Stakeholder Needs Assessment Workshop
Summary

Energy Sector

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CAPP Offices, Calgary, Alberta

Table of Contents

1.0 Introduction

In 2017, the Alberta Biodiversity Monitoring Institute entered its 10th year of formal operations. Over the past decade, the ABMI has developed valuable baseline data on biodiversity and land cover to support natural resource management in Alberta. Initial decisions about the ABMI's scope and direction were based on stakeholder feedback gathered between 2002 and 2006—a time when Alberta lacked a comprehensive biodiversity monitoring program. Ten years later, as part of the ABMI 10-year Science and Program Review, a series of stakeholder needs assessment workshops are being run again to collect feedback on the performance of the Institute to date and gather input on a range of emerging initiatives. This stakeholder input will inform decision-making on ABMI operations going forward.

2.0 Background

To formally engage its stakeholders across a range of sectors, this past spring the ABMI launched a 10-year Science and Program Review. The Review has two components: 1) a Science Review to evaluate the Institute's scientific framework and the extent to which it has delivered on its initial scientific objectives; and 2) a Stakeholder Needs Assessment to evaluate the range of products and services provided by the ABMI and how they meet stakeholder needs. The Stakeholder Needs Assessment primarily comprises a series of facilitated workshops, with a survey administered before each.

The Science Review and Stakeholder Needs Assessment receive strategic oversight from the Science Expert Committee and Stakeholder Advisory Group, respectively. Each committee is responsible for assessing the results of their respective review processes and developing a final report, which is then submitted to the Steering Committee overseeing the whole process. The Steering Committee will submit recommendations to the Board of Directors by March 31, 2018. The Board of Directors will then assess and prioritize those recommendations to guide future operations.

Table 1 ABMI 10-year Science and Program Review process visualization

3.0 Pre-Workshop Survey

3.1 Summary

In the past ten years, most ABMI operations have focused on monitoring and reporting on the status and trend of Alberta's species, habitats, and human footprint across the province. The key output of this activity is the largest publicly available collection of environmental monitoring data in Alberta. We currently provide province-wide information on human footprint and land cover, and a range of data products, such as species abundance, on hundreds of Alberta's plants and animals. The pre-workshop survey was designed to assess the value and uptake by stakeholders of these particular data products.

The pre-workshop survey was distributed to six of nine stakeholder and partner groups engaged during the evaluation process prior to their workshops to support the workshop design process. The questions in the survey focused on the following ABMI products:

- Access to raw data
- ABMI Human Footprint Inventory (HFI)
- ABMI Land Cover Inventory (LCI)
- ABMI Biodiversity Intactness Index (BII)
- ABMI Species' Profiles

The questions were designed to first assess the general level of interest and/or need for the five product areas for work activities, regardless of where this information is accessed. The questions then tried to glean the level awareness of ABMI products, whether respondents utilize ABMI products to meet work activity needs, and why or why not.

The survey was completed by sixty-four individuals across six groupings arranged by the date of their workshop. Average time spent on the survey across sectors was sixteen minutes, and there was an average completion rate of 79%. The survey was only distributed to workshop invitees and, as a result, findings do not reflect the broad cross-sectoral needs of each group. These results will not be submitted to the 10-Year Review Steering Committee to use during their final evaluation and prioritization exercise.
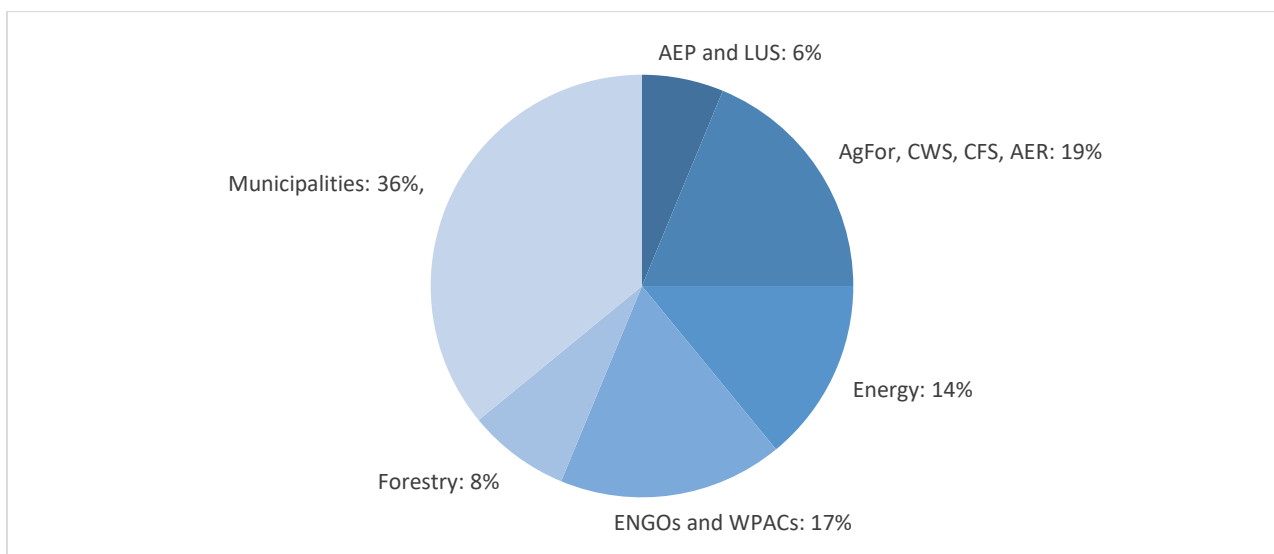

