Letter from Scientists to Prime Minister Justin Trudeau Regarding the Protection of Canada's Primary Forests

March 23, 2022

Dear Prime Minister Trudeau,

As more than 90 scientists working at the intersection of ecosystems and climate change, we are deeply concerned by the evidence of continued deforestation and degradation of primary forests globally and in Canada because of the resulting impact on greenhouse gas emissions and the biodiversity crisis[i]. Canada's primary boreal and temperate forests have a vital role to play as natural climate solutions, and it is important that their protection is central to Canada's climate and biodiversity policies.

The climate and biodiversity crises are inextricably linked and require solutions that address them in tandem[ii]. Among the most urgent, critical solutions at the intersection of these crises is the protection of the world's primary forests (those that have never been industrially disturbed and where natural processes prevail) and older forests, which have unique and irreplaceable ecological values and provide among the most effective, large-scale climate mitigation benefits[iii]. Addressing the threat of climate change requires both the elimination of our dependence on fossil fuels and the preservation of the world's primary and older (old growth and mature) forests[iv]. In short, these forests are a critical lifeline to a safe climate as they sequester and store massive amounts of carbon, provide essential habitats, and often have high levels of biodiversity that provide unique natural solutions to both crises.

With the release of Canada's 2030 Emission Reduction Plan this spring, we strongly recommend the Government of Canada use this opportunity to advance measures to protect primary forests and older forests, and to make their protection a key pillar of its natural climate solutions commitments. We further recommend that the Government of Canada commit to improve the accuracy and transparency of its national greenhouse gas emissions accounting for and reporting of emissions from its logging sector[v].

Primary forests have unique values and provide significant benefits for addressing the climate and biodiversity crises. These increasingly rare forests, which account for between approximately one-quarter[vi] and one-third[vii] of forests globally, hold 30-50% more carbon per hectare than logged forests, and provide a continuing sink for carbon dioxide (CO_2) and other greenhouse gases[viii], while also providing critical habitat for at-risk species[ix]. Canada is the steward of a substantial proportion (~16%[x]) of the world's remaining primary forests, with some of the last large stretches of these irreplaceable ecosystems found in its boreal forest, which contains globally significant stocks of ecosystem carbon.

When primary forests, whether in Canada or elsewhere, are logged they release significant amounts of carbon dioxide, exacerbating climate change[xi]. Because primary forest ecosystems store more carbon than secondary forests, replacing primary forests with younger stands, as Canada is doing, ultimately reduces the forest ecosystem's overall carbon stocks, contributing to atmospheric greenhouse gas levels.

Even if a clearcut forest eventually regrows, it can take over a decade to return to being a net absorber of carbon[xii], and the overall carbon debt in carbon stocks that were removed from older forests can take centuries to repay, a luxury we simply no longer have[xiii]. Recent studies also indicate that soil disturbance associated with logging results in large emissions of methane (CH_4)[xiv], a powerful greenhouse gas second only to CO_2 in its climate forcing effects. As the Intergovernmental Panel on Climate Change (IPCC) recently concluded, we have under a decade to significantly reduce global greenhouse gas emissions in order to avoid exceeding 1.5 degrees C of warming, meaning any continued loss of primary forests erodes our remaining atmospheric carbon budget. Responding to the latest climate projections, UN Secretary General António Guterres' issued a "code red emergency"[xv]. Importantly, the Glasgow Climate Pact (paragraph 38) emphasizes the importance of protecting, conserving and restoring nature and ecosystems to achieve the Paris Agreement temperature goal, including through forests acting as sinks and reservoirs of greenhouse gases and by protecting biodiversity[xvi].

Primary forests are also generally more resilient than logged forests to wildfires[xvii] and other natural disturbances likely to worsen with the climate crisis. Notably, clearcutting and other intensive logging practices are often associated with more intense wildfires[xviii]. Thus, achieving the most stable, resilient possible forest carbon stores requires protecting primary forests from industrial logging.

While we commend Canada for its commitment to natural climate solutions as a climate priority, we are concerned by the rate of continued industrial logging in primary forests from the boreal to coastal rainforests and the absence of a comprehensive primary forest protection policy. Replacement of these carbon-dense, biodiverse forests with lower-carbon, less biodiverse secondary forests is undermining global climate progress and contributing to the biodiversity crisis. In Canada, only 15 of 51 boreal caribou herds, which rely on primary and older forests, have sufficient habitat left to survive long-term[xix]. Additionally, only about a quarter of forests in British Columbia are old-growth and of these, only about 3% are highly productive with large trees[xx].

We strongly encourage Canada to adopt policies that will incentivize protection of primary and older forests, particularly under the leadership of Indigenous Peoples and in accordance with Indigenous Peoples' internationally recognized rights. Where Indigenous land rights are strong, ecosystems' climate and biodiversity values tend to be better protected, and Indigenous Peoples' meaningful participation and leadership is foundational to equitable and effective forest protection policies. **We also encourage Canada to undertake a comprehensive review of its forest carbon accounting and quantification practices**. Recent global studies have shown significant disparities between national greenhouse gas inventories and actual atmospheric emissions, most egregiously in the land sector[xxi]. Given Canada's large forest area and high logging rates, accurate forest emissions accounting is essential to ensuring the integrity of Canada's overall climate goals. More accurate accounting and reporting will help ensure that Canada is properly valuing the climate benefit of its primary forests and the environmental costs of industrial logging.

The decisions Canada makes regarding its primary forests over the next few years will have profound ramifications for the global climate and biodiversity crises. Canada's primary and older forests have a key role to play in preserving a safe and livable world, and the Government can make a significant contribution by prioritizing keeping these vital and irreplaceable ecosystems standing.

Sincerely,

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