

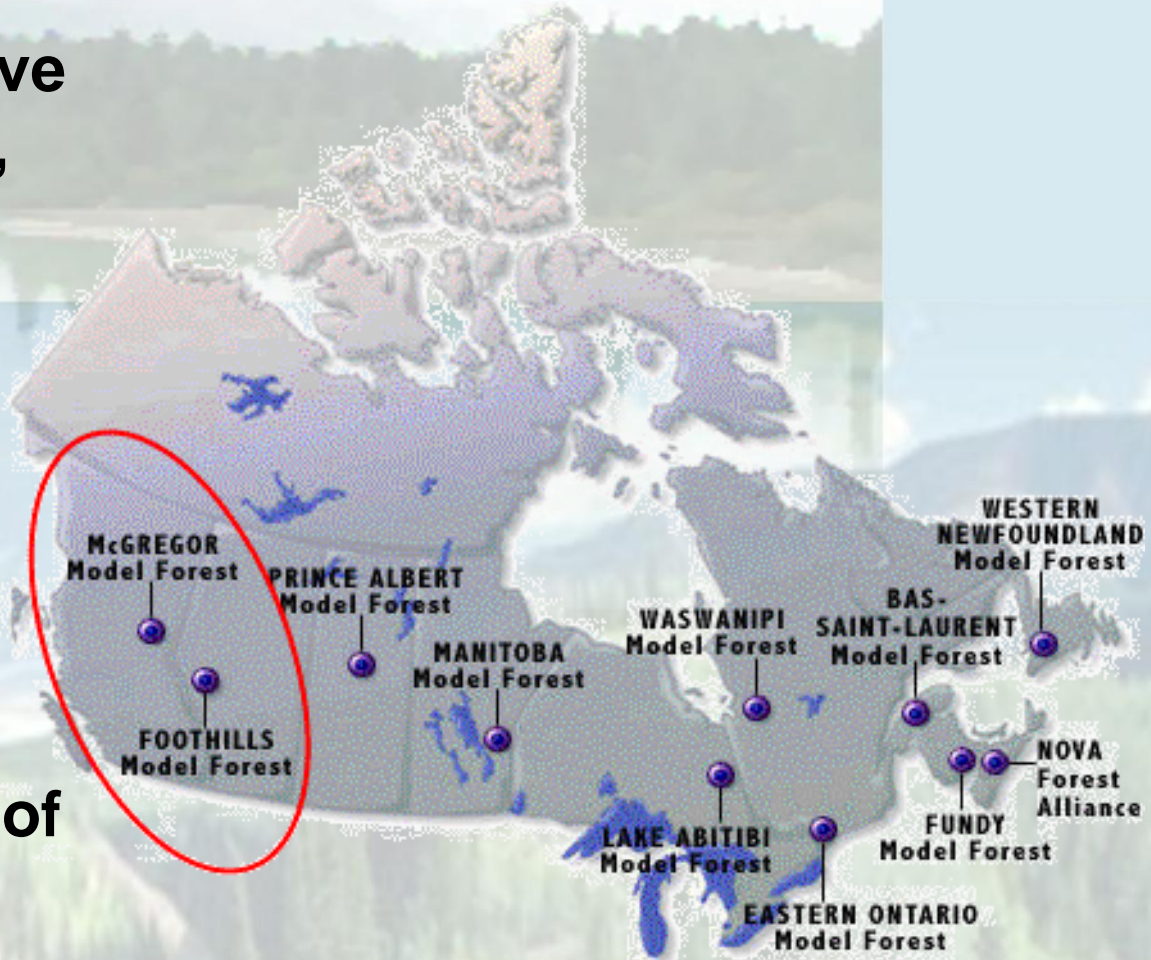
Sustainable Forest Management: From Concept to Practice in Two Canadian Model Forests

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McGregor Model Forest
David Andison
Foothills Model Forest



Canadian Model Forest Program

- Unique and creative mixture of people, knowledge, tools and processes
- Contributed individually
- Common: ecological knowledge base and development of new management strategies and practices