Figure 2 Percentage representation of which sectors responded to the pre-workshop survey out of a total of 64 respondents

3.2 Results

Nine respondents from the energy sector completed an average of 78% of the survey in fourteen minutes. Energy sector respondents indicated that general information about land cover, human footprint, species abundance and species specific information to all be between "moderately" to "very" important. Despite this, only 56% of respondents currently use ABMI Human Footprint Inventory in their work activities (Figure 3). Only 43% of respondents utilize the Biodiversity Intactness Index (Figure 4), and only 33% use ABMI raw data. Only 25% of respondents utilize the ABMI Land Cover Inventory (Figure 5).

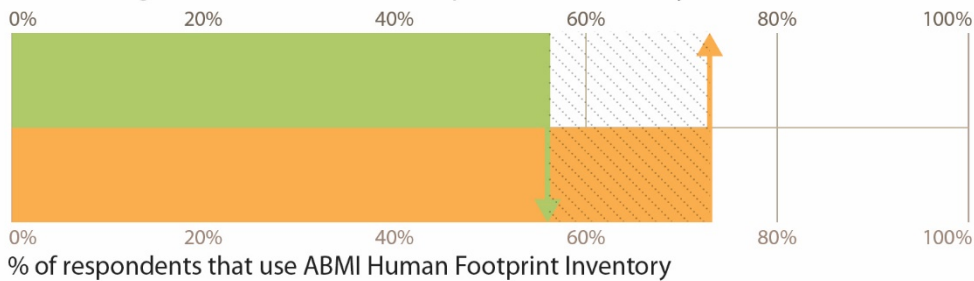*Figure 3. Value of general human footprint information compared to the % of respondents that use ABMI Human Footprint Inventory*
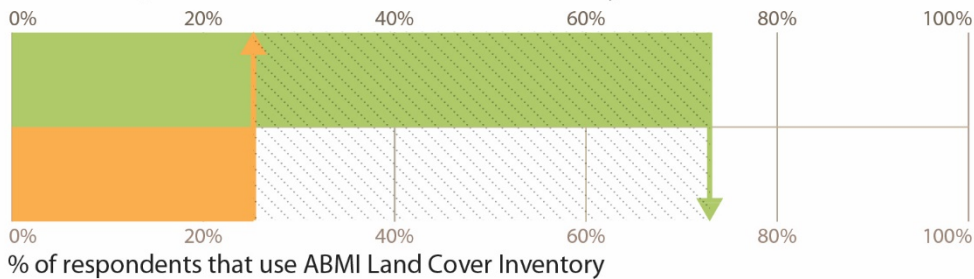

Figure 4. Value of general land cover information compared to the % of respondents that use ABMI Land Cover Inventory

Energy Sector Respondents

% of respondents who don't use ABMI Biodiversity Intactness Index
who were aware of its existence

