



WORKSHOP SUMMARY REPORT

Creating a Roadmap for EBM in Alberta and Beyond



Workshop Summary Report

fRI Research Healthy Landscapes Program

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fRI *Research*
Informing Land & Resource Management



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Any opinions expressed in this report are those of the authors, and do not necessarily reflect those of the organizations for which they work, or fRI Research.

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REPORT SUMMARY

THE WORKSHOP

For several years, the Healthy Landscapes (HL) Program at fRI Research has undertaken an ambitious research program aimed at understanding and translating knowledge about natural forest patterns and natural ranges of variation for use in forest land management in western Canada. This information is widely considered to be integral to the concept of Ecosystem Based Management (EBM), a paradigm that is often cited, but variously defined, in the context of forest land management. A series of four EBM Dialogue Sessions in Alberta hosted by the HL Program in 2017 found broad support for the concept of EBM, yet they revealed that stakeholders have different interpretations of what EBM looks like when implemented.

This workshop was identified by the HL team as an essential next step in the evolving discussion about EBM in Alberta by providing stakeholders with the opportunity to learn from and share ideas with each other in the interest of advancing sustainable land management. The workshop took place on June 19th-20th, 2018 in Edmonton, Alberta. The workshop was attended by a total of 65 attendees representing a broad range of agencies, and seven presenters.

THE CONVERSATION

The discourse at the workshop visited familiar territory for many of the attendees, but the presentations by experts on EBM and on collaborative change revealed new and unexpected avenues to explore. Many themes and questions recurred over the two days, and three key takeaways emerged in the process.

1) EBM is as much about people

As Dr. Ed Grumbine emphasized in his keynote address, and as most other presenters expressed, a major stumbling block to EBM implementation has been achieving a shared vision for management. While the goal is to manage ecosystems more holistically and sustainably, EBM potentially represents significant changes to the systems, policies, practices, social acceptability, and economic viability. Change is difficult and scary. For EBM to become a reality, it is neither advisable nor possible to ignore the needs and values of affected and interested stakeholders.

2) Progress *has* been made on EBM implementation; the challenge is (how) to build on that

Presentations and examples provided by participants revealed that in spite of feeling stalled on EBM, progress has been made in Alberta and in other jurisdictions. Elsewhere in Canada, the United States, and even Asia, different models exist for top-down policy approaches to EBM as well as bottom-up grassroots initiatives. In Alberta, practitioners a) expressed discouragement with the pace of change, but b) acknowledged that the management landscape is more informed by EBM principles than it was 20 years ago. Forward momentum may be possible by building on the successes and learning from the missteps of other regions in adopting EBM in landscape



management – plus a structured logical approach to introducing new knowledge and interpretations through a network of demonstrations, pilot studies, and adaptive management experiments.

3) Moving forward will require trying new approaches to collaboration

The pitfalls of conventional feedback methods were identified by virtually all of the speakers, and echoed by many participants. There is clearly a desire for more meaningful engagement with a wider range of stakeholders. Among the most challenging steps, but also the most potentially rewarding, is for players to look at what they can change internally rather than waiting for or imposing change on other parties. This was echoed in many of the conversations over the two days: “*what are we waiting for?*”; “*we don’t need to wait for someone else to tell us to start doing this.*” As one example of a new method of engagement, the concept of *stretch collaboration* was demonstrated by Brenna Atnikov as a novel approach to complex, dynamic, and conflict-heavy challenges.

Where do we go from here?

Several times during the workshop, participants and presenters alike self-organized into groups to discuss a range of challenges identified over the two days and propose action plans to overcome these challenges. These action plans are grouped into three categories, as outlined below:

1) Communicate and Collaborate

- Seek connections with stakeholders and communities (including Indigenous) at the beginning not at the end; we don’t need to wait for anyone to tell us to start doing this.
- Collaborate with stakeholders to include those that challenge/oppose our thinking. Provide multiple entry points and create space for experimentation.
- Improve outreach to the general/public audiences through communication efforts and creating an EBM documentary with hosted screenings.

2) Facilitate and Demonstrate

- Develop guides/guidelines for EBM to support and encourage change; demonstrate cost efficiencies and rationale.
- Initiate pilot projects and case studies of past/current projects, some of which should involve (Indigenous and other) co-management, governance, protection, and/or other collaborative schemas.
- Complete a systematic review and mapping of EBM policies and implementation across jurisdictions in Alberta; benchmarking to perform a gap analysis for policy.

3) Investigate and Integrate

- Develop a better understanding of current and historic disturbance on the active *and* passive landbase and pursue policy changes at multiple (including local) levels informed by this knowledge.
- Address research gaps in EBM through meta-analysis, creating an EBM advisory board, and networking between stakeholders.
- Conduct operations-level experiment of EBM and monitoring of how the system responds; integrate with existing policy and land management frameworks (e.g., Regional Management Plans).





ACKNOWLEDGEMENTS

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The primary funding for the workshop was generously provided by the Forest Resource Improvement Association of Alberta (FRIAA). Workshop sponsorship was provided by West Fraser Mills and Mercer Peace River Pulp.

The workshop planning committee included:

- Jules Leboeuf (Professional Facilitator - Independent)
- Matthew Pyper (Fuse Consulting Ltd.)
- Sonya Odsen (Fuse Consulting Ltd.)
- David Andison (Bandaloop Ltd, and Program Lead for the Healthy landscapes Program)
- Fran Hannington (fRI Research)





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1.0 WHY THIS WORKSHOP AND WHY NOW?

For several years, the Healthy Landscapes Program at fRI Research has undertaken an ambitious research program related to translating information about natural forest patterns and natural ranges of variation for use in forest land management in western Canada. In recent years, the partnership has also expanded their work to include a communications and outreach program. The goal of this program is to communicate about the research findings from the program, and to engage in productive and thoughtful discussions with a diverse range of stakeholders in Alberta. These discussions are then fed back into the Healthy Landscapes program and new research ideas and opportunities are discussed to advance the understanding about topics related to Ecosystem-based Management (EBM) in Alberta.

