

## **Clear-cut Destruction**

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Since time immemorial Indigenous people have historically employed traditional resource management practices to carefully manipulate successional processes to sustainably produce foods and materials, a concept they refer to as "caregiving." Although many of these traditional teachings have been marginalized due to assimilation, there are still Indigenous knowledge keepers who know the teachings of their people and the reliance on traditional knowledge has proven invaluable for the restoration work needed to restore this land. These cultural caregiving practices involve techniques such as burning, pruning, coppicing, weeding, transplanting, and sowing plants into the land. Kimmerer highlights the example of the Kalapuya people, an Indigenous nation, routinely burning the Willamette Valley, which resulted in increased plant production (2001). The traditional fires practiced by Aboriginals not only led to greater vegetation, but also helped control pests, sustainably provided materials for basketry, and prevented catastrophic fires (Wall-Kimmerer, 2000). The practice of clear-cutting has been ongoing since the settlers first began developing the land to make way for progress and development on Turtle Island. Consequently, the old-growth forest in the Pacific Northwest has been nearly wiped out for the road system and land ownership. Clear cutting forests in Washington State must be prohibited to allow for reforestation to restore the land, slowing the CO<sub>2</sub> emissions and helping to improve the land and air quality.



Figure 1 Horses hauling a spruce log 30 feet in circumference, Washington, 1905. (Darius Kinsey/Library of Congress) <https://medium.com/timeline/logging-photos-of-washington-states-old-growth-forests-bf18aef19955>

Prior to logging, the old-growth cedar was so massive that it was a challenge to transport for use in construction and various products like paper. Today, I observe second-growth timber being extracted, and it's significantly thinner, at just a hundred years old. The recently logged trees at the Sherwood clearcut in Allyn, Washington, held deep cultural and spiritual significance for the Medicine Creek Treaty People, Native American tribes. The trees were left partially cut, facing a slow death, while the stumps from the original clearcut in 1910 remained. Foreign entities are acquiring the timber in auctions and selling it at premium prices, contributing to environmental waste, pollution and increasing CO<sub>2</sub> emissions. This exploitation must cease; the local community will bear the consequences of neglecting the land and depleting resources that will take more than a century to replenish.



Many people rely on the timber industry to supply the demand for timber, and they believe that replanting trees as they clear the second and third growth timber does not harm them. The devastating effects of clear-cutting are evident. These companies and individual proprietors are responsible for the clear-cuts, so one can profit by selling the timber for a premium price, selling timber to the highest bidder. Meanwhile, our wildlife is losing its habitat; pollution is increasing in our waterways, and there is less carbon sequestration and an increase in wildfires; as a direct result, the climate crisis is further escalated. The people and wildlife are paying the price for their negligence as they strip the land of forests.

When these sites are replanted, the natural diversity of the original flora is often not restored, leading to an increased risk of wildfires due to the lack of variety of trees and plants native to the forests. It is a misconception that one can replant a clear-cut site to its pre-cut condition. This practice is not only

ineffective but also harmful to our environment. Ecological restoration is essential to protecting the native biodiversity of our ecosystems while improving human health and well-being. While anthropogenic changes to the ecosystem have colonized the land in Washington State, our goal must align to restore the land so it will support wildlife for generations to come. The ecological restoration will increase food security, water quality, and economic prosperity, all while supporting the issues of climate change (Gann et al., 2019).

The economic costs of replanting will be challenging to predict in the face of climate change. The challenges of the climate crisis will impact the number of trees, shrubs, and plants that will thrive in the face of global warming. Carbon sequestration is essential to mitigate the adverse effects of carbon emissions; this is possible when treating slash piles with pyrolysis. The equipment used to create the biochar from the debris on the preserve is expensive to purchase. Sequestering carbon through reforestation has the potential to substantially reduce global greenhouse gases (GHG) (Austin et al., 2020).

Restoring the clearcut site offers numerous social benefits, including the opportunity to establish strong connections with neighboring restoration organizations, paving the way for fruitful partnerships in the future. Restoration projects inform the citizens of the Northwest raising awareness about the significance of reforestation and the positive outcomes that will stem from the team's endeavors. Furthermore, the restoration work will not only enhance the visual appeal of the area but also significantly improve the natural habitat for wildlife, while reducing the risk of floods and wildfires. The land's biodiversity will flourish, with an increase in the prevalence of native plants, and the team's efforts will play a crucial role in supporting pollinators by providing essential traditional plants for their sustenance. Above all, the dissemination of knowledge through community projects will be pivotal to the success of the work conducted at the site. The insight gained from such endeavors will help foster a reconnection to the land (Sotomayor, 2023).



Figure 3



Figure 4

*Figure 3 Typical whole and intact Pacific Northwest Forest*

<https://kitsapenvironmentalcoalition.org/2021/04/01/a-call-for-a-moratorium-on-clear-cutting-of-state-forest-lands> Figure 4 Plateau section showing destruction from clear cutting of Port Gamble Forest Heritage Park Pulsbo, Washington March 2021 <https://kitsapenvironmentalcoalition.org/2021/04/01/a-call-for-a-moratorium-on-clear-cutting-of-state-forest-lands/>

Traditional Ecological Knowledge (TEK) plays a crucial role in ecosystem restoration efforts, especially in collaboration with tribal nations. It is essential to prioritize TEK to ensure that it is not overlooked. The tribal nations of Washington state have a deep connection to the land and a responsibility for its well-being. They hold an inherent right and duty to participate in land restoration efforts, as tribal sovereignty has been intertwined with the ecosystem for thousands of years. The indigenous peoples of Turtle Island continue to bear the responsibility for the land, a duty passed down through generations. The Kitsap Environmental Coalition has been calling for a moratorium on clear cutting the land in Washington State as they partner with Tribal Nations to advocate for the preservation of our forests to reduce the carbon emissions and fight for the environment. We need more partnerships throughout the country to push for legislation to fight to protect our forest. Future generations are counting on all United States Citizens to take a stand against the foreign entities that are profiting from our forests and putting our ecological systems in grave danger.

Research has shown that there is an eventual point of no return, once the canopy of the natural forests is eliminated there is no way for the seedlings to be protected from nature's elements. The droughts, wildfires, increasing temperatures combined with all the effects of climate change are making it impossible for trees to reestablish the forests. Trees that have been thriving in areas for centuries are no longer able to sustain life in their place of origin. Researchers are finding a variety of species of trees that are now able to grow at higher elevations, the landscape is vastly changing with the climate change (Sakas, 2020).

Washington citizens must take preventive measures to preserve our forest in the Pacific Northwest and save the natural habitat for the remaining wildlife and waterways.

This work will be challenging due to climate change, invasive species, and maintaining the space for native plants. Collaborative efforts with local tribes, communities, and organizations are essential for the success of the clearcut site and the entire preserve. TEK is an essential tool in the restoration efforts of the ecosystem partnering with tribal nations and is necessary to ensure TEK is not overlooked. Tribal nations of Washington State have a unique interest in the land and their responsibility to the land and hold an inherent right and duty to help restore the land. Tribal sovereignty has been integral to the ecosystem for thousands of years. The Aboriginal people of turtle island still carry the responsibility to the land that has been passed throughout time. When we come together in efforts to rehabilitate the land, including native teachings, the work will be successful. Science is also important to consider the ever-changing environment. Partnerships with organizations that share the same goals and land ethic will succeed tremendously. We must be one with the land, the only way that can happen is if we use all available scientific data and traditional knowledge to provide the best outcome for the reforestation sites.

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