% of respondents that believe ABMI Biodiversity Intactness Index
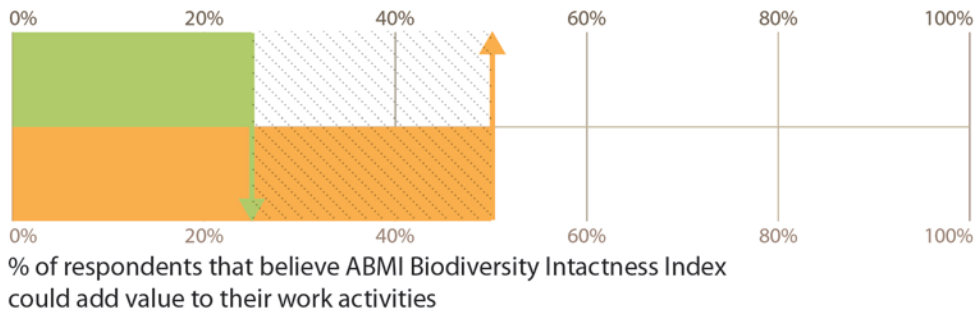could add value to their work activities

Figure 5. Value of general species abundance information compared to the % of respondents that use ABMI Biodiversity Intactness Index

Of the individuals that do not use ABMI Human Footprint Inventory (HFI), Land Cover Inventory (LCI), or Biodiversity Intactness Index (BII), there was varying levels of awareness of the products. 100% of respondents were aware of the HFI, 83% were aware of the LCI, and only 25% were aware of the BII. Respondents were also asked to indicate whether or not, based on the brief information provided by the products in the survey, they now believed the product would add value to their future work activities. 100% of respondents believed the HFI would add value (Figure 6), 80% the LCI would add value (Figure 7), and 50% the BII would add value (Figure 8).

Energy Sector Respondents

% of respondents who don't use ABMI Human Footprint Inventory
who were aware of its existence

% of respondents that believe ABMI Human Footprint Inventory
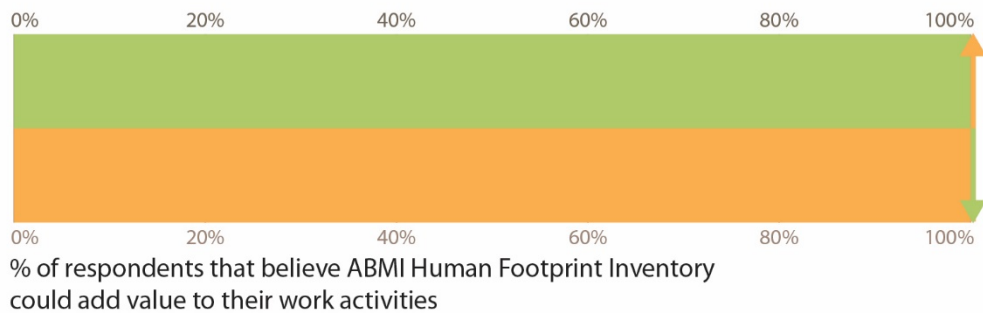could add value to their work activities

Figure 6. % of respondents not using ABMI Human Footprint Inventory compared to the % of respondents who believe it could add value to their work activities

Energy Sector Respondents

% of respondents who don't use ABMI Land Cover Inventory
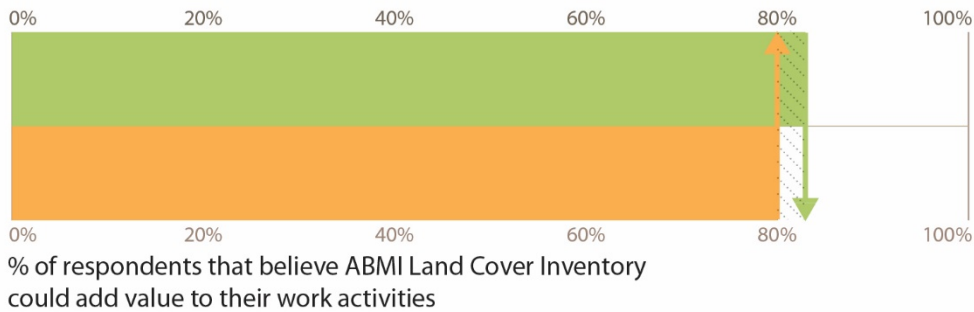who were aware of its existence

Figure 7. % of respondents not using ABMI Human Land Cover Inventory compared to the % of respondents who believe it could add value to their work activities