Ecosystem-based Management (EBM) is a term that is often used, but variously defined in the context of forest land management. Recent experiences within the Healthy Landscapes program at fRI Research, through a series of four EBM Dialogue Sessions, have demonstrated broad support for the concept of EBM in Alberta. However, these sessions have also revealed that different stakeholders have different interpretations of what EBM will look like on the ground. Despite some of these differences, stakeholders have expressed significant interest in engaging in a discussion about continuing to evolve the concept of EBM in Alberta. More specifically, these stakeholders have expressed an interest in learning and sharing ideas with each other in the interest of advancing sustainable land management.¹

This EBM workshop was considered an essential next step in the evolving discussion about EBM in Alberta. Partners in the Healthy Landscapes program at fRI Research were interested in bringing together individuals from within Alberta, and recognized experts from outside of Alberta, to engage in a thoughtful discussion about barriers and opportunities to the implementation of EBM concepts in forest land management. The intent was not only to learn about forestry specific EBM experiences from other jurisdictions, but also to learn from individuals using EBM concepts in disciplines beyond the field of forestry. Staying true to the goals of the Healthy Landscapes program, the intent of the workshop was not to advocate for any specific idea or point of view. Rather, it was to facilitate a thoughtful discussion with a diverse range of stakeholders about what a roadmap might look like for advancing EBM principles in Alberta and beyond. By the end of the workshop, the workshop planners and sponsors hoped to identify up to 10 tangible next steps in the evolution of EBM in Alberta and beyond.

¹ Andison, D.W., J.R. Parkins, M.P. Pyper, and J. Leboeuf. 2019. Understanding EBM through dialogue. fRI Research, Hinton, Alberta. 63p.



1.1 APPROACH

Planning for the workshop involved a range of experts experienced in EBM research, implementation, and professional facilitation. Planning and strategic direction were led by Dr. David Andison, Program Lead of the Healthy Landscapes Program at fRI Research. Professional facilitation and strategic direction were provided by Jules Leboeuf. Planning, communications and strategic direction were provided by Matthew Pyper. Sonya Odsen and Fran Hannington provided logistical and communications support for the project planning team.

After considerable discussion among the workshop planning team and following consideration of a range of workshop structures and approaches, the team decided to focus on building trust amongst diverse stakeholders through an open and transparent workshop approach. The focus of the planning team was to bring together qualified experts with experience in EBM and allow them to tell their story about EBM implementation realities.

The workshop took place on June 19th-20th, 2018, at the Coast Edmonton Plaza Hotel in Edmonton, Alberta. The first day of the workshop opened with a keynote address from Dr. Ed Grumbine, one of the 'founding fathers' of the EBM movement in North America who has experience implementing EBM ideals in the United States and China. Following this keynote, participants heard from a range of professionals from different jurisdictions in Canada and beyond about their experiences implementing EBM approaches. Following these presentations, the planners created space for open and thoughtful discussions amongst workshop participants. The goal was to create a general structure and framework for constructive discussions, but to provide participants with enough freedom that they could reflect on their learnings from the previous presentations and discuss core topics of interest to them.

Building on this approach, the workshop planners structured Day 2 such that it could leverage the perspectives and ideas shared on Day 1 and move towards a focused list of up to 10 tangible next steps that could be taken in the evolution of EBM in Alberta and beyond. This structure was intended to deliver on the EBM roadmap theme of the workshop. To deliver Day 2, the day was opened with a keynote presentation from Brenna Atnikov, a professional facilitator with REOS Partners and an expert in helping groups work through polarized and often difficult conversations. She provided participants with perspectives on a new approach to collaboration, called stretch collaboration, and then walked participants through the process of Rapid Prototyping, in which participants had the chance to see how a structured approach to collaboration could help them think differently about overcoming key challenges. Day 2 ended with participants forming 10 groups around topics suggested by participants. The goal of this final session was to further discuss and identify how these topics could advance EBM implementation in Alberta and beyond.



1.2 WORKSHOP AGENDA

Day 1

- 8:30 **Welcome, Introductions & Morning Show**
- 9:00 **Keynote Presentation and Q&A Session:** *EBM True Confessions and Lessons Learned*—Dr. Edward Grumbine, Grand Canyon Trust, Flagstaff, Arizona.
- 9:45 **Presentation:** *Understanding Different Perspectives on EBM Through Dialogue*—Matthew Pyper, Fuse Consulting, Edmonton, Alberta.
- 10:00 **Morning Break**
- 10:30 **A Fishbowl Conversation about EBM Implementation Realities**
- 12:00 **Lunch**
- 1:00 **Understanding EBM Interpretation and Implementation Realities: Presentations followed by a panel discussion**
EBM Experiences in Ontario: **Mike Briennesse**, Silviculture Guide & Policy Advisor, Ontario Ministry of Natural Resources and Forestry
EBM Experiences in Québec: **Jean-Pierre Jetté**, Sustainable Forest Management Strategic Advisor, Québec Ministry of Forests, Wildlife and Parks
EBM Experiences in Nova Scotia: **Laird Van Damme**, Senior Partner, KBM Resources Group
EBM Experiences in Oregon: **Shawn Morford**, Executive Director, Network of Oregon Watersheds
- 2:30 **Afternoon Break**
- 3:00 **World Café Exercise: Looking Forward Together**
- 4:00 **World Café Check Back**
- 5:00 **Closing Conversation**
- 5:30 **Cash Bar and Networking**

Day 2

- 8:30 **Morning News**
- 9:00 **Keynote Presentation:** *Solving Complex Problems Using Stretch Collaboration*—Brenna Atnikov, Reos Partners, Calgary, Alberta.
- 10:00 **Morning Break**
- 10:30 **Advancing the Conversation on EBM through Rapid Prototyping**
- 12:00 **Lunch**
- 1:00 **Open Space Group Session – Identifying at least 10 actionable items in the Evolution of EBM in Alberta and beyond**
- 4:00 **Open Space Gallery Walk**
- 4:30 **Closing Conversation**



1.3 PARTICIPANTS

The workshop was attended by a total of 65 attendees and six presenters. A range of key stakeholders were represented at the workshop including:

- Engaged members of the public
- ENGO's
- Alberta Agriculture and Forestry Staff
- Federal and Provincial Government Biologists
- Alberta Environment and Parks Staff
- Government of Nova Scotia Staff
- Forest Industry Representatives
- Oil and Gas Representative

While there were no participants represented from Alberta Municipalities or Indigenous communities, invitations were sent to these stakeholders. Scheduling conflicts affected the participation of at least one Indigenous community representative.

