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Old-growth panel

Sierra Club BC submission, January 31, 2020

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Sierra Club BC welcomes the opportunity to share our views on BC's globally rare old-growth forests with the provincial Old-growth Panel. Our written submission summarizes the key points we shared with you during our meeting on November 18, 2019 in Vancouver. ¹

Content

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1. Introduction: Growing support for old-growth protection

This is not the first time that we and others are sharing our concerns and calls for action regarding old-growth forests with the BC government. Tens of thousands of British Columbians have spoken out with us and other environmental organizations, many of them for many years, with personal letters and emails, letters to the editor, meeting with their MLAs and joining days of action in front of dozens of MLA constituency offices in 2019. In numerous occasions, we shared our concerns together with First Nations leaders², tourism organizations³, local governments⁴, leading unions and business representatives.⁵

¹ slides can be found here <https://www.dropbox.com/s/a8n2x3dlibjo6qe/OG%20Panel.pdf?dl=0>

² <https://vancouver.sun.com/opinion/opinion-remaining-old-growth-forest-must-be-protected>

³ <https://sierraclub.bc.ca/200000-people-stand-tall-for-ancient-rainforests/>

⁴ <https://sierraclub.bc.ca/end-old-growth/>

⁵ <https://sierraclub.bc.ca/new-bc-government-must-reform-forest-policies-say-environmentalists-businesses-and-union/>

Concerned residents in British Columbia are being joined by hundreds of thousands around the world who care deeply about the planet's last old-growth forests and have asked the BC government to protect what remains (220,000 have already sent a message using the website of Rainforest Rescue⁶).

Their worries that we are running out of time to save the web of life and ensure the benefits only old-growth forests can provide were confirmed in a letter sent by 223 forest scientists to the BC government in June 2018⁷

We were also joined by 25 international environmental organizations, including from tropical rainforest countries, who believe that British Columbia has a global responsibility to protect its remaining old-growth forests as a global legacy.⁸

We all hope that the recommendations coming from your panel will lead to increased conservation of BC's endangered old-growth forests.

2. A selection of existing resources

In the last three years alone we have shared several briefing notes, recommendations and reports with the BC government, on our own and with other organizations. The following list is a selection we consider relevant for your review.

- [Clearcut Carbon](#) – Sierra Club BC report highlighting the climate impact and the annual rate of old-growth logging (and clearcut logging overall), December 2019
- [Joint Recommendations on Changes to FRPA](#)
A joint submission to the BC government's review of forestry laws, including for old-growth protection, submitted by 28 NGOs in July 2019
- [Applying Solutions from the Great Bear Rainforest Agreements to Vancouver Island and the South Coast](#) – July 2019 - Environmental Law Centre report regarding old-growth solutions for Sierra Club BC
- [Forestry and Carbon in BC](#) – a report by Dr. Jim Pojar debunking myths about forests, carbon and climate change (including an excellent summary of scientific findings regarding old-growth and carbon) March 2019
- [Old-growth targets in provincial forestry laws, Background, February 2019](#)
- [Hidden, Ignored and Growing: BC's Forest Carbon Emissions](#) – Sierra Club BC report January 2019
- [Policy Recommendations for Old-Growth Forest Protection](#) – Joint NGO recommendations, July 2017

3. Reporting on the state of old-growth forests

A serious barrier for meaningful dialogue about old-growth solutions is the lack of meaningful, detailed information about the state of BC's old-growth forest ecosystems and an ongoing tendency in provincial communication to downplay the old-growth crisis with misleading statements or by reporting the percentage protected of the remaining old-growth, instead of the percentage protected of the original old-growth⁹.