Energy Sector Respondents

Importance of species abundance information for work activities
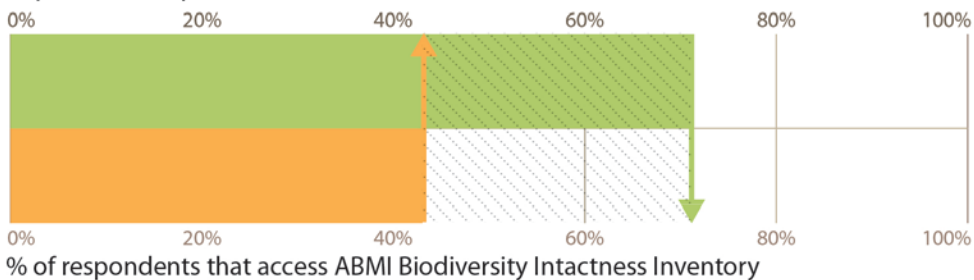
Figure 8. % of respondents not using ABMI Human Biodiversity Intactness Index compared to the % of respondents who believe it could add value to their work activities

4.0 Stakeholder Needs Assessment Workshops

As a first step in developing the stakeholder needs assessment workshops, the ABMI identified various stakeholder groups to engage. These include groups with a historical relationship with the ABMI, as well as additional groups that would likely be interested in using ABMI data to meet their own strategic priorities. Representatives of each of these stakeholder groups were invited to join the Stakeholder Advisory Group (SAG) that oversees the Stakeholder Needs Assessment process. In turn, the SAG membership nominated specific individuals to participate in the workshop process. In total, 10 facilitated workshops were held over the fall of 2017.

4.1 Workshop objectives

The objectives for the 9 facilitated workshops were to:

- assess the ABMI's range of products and services, and the extent to which they meet stakeholder needs;
- understand stakeholders' current and emerging biodiversity information needs; and
- solicit feedback on the ABMI's products under development and how they address stakeholders' needs.

The workshops were designed to assess the value and limitations of the ABMI's core monitoring program, as well as emerging ABMI products and services, and the extent to which they fulfill stakeholder biodiversity information needs now and into the future. The objectives were also partially achieved by distributing a pre-workshop survey with specific questions designed to assess the value and uptake by stakeholders of ABMI's core status and trend monitoring products (province-wide information on human footprint and land cover, and a range of data products, such as species abundance, species responses to human footprint, species habitat associations, and more, on hundreds of Alberta's plants and animals).

5.0 Workshop Methods

This facilitated 5-hour session included:

- Part 1 – Background presentations
- Part 2 – Pre-workshop survey results review followed by question and answer period
- Part 3 – Needs and challenges roundtable discussion
- Part 4 – ABMI innovation presentations and World Café

5.1 Who was there?

ABMI Stakeholder Needs Assessment workshops were targeted, sector-specific sessions. One of the goals of the workshops was to engage with as broad a cross-section of the sector as possible. This session's participants comprised 13 representatives from the energy sector. Most participants remained for the duration of the session.

5.2 What did the different sessions look like?

a) Background presentations

There were four presentations delivered by three ABMI staff:

- *Welcome and introduction to the review process* – Tara Narwani
- *ABMI structure, governance and evolution* – Tara Narwani
- *Species monitoring and outcomes* – Jim Schieck
- *Land surface monitoring and outcomes* – Jahan Kariyeva

The presentations were designed to provide a background and rationale for the ABMI's 10-Year Science and Program Review, in addition to providing a synopsis of the ABMI's core monitoring and science activities to date.

b) Survey results review followed by question and answer period

Prior to the workshop, participants were asked to fill out a survey administered online through SurveyMonkey. In the past 10 years, most ABMI operations have focused on monitoring and reporting on the status and trend of Alberta's species, habitats, and human footprint across the province. The key output of this activity is the largest publicly available collection of environmental monitoring data in Alberta. We currently provide province-wide information on human footprint and land cover, and a range of data products, such as species abundance, species responses to human footprint, species habitat associations, and more, on hundreds of Alberta's plants and animals. This survey was designed to assess the value and uptake by stakeholders of these particular data products.

Key results from the survey suggested:

- there is awareness of ABMI products, but low uptake;
- there is a lack of awareness of other ABMI products which could provide value; and
- there is concern about data quality, particularly in southern Alberta (i.e., agriculture footprint and land cover information).

Following a presentation of these key results, participants were invited to contribute to a question and answer session. The ABMI posed the following questions to workshop participants in response to the survey results:

- How can we increase the awareness and/or uptake of ABMI data and information products?
- What are your chief concerns regarding ABMI data—this could include quality, scope, coverage?

