

B.C. 'ark' threatened by climate change, report says

Environment, economic health threatened by unprecedented changes to ecosystem

By Scott Simpson, Vancouver Sun
December 4, 2008

Climate change made it easier for the mountain pine beetle to thrive in British Columbia, but logging and fire protection made it impossible for Interior forests to withstand the devastating pest, warns a new report.

Simon Fraser University's Adaptation to Climate Change Team, or ACT, says in a report released on Wednesday that fragmented habitat, and "unprecedented" changes in temperature and precipitation threaten B.C.'s economic health and diminish the ability of ecosystems to sustain themselves.

There is an urgent need for all levels of government to set aside competing interests and act in the best interest of those ecosystems or risk their collapse -- and that of the resource communities that depend on them, says the report.

"A potent current example is the massive pine beetle infestation in the B.C. Interior resulting from a combination of warmer winters and a less resilient forest ecosystem caused by silviculture practices, including fire suppression, that reduced natural buffers to the spread of infestation," the report says.

Report lead author John O'Riordan, a retired former deputy minister of B.C.'s Ministry of Sustainable Resource Management, said average winter temperatures in the Interior have jumped three to five degrees in the past 50 years -- making it easier for the tiny pests to survive the winter.

"We are actually dealing now with a significant shift in climate," he said at a press conference to release the report.

"The other thing which is not fully understood is that the reason the pine beetle had such an impact in the Interior is because the structure of the forest was also manipulated by human activity.

"As a result of fire suppression and the way the forest was logged, it was a much more even-aged stand of trees than nature would have provided.

"The result was that the pine beetle had a pretty well free rein to affect a large number of trees whereas under natural circumstances the trees would have had a more varied age structure because of fires. Beetles don't attack younger trees. They only attack middle-aged to older trees."

The report says B.C.'s ecosystems contribute substantially more to the province's economy than traditional resource revenues.

"Our ecosystems provide a rich array of services such as: controlling flooding, helping to clean drinking water sources, storing carbon, and moderating air and water temperatures," the report says.

Climate change will have "such a profound effect" on these assets that government must change the way it manages them -- or the B.C. economy, and ecosystems themselves, will suffer.

For example, it may be less costly for B.C. residents to maintain a natural watershed than to spend money on reservoirs and water treatment, suggested SFU public policy program master Nancy Olewiler, a co-founder of ACT.

The report describes British Columbia as a "biodiversity ark" that supports more than 70 per cent of North American plant and animal species -- but it says the province's array of ecosystems cannot adapt to the double challenge of human development and climate change.

The report says B.C. and Alaska have become refuges for many significant species, such as grizzly bear, mountain caribou and all five species of Pacific salmon.

O'Riordan recommends the province take leadership on ecosystem management and work toward a single-agency approach "to ensure consistency in maintaining ecosystem functionality."

The report says that within five years, B.C. government decisions on resource use should be based on "consistent ecosystem-based principles."

That means all watershed and land planning should be undertaken at a local level, that decisions about resource roads be coordinated against all agencies to minimize road development, and that the cumulative impacts of resource activity should be considered.

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