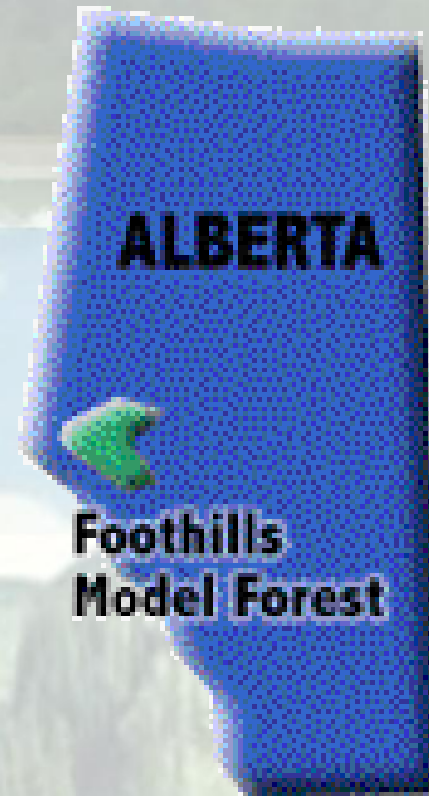
- **McGregor Model Forest**

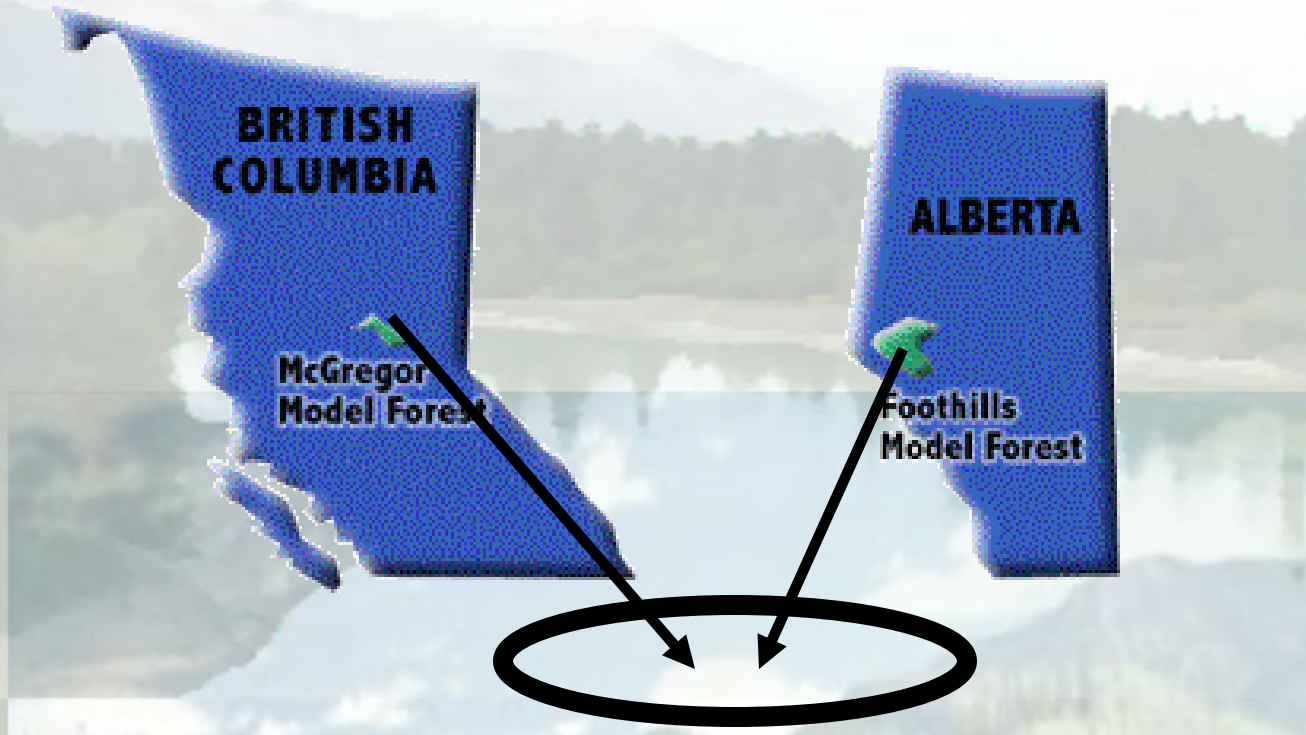
- **Central British Columbia**
- *The McGregor Approach to Sustainable Forest Management*
- **Five integrated sustainable forest management tools**



- **Foothills Model Forest**

- West-Central Alberta
- Different and complementary SFM challenges
- Comprehensive Natural Disturbance Program





Opportunity to integrate the sustainable forest management approaches developed by each model forest

Environmental, Economic and Social Values	<ul style="list-style-type: none"> • <i>International</i> • <i>National</i> • <i>Provincial / State</i> • <i>Regional</i> • <i>Sub-regional</i> • <i>Community</i>
High Level Goals and Plans	