In 2009 and 2016, Sierra Club BC released reports on the state of BC's coastal old-growth forests using EBM thresholds distinguishing ecosystems and productivity by landscape unit and in regional context. Our reports showed that good productivity old-growth rainforest ecosystems in lower elevations have been reduced to a

⁶ <https://www.rainforest-rescue.org/petitions/1120/stop-felling-canadas-centuries-old-forest-giants-for-lumber>

⁷ <http://forestlegacies.org/press-room/latest-news/bc-rainforest-scientist-letter/>

⁸ <https://sierraclub.bc.ca/25-organizations-call-for-action-vancouver-islands-rainforest-communities/>

⁹ <https://www.nationalobserver.com/2019/09/20/opinion/debunking-old-growth-forest-claims-british-columbia>

fraction of their original extent and that even less of these high-risk forests is protected. We recommend that the BC government uses a similar approach to report on the state of old-growth forests and inform conservation.

[Vancouver Island and South Coast Rainforest at High Ecological Risk, Backgrounder, 2016](#)

[State of British Columbia's Coastal Rainforest, 2009](#)

[High resolution also available](#)

4. The big picture: Why we care about old-growth forests

There are more reasons to protect the last old-growth than we can discuss in this submission. This section is an attempt to summarize the big picture, with a link for more information for each key reason.

1. The world's last remaining intact forests and the life support systems we all depend on are a legacy for all future generations.

For more information: Why Vancouver Island's giant trees have never been more valuable and more in danger: <https://www.thestar.com/vancouver/2019/08/19/why-vancouver-islands-giant-trees-have-never-been-more-valuable-and-more-in-danger.html>

2. Old-growth forests have accumulated huge amounts of carbon per hectares and clearcutting them releases massive amounts of carbon back into the atmosphere. Protecting old-growth means reducing emissions quickly and keeping the carbon where it belongs.

For more information: Preserve Old-Growth Forests to Keep Carbon Where It Belongs: <https://thetyee.ca/Opinion/2017/09/12/Preserve-Forests-Carbon-Belongs/>

3. Many of BC's last old-growth forests are among the most resilient forests and will better cope with worsening climate change impacts than young forests. Old-growth is critical to protecting communities from droughts, floods and wildfires.

For more information: Changing Climate, Vanishing Old Growth <https://thetyee.ca/News/2019/07/15/Increase-Fire-Risk-Coastal-Forests/>

4. Independent polling shows that an overwhelming majority of British Columbians want the province to take action for endangered old-growth forests.

For more information: Poll finds 92% of British Columbians want old growth forests protected: <https://cortescurrents.ca/old-growth-forests-protected/>

5. Logging the last unprotected old-growth is not sustainable. Once cut it will only be more difficult to create a diverse economy including sectors like tourism and recreation. Business as usual is not going to end well, either for ecosystems or forestry jobs.

For more information: Clearcutting B.C.'s last old-growth leaves all of us poorer, forever <https://www.vicnews.com/opinion/column-clearcutting-b-c-s-last-old-growth-leaves-all-of-us-poorer-forever/>

6. Logging the last old-growth threatens the cultural values of Indigenous peoples who have stewarded these forests since time immemorial.

For more information: Old-growth logging threatens culture, says Nuu-chah-nulth tribal council: <https://www.cbc.ca/news/canada/british-columbia/old-growth-logging-threatens-culture-says-nuu-chah-nulth-tribal-council-1.4899547>

7. We are in the midst of a global extinction crisis. Scientists fear a million species could go extinct in coming decades. We must protect old-growth forests which many species-at-risk rely on.

For more information: Logging B.C.'s ancient forests adds to extinctions:

<https://vancouver.sun.com/opinion/op-ed/jens-wieting-and-torrance-coste-logging-b-c-s-ancient-forests-adds-to-extinctions>

8. BC's old-growth forests have been reduced to a fraction. Clearcutting what remains is causing more conflict as communities seek to defend what is left and push back against extreme old-growth logging.

For more information: BC has entered the era of extreme old-growth logging. We must stop it:

<https://www.nationalobserver.com/2019/05/31/opinion/bc-has-entered-era-extreme-old-growth-logging-we-must-stop-it>

9. International headlines about the lack of protection of BC's endangered old-growth forests and weak forestry laws undermine BC's reputation globally, particularly of the provincial forestry sector.