The discussion lasted approximately 40 minutes, during which facilitators encouraged feedback from a broad range of participants. Facilitators recorded feedback throughout to ensure none was missed.

c) ABMI innovation – world café

Participants were asked to gather for a series of presentations regarding emerging ABMI products and services. The five ten-minute presentations were:

- *Enhancing Regional Monitoring* – Jim Schieck
- *Creating a Biodiversity Network: From Citizens to Institutions* – Joelle Chille-Cale
- *Geospatial Product Innovation* – Jahan Kariyeva
- *Knowledge Translation* – Tara Narwani

After the presentations, participants were invited to visit associated stations set up in the foyer outside the room. Each station was marked by a poster reminding participants of products introduced in each presentation, and a knowledgeable ABMI staff member was present to answer questions. Workshop participants were invited to visit each station to provide feedback on the specific questions posed at each by recording information on a sheet of paper. The objective of the World Café session was to gather feedback from participants on each emerging ABMI product through the following questions:

- Is this tool useful to you and your work activities? (i.e., will it address the needs and challenges mentioned in the previous activity?)
- How could we tweak/modify this product/tool to better meet your biodiversity information needs?
- What do you see as the primary barrier to using this product/tool?

Feedback was recorded by participants on sheets paper. The World Café session lasted about 50 minutes, and facilitators gathered the papers at the end of the session to ensure no responses were lost.

d) Needs and challenges round table discussions

Participants were divided into two groups, based on pre-assigned coloured dots on their nametags. Once arriving in their breakout groups, they were invited to discuss:

- Current and future biodiversity information needs;
- Current and future barriers/challenges to accessing the required biodiversity information.

Each group was provided four sheets of paper (one each for current needs, future needs, current challenges, and future challenges), and self-appointed a scribe to record feedback on each. Discussions lasted about 30 minutes.

Following their discussions, each group shared their comments with all participants for the final 20 minutes of this segment, and facilitators took notes.

e) Closing

For the final 10 minutes of the workshop there was an impromptu closing conversation. Participants revisited some of the initial questions and had the chance to once again voice some of their key concerns. Facilitators ensured that pre-workshop survey results in addition to a workshop summary would be shared as soon as it is completed.

6.0 Workshop Summary

Feedback from each of the participant activities was synthesized and evaluated to draw out common themes under the banners of "Needs" and "Challenges".

In addition, feedback on new and emerging ABMI products was tabulated (see below).

6.1 Needs

The "Needs" identified during the workshop fell into five broad themes:

- Increased standardization
- Knowledge sharing and collaboration
- Resolution
- Effective cost management
- Additional data needs

The data that make up these themes have been provided in brief in Table 1 – Summary of Needs. An asterisk (*) has been included for statements that appeared repeatedly.

Increased standardization

The discussions during the workshop clearly indicated a need for agreement and consistency in the methods for collecting biodiversity information across organizations and geographic locations.

Knowledge sharing and collaboration

Participants indicated a need for the ABMI to better understand their regulatory requirements, in order to explicitly provide tools tailored to their environmental needs. There was also interest in having the ABMI present information about specific species and habitats of interest through interactive tools.

Resolution

Need for higher resolution tools and data information was indicated by most participants. It was suggested that although ABMI data provides effective regional perspective, it does not sufficiently support local decision making.

Effective cost management

Participants indicated finding effective cost-management methods to meet future biodiversity needs will be a future challenge.

Additional data needs

Participants provided multiple suggestions for additional data needs over the workshop, including increased data for specific species of interest and their habitats, and specific GIS data information.

6.2 Challenges

Respondents noted two challenges they are facing in meeting their biodiversity needs. These themes are:

- Data collection methods
- Regulator expectations

The data that makes up these themes has been provided in brief in Table 2 – Summary of Challenges. An asterisk (*) has been included for statements that appeared repeatedly.

Data collection methods

Participants indicated that because the government, ABMI and contractors collect data under different protocols, it is difficult to combine data sets for more effective decision making. There was also discussion about new technologies allowing for more cost-effective biodiversity information collection.

Regulator expectations

There was discussion about the broad range of regulatory expectations for operators. Participants indicated that, for operators working at a local scale, it is difficult to link to regional scale effects.

6.3 ABMI emerging products - innovation

The participants provided feedback on 5 new and emerging ABMI products during the World Café. Below, we have categorized it for each product:

1. **Enhancing Regional Monitoring: WildTrax**

Workshop attendees felt that this program would be beneficial to site-specific/local monitoring activities, in particular for Species at Risk, Moose, and establishing standards for local camera/ARU monitoring so that it can be scaled up to regional monitoring. Participants are hopeful WildTrax will reduce the high costs associated with EIA/EAs, in part by minimizing costs for consulting fees. It was also noted that this tool could be useful for biodiversity reporting to meet AICHI standards.