Defined Forest Area

**Assess
Opportunities**

SFM Tools

Adjust

**Adaptive
Management
Cycle**

**Scenario
Planning
Process**

**Design
Strategy**

**Reports
Maps
Charts
Visualization**

SFM Foundation

Ecological Social Economic
 • Information • Knowledge
 • Experience

Models

Evaluate

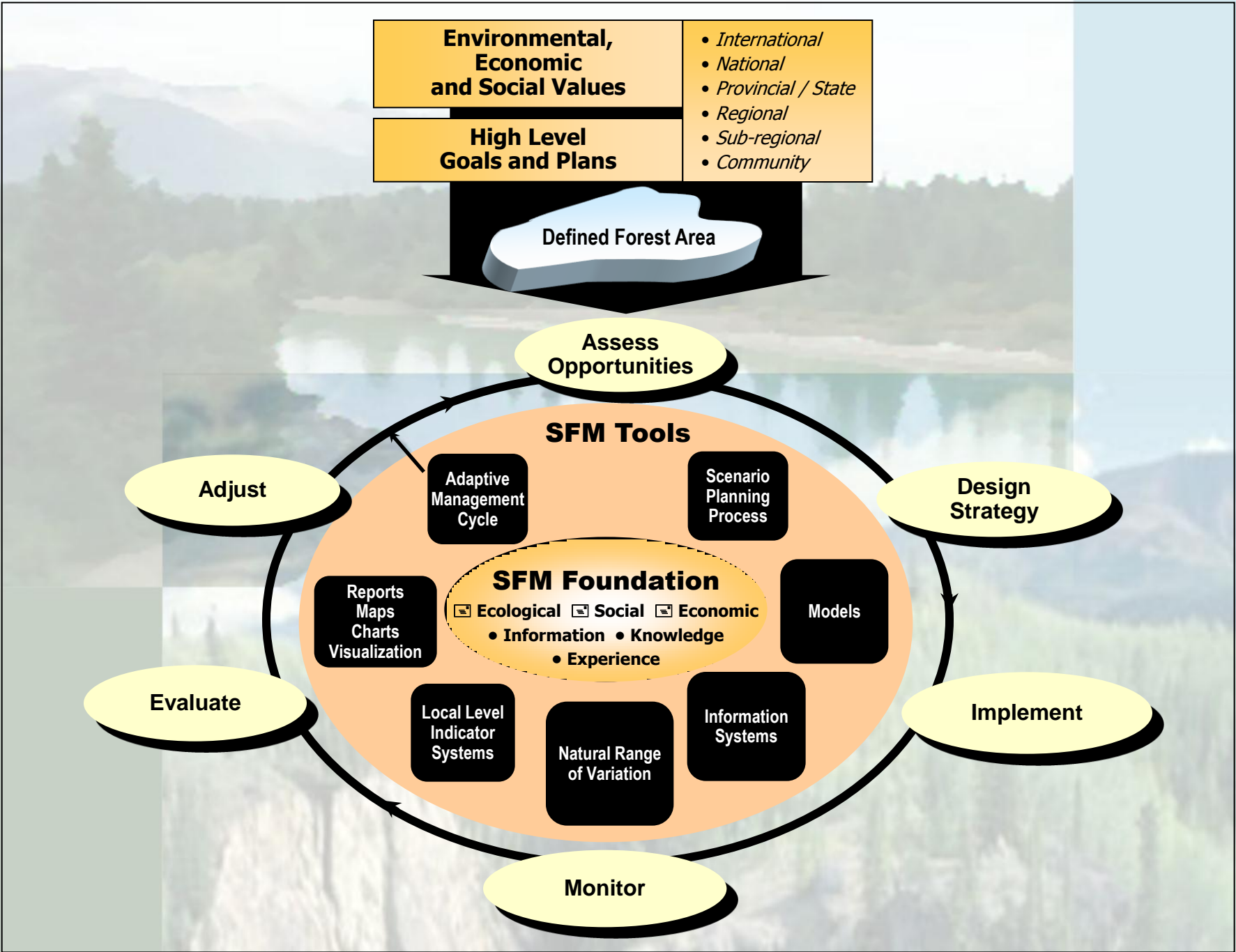
**Local Level
Indicator
Systems**

**Natural Range
of Variation**

**Information
Systems**

Implement

Monitor



McGregor Approach to Sustainable Forest Management



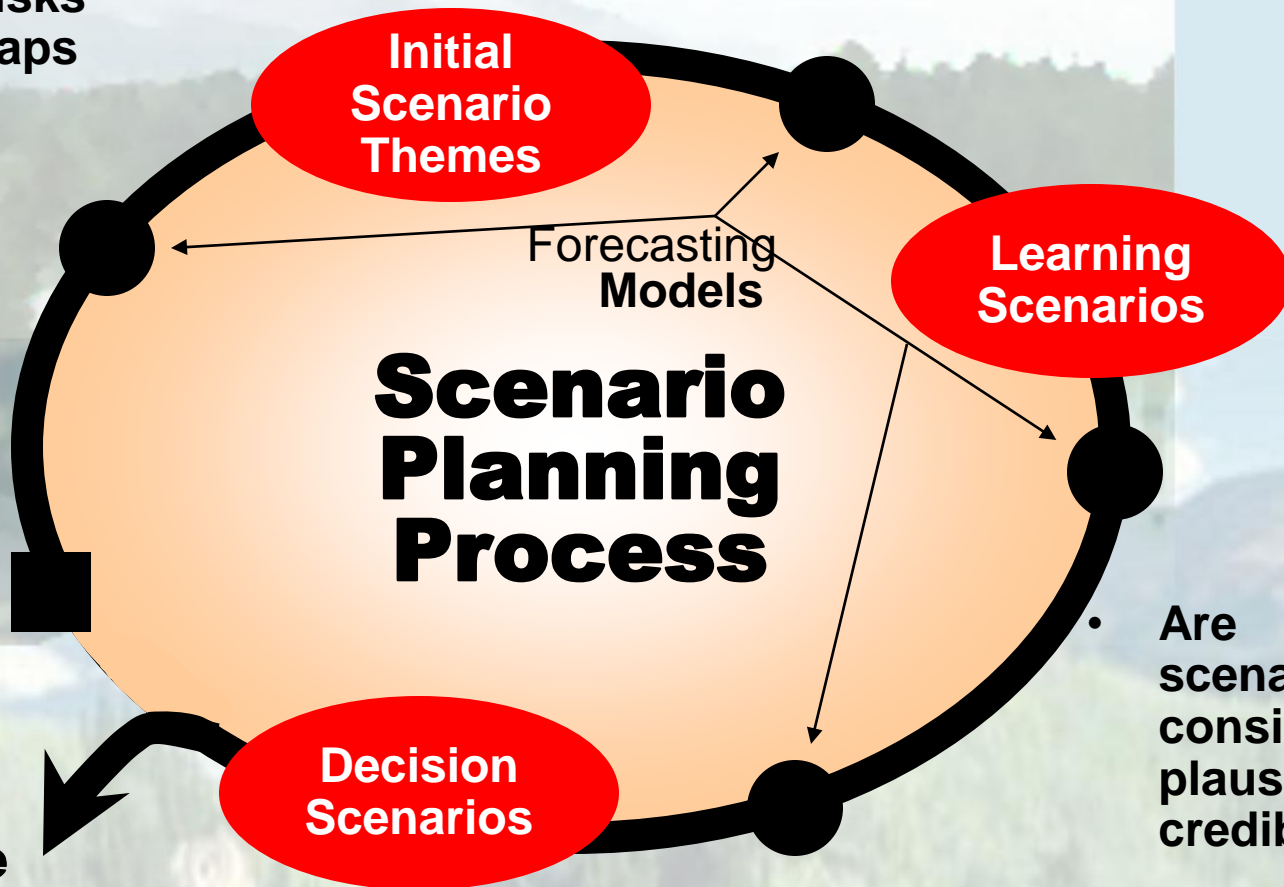
- **Scenario Planning**
- **Models**
- **Visualisation**

Scenario Planning

- **Disciplined method for imagining possible futures**
- **Series of narratives**
- **Benefits of varied perspectives of participants**
- **Multiple factors, shared human experience**

- Assumptions
- Uncertainties
- Risks
- Gaps

- Scope
- Participants
- Databases
- Values
- Objectives
- Indicators
- Trends
- Issues



- Are scenarios consistent, plausible, credible?

- Compare scenarios
- Converge on most feasible scenario(s)

Models

- **Support scenario planning process**
- **Feasibility, ability to achieve desired outcomes**
- **Comprehensive GIS databases**
- **Spatially and temporally explicit forecasting models**
- **Treatment and scheduling models**
- **Up to 6 million ha**

McGREGOR MODEL FOREST

Scheduler v.0.1

Objective Selector

Objectives

Name	Violations	Target Type	Active
ECA	0		<input type="checkbox"/>
CAMERON	0	Hard	<input checked="" type="checkbox"/>
JENSEN	0	Hard	<input checked="" type="checkbox"/>
OLSSON	0	Hard	<input checked="" type="checkbox"/>
PLATSKO	0	Hard	<input checked="" type="checkbox"/>
Seral	0		<input type="checkbox"/>
averil	0		<input type="checkbox"/>
lynch	0		<input type="checkbox"/>
nyder	0		<input type="checkbox"/>
seebach	0		<input type="checkbox"/>
wilson	0		<input type="checkbox"/>
Volume	0		<input type="checkbox"/>
TFL030	0	Hard	<input checked="" type="checkbox"/>

