

Adaptive Management and EBM: an introduction

1) What is Adaptive Management?

Adaptive management is a formal process of “learning by doing”, with the goal of improving land and resource management policies, objectives and practices over time. Adaptive Management is a component of EBM.

Adaptive Management (or AM) is a way to learn from management **actions**. The basic idea is familiar: we all learn from experience, and this is how First Nations adapted to prosper on the Coast thousands of years ago. But we can use special tools and methods to improve our natural ability to learn from experience when we manage ecological and social systems. Adaptive Management is mostly about how to use those tools. Some examples of tools include: strategic planning, monitoring programs, and formal research.

2) Why is this important for EBM?

- EBM for the Central and North Coast is the result of many years of study and negotiation. AM builds on the Land Use Objectives already agreed to, and monitors how these are being implemented by First Nations, provincial agencies and forestry companies.
- Ecosystems behave in complex and sometimes surprising ways. We don't always know the effects of development or management. AM provides a way to decide what management actions can be done safely, what actions need to be monitored, and what actions should be avoided until more studies are done.
- AM helps reduce disagreement about what to do, by providing reliable evidence about actual results from management strategies.

3) Why is Adaptive Management useful for community Land and Resource managers?

- Helps to focus monitoring and research efforts.
- Builds managers' capability and confidence by giving them access to new tools, knowledge and shared results across the Coast.
- Provides technical and financial support for community practitioners, and helps connect communities to external resources (if a coast-wide framework is approved).

4) What is the outcome of doing Adaptive Management?

- AM provides a better picture of what is known and not known when managing complex systems.
- AM leads to recommendations about the need for certain kinds of information. These recommendations guide monitoring and research decisions.
- It focuses our limited time and money on questions where new knowledge can make the most difference.

- AM provides useful new knowledge for management choices, to improve decision-making.
- When multiple players use the same approach, it also offers a way to share perspectives and experience.
- AM does NOT directly produce policy or management recommendations, but the information it generates can be used by decision-makers to improve policies and management strategies
- AM does NOT affect governance or regulations. It does not impose new reporting requirements.
- AM will NOT solve all your problems!

5) When should we use Adaptive Management?

- AM can be applied to Ecological Integrity (EI) strategies (such as conservancy management, or forest operations planning) and to Human Well Being (HWB) strategies (such as economic development or ecotourism)
- AM is a long-term approach that gradually adds to our understanding.
- In the short-term it is most helpful for clarifying what we know and what is likely to happen as we implement management strategies.

6) What should we do for Adaptive Management?

AM requires good **strategic planning** as a foundation. Many strategic planning exercises have been completed or are underway already on the coast, so AM can use the results of these. To review, the terms and process of strategic planning are as follows.

Set Goals, then clarify objectives. Objectives and goals are usually decided by policy makers.

Goals = broad vision and guiding intentions, that give direction to all other planning work but only at a very general level. Example: Preserve the integrity of hydro-riparian ecosystems on the North Coast.

Objective = a specific result that should be achieved to support a goal. Objectives define an “end state” and a direction of change, but not a target. Example: Maintain streamflow within the range of natural variability.

Next: design strategies using **knowledge** and **experience**.

Strategies = specific actions or plans to be implemented to achieve the desired objective. It is helpful for AM if strategies or plans are defined as a quantitative indicator and a target level for that indicator. Example: In order to meet the objective above, ensure logging activity is less than 20% Equivalent Clearcut Area (ECA) of the entire watershed, for sensitive watersheds.

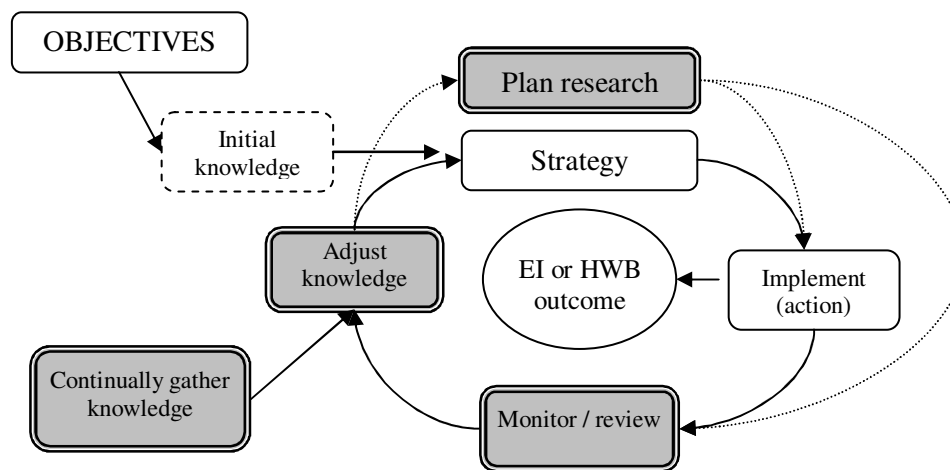
To develop a strategy first requires a clear objective, and then knowledge and / or experience. Often strategies are developed through engaging elders or respected knowledge holders (including outside experts) in discussion and consultation (asking “what will work here?”)

Indicators: something that can be measured to verify plans are being accomplished. You can use implementation indicators to monitor strategies, or effectiveness indicators to monitor objectives. Indicators should be simple to measure or describe, should not be affected by factors other than management efforts, should be directly linked to the systems being managed, feasible and relevant for the scale and purpose of use.

Target: designated desirable level of a specific indicator.

Examples: less than 20% of ECA (Target “less than 20%”+ indicator “ECA”)

The figure below outlines a strategic planning process. AM is illustrated by the shaded boxes in the figure.



Resources are limited (people, \$\$) and so we need to focus AM monitoring and research efforts on objectives and strategies where knowledge is most needed.

Priorities should be to collect information on issues where;

- 1) knowledge is weak or limited, and
- 2) it makes a big difference to achieving the agreed objectives.

Sometimes, we can guess wrong and it doesn't matter much. And in other cases, we actually know a lot about the ecosystems and can predict fairly accurately what will happen as a result of management (like the hydroriparian example above). Because it is costly and time-consuming to conduct monitoring and research studies, we need to choose wisely which studies will be most helpful.

An AM framework for EBM implementation will include tools for assessing these factors, and technical support for community managers.

AM suggests what kinds of monitoring or research studies will help managers to reduce uncertainty and achieve desired outcomes (see figure on next page).

