

OLD GROWTH STRATEGIC REVIEW

Economic, Ecological and Cultural Importance of Old Growth Forests

The Arrowsmith Naturalists Club was founded in 1970 to know, enjoy and preserve nature. We are affiliated with B.C. Nature and Nature Canada.

Please accept our submission to the Old Growth Strategic Review.

We are 142 members living within the unceded traditional territory of the Snaw-naw-as and Qualicum Indigenous peoples. This region is within the UNESCO designated Mount Arrowsmith Biosphere Region. We live, work and play in the Coastal Douglas fir BEC zone, where in 1999, the BC Conservation Data Centre published that “nearly every type of old growth CDF plant community is now rare and endangered.” Today old growth CDF forests are close to extinction with less than 1% left.

There are a myriad of economic, ecological and cultural justifications for protecting the remaining old growth forests in British Columbia.

We are calling for policy that ends harvesting remaining old growth forests and brings in ecosystem-based forest management - management that balances a broad range of benefits derived from our forests.

The Arrowsmith Naturalists Club support solutions that centre on the United Nations Declaration on the Rights and Title of Indigenous Peoples, social and economic justice, biodiversity and climate crisis.

Economic & Ecological

British Columbia's old forests are important. Old forests are ecological reservoirs of genetic variation, a record of ecological history, habitat for specialized species, recreation inspirations, complex buffers to change and provide proven health benefits from phytoncides produced in conifer forests such as we have in British Columbia.

Old Growth forests support species at risk.

Old Growth forests are storing large amounts of carbon. When clear cut, we lose this important carbon storage especially needed now with the changing climate. When Old Growth forests are clearcut, soils that are crucial to supporting healthy forests are degraded.

Old Growth forests contribute to water retention in our watersheds.

Old Growth forests support plants and provide oxygen.

Old Growth forests support fish.

Old Growth forests support a multi million dollar tourism industry

Old Growth forests support Indigenous peoples culture and arts.

Old growth forests are important to the Province of British Columbia as a seed bank.

Vancouver Island's native trees, Western Red Cedar, Coastal Douglas Fir and Coastal Western Hemlock are rich in phytoncides (wood essential oils), which are antimicrobial volatile organic compounds. This is important and relevant because of the large body of evidence showing profound human health benefits from these conifer forests.

Old growth forests are vital to sustaining wildlife, including unique species that can't live in the second-growth tree plantations that old growth forests are replaced with.

Lichens have an incredible role in old growth forests. *Lobaria oregana* is a lichen that fixes nitrogen out of the air and makes it available to plants. Nitrogen is the element that is most essential to the growth of coastal forests. This beneficial lichen is confined only to old growth forests and cannot survive in 2nd and 3rd growth forests.

British Columbia is faced with the consequences of harvesting faster than the growth rate of forests. We have cut too much in too many places and what we have lost is irreplaceable and permanent.

When we lose an old growth forest, we all lose integral public resources and lose the opportunity to change course toward a sustainable longer lasting forest industry economy.

On November 5, 2019 11,258 signatures from scientists from 153 countries -- including 409 from Canada published in the journal *BioScience* a letter saying we humans must change how we live." "The climate crisis is closely linked to excessive consumption of the wealthy lifestyle. Excessive extraction of materials and overexploitation of ecosystems, driven by economic growth, must be quickly curtailed ... We must protect and restore Earth's ecosystems that play a major role in keeping the earth stable and keep the environment in equilibrium."

A barrier to achieving a sustainable forest industry and protection of old growth forest is that historically, provincial governments continually surrender to industrial forest corporations demands for more forest to cut and pressure for lesser environmental protection to enable corporate profit.

It is problematic when regulations are an obstacle to achieving an Old Growth Strategy. We witnessed this when an area near Cathedral Grove was identified by Ministry of Environment biologists as critical winter habitat for Deer and Roosevelt Elk that had to be protected. In 2004 a forest corporation was permitted to log there because the government took the land out of Tree Farm Licence (TFL) 44 , putting it under a private land management regime that allows the company to decide what's best for wildlife.

Another obstacle to protecting old growth forest is that compliance is not reliably effective as witnessed when the Compliant & Enforcement Branch investigation concluded the Nahmint forest stewardship plan doesn't comply with old-growth biodiversity protections in the Vancouver Island Land Use Plan, and warned of long-term impacts on a land base designated as a special management zone.

There are high costs to the public when loss of trees results in a decrease in the water table and an increase in water temperature. Both conditions negatively affect juvenile wild Pacific salmon, the food chain and ecosystem function.

There is a large body of evidence showing that forests have significant health care cost benefits. Researchers at Griffith University in Australia suggest that national parks and protected areas save an approximate \$6 trillion globally in mental health care costs. Lead study author Ralf Buckley said while that is a "conservative" estimate, it's still "10 times greater than the global value of park tourism and 100 times greater than the global value of park agency budgets."

There has been tremendous job loss in the BC forest industry and forests are now managed as a crop. Old growth is only becoming increasingly rare. The result we see is what the forest industry calls a "higher cost of fibre" as the corporation's and their contractors need to push roads further into wilderness areas to access the last pockets of precious old growth forest in community watersheds. We feel the benefits of protecting all of our old growth forest far outweighs costly impacts to water quality such as sedimentation, pollution and changes in water levels.