Scheduler v. 0.1

Project: Test-1 Scenario: basecase

Analysis Properties

General

Mode: Spatial Aspatial

Algorithm: Simulation Optimization

Planning Horizon: 250

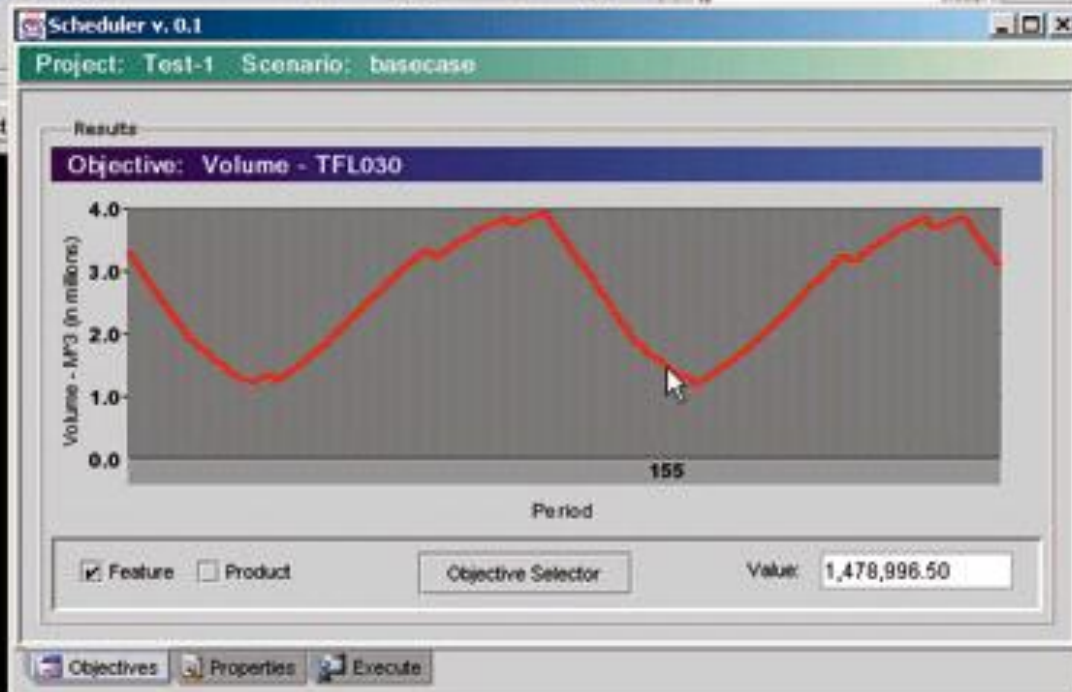
Harvest By: Block Fragment

Interval

Apply Over Entire Planning Horizon

Per Period: 1

Apply Cancel

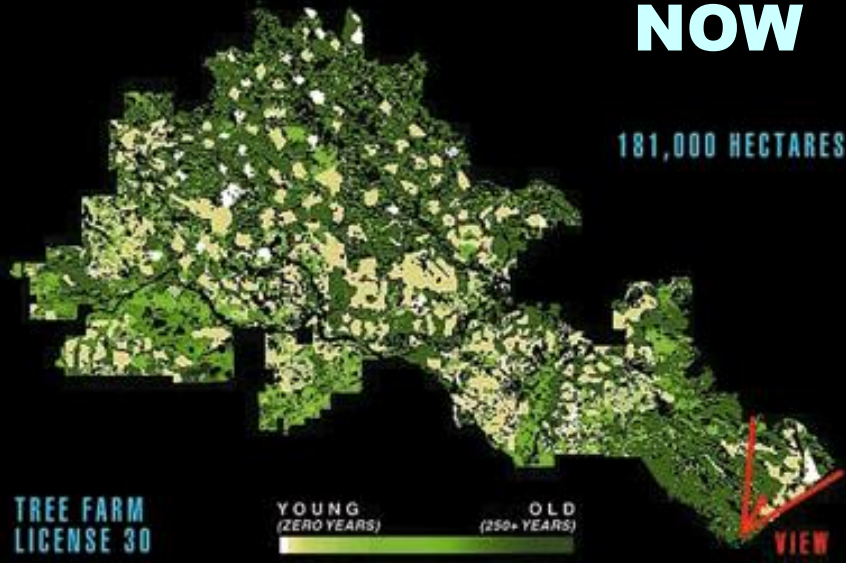


Management
Scenarios
Modelled / Projected

Canfor TFL30
Prince George, BC

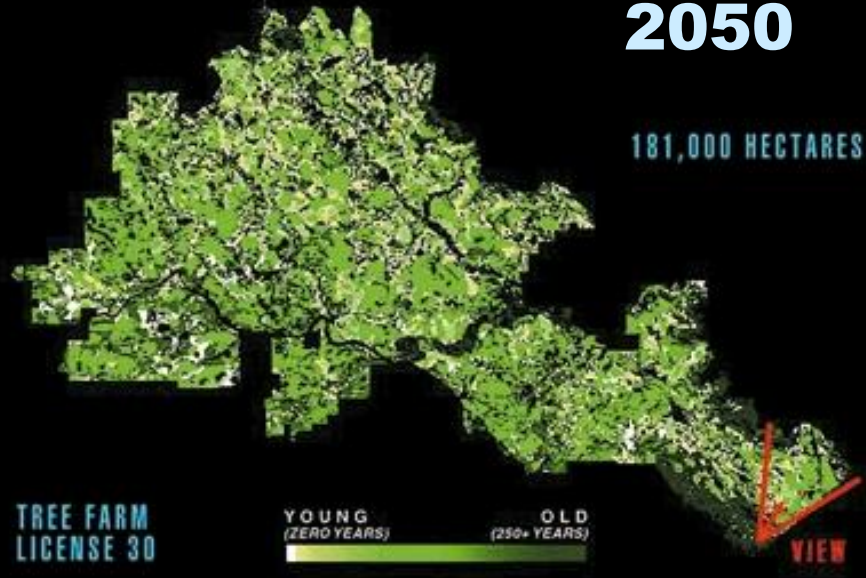
NOW

181,000 HECTARES



2050

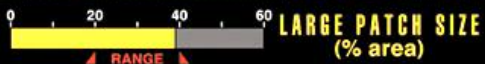
181,000 HECTARES



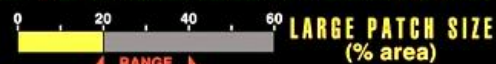
