

Adaptive Management of Labrador Forests

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Outline of Presentation

- Strengths of the new plan for District 19
- Concepts of adaptive management
- Weaknesses of the plan
 - adaptive management
 - research and monitoring
 - calculation of sustainable harvest levels
- Conclusions

Strengths of the Plan

- collaborative approach
- focus on ecological, social and cultural values
- approach to protected areas

Concepts of Adaptive Management

- philosophy and approach to management made in Canada!! (professors and resource/environmental managers in BC, late 1960s and early 1970s)
- central concept - treat management as an explicit learning process, i.e., apply the principles of science while managing

AM (continued)

- profound uncertainties about impacts and outcomes of management
- admission that “normal” science can help only part way
- focus on learning at the time and space scales of management of the natural system
- passive vs. active adaptive management

“CSA SFM Standard” view of AM

- Planning
- Implementation and Operation
- Checking and Corrective Action
- Management Review

“CSA SFM Standard” view of AM

- **Planning**
 - **DEFINE THE FOREST**
 - Define the forest area and its present conditions.

 - **VALUES/OBJECTIVES**
 - Identify and select values, objectives, indicators, and provisional targets.

 - **INVENTORY**
 - Prepare maps and other records associated with the chosen indicators.

 - **FORECAST**
 - Forecast expected future conditions of chosen indicators:
 - under a no-action strategy; and
 - under alternative strategies.

 - **CHOOSE**
 - Select the strategy, with its associated indicator forecasts, that best meets desired targets.

“CSA SFM Standard” view of AM

- **Implementation and Operation**
 - Take actions as prescribed in the selected strategy.
- **Checking and Corrective Action**
 - Measure all indicators.
 - Compare implemented actions with planned actions, and actual indicator levels with targets.
 - Understand reasons for differences between actual and planned outcomes, and use the learning to improve management through corrective action.
- **Management Review**
 - Periodically review overall progress in achieving SFM and implementing the SFM requirements. Return to planning for the next cycle.

Why AM for Labrador Forests?

- mandated by policy (1994 EPR for District 20)
- profound uncertainties - the less you know about the consequences of management, the more you need AM!

Key weakness #1 - no long-term forecasts!

- philosophical difference - build predictive models either:
 - without solid data on relationships (i.e., early)
 - OR
 - only with solid data (i.e., late)
- AM demands doing it when forecasts are needed, regardless of data abundance and quality

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Key weakness #1 - no long-term forecasts!

- indeed, AM says: use model-building to guide data collection
- a weak forecast is more helpful than no forecast at all - it is the best way to expose and characterize uncertainty

Key weakness #2 - no explicit monitoring protocols!

- AM can not happen without proper monitoring of the very same variables forecast

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Key weakness #2 - no explicit monitoring protocols!

- we can not learn if we do not check, scientifically, in what ways the forecasts are wrong

Key weakness #3 - trivial calculation of sustainable harvest level

- old approach - “back of the envelope”
- good models are available and easy to use
- data requirements are substantial, BUT . . .
 - better to create data-poor forecasts than no forecasts at all
- advantage of forest-inventory projection models is that possible future forest dynamics are calculated for use by people who need to assess non-timber values

forest-inventory and wood- supply forecasts

- *THE* most important variables to forecast, and technology and basic datasets are in place to do so!!

Conclusions

- excellent start on some plan features, and unfortunate missed opportunity on others
- excellent idea to have a forum to work on research and monitoring needs
- strongly/urgently recommend moving forward with robust implementation of research and monitoring entirely within the context of AM, rigorously interpreted