For more information: (Un)clearcut:

<https://www.earthisland.org/journal/index.php/magazine/entry/unclearcut/>

10. Protecting the last ancient rainforest and centuries-old trees is a moral responsibility. We must stand up for these ecologically and culturally vital forests.

For more information: Can you put a price on the beauty of the natural world?

<https://www.theguardian.com/commentisfree/2014/apr/22/price-natural-world-agenda-ignores-destroys>

5. Old-growth polling results

In November 2019 Sierra Club BC shared the results of an independent Research Co. poll regarding public opinions on BC's old-growth <https://sierraclub.bc.ca/forestpoll/>

The poll showed 92 per cent of British Columbians support taking action to defend endangered old-growth forests. These views are widely held across the province, with 90 per cent or more in southern B.C. and the Fraser Valley, 87 per cent on northern Vancouver Island and 83 per cent in northern B.C.

British Columbians also overwhelmingly believe it is important for the B.C. government to keep its election promise¹⁰ to take action on old-growth forests, including more protection for old-growth trees, less logging, partnerships with First Nations and support for a more diversified economy. Ninety-two per cent agreed with this statement.

According to the poll, key reasons why British Columbians care for old-growth are that

- “many important and rare species depend on old-growth forests” (86%)
- they “capture and store carbon from the atmosphere, which helps defend our communities from the extreme weather that is caused by climate change” (also 86%)
- they “are being logged at a rapid rate and there is very little remaining” (also 85%),”
- “as a legacy for future generations” (also 85%)

¹⁰ The 2017 NDP platform stated, “In partnership with First Nations and communities, we will modernize land-use planning to effectively and sustainably manage BC's ecosystems, rivers, lakes, watersheds, forests and old growth, while accounting for cumulative effects. We will take an evidence-based scientific approach and use the ecosystem-based management of the Great Bear Rainforest as a model.” <https://action.bcndp.ca/page/-/bcndp/docs/BC-NDP-Platform-2017.pdf>

- “old-growth forests are globally rare and important” (also 85%)
- “given our changing climate, if old-growth trees are logged they will never grow back in the same way”, (also 85%),
- they “give us clean water and help clean the air” (84%),
- “for the beauty of the landscape” (83%)
- they “protect communities from droughts, flooding and landslides worsened by climate change” (also 83%)
- They “are important for First Nations cultural values” (80%).
- “salmon depend on old-growth forests for their spawning habitat” (80%)
- They “provide excellent places for recreation and tourism” (79%).

6. Endangered old-growth forests and species extinction

Destruction and disruption of the natural world have sped up the natural rate of species extinction by at least one hundred times. One recent international study found globally billions of populations of mammals, birds, reptiles and amphibians have been lost in recent decades with habitat destruction as the leading cause, now exacerbated by global warming. They referred to the massive loss of wildlife as “biological annihilation.”¹¹

In B.C., we often celebrate the biological richness and spectacular landscapes in this part of the world, despite the fact that there are 1900 species at risk of disappearing in this province, many of which depend on old-growth forests.¹²

Vancouver Island’s remaining intact rainforest is being destroyed three times faster than the remaining Amazon rainforest in Brazil. Since 2019, the world is looking with terror to Brazil, where the government of president Jair Bolsonaro is putting at risk the 80 per cent of Brazil’s Amazon rainforest that remains standing. In the last 25 years, close to 10 per cent of the rainforest has been destroyed: 3.7 million square kilometres remained in 1993 and 3.3 million square kilometres remained in 2018.

In contrast, Sierra Club BC mapping shows that on Vancouver Island, only about a fifth of the original productive old-growth rainforest remains unlogged.