2100

181,000 HECTARES

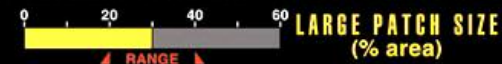
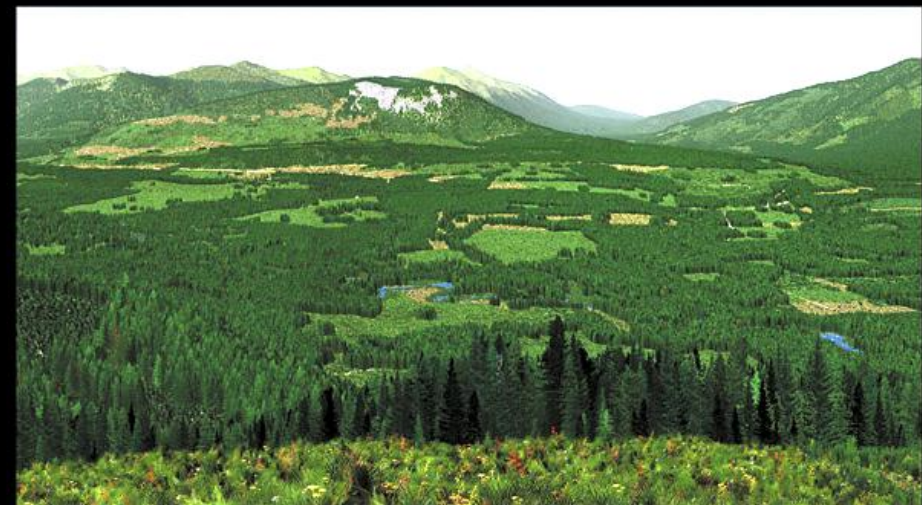




NOW



INTENSIVE FORESTRY 2100



BIODIVERSITY GUIDEBOOK 2100

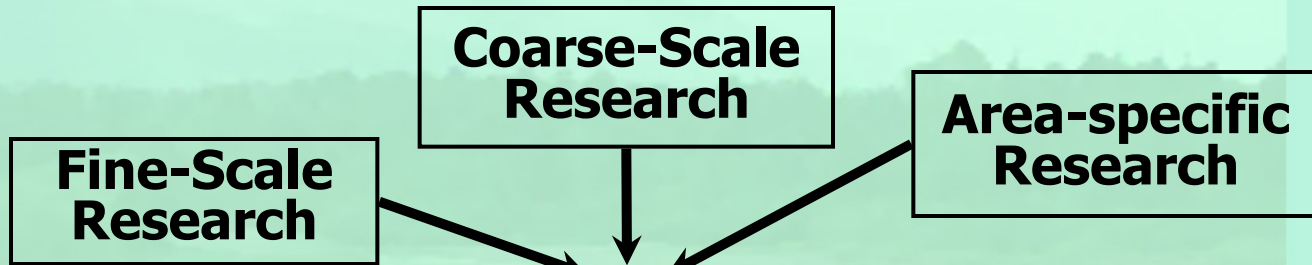
Foothills Model Forest Natural Disturbance Program



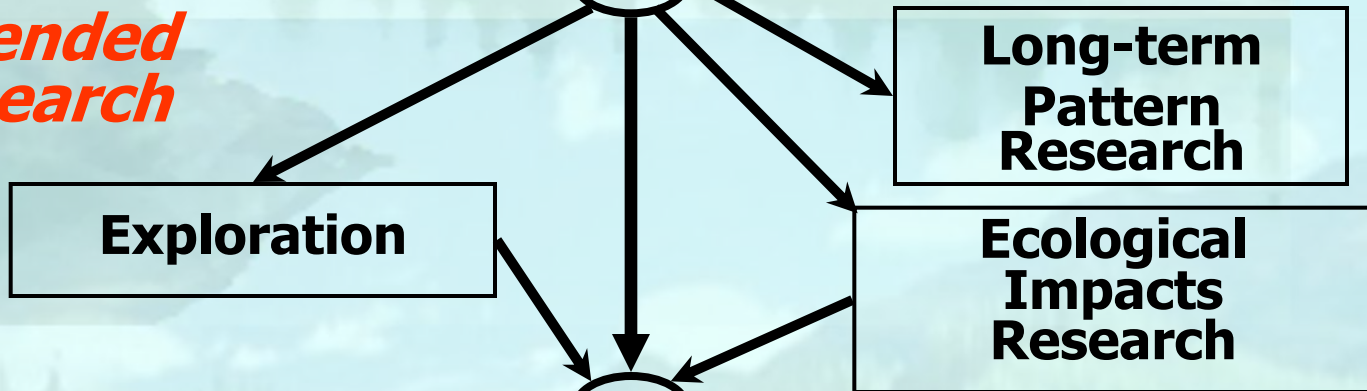
- Natural disturbance – an ecological process to guide management
- Fine filter (species) approach limitations
- Landscape dynamics over time and space – Coarse filter approach
- Understand then, manage for the natural range of variation
- Management can approximate this



