

Alberta Biodiversity Monitoring Institute and the Willmore Wilderness



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While the conservation of biological diversity in one form or another is the main goal driving the majority of conservation efforts, a constant challenge is our lack of knowledge about these complex and dynamic systems. When considering the profound and far-reaching decisions that must be made around land-use planning and choices of land management strategies, one can easily feel overwhelmed by the uncertainty under which we're asked to act. However, we must act. As the saying goes, uncertainty is the only certainty in life. Advancing knowledge of biodiversity must happen in tandem with using the best-available knowledge. Luckily, here in Alberta, we have an organization that may rapidly improve our knowledge of biological diversity in the province.

The Alberta Biodiversity Monitoring Institute (ABMI) is an independent research organization established to measure biodiversity throughout Alberta. The latest ABMI annual report outlines the Institute's mission "to inform government, industry, environmental communities, First Nations, and the public about what is happening in our environment so that they can make informed decisions and plan for the future." According to the ABMI, Alberta is home to over 80,000 species; the Institute is researching and monitoring over 2,000 of these species at 1,656 sites across the province. Data collection across the province is the main activity of the ABMI as it works to strategically reduce knowledge gaps and decrease uncertainty in land-use planning and management decision making. The information gathered by the ABMI is independent of any government or organization, is publicly available to everyone in Canada, and is invaluable as a long-term database that uses a consistent methodology. This consistency allows for comparison and analysis across the data from different years and regions.

The Willmore Wilderness area, a

priority AWA area of concern, is just one example of where ABMI data collection is active in the province. The Willmore Wilderness is delimited by a provincial Wilderness Park in the Eastern slopes of Alberta north of Jasper. It is a large mountain park that is a virtually untouched wilderness and is home to many interesting and sensitive species such as the wolverine, grizzly bear, and caribou. In collaboration with other groups, ABMI is engaged in the Willmore Biodiversity Research Project. The project focuses on understanding differences in species detection using different monitoring methods and how the ability to detect different species affects results of data collection, monitoring, and ultimately land-use planning and management decisions. The Willmore research project has already identified areas where research and monitoring need to be improved to fill data gaps. It also has provided valuable information about wildlife and rare habitats in the park and will continue to actively guide the management of the protected area.

Having the knowledge and tools provided by the extensive, ongoing, and strategic research of groups like the ABMI and projects such as the Willmore Biodiversity Research Project are invaluable. They enhance our ability to understand the life around us as well as the human impact on natural systems. If treated seriously by government they will

enable Alberta to make better choices when it comes to regional and local land-use planning and management. At the same time, we must remember that we cannot be paralyzed by uncertainty; we cannot wait until we have "perfect" information.

Too often governments and decision-makers use "lack of data" as an excuse for not taking appropriate actions to minimize or altogether avoid the plausible risks from human activities. Every land-use decision must use the best available data to prepare for and mitigate the likely consequences and risks arising from human interventions on the landscape. Uncertainty will inevitably be a part of any planning or management process in the complex and dynamic natural world. We simply cannot know everything but we must move forward using the best available scientific knowledge and guided by the precautionary principle. Finally, we must ensure that the ongoing and rigorous data-collection efforts of groups such as ABMI are not neglected as stacks of data filed away on a shelf or in someone's hard drive. Data must be transferred into knowledge and knowledge must be transferred into action for it to be of any use. By using the best available knowledge in conjunction with the precautionary principle we can make decisions that allow us to tread more lightly on this sensitive and complex planet we call home. 🌱

The Precautionary Principle is defined by the United Nations Educational, Scientific and Cultural Organization (UNESCO) 2005 as: "When human activities may lead to morally unacceptable harm that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that harm. Morally unacceptable harm refers to harm to humans or the environment that is: threatening to human life or health, serious and effectively irreversible, inequitable to present or future generations, or imposed without adequate consideration of the human rights of those affected."