Strategic Plan

2026–2029

Biodiversity Pathways

PARTNERS IN MONITORING

Introduction

Biodiversity Pathways is a not-for-profit organization that delivers biodiversity monitoring and applied science across Canada. Since 2023, we have grown rapidly, expanding our work across jurisdictions and developing new programs with governments, Indigenous communities, industry, and research partners. Biodiversity Pathways operates through several specialized Centres, including the Wildlife Science Centre, Services for Environmental Sensor Research Centre, Boreal Avian Modelling Centre, Geospatial Centre, and Partnerships for Applied Research Centre. Each Centre brings different expertise, and Centres work together where their combined capabilities can address larger environmental questions. This strategic plan outlines Biodiversity Pathways' direction for 2026–2029. It builds on three years of growth and sets out where we will focus our efforts over the next three years, allowing us to adapt as technologies, environmental or policy pressures evolve.

Biodiversity Pathways is the national affiliate of the Alberta Biodiversity Monitoring Institute, a relationship that supports shared scientific and technical capacity while maintaining distinct operational roles for each organization.

Our Mission

We track changes in biodiversity and ecosystems and work collaboratively to provide scientifically credible information that supports stewardship and decision-making.

Our Vision

Biodiversity Pathways is a trusted leader in applied biodiversity science and monitoring across Canada.

Our Operating Principles

- **Independent**: Our information and analyses are objective, free from management, advocacy, or regulatory influence.
- **Scientifically Credible**: Our methods, analyses, and reporting are evidence-based, transparent, documented, and subject to scientific review.
- **Relevant and Practical**: We develop information, tools, and monitoring systems that support real-world stewardship and decision-making needs.
- **Transparent**: Our governance and operations are open to scrutiny, supporting accountability and trust.
- **Collaborative**: We work with governments, industry, Indigenous communities, researchers, and other partners to strengthen applied biodiversity science, monitoring, and decision-support systems.

Our Values

- **Leadership**: We work with others to advance responsible stewardship.
- **Accuracy**: We do our work with care and precision.
- **Ingenuity**: We bring creative thinking to our products, services, and processes.
- **Passion**: We care deeply about our work and the impact it has.
- **Personal Initiative**: We value initiative and each individual's contribution to the shared success of the organization.
- **Teamwork**: We listen to, respect, and work cooperatively with each other.
- **Personal Development**: We prioritize learning, feedback, coaching, and mentoring to support individual growth.

Context: Emerging Trends and Pressures

Economic Growth and Working Landscapes

Governments across Canada continue to place strong emphasis on economic growth and resource development. At the same time, expectations for biodiversity stewardship and environmental performance continue to grow. This is driving demand for scientifically credible information to support development and environmental management across working landscapes.

Biodiversity and Stewardship Expectations

Expectations for biodiversity stewardship are changing. Governments, industry, Indigenous communities, and other organizations increasingly need to understand whether management actions are producing the intended environmental outcomes. Making good decisions requires a clear understanding of the state of ecosystems, how they are changing, and why. This is generating greater demand for consistent monitoring and reporting.

Technology and Applied Environmental Science

Remote sensing, acoustic sensors, wildlife cameras, geospatial analysis, cloud platforms, artificial intelligence, and advanced modelling are transforming how environmental information is collected, processed, and applied. These technologies are making it possible to monitor biodiversity across larger areas and provide information more quickly. Scientific expertise remains essential to ensure these new approaches produce credible results.

Climate and Ecological Change

Ecosystems are changing in response to climate change and land-use pressures. Wildfire, drought, hydrological change, habitat fragmentation, and cumulative disturbance are affecting landscapes across Canada. Understanding these changes requires long-term monitoring that can track what is changing, how much it is changing, and why. This information is also becoming more important for assessing whether restoration and recovery efforts are working.

Indigenous Partnerships and Data Sovereignty

Indigenous governments and communities are increasingly leading and shaping biodiversity monitoring and stewardship programs across Canada. Indigenous-led monitoring, Guardians programs, and approaches to data sovereignty are changing how environmental information is collected and managed. Building effective partnerships requires long-term relationships and respect for community priorities and Indigenous governance.