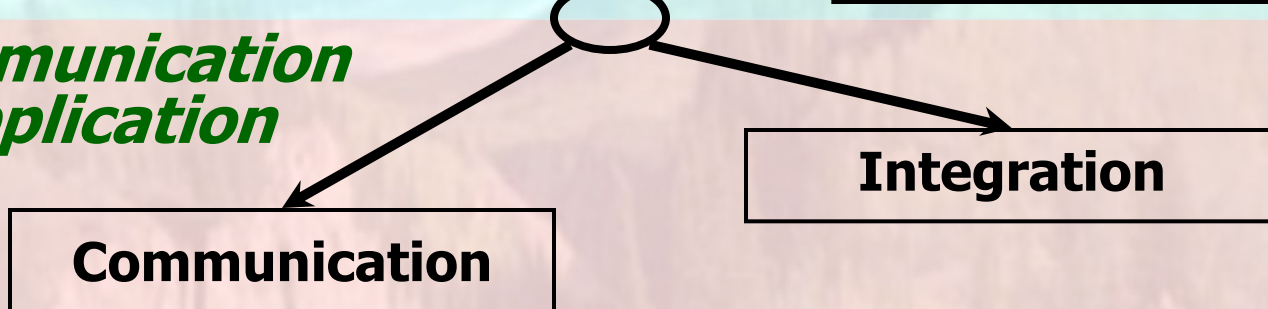
***Basic NRV
Research***



***Extended
Research***

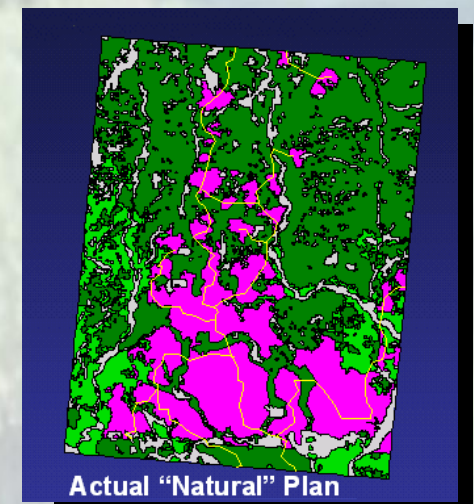
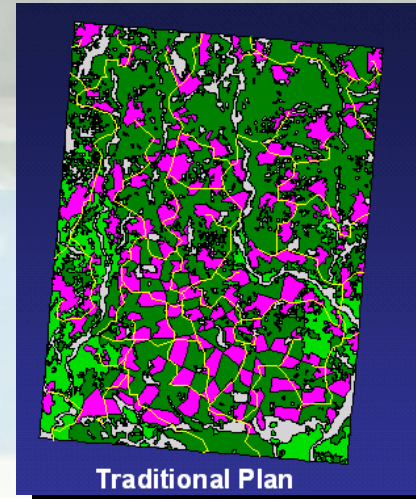