More than 30 per cent of what remained standing in 1993 has been destroyed in the last 25 years - close to 700,000 hectares of Vancouver Island’s ancient forests (31 per cent) remained in 1993 and less than 500,000 hectares (21 per cent) remained in 2018. Old-growth logging on Vancouver Island continues at a rate of about 34 soccer fields per day. Our latest data shows that across BC, forests older than 140 years are logged at a rate of more than 500 soccer fields per day.¹³

Globally, and in BC, the loss of old-growth forests threatens species, carbon storage, clean air and clean water. In some countries, this is mainly due to deforestation; in other countries such as Canada, it is mainly through the replacement of rich ancient forests with even-aged young forest.

B.C.’s remaining temperate old-growth rainforests represent the largest remaining tracts of a globally rare ecosystem that covers just half a per cent of the planet’s landmass. Many species that live here don’t exist anywhere else. And while trees grow tall in decades in tropical forests they need centuries to become old in temperate zones.

Logging of B.C.’s ancient forests continues in habitat that is needed for spotted owl and caribou, species on the brink of extirpation. Like in tropical areas, the loss of these forests disproportionately impacts the Indigenous peoples who hold title to them and who have used the resources in them since time immemorial.

¹¹ <https://www.pnas.org/content/114/30/E6089>

¹² <https://www.wildernesscommittee.org/BCSpecies>

¹³ <https://sierraclub.bc.ca/clearcutcarbon/>

Governments everywhere must safeguard remaining ancient forests, their webs of life and the life support systems we all depend on. B.C. must set a strong example by protecting old-growth forests in a way that respects Indigenous rights and title while creating new jobs and improving second-growth forestry. The Great Bear Rainforest Agreements showed that progress for healthy rainforests and healthy communities is possible, and the NDP was elected on a promise to implement this science-based approach elsewhere in the province.

7. BC's old-growth forests and the climate crisis

Sierra Club BC's perspective on BC's old-growth forest is grounded in the assessment that the trajectory of BC's systematically disappearing intact old-growth forests – many with record high carbon storage per hectare accumulated over centuries - is reflecting the rapidly worsening global extinction and climate crisis (see also our Clearcut Carbon report¹⁴, highlighting the importance of reforming BC forestry for both climate mitigation and adaptation).

In November 2019, 11,000 scientists warned of “untold suffering” unless there are “major transformations in the ways our global society functions and interacts with natural ecosystems.”¹⁵ There is overwhelming evidence that our collective actions to reduce carbon pollution in the next decade will decide whether humans can slow down global heating before impacts become completely unmanageable and further climate disruption becomes unstoppable.

In October 2018, the Intergovernmental Panel on Climate Change (IPCC) warned that humanity has until 2030 to reduce global greenhouse gas emissions by about half, followed by net zero emissions by mid century, to have a fighting chance of limiting global heating to 1.5 degrees Celsius by 2100.¹⁶

Severe climate impacts like drought, flooding, hurricanes, wildfires and sea level rise are already creating devastating impacts for people in B.C. and around the world. There is now overwhelming evidence that any further delay of the necessary transformations will result in increasingly catastrophic climate change and ecosystem degradation on a global scale.

One crucial factor in this unprecedented moment is the fate of the world's forests, particularly intact carbon rich forest ecosystems like BC's remaining old-growth forests in lower elevations. Globally, forests are slowing climate change by absorbing about a quarter of the greenhouse gas emissions caused by humans. The fact, that BC's forests have turned from carbon sink to carbon source for over a decade and that we continue to weaken our best natural carbon sink by clearcutting carbon-rich old-growth forest in the midst of a climate crisis is a grave concern.

Simply put, we cannot safeguard a stable climate without protecting and restoring intact forests, and we cannot sustain forests without stabilizing the climate. These actions must be taken together.

The good news is that a rapid shift towards increased forest conservation and improved management could not only reduce carbon emissions from forests, but also allow carbon to be sequestered, removing it from the atmosphere, if we act today, before further warming causes more climate and ecosystem breakdown.

