Partner Perspectives

Tool helps tweak management plans

Partner Perspective

Alberta-Pacific Forest Industries
Boyle, Aberta

"Neptune helps with Al-Pac's philosophy of continuous improvement . . . It's a nice strategic tool."

Matthew Smith
Al-Pac forest ecology analyst

MARCH, 2011

Overview

Alberta-Pacific Forest Industries is a pulp producer harvesting timber across a licence area of 5.8 million ha – about the size of Nova Scotia – of which about two million ha are harvestable forest land. The balance consists of wetlands and non-harvestable forest areas such as river valleys, slopes, protected areas and riparian buffers. Ecological integrity across the landscape must be maintained for the company to meet regulatory and international certification requirements. The company harvests on average about 8,000 ha a year.

Challenge

Forest and environmental planners in industry aim to manage with broad landscape-level ecosystems in mind, and Al-Pac looks after a very large landscape. In addition, the often-unpredictable activities of other users, such as various timber interests and oil and gas players, have to be factored in to landscape management decisions. Certification systems such as Forest Stewardship Council (FSC) demand solid metrics on how a company is doing in terms of keeping the forest healthy and flourishing measured against historic patterns and processes. Aerial photography, photo interpetation and ground-level checking to support certification and regulatory expectations can be very time consuming and expensive.

Solution

Matthew Smith, Al-Pac forest ecology analyst, has been working with Foothills Research Institute's Natural Disturbance Program and a 20-strong committee to fine-tune the Program's software system called Neptune. This takes actual historical data on how wildfire affects vegetative structure on the landscape, and allows today's industry to run their own management scenarios to see which will most closely match those historical patterns. Emulating nature, the thinking goes, will help safeguard the ecological diversity and processes that have given us the forests we enjoy today. Continual improvements to Neptune's data sets and web-based accessibility will add to the reliability of its predictions and insights.

Results

"Being part of the committee is a good opportunity to learn from others and brainstorm how Neptune can serve each of the forest companies and agencies," says Smith. "Already it's a very useful tool to measure the natural disturbance dynamic – it gives you some metrics, especially at the broad level. I think it will help our area have a very 'natural disturbance' look to it, and is very good at producing the spatial analysis and statistical material that FSC needs." Neptune may not be the silver bullet of emulating Mother Nature, but it does provide some good guideposts, Smith says. "It also helps with Al-Pac's philosophy of continuous improvement. You can run a scenario, tweak it, run it again, so that you're always working towards better outcomes in landscape management. It's a nice strategic tool."

For more see **www.foothillsresearchinstitute.ca**