2.0 PRESENTATIONS

2.1 EBM TRUE CONFESSIONS AND LESSONS LEARNED

Dr. Edward Grumbine, Grand Canyon Trust, Flagstaff, Arizona

Dr. Edward Grumbine's experiences are wide-ranging and international. In this presentation, he focused less on the "E" of EBM—the scientific and technical aspects—and more on the "M": *how* we get the most out of EBM to make it useful on the ground. With over 26 years of experience with EBM, he has found that the social and collaborative aspects of EBM are critical to its uptake, application, and success.

Grumbine provided ten themes of EBM compiled from the literature, over half of which examined social themes and human behaviour. On the "E" side of things, he emphasized the importance of ecological integrity as the goal of EBM, and the critical need to approach solutions as experiments and monitor their results.

However, the "M" side of the equation has been consistently identified by managers as their primary challenge when striving to apply EBM. Big-picture thinking applies to more than just ecosystems, and the value of relationship-building becomes clear when we accept that people are part of the system. The importance of cooperation was highlighted as essential, particularly for negotiating power imbalances.

A major case study of water governance in the Asian Highlands illustrated the importance of the "M" in EBM. Landscape-scale planning questions were incomplete without understanding the needs and values of local farmers, and the lessons learned in the process apply to any EBM challenge. Grumbine's team



found that if you *exchange ideas, propose solutions, build agreements, and manage conflicts*, it is possible to make progress.

2.2 UNDERSTANDING DIFFERENT PERSPECTIVES ON EBM THROUGH DIALOGUE

Matthew Pyper, Fuse Consulting, Edmonton, Alberta

In 2017–2018, a series of dialogue sessions were held in four cities across Alberta with the goals of examining different perspectives of EBM, understanding barriers to its implementation, and testing the effectiveness of a dialogue approach. Through a series of guided and open conversations, they found that negative history and the resulting mistrust between stakeholders are key obstacles to EBM implementation. There was also strong debate on the role of values in the planning process: are they an outcome or a planning parameter? The dialogue sessions revealed the wide range of views on what EBM means in practice, and demonstrated the importance of both sharing information *and* engaging in conversation to build common understanding. A key outcome of these sessions was that even if people still disagree when they leave the room, engaging in dialogue is an important step to building trust.

2.3 EBM EXPERIENCES IN ONTARIO

Mike Brienesse, Silviculture Guide & Policy Advisor, Ontario Ministry of Natural Resources and Forestry

Mike Brienesse described the process by which Ontario arrived at EBM implementation through a series of landscape guides. EBM is used as a coarse filter for landscape management in these guides, while accounting for fine-filter objectives such as human values not captured by EBM. During the process leading up to these guides, they discovered that specifying larger-scale targets and allowing managers to determine how to meet them was ultimately more effective than providing explicit direction.

They also learned the importance of storytelling to achieve buy-in, for example by relating riparian harvest to beavers. This storytelling importantly includes transparency and identifying both the positive and negative effects of management actions. Echoing the themes of Grumbine's presentation, Brienesse also warned managers to double or even triple the time they think will be needed for collaboration on value-based challenges.

2.4 EBM EXPERIENCES IN QUÉBEC

Jean-Pierre Jetté, Sustainable Forest Management Strategic Advisor, Québec Ministry of Forests, Wildlife and Parks

In Québec, EBM was formally integrated into policy with the *Forests Act* of 2010. Getting to this point involved several challenges, but they ultimately found that common solutions can be found, in part by



discussing ecological issues at the same table as management issues. *Change management* was an important component: a provincial team was formed to act as a conduit for knowledge between decision-makers and regional experts operating on the ground.

Jetté's perspective on EBM shifted as a result of this process, and he now feels that rather than treating it as a target, EBM should be seen as a tool to achieve a target. By looking beyond the short-term, it is clear that EBM can be used to increase resistance and resilience to insect outbreaks and to reduce regeneration failure—i.e., it is a tool to achieve sustainable forest management goals including wood production.

2.5 EBM EXPERIENCES IN NOVA SCOTIA

Laird Van Damme, Senior Partner, KBM Resources Group

Laird Van Damme connected the path to EBM implementation with the traits of successful salesmanship: storytelling, utility, relationships, and trust. Private companies, too, have the advantage of being able to change faster than governments, which require substantial organizational movement to shift direction.

In Van Damme's experience, the ingredients for change combine top-down support from government with the flexibility of companies. This works when governments provide tools for implementation at multiple scales, in this case to move toward EBM. However, storytelling remains key: if on-the-ground actions and reporting do not match the stories stakeholders understand about EBM, extreme pushback may result no matter how sound the science. Ultimately, regulatory change needs to be matched by enforcement and transparency, and supported by education efforts.

2.6 EBM EXPERIENCES IN OREGON

Shawn Morford, Executive Director, Network of Oregon Watersheds

There are c. 90 watershed councils in Oregon, and the Network of Oregon Watersheds is a statewide organization that represents, educates, and provides support for these (primarily grassroots) councils. The watershed council model contrasts with how forests are regulated in Canada: it is non-regulatory, volunteer-based, and relies on relationships with private property owners and diverse stakeholders.

However, there are many common threads with the challenge of EBM implementation. Watershed councils must collaborate and work toward ecosystem health with diverse partners who may not agree on what that looks like or how to get there. This definition will vary across watershed councils, and will include human as well as ecological values and desired long-term outcomes. Successful collaboration depends on councils' willingness to listen and learn more about the challenges and values of each stakeholder, and meet as parties with a common interest rather than viewing them as opponents.