¹⁴ <https://sierraclub.bc.ca/clearcutcarbon/>

¹⁵ <https://academic.oup.com/bioscience/advance-article/doi/10.1093/biosci/biz088/5610806>

¹⁶ <https://www.ipcc.ch/sr15/>

New analysis from The Nature Conservancy, WRI and others¹⁷ estimates that stopping deforestation and degradation, restoring forests and improving forestry practices could cost-effectively remove 7 billion metric tons of carbon dioxide annually (for comparison, global annual emissions were 37 billion tonnes in 2018).

Research shows that no other nation can contribute more to this goal than Canada—home to more than a tenth of the world’s trees, it is the country with the highest ratio of trees to people in the world.¹⁸ The biggest and oldest trees in Canada are found in B.C., as are forests with some of the highest carbon storage per hectare globally.¹⁹

B.C. clearly has an outsized role to play in tackling the climate crisis because of the forests that grow here. The province must change course in forest stewardship in the coming decade—a decade crucial for securing a livable climate for our future.

Protecting and restoring old-growth forests while phasing out destructive forestry practices is equally important both to protect communities from climate change impacts like droughts and flooding, and to reduce carbon dioxide emissions from forests and forestry, which are not counted in official emission tallies yet are now much greater than all official provincial emissions combined.

8. Old-growth forests are the best carbon bank

Not every hectare logged contributes the same amount to B.C.’s carbon emissions from logging. The initial carbon loss from cutting down old-growth forest is much greater compared to renewed logging of second-growth forests. The loss of carbon as a result of clearcutting also varies depending on the ecosystem and how much carbon has been accumulated over time.

Many forest ecosystems in B.C.’s Interior have a higher level of natural disturbance from impacts like fire and insects (now increasingly worsened by climate change).²⁰ In contrast, B.C.’s old-growth coastal and inland temperate rainforests have lower levels of natural disturbance and trees that grow much older. They can store over 1,000 tonnes of carbon per hectare, one of the highest rates on earth.

These old-growth forests are like a carbon bank, accumulating carbon in soil, trees, and organic matter over millennia²¹. Old-growth forests with exceptionally high carbon storage per hectare can only be found on a small percentage of the forested land base, particularly in valley bottom forest ecosystems. A 2018 study showed that the largest 1% of the world's trees store 50% of forest carbon globally.²² Unfortunately, these highly productive stands have historically been the most targeted for logging. Therefore, they are now the most endangered ecosystems, reduced to a fraction of their former extent, with insufficient protection.

Research increasingly shows that, contrary to industry claims, old trees store more carbon than young trees.²³ One study found that old trees store more carbon in proportion to their size, and that almost 70% of

¹⁷ <https://www.pnas.org/content/114/44/11645>

¹⁸ There are nearly 9,000 trees for every Canadian. <https://www.washingtonpost.com/news/energy-environment/wp/2015/09/02/scientists-discover-that-the-world-contains-dramatically-more-trees-than-previously-thought/>

¹⁹ Wilson et al. (2008), *Mitigating and Adapting to Climate Change Through the Conservation of Nature* <https://itabc.ca/publications-a-research/mitigating-and-adapting-to-climate-change-through-the-conservation-of-nature/>

²⁰ <https://www2.gov.bc.ca/assets/gov/environment/climate-change/adaptation/climate-risk-summary.pdf>