Growing Demand for Decision-Ready Information

Clients and partners expect biodiversity information to be accessible and ready to use. This is increasing demand for reporting systems, mapping tools, and other information products that turn complex environmental data into information that can be applied directly to planning and management.

Strategic Issues

These strategic issues shape our priorities for 2026–2029.

Maintaining Scientific Credibility and Independence

Biodiversity Pathways' long-term value rests on scientific credibility and independence. As we expand into new jurisdictions and funding arrangements, we need to ensure that our science remains objective and trusted.

Scaling Monitoring and Reporting

Demand is growing for monitoring and reporting systems that can be applied consistently across large landscapes and different jurisdictions. Building approaches that can be repeated and adapted to different settings is an important technical and organizational challenge for Biodiversity Pathways.

Maintaining Focus

Demand for our work can outpace our organizational capacity. Long-term success depends on investing in areas where we have strong capabilities and making deliberate decisions about where to grow.

Making Biodiversity Information Useful

Producing good science is not enough. Biodiversity Pathways needs to ensure that the information we produce is accessible and useful to the people making environmental decisions by continuing to improve how it is analyzed, packaged, and communicated.

Building Long-Term Partnerships

Our programs depend on strong relationships with governments, Indigenous communities, industry, and research partners. Building and maintaining these relationships takes time and sustained effort, particularly as monitoring and stewardship activities grow more complex, and Biodiversity Pathways expands across Canada.

Adapting to Technological Change

Remote sensing, acoustic monitoring, automated analysis, artificial intelligence, cloud platforms, and advanced modelling are creating opportunities to improve how Biodiversity Pathways collects, analyzes, and reports environmental information. Simultaneously, rapid technological change introduces risks, particularly around scientific oversight, data quality, and long-term comparability across evolving systems. Managing both the opportunities and the risks will require active attention.

Organizational Coordination and Sustainable Growth

Continued growth will place greater demands on Biodiversity Pathways' people and internal systems. As we expand across programs and jurisdictions, our organizational capacity needs to keep pace.

Biodiversity Pathways Strategic Direction

The strategic issues outlined above helped shape Biodiversity Pathways' priorities for the next three years. These priorities provide a framework for focusing our time and resources and advancing our mission.

Our Priorities

1. Monitoring Landscapes and Biodiversity
2. Working Collaboratively
3. Mobilizing Knowledge
4. Operating with Excellence

Priority 1: Monitoring Landscapes and Biodiversity

Rationale

Biodiversity monitoring and applied science are at the core of Biodiversity Pathways' work. Our Centres bring different expertise, allowing us to understand how biodiversity and landscapes are changing and what those changes mean.

Goal

Strengthen and expand biodiversity and landscape monitoring across Canada.

Areas of Focus and Measurable Outcomes (by 2029)

Area of Focus	Measurable Outcomes (by 2029*)
Collaborative biodiversity and landscape monitoring programs	1.1. Establish an integrated landscape-scale monitoring and reporting program in northern British Columbia, driven by government, Indigenous, or industry partners.
	1.2. Implement shared field data collection standards, geospatial processing, or reporting approaches across at least two major programs.
	1.3. Develop and operationalize at least 20 new or substantially enhanced species-level or biodiversity response models applicable at landscape, provincial, or national scales.
	1.4. Expand automated acoustic classification capacity using AI-enabled models to cover two additional species or two additional monitoring sites per year.
Human footprint and landscape change assessment	1.5. Publicly release Version 1 of the Human Footprint Inventory for British Columbia.
Habitat and watershed assessment	1.6. Pilot a vegetation and habitat inventory program, with an initial focus on wetlands.
Monitoring approaches for mining, energy, and restoration landscapes	1.7. Develop a regional monitoring program focused on mining, energy, restoration, environmental assessment, or cumulative effects.
	1.8. Apply restoration assessment or cumulative effects reporting in at least two projects or programs.
Integrated monitoring programs across Canada	1.9. Expand operations of at least one program into a new jurisdiction.

**Measurable Outcomes are contingent on contract and funding commitments.*

Priority 2: Working Collaboratively

Rationale

Biodiversity Pathways' programs are built on long-term partnerships. We work with governments, industry, Indigenous communities, researchers, and other organizations to develop and deliver programs that respond to their biodiversity information needs. Maintaining these relationships is important to our long-term success.

