced a report on the status of biodiversity in the SSPR for the following reasons:

- The ABMI has been actively monitoring biodiversity in southern Alberta since 2007. As a result, the ABMI has excellent data for southern Alberta which allows us to generate scientifically credible results on the health of biodiversity in the region.



- Representing 13% of Alberta's land area, the SSPR is home to 45% of the provincial population and has significant agricultural, urban, and energy related land-use pressures. Decisions about the future of our landscapes continue to be discussed in a variety of forms including Watershed Planning Advisory Councils (WPACs) and land-use regions.
- The ABMI is in the business of developing products that help inform and support sustainable resource management in Alberta. This report represents our first opportunity to directly show how biodiversity knowledge can be used to support sustainable resource management in southern Alberta.

4 How is the ABMI governed? Who is the ABMI accountable to?

The ABMI's Board of Directors is composed of representatives from the Government of Alberta, environmental non-governmental organization sector, forest sector, energy sector, agriculture sector, and the research community. The Board of Directors appoints the ABMI's Executive Director, who is accountable for ensuring that the Institute remains effective, impartial, and accessible.

5 Where does the ABMI's funding come from?

The ABMI operates under a cost-shared model receiving funding from government and industry. In 2010, approximately 70% our funding came from the Government of Alberta. Please see our 2010 Annual Report for additional information.

6 What is this report saying about the health of biodiversity in the SSPR?

Forty-nine percent of the SSPR has been permanently or temporarily converted to support residential, recreational or industrial activities. In just the Grassland Region of the SSPR, 57% of the land base has been permanently or temporarily converted.

The ABMI assessed the status of 85 species in the Grassland Region of the SSPR and found them to be 54% intact. In general, intactness is lowest for species that are associated with native grassland habitat. This indicates that the most extreme departures from intact conditions are associated with species that have a close relationship with native grassland habitat.

Overall, 6.3% of the SSPR is managed as protected areas, and that percentage is not evenly distributed across the different natural regions and subregions.

The ABMI will continue to track status and trends in human development, species, and habitat to determine how the ecological health of the region is changing. As resources permit, we will broaden species surveys to include the Rocky Mountain, Parkland, and Foothills Natural Regions in future assessments.

Future reports will also profile the status of winter active mammals, wetlands, and additional components of habitat in the SSPR.

7 What does the ABMI's report say about species at risk in the SSPR?

This report identifies 69 species that are listed or otherwise identified as a conservation concern in the SSPR. The ABMI was able to measure the status of 4 of these species and found them to be on average 53% intact. Drawing on existing data from the provincial government, this report also indicates that Sage Grouse populations occurring in the SSPR have declined by approximately 80% since the mid-1970's.

8 What can the information in this report be used for?

As land-use and natural resource planning in Alberta gains momentum and profile, the knowledge and data provided by the ABMI can be used to set regional ecological goals and objectives, and serve as the foundation for evaluating resource management outcomes in southern Alberta.

9 When will subsequent reports with data about other aspects of Alberta's biodiversity be ready?

The ABMI is designed to monitor biodiversity across Alberta and in perpetuity. We will provide updates on the status of biodiversity in the SSPR every few years. In addition, the ABMI will be producing a number of reports for other regions of interest such as:

- Natural Regions,
- Watersheds,
- Oil Sands, and
- Other Land Use Planning Regions.



10 What is “biodiversity”?

Biodiversity is the variety of life on Earth—from the multitude of species that live in a drop of water, to the vast wildlife that depends on Alberta’s largest ecosystems—and the ecological processes of which they are a part. Biodiversity is the foundation for the ecological goods and services that support Alberta’s high quality of life: clean air, clean water, and abundant renewable resources.

11 What is the impact of the ABMI in Alberta?

Alberta has adopted a systems approach to resource management. Comprehensive monitoring is an essential component of that system. The ABMI is Alberta’s only comprehensive regional-scale terrestrial and wetland biodiversity monitoring program.

12 There have been a number of environmental monitoring reviews in recent months including a Federal Oilsands Advisory Report (December 2010) and Alberta Environmental Monitoring Panel report (June 2011) that examine monitoring in Alberta. How do these reports relate to the ABMI?

There is a strong recognition that environmental monitoring in the province of Alberta would benefit by being arms-length, science-based and transparent. These characteristics ensure that the people of Alberta can have confidence in the sustainability of resource management in our province.