2.7 SOLVING COMPLEX PROBLEMS USING STRETCH COLLABORATION

Brenna Atnikov, Reos Partners, Calgary, Alberta

What kind of collaboration is called for when diverse actors decide they must work together to influence and transform systems that feel stuck, unacceptable and entrenched? The challenge of EBM implementation may seem very different from challenges of health care, peace, democracy and justice around the world—yet these complex issues are similar in that conventional approaches are ineffective. In this presentation, Brenna Atnikov introduced the concepts of *transformative scenario planning* and *stretch collaboration* as approaches to make progress on complex issues that defy simple solutions.

In a case study presented by Atnikov, transformative scenario planning consisted of three phases: exploring questions, driving forces, certainties and uncertainties; compiling *possible* (not only desirable or expected) future scenarios; and boiling these down to plausible and distinct scenarios and determine what actions they could take. By bringing diverse parties together, they saw the dynamics of the macro—in this case, the larger health system and health advocates—play out in the micro.

This process revealed the importance of stretch collaboration—with these complex issues, there is less room for unilateral decision-making and greater need to meet with people with dissenting views. To make progress on these complex and dynamic problems, Atnikov recommends flipping the traditional collaboration model on its head. Stretch collaboration entails stretching in three ways: embracing conflict and connection, trying messy solutions to complex problems, and asking ourselves what we will change or do differently. However, the process requires abandoning the conventional need to agree on a common purpose, a common solution, and a common plan—a rigid solution is unlikely to hold for complex, dynamic problems. It also means accepting the discomfort that is inevitable when conflict is embraced rather than avoided.

3.0 GROUP DISCUSSIONS

3.1 FISHBOWL EXERCISE: REFLECTIONS ON PRESENTATIONS

3.1.1 Approach

Participants formed a single large circle around four central chairs. These central chairs were occupied by various participants throughout the fishbowl, including Dr. Edward Grumbine (who remained in the fishbowl for the entire exercise). When a participant in the outer circle wanted to join the conversation, they simply “tagged in” to replace someone already in the centre. This technique, known as a ‘Fishbowl’, is a proven way to create a focused conversation and allow discussion about key observations from members of the audience. It also facilitates the sharing of field experience and know how within a large community.



3.1.2 Outcomes

The conversation was not guided, rather it followed the interests and questions of participants conversing within the fishbowl. Themes that arose during the conversation included:

- Balancing social/cultural priorities with ecosystem integrity and health
- The threshold between talking about EBM and practicing it
- Communication: with whom, how effectively?
- Questions of trust and motivation
- Organizational and social inertia

In many cases the questions were directed at Dr. Grumbine as someone with a record of EBM implementation in different ecosystems and cultural settings. Dr. Grumbine and others identified a range of options to address these questions based in their experiences of what has worked and what has not. The following suggestions arose multiple times and in different configurations:

- The importance of processes and structures that ensure that in pursuit of a “win-win” solution, the scientific data are not discounted. These may include legislative steps (e.g., species-at-risk protections) and individuals or committees responsible for maintaining scientific defensibility.
 - This links to the need for effective communication: the data are more likely to be valued if an effort is made to make the facts come alive.
- Rather than focusing on what has not yet happened with EBM, Dr. Grumbine highlighted the various ways in which EBM has been increasingly applied—including in regions (e.g., China) where it was happening without being called “EBM”. Who is already practicing EBM in Alberta, and how?
- The recurring question of communication was addressed on multiple fronts:
 - Options for communicators to use a range of methods, including the use of visuals and other techniques to reach different learning styles.
 - The need for fundamental respect for the audience you’re trying to reach, including rural and non-scientific groups and particularly Indigenous communities. An important lesson was for communicators to get out of their cultural framework to learn how other people view the world.
 - Important to identify who is *not at the table* and *why people don’t want change*. It is not possible to help a group or organization shift their way of thinking if we don’t understand and respect the reasons for their resistance.
 - Identify groups outside of the community that have not been reached and reach out to them (particularly for Indigenous communities—go to where they are and meet according to their schedule).



3.2 WORLD CAFÉ EXERCISE: LOOKING FORWARD TOGETHER

3.2.1 Approach

A lot of information was given during the presentations, much of it new to many participants. This exercise was designed to provide an opportunity to make sense of the presentations and conversation that occurred throughout the morning. This approach enquires into what is possible by making what people are thinking more visible, and capturing consensual hunches about challenges and opportunities.

3.2.2 Outcomes

The conversation included a series of questions presented in a sequence, as below.

Question 1: What is a story of the future you are anticipating for EBM?

Outcomes: Five key themes emerged from this discussion:

- 1) Indigenous Ways of Knowing Are Embedded in EBM
- 2) All Users of the Landscape Define the Way Forward
- 3) Adaptive Systemic & Integrated Land Management Approach
- 4) Active Citizen Science
- 5) Cooperative Networks

Question 2: What question, if answered would begin creating the change we want?

Outcomes: The answers tended to fall into one of five groups:

1) Working with Others

- What is everyone's position on EBM? (GOA, Industry, Municipalities & ENGO)
- Who supports EBM?
- How do we align support from everyone?

2) Collaboration

- Are we individually ready to work together?
- Can bureaucracy move fast enough to be adaptive?
- How do we engage with absent stakeholders beyond forestry circles?
- Can we really have effective dialogue together (everyone)?
- How do we influence change?
- How do we drive grass roots engagement?
- What tradeoffs are each of us willing to make?
- How do we start being inclusive with everyone?
- How do we move together in uncertainty and moving targets?
- Who makes the hard decisions?
- How do we bring new people into the conversation?
- How do we increase the understanding and awareness of the realities of land management?



- What if there is no solution space?
- How can scientist speak to stakeholders who are disparate?
- How do we know when enough dialogue has occurred?
- How do we keep positive rather than gravitate to polarization of issues?

3) Definitions

- What is a healthy ecosystem? What does it look like?
- What are the criteria for EBM? So we (can) all agree?
- Do we have a common purpose & direction for change?
- Do we have the same common goals?
- What's holding us back?
- If not EBM, then what?
- Can we agree/define the ecological framework for the discussion?
- Can we describe what we want the future forest landscape to look like?
- If EBM is the solution have we defined the problem it is solving?
- Can we define a shared vision and list the values we are managing?

