

ALCES Landscape Cumulative Effects Simulator



**Solution Oriented
Computer Simulation Models for
Strategic-Level Regional Planning**

**PEOPLE
PROFIT
PLANET**

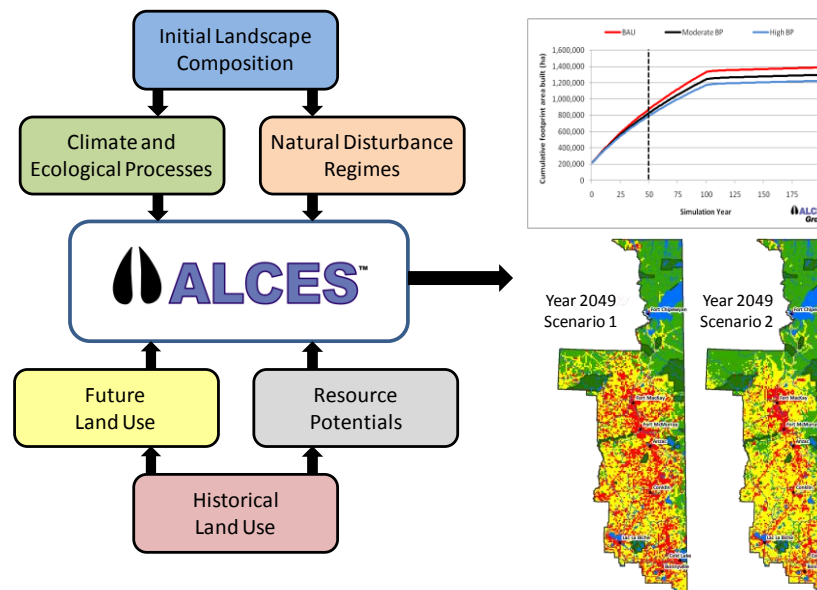
Welcome to the ALCES Group

Sustainable land-use decisions require adequate information, foresight and planning. ALCES Landscape & Land-Use Ltd. (ALCES Group) assists diverse stakeholders to collaboratively explore the economic, ecological and social consequences of different land-uses on land, air, water, wildlife and communities. We are a unique collaboration of interdisciplinary consultants committed to assisting clients make sustainable land-use decisions to achieve triple bottom line results - people, planet and profit - that foster environments in which we and our grandchildren can thrive.

The ALCES Group has over fifteen years of experience in the delivery of land-use cumulative effects modelling tools, strategic land-use planning advice, and the provision of practical strategies to assist government, business, and society.

ALCES® Simulators

The ALCES Group has developed integrated simulation tools to assist progressive resource managers and planners develop strategies and land-use options that optimize societal goals. The ALCES® product suite (Integrator, Municipality, Wildlife Manager, Optimizer and Mapper) is powerful and fast, and has been proven in a diverse range of projects. Our tool-kit provides strategic-level simulation modelling and visualization capabilities. ALCES® follows logical steps for data compilation and entry; outputs include tables, graphs and maps.



Indicators Tracked in ALCES®

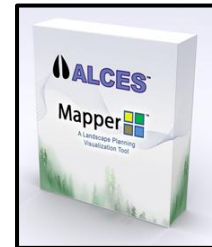
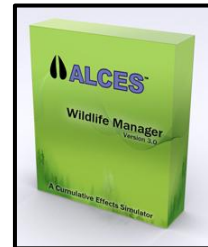
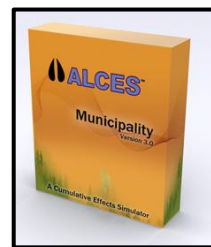
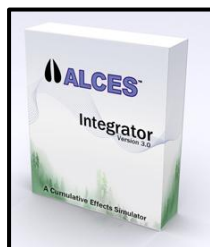
The ALCES product suite integrates landscapes, land-uses, natural disturbances and a variety of ecological processes to track and report on the performance of many different indicators.

<u>Natural Disturbances</u>	<u>Ecological Processes</u>	<u>Land Uses</u>	<u>Management Levers</u>	<u>Socio-Economic</u>
Natural Fire	Biodiversity	Settlements	Business as Usual	Employment
Prescribed Fire	Endangered Species	Forestry	Best Practices	Royalties
Insect Outbreaks	Meteorology	Energy	Thresholds and Targets	Return on Investment
Climate	Surface and Groundwater	Mining	Management by Objective	Social Equity Measures
Climate Change	Successional Pathways	Crops	Optimization	Infrastructure Costs
Avalanches	Nutrient Dynamics	Irrigation	Backcasting	Commodity Production
Gap Dynamics	Predator - Prey Dynamics	Livestock	Forecasting	Input Demands / Costs
Coastal Erosion	Carbon Pool Dynamics	Tourism / Recreation	Deterministic / Stochastic	Supply / Demand Ratio
Wind Throw	Landscape Metrics	Transportation	Infrastructure Risk	Immigration / Emigration
Storm Events	Exotic Invasive Plants	First Nations	Access Management	First Nations Issues
Drought	Range of Natural Variability	Hunting, Fishing, Trapping	Urban Sprawl vs Nodal	Life Cycle Analyses
Floods	Soil Formation / Loss	General Infrastructure	Strategic vs Tactical	Cradle to Grave

Our Services

ALCES Group services focus on the application of the ALCES toolkit to complex planning issues in multi-stakeholder environments. We assist and train clients in assessing strategic and tactical environmental, social, economic and political challenges associated with economic and population growth and conservation planning. The ALCES® tool kit has the ability to:

- forecast and visualize landscape change resulting from single or multiple human land-use practices and various natural disturbance regimes
- track flows of natural resources (water, fiber, hydrocarbons, ores, wildlife, crops, livestock, carbon) and identify issues relating to sustainability of resource flows
- track employment, expenditures, royalties and indirect economic benefits associated with flows of land-use resources (timber, hydrocarbon, ore, livestock, water, electricity)
- define trade-offs between land-use practices and environmental quality
- identify possible combinations of land-uses in space and time that maximize performance of key social, economic and ecological indicators
- seek mitigation strategies that minimize adverse risk to ecological and economic goals



For more information on the ALCES Group or our Landscape Simulation Models, visit www.alces.ca