An economic cost of continued harvesting of old growth forest is negative cumulative effects on the quality of coastal watersheds, fish habitat and ecosystem goods and services provided by these watersheds. A recent Strait of Georgia study demonstrated that the value of protecting coastal watersheds and the ecosystem services that maintain coho habitat range from \$0.93 to \$2.63 per hectare of drainage basin.

We have a high percentage of private forest land on Vancouver Island, especially on the south east coast where the Private Managed Forest Land Act's best riparian regulations allow a matrix of harvesting to the waters edge as seen in the Englishman River in 2009, when a forest corporation logged 47 trees on an island in the river taking 22 old growth trees, with the remaining trees left on the ground. British Columbia's forest practices have been causing British Columbia's millions of dollars in restoration costs.

When an old growth forest is logged, the degraded forest becomes receptive and fertile to the introduction of exotic invasive species that are competition for the other plants and animals that need to live here.

British Columbia's most productive old growth forests are valuable to the critical role played by healthy and resilient forests in climate change mitigation and adaptation. Studies done on managed forests — places where trees have been planted at about the same time and are all similar species — show that managed forests take up less carbon than unmanaged forests of the same age. This poses a problem. The importance of old growth forests in their carbon storage capacity as efficient and important parts of our battle against climate change can not be ignored.

Floods, droughts and fires are some of the impacts of climate change, made worse by logging, making a strong case for protection of all remaining old growth forest as a substantial strategy to both mitigate and adapt to climate change.

William Moomaw chemist and environmental scientist, serving as lead author on five reports of the Intergovernmental Panel on Climate Change sharply criticizes the recent trend of converting forests in the Southeastern U.S. to wood pellets. He advises leaving existing older and middle-aged forests intact because of their superior carbon-sequestration abilities.

Clear-cutting BC old growth and mature forests does not even help with sustainable employment in the forest industry. In 2010 Catalyst Pulp Mill in Campbell River closed forever. Since 2010, lost employment in the BC forest industry numbers over 30 thousand jobs.

In year 2000, 15,700 people were employed in the forest sector in the Caribou development region (includes the Cariboo and Fraser-Fort George regional districts). By 2010, the number of people employed had declined to just 9,200. Overall, more than 6,500 jobs have disappeared, representing a 40% decrease in the number of people working in the industry in that region..

A decade ago, 24,600 people were employed in the forest sector in the Vancouver Island/ Coast region. By 2009, the number of people employed had declined to just 8,900. Overall, more than 15,000 jobs have disappeared, representing a 65% decrease in the number of people working in the industry. ! The sector has declined as a major employer on the Island. Forestry accounted for 7.5% of total employment in the region in 2000, but represented just 2.3% of all jobs in 2004.

Old growth forests per given site are higher in economic value left standing than becoming second-growth & 3rd growth stands for 45 year logging rotations. Old growth forests are valuable for tourism, scenery, recreation, wildlife, clean water, wild salmon, endangered species, carbon storage and First Nations cultural needs.

Cultural:

Pacific Northwest First Nations define themselves as Salmon People as Salmon have long been the symbol and lifeblood of the people.

For over ten thousand years BC's Indigenous Peoples have refined and honed intricate methods of harvesting as well as conserving the natural resources that the land and sea offered them.

Nuu-chah-nulth Nation on Vancouver Island, traditional philosophy of hishuk'ish tsawalk (everything is one) with it's harvesting practices grounded in the principles of iisaak (respect) and uu-a-thiuk (taking care of) was important especially to Salmon who depend on old growth forests for their spawning habitat.

Cedar is a well-known symbol of the Pacific Northwest Coast and for thousands of years important in many aspects of coastal First Nations lives. Not only is cedar a key natural resource in the production of material goods, the tree also plays an integral role in the spiritual beliefs and ceremonial life of coastal First Nations.

Western Red Cedar is known as the tree of life and is held with the highest respect by west coast First Nations peoples. Western Red Cedar is BC's Provincial tree.

There is a cultural belief that the trees and the many understory plants in the forests are the "Earth's blanket" and if too much is plucked or ruthlessly destroyed, the earth is sorry and weeps."

Source: The Earth's Blanket ~ Nancy J. Turner

Old growth forests have an incredible intrinsic and aesthetic appeal to people. Whether they visit the old growth forests or not, people want to know that not all of this forest is gone.

A November 2019 Sierra Club poll showed that Ninety-two per cent of British Columbian's support taking action to defend endangered old-growth forests.

Merve Wilkinson who was awarded the Order of Canada and the Order of British Columbia demonstrated sustainable forestry can only be achieved when the harvest rate does not exceed the forest growth rate. Merve logged 21/2 times the original volume of wood on his 70 acres but after 70 years of more than a dozen cuts, still had 110% of the original volume growing.

Merve's eco forestry practices of leaving mature old growth trees to develop all old growth attributes, selectively log, leaving oldest tallest trees to give the necessary competition for the younger forest to grow taller than they do in an

even-aged second or third growth clear cut plantation shows sustainable forest practices are achievable.

The only short-term economic benefit to clear cutting BC's remaining unprotected old growth forests will be realized exclusively by corporate executive's, their subordinates and shareholders, who may have no connection or feeling of responsibility to functioning forests and their ecosystem connections.

All old growth forest values described in this submission are public assets that we can not afford to degrade any further.

The Arrowsmith Naturalists membership of 142 people, join with conservation, industry and tourism organizations calling for comprehensive science -based legislation to protect all old growth forests. It is our hope that government will recognize the flawed logic to continue selling off the remainder of old growth forests that are our most life-sustaining public asset.

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