4) Technical

- Where is EBM in the Bio-diversity Management Framework? (Linear Foot Print Planning, Recreational Planning)
- Can EBM be codified into law?
- How will EBM account for long-term human impact on the landscape?
- How will EBM deal with limits to ecosystems?
- Can EBM be misused to avoid difficult truths?
- What are the macroscale ecosystem dynamics from interdisciplinary perspectives?
- What are the impacts of climate change on NRV and EBM?
- How do we break the cycle of single species management to manage the landscape holistically?
- How do we manage the links in the system (not just features)?

5) Knowledge Sharing

- Do we have the knowledge necessary to make decisions?
- What is currently being done in Alberta?
- How do we share the knowledge and experience in the room with scientific community?
- How do we navigate the conflict between EBM science & TKE

Question 3: What do you need to learn here that will help us move forward?

Outcomes: As above, the answers tended to fall into one of several topic areas:

- 1) Communicating with diverse audiences
- 2) Change Management
- 3) How to break down silos
- 4) How to engage with those missing in the room
- 5) How to tackle complexity and uncertainty
- 6) How to lay down all our cards on the table
- 7) Test assumptions – where disagreements exist

- 8) How to focus on science while engaging in participatory processes
- 9) Being patient with collaboration and trust building
- 10) Dealing with critical voices and build relationships at the same time.

A visual summary of the outcomes of the exercise are given in Figure 1 in the form of a cluster map.

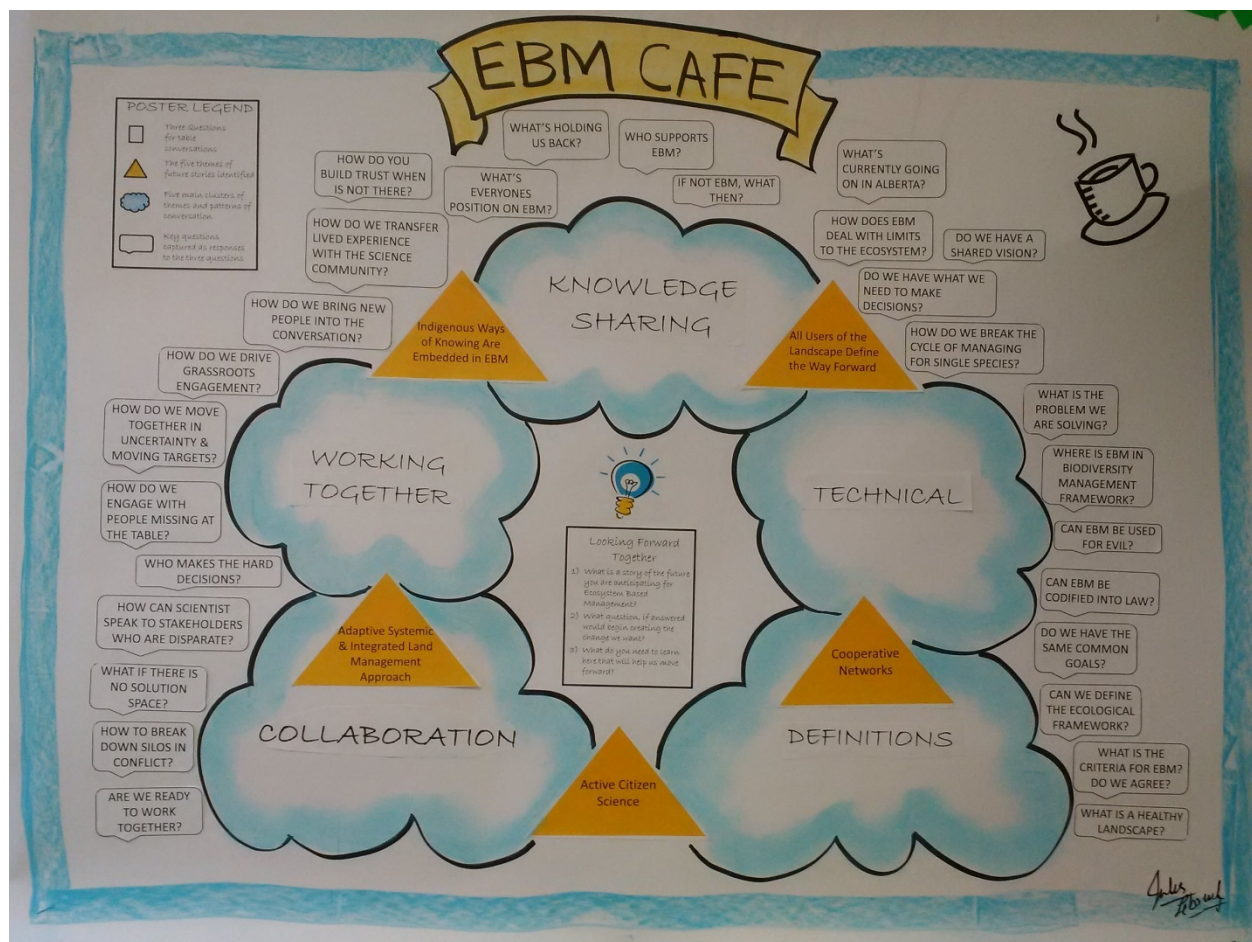


Figure 1. Cluster Map of EBM Café Session: A harvest of hunches and insights from workshop participants about the possibilities and challenges of EBM.



3.3 ADVANCING THE CONVERSATION THROUGH RAPID PROTOTYPING

3.3.1 Approach

Using the five key themes from the EBM World Café, a facilitated conversation further revealed mental models and assumptions on beginning to learn and act our way forward.

The five themes were:

- Indigenous Ways of Knowing Are Embedded in EBM
- All Users of the Landscape Define the Way Forward
- Adaptive Systemic & Integrated Land Management Approach
- Active Citizen Science
- Cooperative Networks

Lev-er-age

*Leverage is both a noun and a verb.
As a noun, it means exertion of force.
As a verb it means to use something
to maximum advantage.*

This process followed the model of Rapid Prototyping, as developed by REOS Partners. The approach encourages users to work through their own individual mental models and encourages people to shift into more of a system's thinking mind set (Figure 2).