***Communication
& Application***

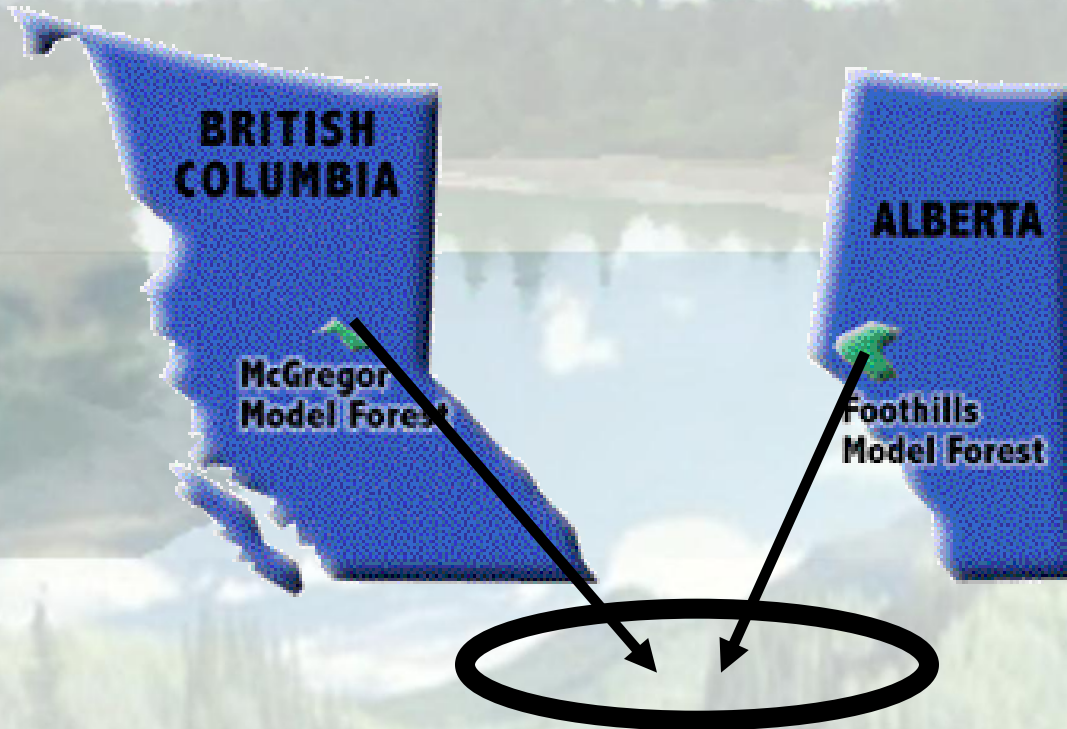


Natural Disturbance Program

- Defendable, quantifiable foundation of knowledge
- Demonstrate how integral disturbance is to forests
- Objective measurable foundation for building SFM scenarios
- Ideally suited to defining indicators and targets

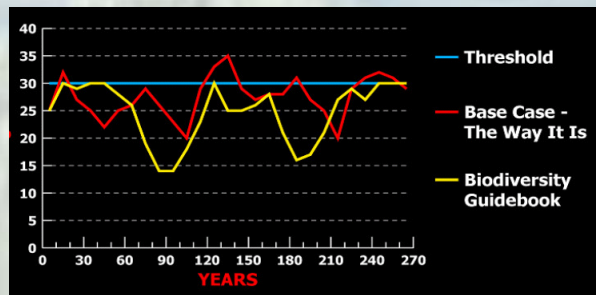
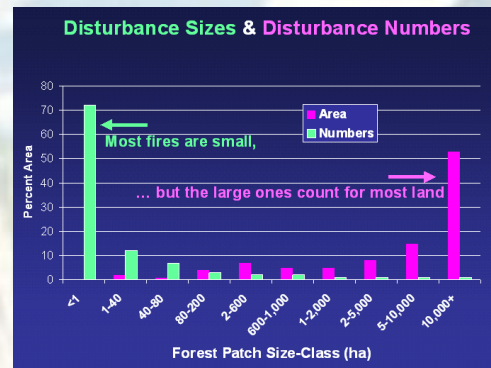
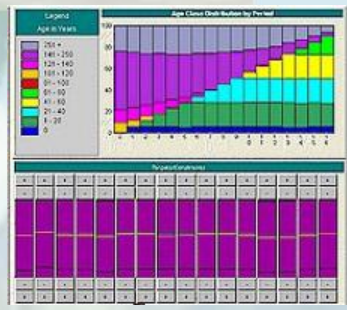
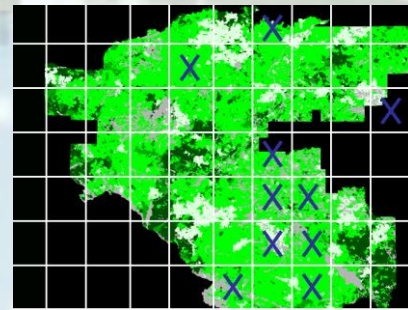
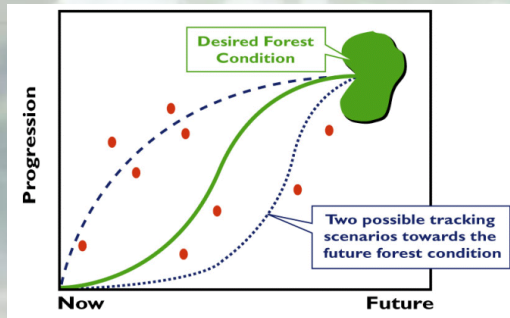


Integration of Approaches



Opportunity to integrate the sustainable forest management approaches developed by each model forest

Conclusions



Acknowledgements

- **Canadian Forest Service**
- **McGregor Model Forest's 30+ Partners**
- **Weldwood of Canada**
- **Jasper National Park**
- **Alberta Newsprint Company**
- **Alberta Sustainable Resource Development**
- **Many dedicated individuals in each Model Forest**