2. **From Citizens to Institutions: Building a Biodiversity Network**

Participants are generally excited about this tool, and reported the following benefits: easy access to data; ability to use it for public engagement and education; a great tool for Indigenous Relations; and useful for capturing field observations and wildlife sightings to be used in EPA approvals. Some barriers to use include concerns regarding confidentiality, whether data would be coordinated and speak to FWMIS on the back end, and that some companies have already developed their own similar apps. One participant added that it would be useful if the app could be used for track and scat monitoring, and if profiles could be kept confidential.

3. **Geospatial Innovations**

There were many comments left at this station. Higher resolution data, easy data sharing and adaptability, ability to tease out sector effects, more Species at Risk habitat information, and communications updates regarding data layer improvements were the main requests of the group.

4. **Knowledge Translation**

Participants were excited about the new mapping portal introduced at the workshop. There were many useful suggestions provided to improve the mapping portal, and make it more useful for the Energy Sector's work activities. This feedback included suggestions for a variety of new data layers and functions.

5. **Science for Caribou Recovery**

Caribou is an important topic for the Energy Sector, and participants supported the presentation delivered. In response, many individuals provided useful information for ways to improve the work of the Caribou Monitoring Unit at the ABMI and ensure time and effort are being optimized. Participants indicated that similar projects for other species of interest (e.g., Ronald Lake bison herd, moose, whitetail deer, black bear, whooping cranes, rusty blackbird and Canada warbler) would be of value.

7.0 Moving Forward

Throughout the session, our conversations highlighted areas where the ABMI can invest effort to continue to meet the needs of the Energy Sector in Alberta. Results of the workshop will be incorporated into the Stakeholder Needs Assessment Report, and used by the 10-year Review Steering Committee to develop a series of recommendations for the ABMI Board of Directors. The Board of Directors will use these recommendations to make decisions about the next 10 years of ABMI operations. Thank you for your valuable input.

Theme	Data
Increased Standardization	Consistency*; Coordination between ABMI and GoA, EMCLA and consultants*; Alignment of monitoring questions and researchers*; Cost reduction*; Data sharing; Integration of data sets; Incidental observations.
Resolution	Data should be available and flexible to be used at multiple scales*; Need high enough resolution data to support local decision making*; Scale to township level; Aggregated industry footprint; Higher resolution on wetland type or value desired.
Effective Cost Management	New technologies*; Anticipate future biodiversity needs*; Multiple data collectors may not be most effective model for data collection*; Increasing expectations mean that costs are rising.
Knowledge Sharing and Collaboration	Information about Species at Risk*; Collaboration to reduce costs of EA/EIAs*; Need to share the ABMI success story; Develop infographics and factsheets to share information*; Increase engagement with Indigenous communities*; Align data collected with EPEA approvals*; Interactive tools*; Multi-species information; Company data upload capability within ABMI tools; Access for consultants; Predictive climate models; Information for waterfowl management; Energy sector impacts; Drive restoration prescriptions; CAPP has a responsibility to share data with ABMI; Work with ASPB to share updates; Future reputation of AB development to evidence based management; Reporting to meeting AICHI standards.
Additional Data Needs	Recovery status of reclamation and disturbance*; Species at Risk information*; Cost/benefit of Caribou tools*; Connection to mechanistic research*; Track and scat monitoring; Species-specific information; Ownership of features; Habitat information as another SAR success rate measure; Predictive causation/trend; Need KPI to detect change in development planning.

Table 2 Summary of needs

Theme	Data
Regulator Expectations	Unrealistic regulator expectations; Multiple scales of management; High costs; Increasing expectations.
Data Collections Methods	Multiple data collectors*; Lack of alignment between researchers*; Different standards and varied methodologies across data collectors*; Cost effectiveness*; Multi-species approaches*; Confidentiality; Resistance to sharing data among different organizations and companies.

Table 3 Summary of challenges

Appendix 1 – Presentations

Appendix 2 – Survey Results

Appendix 3 – Workshop Evaluation Forms

Appendix 4 – Workshop Attendees

Appendix 5 – Workshop Results Notes

Appendix 6 – Workshop Information Package