Systems Thinking

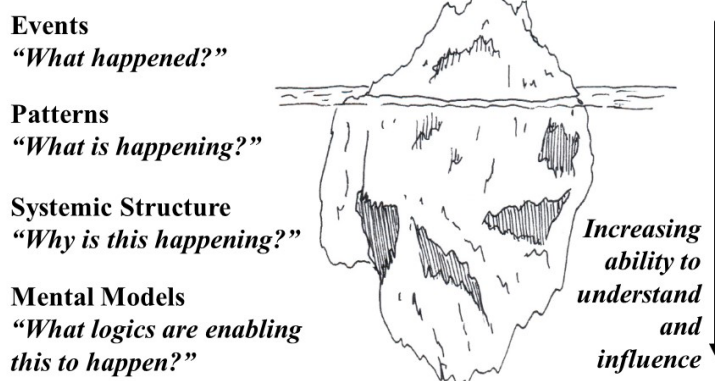
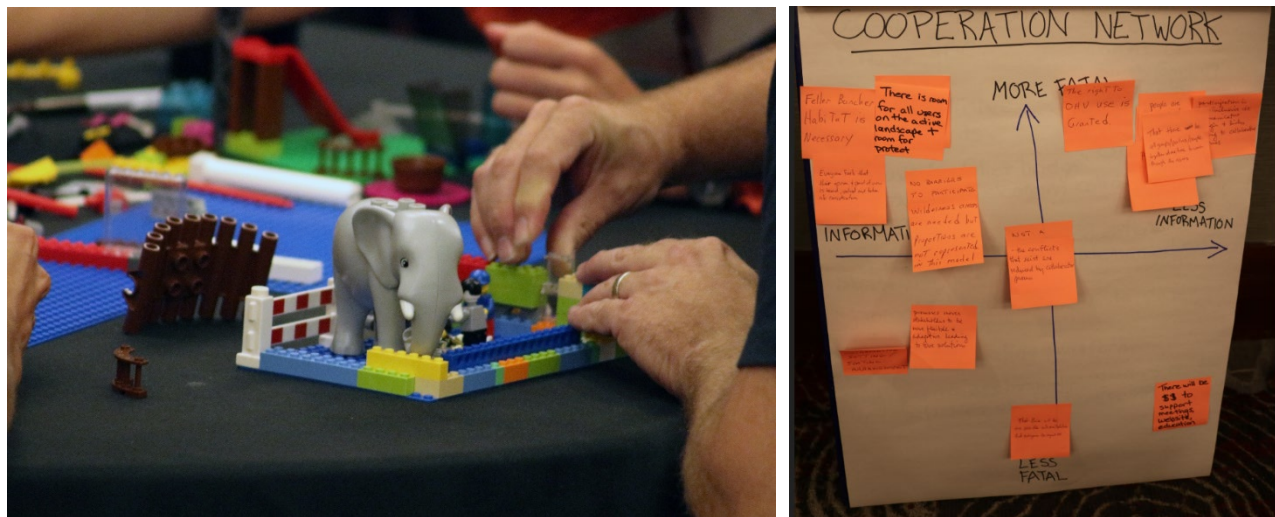


Figure 2. Iceberg Model raises awareness of how underlying systems dynamics shape behaviour and culture. Organizations tend to solve problems at the tip of the iceberg resulting in knee jerk reactions, little change and low rate of return on investment on change initiatives.

As part of the process, workshop participants then had the opportunity to work individually and then collaboratively to build Lego models of their thinking to help reveal their thinking as regards opportunities and barriers in decision making (left side of Figure 3). As a wrap-up to the activity, participants were asked to capture their diverse perspectives on a quadrant of topics that were either

Due to the amount of information captured during the activity, we are only providing a summary of what was recorded in the upper right quadrant of the X & Y axis of a ``Cooperation Network``(right side of Figure 3) which identifies areas where we need more information that are fatal to the initiative, which are opportunities.



3.3.2 Outcomes

3.3.2.1 Indigenous Ways of Knowing Are Embedded in EBM

- Inclusivity.
- Start seeking connections and map out the WHO, Where and WHEN for meeting up.
- Begin to interconnect with other groups such as LUF (4th pillar).
- We don't need to wait for anyone to tell us to start doing this.

- Can we let go of what we think we know?
- Don't seek people out at the end of your planning process for approval.
- What are we waiting for?
- Everyone wants to participate and is willing and ready to work together.



- Start building knowledge bridges between western science and TKE.

3.3.2.2 All Users of the Landscape Define the Way Forward

Leverage Point:

- Make room for others.
- Begin by inviting previously excluded stakeholders to meetings.
- Design open & transparent processes and participatory style meeting agendas.
- Make it easy for people to participate (structure such as location and time of meetings).
- Multiple entry points to participation are a must.

Mental Models & Assumptions:

- We demonize stakeholders that challenge our thinking.
- We need to collaborate with everyone (snakes and sharks too).
- Currently we are excluding these challenging stakeholders.
- We need to make room for everyone.
- One size does not fit all. We need to accommodate different ways so we can maximize participation. Not just one way of getting there.
- Multiple Bridges required to join up.

3.3.2.3 Adaptive Systemic & Integrated Land Management Approach

Leverage Point:

- Minimize turf protection to maximize integration with others.
- Rip off our badges and labels for equality of relationship in the room (get over the colonial hangover).
- Create space to allow experimentation without the fear of failure or rule/promise breaking.
 - Agree that learning from failure is part of supporting the experiment and not a stain on our record or reputation.

Mental Models & Assumptions:

- Words do not match our actions from key leadership parts of our organizations.
- The collaboration process is broken.
- In trying to make everyone happy, we make no one happy.
- Fear of failure is paralyzing jurisdictional support.
- We can't say no but in the process we deliver very little results.
- Knowledge will propel the elephant in the room.
- We think we know where the barriers are located.
- The space for pilots and experiments will be allowed.
- Bridges are possible.
- The power of the penguin: Will take action!