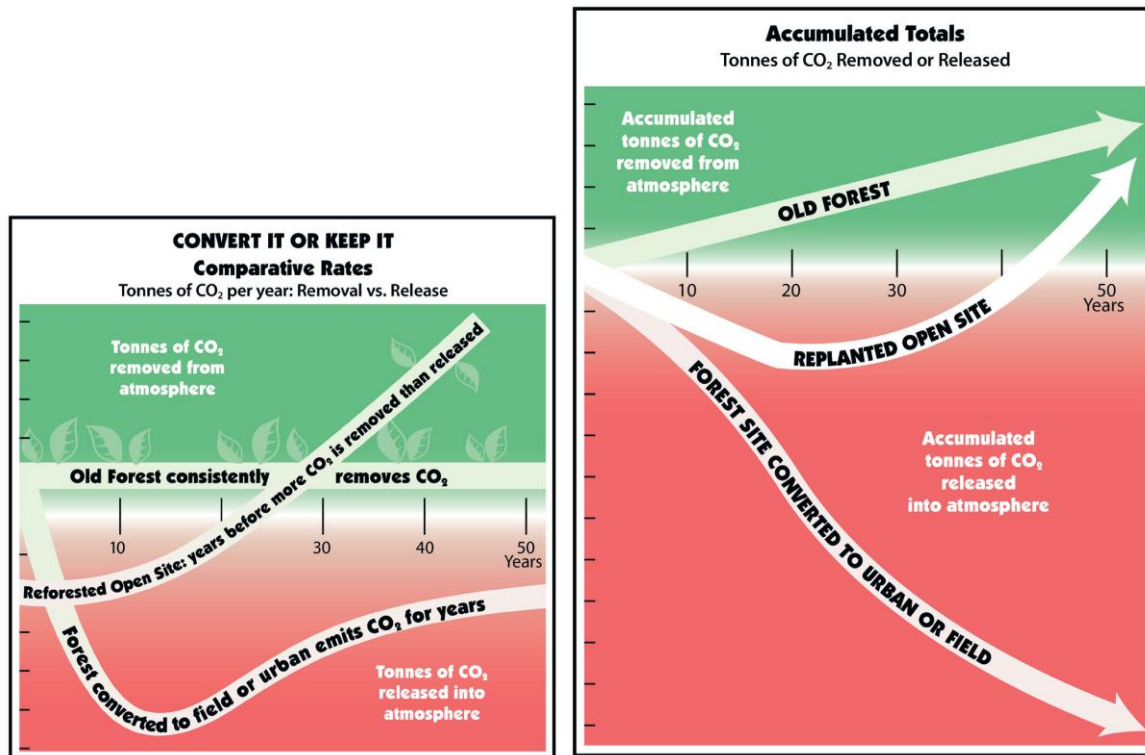
²¹ <https://sierraclub.bc.ca/7-myths-about-forests-carbon-and-climate-change/>

²² Lutz et al. 2018, “Global importance of large-diameter trees.”

<https://onlinelibrary.wiley.com/doi/abs/10.1111/geb.12747>

²³ <https://www.nature.com/articles/nature07276>

the carbon stored in a tree is accumulated in the second half of its life.²⁴ It makes no sense to cut down carbon-storing older trees at a time when scientists are desperately trying to invent risky carbon-capture technology.



Left: Rate of annual carbon capture of old-growth compared to young forest. A clearcut loses carbon for more than a decade before young trees catch up and begin capturing a similar amount of carbon as the original stand. In contrast, old-growth and older forests continue to sequester steady amounts of carbon per year.

Right: Total amount of carbon stored per hectare for old-growth compared to young forest. An old-growth forest that is clearcut and replaced by young forest will release hundreds of tonnes of carbon per hectare over several decades. An equivalent area of replanted forest will not have any positive effect on carbon storage for decades. "Like the proverbial turtle, the slow and steady carbon removal benefits of a conserved old forest end up ahead even of a replanted stand in the short and medium term."²⁵

In addition, old-growth forests should be considered non-renewable under a changing climate. Once cut, old-growth forests will not grow back as we know them. According to BC ecologist Jim Pojar, "...recovery of coastal old-growth forest, which requires several centuries to fully develop, is an inappropriate anachronistic concept, given rapid climate change, system unpredictability, and scientific uncertainty. Old coastal forests are effectively non-renewable resources in the present circumstances. For that reason alone, you could argue that the remaining large intact areas of old-growth temperate rainforest - globally rare to begin with - should

²⁴ <https://www.cbc.ca/news/canada/how-old-trees-help-climate-1.4252888>

²⁵ Wilson et al. 2008, *Mitigating and Adapting to Climate Change Through the Conservation of Nature*, p. 12-13.