Goal

Strengthen and expand partnerships across Canada.

Areas of Focus and Measurable Outcomes (by 2029)

Area of Focus	Measurable Outcomes (by 2029*)
Industry and regional partnerships Coordination across monitoring and stewardship systems	2.1. Establish contracts with at least two major industry or sector organizations related to mining, energy, or restoration.
	2.2. Establish Biodiversity Pathways as a convener of partners around integrated monitoring or reporting in at least one major working landscape.
	2.3. Convene at least one multi-sectoral group to coordinate regional bat monitoring and reporting.
Government relations and strategic partnerships Co-designed monitoring and reporting with governments, Indigenous communities, and other partners	2.4. Establish organizational capacity for government relations and strategic partnerships across priority jurisdictions.
	2.5. Establish or maintain at least three collaborative initiatives with government or Indigenous organizations.
	2.6. Increase the number of Indigenous-led monitoring or stewardship initiatives supported by Biodiversity Pathways by 25%.

**Measurable Outcomes are contingent on contract and funding commitments.*

Priority 3: Mobilizing Knowledge

Rationale

Organizations, communities, industry, and governments require environmental information that is practical, credible, and directly relevant to real-world decisions. Ensuring we pay attention to how information is produced, delivered to, and applied by partners and decision-makers is a significant part of our work.

Goal

Improve how biodiversity information is delivered and used, through better reporting systems, analytical tools, and sustained partner engagement.

Areas of Focus and Measurable Outcomes (by 2029)

Area of Focus	Measurable Outcomes (by 2029*)
User-focused biodiversity information products and decision-support systems	3.1. Release a new or substantially enhanced biodiversity mapping application, or decision-support tool that supports environmental planning, restoration, or stewardship.
	3.2. Develop and deliver at least two reporting products or decision-support tools co-designed with partners.
	3.3. Apply an information product in a regional, provincial, Indigenous, industry, or national monitoring and assessment initiative.
Regional reporting and environmental assessment products	3.4. Release a regional reporting product focused on biodiversity, landscape condition, restoration, or cumulative effects.
Information adoption	3.5. Provide training or implementation support for at least three Biodiversity Pathways products or reporting systems.
Integration of western science and Indigenous knowledge in monitoring and reporting	3.6. Support at least three collaborative monitoring or reporting initiatives that bring together and communicate about western science and Indigenous knowledge approaches.
Data delivery systems and reporting infrastructure	3.7. Develop and implement an organization-wide data system to support biodiversity monitoring, reporting, and information delivery.

**Measurable Outcomes are contingent on contract and funding commitments.*

Priority 4: Operating with Excellence

Rationale

For an organization to maintain continued growth, it requires strong internal systems, clear coordination, and long-term financial stability. These are pillars of our operations, while also maintaining the quality and scientific credibility of our work.

Goal

Strengthen the organization to support sustainable long-term growth.

Areas of Focus and Measurable Outcomes (by 2029)

Area of Focus	Measurable Outcomes (by 2029*)
Financial stability, recurring revenue, and organizational reserves	4.1. Maintain at least 40% of annual revenue from multi-year funding agreements.
	4.2. Maintain a cash reserve equivalent to at least 10% of annual operating expenses.
Organizational coordination, quality management, and accountability systems	4.3. Implement organization-wide quality management, accountability, and data governance processes.
	4.4. Develop and implement a standardized field safety management system across the organization.
Organizational capacity and culture	4.5. Expand organizational capacity in business development, Indigenous engagement, and program coordination.
	4.6. Establish Indigenous relations training for staff, including appropriate training on Indigenous data governance.
	4.7. Develop and maintain organizational practices that support an inclusive, respectful, and effective workplace.
Scientific credibility	4.8. Complete an independent scientific audit of at least one Centre, with findings to inform organization-wide quality standards.
Responsible use of artificial intelligence	4.9. Establish organizational guidance for the use of artificial intelligence.
Governance	4.10. Implement processes for Board self-evaluation and education.
	4.11. Secure at least one collaborative connection facilitated by the Board.

**Measurable Outcomes are contingent on contract and funding commitments.*