3.3.2.4 Active Citizen Science

Leverage Point:

- Stop the cycle of Them (citizens) against Us (scientists).
- Begin a conversation on how to allow citizens to participate in trustworthy ways of talking about science (my science, your science, our science etc.).

Mental Models & Assumptions:

- All users will agree with the science.
- Citizens willing to discuss data at the table if we are prepared to do the same.
- Your data stinks and mine doesn't thinking exists creating trust issues.
- We need to invest in building the following bridges to influence collaboration:
 - Scientific discipline bridge
 - Physical biological sciences bridge
 - Political bridge
 - Policy bridge

3.3.2.5 Cooperation Networks

Leverage Points:

We can start working together by making the first move and inviting the conversation as the antidote to overcoming and minimizing the political wedge².

Mental Models & Assumptions:

- Alberta is the *wild west a pioneer, an energy leader*
- Everyone wants balance (and it's possible)
- Balance is achievable if we row together. We can each get what we need but it must be done together.

After the workshop, a summary of this discussion was captured visually by Figure 4, highlighting the leverage point opportunities.

² A **wedge** issue is a **political** or social issue, often of a controversial or divisive nature, which splits apart a demographic or population group. ... A **wedge** issue, when introduced, is intended to bring about such things as: A debate, often vitriolic, within the opposing party, giving the public a perception of disarray



Figure 4. Context Map of EBM Rapid Cycle Prototyping session. Opportunities to leverage change based on the five themes identified during the EBM Café session.



3.4 OPEN SPACE: TEN OUTCOMES FOR CREATING A ROADMAP FOR EBM

3.4.1 Approach

For the final activity, participants were invited to identify a question of interest to them arising from the presentations, conversations, and activities of the workshop. The individuals posing the question documented the conversations including key themes and, importantly, *next steps*. They were encouraged to think of next steps in terms of what they can do (as opposed to things other people or agencies should do).

Participants who did not pose a question were free to move from conversation to conversation and focus on the question(s) of greatest interest to them.

As the session concluded, note-takers posted the results of their conversations on the walls in an open gallery, which participants were free to peruse and discuss.

Ten topics were established for more in-depth conversations:

1. Support from the top!
2. What else about stretch collaboration and transformative scenario planning do you want to know?
3. First Nations involvement in EBM
4. Communication opportunities around EBM
5. How do we incorporate climate change uncertainty into EBM?
6. EBM in Action—a deeper dive into case studies
7. EBM and the active vs passive landbase
8. Research gaps in EBM
9. Linking EBM development with current GOA initiatives
10. What does “people as part of nature” mean?

3.4.2 Outcomes

Below are the highlights and next steps from each conversation.

Topic 1: Support from the top!

Highlights

- Limitations: lack of trust, political change, government pushback
- Quebec and Ontario examples of top-down and/or collaborative approach
- Policy pillars needed: Cost-Benefit; Social Issues; First Nations; Environment

Action Plan

- Tangible outputs, e.g. policy white papers
- Multi-stakeholder advocacy
- Guides/guidelines for EBM (holistic) to spur change
- Demonstrate cost efficiencies and prepare rationales for policy changes



Topic 2: Understanding stretch collaboration and transformative scenario planning

Keynote speaker Brenna Atnikov walked participants through additional theory pertaining to stretch collaboration by illustrating the “Theory U” by Otto Scharmer³. This graphic can be viewed in Appendix 1.

Topic 3: First Nations involvement in EBM

Highlights

- Governments have to be willing to give up sole control of natural resources
- Relationship-building
- Do First Nations want to engage and do they have the capacity?
- How would they manage the forest ecosystem, govern the process?
- Not all Nations are the same

Action Plan

- Synthesis of case studies
- Relationship-building to bridge the gap between western science and traditional knowledge
- Implement pilot projects (Moose Lake management plan, Indigenous protected and governed areas)
- Co-management of protected areas

Topic 4: Communication opportunities around EBM

Highlights

- Range of “whys”: bringing awareness to the public, combat false information, public buy-in
- Barriers: tendency to overextend negative examples, not “sexy”, challenging to identify audience and measure outcomes.
- How to fund, how to find agreement on Why?

Action Plan

- Active blog; talk about issues in real-time in unbiased way
- Revive “Bertie the Beaver” to talk about ecosystems—YouTube?
- Create an EBM documentary and host “screenings” to draw in key people

Budget: \$100,000–\$150,000

Topic 5: How do we incorporate climate change uncertainty into EBM?

Highlights

- If Species A is here now, should we be replanting it if not suited to future climate?
- Policy is rigid and needs flexibility to respond
- More research needed but perhaps outreach and extension more important
- How to create a regulatory environment that accepts risk? Is this a system problem?

Action Plan

- We give up!
- Could not find personal “we” actions and the list of “other guy” actions is not realistic given our scope of control.

Budget: lots and then more

³ Scharmer, C.O. 2009. Theory U. Leading from the future as it emerges: The social technology of presencing. Barrett-Koehler Publishing, San Francisco, Ca.



Topic 6: EBM in Action—a deeper dive into case studies

Highlights

- In ON, PQ and NS, EBM is established policy
- ON is a good example of empirical science influencing policy *but* less robust monitoring than NS and PQ

Action Plan

- Systematic review and mapping of EBM across jurisdictions in AB to identify gaps → Benchmarking for policy/strategies
- Policy, implementation, and decision support tools for AB; benchmarking to perform a gap analysis for policy

Budget: \$40,000

Topic 7: EBM and the active vs passive landbase

Highlights

- All players on the landscape needed for viable solutions
- Active landbase disturbed/managed via harvest/forestry activities
- Passive landscape not actively managed but is affected by resource development
- No room for failure

Action Plan

- Identify and convene all players to build relationships and collaborate on plan
- Understand disturbance on entire landbase
- Compare current to historic disturbance and identify policy drivers
- Influence policy requirements through initiatives at multiple scales
- Recognize that movement may only happen at the local level

Topic 8: Research gaps in EBM

Highlights

- How to recognize technological, political, economic, and social values as targets?
- Ecological benefits for naturally occurring wildfire
- Probability and risk of fire (prescribed and natural); cost/benefits on all fronts
- Ecological targets and benchmarks
- Meta-analysis of work already done
- Integration of knowledge between EMEND and HLP
- How to work with stand-level retention prescriptions to allow for landscape-level patterns

Action Plan

- EBM researcher(s)
- EBM advisory board
- Financial support
- Networking between stakeholders → EBM researchers, advisory board

Topic 9: Linking EBM development with current GoA initiatives

Highlights

- Regional Management Plans as leverage point to incorporate EBM; covers all regulators
- Need a definition for EBM
- How to engage/influence the energy sector?