<https://itabc.ca/publications-a-research/mitigating-and-adapting-to-climate-change-through-the-conservation-of-nature/>

not be logged.”²⁶ Even without factoring in global heating, if we allow young forests to grow old again, it would take centuries before they offer the ecosystem services of old-growth forests.²⁷

9. The role of old-growth forests for safe, resilient communities

To prepare and adapt our province in the face of climate change requires increased old-growth conservation and reformed forest management policies. Destructive forestry practices that put communities at risk of increased climate impacts like drought and flooding, and release significant amounts of carbon emissions, need to be phased out.

Forest management for community and ecological resiliency also requires protecting and restoring resilient old-growth and allow young forests to grow older as a defense from worsening climate impacts. Safeguarding intact landscapes will also help enable a diverse economy and high quality of life in B.C.

Intact, older forests are the last line of defence for many communities amid worsening climate impacts like droughts and floods. As the climate shifts into uncharted territory, only intact forests can buffer the impacts—not clearcuts and young tree plantations. Intact forests are also essential for clean air and water, species habitat and long term forestry jobs. Carbon-rich old-growth forests remain the most resilient. Forest management decision makers must recognize that protecting and restoring resilient older forests will both slow climate change and help defend the safety of communities.

In some forest landscapes, cautious intervention like thinning to build resiliency and controlled burns will be necessary in ecosystems where forests don’t grow very old naturally, not in typical old-growth ecosystems like coastal and inland rainforests. Clearcutting forests on short cycles is not a climate solution in any forest type in B.C., as this forest management practice releases carbon emissions. Our urgent task is to store carbon, not release it, and natural, older forests do this best.

The IPCC concluded that, without unprecedented action, the world will heat by about 1.5 degrees Celsius by 2040. Global heating of just one degree is already causing longer and more extreme flooding and droughts.

These trends will only stop once the world economy has completely decarbonized. However, impacts to B.C. communities can be significantly slowed by protecting intact natural forests, particularly large landscapes, to moderate local climates.

As our climate is changing rapidly, B.C.’s forestry policies and practices must reflect the changing forest ecosystems we live and work in. Safeguarding our natural life support systems and the ability of forests to store and capture carbon will require leadership, funding and innovation.

Forest management must be guided by the overarching goal of restoring ecologically intact, resilient forests that can protect communities from devastating climate impacts and capture carbon.

Both the urgency to protect communities and the need to massively reduce carbon emissions in the next decade²⁸ requires that we prioritize actions that have immediate benefits. While tree planting initiatives have potential long-term benefits for communities and the climate, these benefits will not be significantly realized

²⁶ <https://thetyee.ca/Opinion/2012/11/23/Great-Bear-Rainforest-Agreements/>

²⁷ Sutherland et al. 2016, “Recovery trends for multiple ecosystem services reveal non-linear responses and long-term tradeoffs from temperate forest harvesting.”

<https://www.sciencedirect.com/science/article/abs/pii/S0378112716302018>

²⁸ International Panel on Climate Change (IPCC) special report released in October 2018:

<https://www.theguardian.com/environment/2018/oct/08/global-warming-must-not-exceed-15c-warns-landmark-un-report>

for decades. In contrast, protecting old-growth forests and ending slash burning has immediate benefits for communities and the climate.

It is not too late to save and restore some of the remaining relatively intact forest landscapes in the province, their cultural values, and their benefits for clean water, pure air and a stable climate. But the decision to transition to truly sustainable forest management cannot wait. Creating more jobs with less damage per cubic metre of wood and truly climate-friendly wood products deserves full provincial support.

In the midst of a climate crisis, we can no longer afford to clearcut old-growth forests for timber. The good news is that a reimagined forestry model is a core component in a low carbon economy, if we act quickly to slow climate change by protecting old-growth forests that must be considered 'unharvestable' in light of the climate crisis.