Jointly developed by government, industry and the environmental community, the ABMI is designed with these key features in mind. Specifically, the ABMI’s core values and principles are:

1. **Independent and Objective** — the ABMI operates at arms-length from all stakeholders and produces factually based results;
2. **Scientifically Credible** — the ABMI is built on a foundation that delivers scientifically credible findings;
3. **Single Repository for Data** — high quality data and information management is housed and managed in one place to ensure timely and accurate delivery;
4. **Transparent Operations** — the ABMI is transparent, in keeping with its role as an arms-length entity entrusted with addressing critical public interest needs;
5. **Public Access to ABMI Data** — data and information products are publicly accessible; and
6. **Value from Products/Services** — the ABMI is committed to delivering as much value as possible from its data set. ABMI data should be applied to a broad suite of suite resource management initiatives.

Both the federal and provincial reports on environmental monitoring recognize these strengths in the ABMI.

ABMI — Fundamental to Regional Planning

Regional Planning

Released in 2003, and reaffirmed in 2008, the Water for Life strategy outlines a provincial action plan for the management of Alberta's water resources. Watershed Planning Advisory Councils (WPACs) were created under Water for Life and are responsible for local and regional planning.

In addition to WPACs, the Government of Alberta initiated work on a Land-use Framework (LuF) in 2005. The LuF structure calls for the creation of seven regional plans and adopts a cumulative effects management approach. Enhancing conservation and stewardship in land-use planning are key strategies under the LuF.

A comprehensive environmental monitoring and knowledge system is required to support WPACs and the cumulative-effects approach identified in the LuF.

Systems Context

Alignment between the ABMI and regional planning is clear in the context of the provincial Sustainable Resource and Environmental Management model (SREM model).

Broad activities under the SREM model are:

1. Set Outcomes: development of desired economic, environmental and social outcomes for each of the six planning regions.
2. Prepare Regional Plans: using integrated policy, regional bodies prepare resource management plans. In the case of LuF, plans are approved by a Cabinet Committee.
3. Deliver on Plan: implement policy and operations determined in regional plans.
4. Monitor Performance: evaluate progress against desired outcomes.
5. Change: validate outcomes and improve planning and management.

Performance monitoring and evaluation is needed to assess economic, environmental, and social outcomes. The ABMI is a world-class monitoring program that provides environmental information.



Alberta's Sustainable Resource and Environmental Management System



ABMI Linkages

Based on the above model, key linkages between regional planning and ABMI include:

1. a. Providing a world-class provincial measurement system for environmental resources that includes a biodiversity monitoring network, a wetland monitoring network, and a remotely-sensed land-use monitoring system;
 - b. Ensuring that Alberta's resource management system has tools to help set clear and measurable outcomes for a sustainable future;
 - c. Supplying the monitoring tools necessary for tracking performance toward regional outcomes; and
 - d. Providing knowledge that will be used to educate Albertans about the importance and effectiveness of resource management efforts.
2. ABMI provides a source of information for ongoing resource management operations at a regional scale.
 3. ABMI provides a continuous flow of information on status and trends in biodiversity that can be used to

assess regional plan or management system performance with respect to biodiversity outcomes. This information may also be used to trigger or focus research investments undertaken by the province or industry.

4. ABMI identifies potential relationships between biotic performance and human-caused disturbance. This forms the basis for applied research to determine cause and effect relationships.
5. ABMI provides an ongoing and trusted source of information that supports stakeholder deliberations and increases the "bio-literacy" of all concerned.

These links can be forged and maintained only in an environment of collaboration. There must also be a commitment from key partners to use ABMI information.

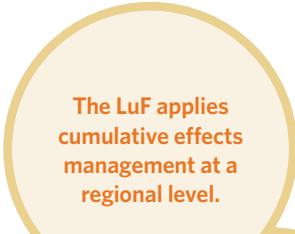
Current Status

Under LuF and Water for Life, the ABMI has been identified as a key environmental program for regional monitoring, evaluation, and reporting. The ABMI is actively being used to improve resource management in the following areas:

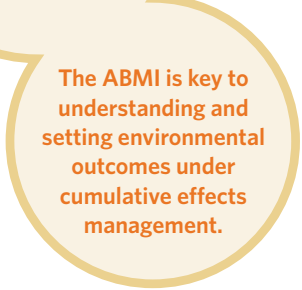
ABMI in Baseline Planning: The Lower Athabasca Regional Plan was developed using ABMI indicators.

Resource Operations: A harmonized model for monitoring living resources in the oil-sands was prompted by, and based on, the ABMI monitoring network.

Outcomes: The ABMI continues to produce core reports on the health of biodiversity in land-use planning regions including the South Saskatchewan Planning Region. Comprehensive reports on the status of living resources in all other planning regions will be completed in coming years.



The LuF applies cumulative effects management at a regional level.



The ABMI is key to understanding and setting environmental outcomes under cumulative effects management.