Action Plan

- Operations-level experiment of EBM on an FMU like C5 and monitor how the system responds: identify barriers
- BMF and water quality frameworks are



- Human use (OHV) needs to be managed, its disturbance reflected in the science

- there for monitoring
- Start with Livingstone/Porcupine Work Committees

Budget: \$100,000

Topic 10: What does “people as part of nature” mean?

Highlights

- Western culture is the only one that differentiates between man and nature
- EBM is like a religion or belief system: we have the responsibility to care for the environment
- Possible success: cultural shift, more stewardship, adoption of more EBM

Action Plan

- Junior forestry program, environmental courses mandatory
- Inject messages into daily media
- Cultural shift to spark action/stewardship
- Could it be a business for the FNMI (First Nations, Métis and Inuit Education)?

4.0 CONCLUSIONS AND NEXT STEPS

As part of the Healthy Landscape Program’s communication and outreach efforts, this workshop played a critical role in bringing together diverse voices—including both presenters and participants—to discuss the road blocks to EBM and chart a way forward.

During the final activity of the workshop, participants sat in a large circle and wrote a single word or phrase that summed up their takeaway from the workshop, stating it to the group and placing it on the floor before leaving. Many of these statements were hopeful and optimistic; others were practical; some remained cynical at the extent or likelihood of progress. As we learned over the course of the presentations and conversations of the two days, having this range of opinions (including dissenting views) at the table is an essential step to moving the conversation forward and identifying appropriate next steps.

A fundamental outcome for this workshop was to conclude the second day with a clear list of tangible next steps in the evolution of EBM in Alberta and beyond. Many potential actions were the subject of conversation during activities and the breaks in between. These actionable steps were summarized in Section 3.4.2 (Open Space Group Session), and these have been combined with other actionable steps identified during the workshop below.

4.1 SUMMARY OF RECOMMENDATIONS

Creating a roadmap for EBM was left open to workshop participants, with the main criteria being that steps be clearly *actionable*, *tangible*, and *self-directed* (i.e., steps do not outline what someone else should do). This list summarizes many of the next steps identified by workshop participants, organized by theme.



4.1.1 Communicate and Collaborate

- Seek connections with Indigenous communities at the beginning not at the end; we don't need to wait for anyone to tell us to start doing this.
- Collaborate with stakeholders to include those that challenge/oppose our thinking. Provide multiple entry points and create space for experimentation.
- Improve outreach to the general/public audiences through communication efforts including reviving "Bertie the Beaver" and creating an EBM documentary with hosted screenings.

4.1.2 Facilitate and Demonstrate

- Develop guides/guidelines for EBM to support and encourage change; demonstrate cost efficiencies and rationale.
- Initiate pilot projects and case studies of past/current projects that involve Indigenous co-management, governance, protection, and/or other collaborative schemas.
- Complete a systematic review and mapping of EBM across jurisdictions in Alberta; benchmarking to perform a gap analysis for policy.

4.1.3 Investigate and Integrate

- Develop a better understanding of current and historic disturbance on the active *and* passive landbase and pursue policy changes at multiple (including local) levels informed by this knowledge.
- Address research gaps in EBM through meta-analysis, creating an EBM advisory board, and networking between stakeholders.
- Conduct operations-level experiment of EBM and monitoring of how the system responds; integrate with existing policy and land management frameworks (e.g., Regional Management Plans).

4.2 NEXT STEPS FOR THE HEALTHY LANDSCAPE PROGRAM

The general nature of the list of ten ideas for next steps for EBM requested from the participants was interesting. Approximately half were considered actionable by the HL team. Of those that were considered actionable, most were related to communications, education, outreach, demonstration, and pilot studies. A small, but important subset identified some knowledge gaps. This would suggest that most of the ideas focused on the M (i.e., management) of EBM, and not the E (i.e., ecology) – echoing Dr. Grumbine's lessons from the start of day one.

However, a deeper conversation emerged over the two days about the interplay between the E and M components of EBM. There was not so much an agreement that knowledge of natural landscape ecosystem dynamics was either complete or unimportant, but rather that there was a desire to share the process of acquiring new knowledge. This makes sense when put beside: a) the potentially seismic shift in thinking that EBM requires, and b) the trust issues revealed by the EBM Dialogue Sessions. The lesson for the HL Program is to conduct future research in a more open, and where possible



collaborative manner. In fact, one of our most recent projects – Landscapes in Motion – was designed to do just that, and has been met with high praise from stakeholders. This suggests that future HL Program research projects should be modelled on this prototype.

In terms of the need for more, and a greater variety of both outreach and demonstration, the HL Program is well-positioned to address those as an impartial group given its current professional and academic affiliations, past experiences, and the trust gained from other outreach experiences.

However, perhaps the most powerful message to the HL team is simply the high level of interest, participation, and engagement at this workshop. A large number of people from a large range of different government, non-government, industry, environmental, and private citizen groups spent two days of their time not just listening to speakers, but sharing and working together in new and often uncomfortable ways. We also deliberately brought in speakers who were willing and able to speak openly about their EBM experiences both good and bad - to make it clear how complex and difficult this transition is. The HL Program has been operating in some form or other since 1996. One of the long-standing questions from the team is whether, or to what degree, other stakeholders and agencies that are not “in the room” support the idea of EBM. Given the response from the workshop, it is safe to say that we have answered that question, and the HL team can move on to addressing *how* future engagement with other stakeholders or groups happens. The dialogue and engagement processes tested in this workshop, and in past dialogue sessions administered by the HL Program, serve as an important starting place for doing this.





APPENDIX 1. ILLUSTRATION OF THEORY U