10. Recommendations: Old-growth protection for healthy ecosystems, healthy communities and a livable climate:

1. Overhaul B.C.'s legislation and regulations governing forestry and make them consistent with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).
2. Partner with the federal government²⁹ to support First Nations who are seeking new Indigenous protected area designations for their territories, many of which include carbon-rich old-growth forests such as those found in Clayoquot Sound.³⁰ The federal government has reserved \$1.3 billion to support these conservation aspirations and deliver on international conservation commitments that neither Canada nor B.C. has met thus far.³¹ B.C. is considered the ecologically richest part of Canada and therefore has a disproportionately large responsibility to contribute to Canada's target of conserving 25% of its land base by 2025 (and 30% by 2030).³² The Province should commit to matching contributions that are, at minimum, proportional to its geographic portion (close to 10% of Canada's geographic area).
3. Amend the Forest and Range Practices Act (FRPA) to reflect a paradigm shift from a timber-based approach to an ecosystem-based approach, to protect and restore endangered old-growth forests, better protect communities from climate impacts and restore the ability of forests to store and capture carbon.³³ Prioritize amendments that will result in immediate community benefits and carbon emissions reductions such as minimum protection for old-growth ecosystems.
4. Provide additional transition assistance to forestry dependent communities and workers affected by climate change impacts and mill closures to support their efforts to restore ecologically intact older forest landscapes, safeguard future forestry opportunities and create a diverse economy. Support community well-being and a diverse economy—including long-term forestry jobs—by shifting subsidies away from the fossil fuel industry and towards supporting ecosystem-based management and conservation finance solutions.
5. Implement all recommendations related to forestry laws from the Professional Reliance Review Report, strengthening regulation and reversing the trend of outsourcing oversight to corporations.³⁴

²⁹ In the case of the Great Bear Rainforest Agreements, provincial and federal governments contributed \$30 million each to conservation financing mechanisms, matching private donors to a total of \$120 million made available for funding First Nations' economic opportunities and management of protected areas <https://coastfunds.ca/>

³⁰ <https://thenarwhal.ca/biodiversity-crisis-feds-announce-175-million-new-conservation-projects/>

³¹ <https://thenarwhal.ca/canada-commits-historic-1-3-billion-create-new-protected-areas/>

³² <https://policyoptions.irpp.org/magazines/november-2019/an-epic-move-to-protect-nature-could-help-unite-the-country/>

³³ <https://sierraclub.bc.ca/wp-content/uploads/FRPA-Joint-ENGO-Submission.pdf>

³⁴ https://engage.gov.bc.ca/app/uploads/sites/272/2018/06/Professional_Reliance_Review_Final_Report.pdf

6. Apply a “climate impact test” for existing logging plans to address the imminent danger of climate impacts worsened through destructive logging, particularly old-growth forests. Where needed, adjust or cancel logging plans to address these risks.
7. Restore and expand government capacity for forest stewardship, monitoring and enforcement at the provincial, regional and local level. Increased oversight is urgently needed, since destructive logging practices will cause greater harm in landscapes hit by increasingly extreme weather events worsened by climate change.
8. Restore and expand government capacity to update ecosystem mapping, update inventories and undertake research, especially related to climate adaptation and climate change impacts such as fire and insects.
9. Adjust the provincial Annual Allowable Cut to a realistic, sustainable level that takes into account past overharvesting and climate impacts, the need for increased conservation and risks from worsening climate impacts.
10. Develop a detailed provincial report on forest carbon emissions to inform governments and decision makers at all levels about the importance of protecting carbon rich old-growth forests. Develop forest climate action plans with timelines for keeping more carbon stored in forests through old-growth protection.
11. Create enabling conditions for old-growth protection by amending regulation and creating incentives to support improved forest management and value-added businesses that create a higher number of jobs per cubic metre and reduce damage and wood waste. Phase out raw log exports.
12. Increase funding for modernized regional land use plans with science-based conservation targets for all types of old-growth using the Ecosystem-Based Management model applied in the Great Bear Rainforest, combined with support for First Nations’ governance, land use planning and a rapid transition to improved management of second-growth forests and a diverse economy.