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Comments: I've attached my comments and relevant scientific articles for reference. Please reach out if you have any questions or have trouble viewing the files.

Sincerely,
Annika Ord

Tongass Forest Plan Revision Dra2 Assessment
Annika Ord Public Comments
February 10, 2025
Note: I've a+ached all men2oned scien2?c ar2cles.

Drivers, Stressors, and Climate Change Assessment:
While there is a good discussion of projected climatic changes (e.g., temperature, precipitation), the discussion of cascading impacts on ecosystems and communities is rather cursory and missing some key areas of concern for communities in the region. Namely links between climate change and atmospheric rivers and landslides, harmful algal blooms, and impacts on ecosystems, communities, and food systems within the Tongass. Without being able to reference the Tongass National Forest Climate Change Vulnerability Assessment by Halofsky et al (unpublished), it's difficult to cross check sources and understand the scope of the broader climate assessment.

Specific comments include:

* Under Current Tribal Climate Adaptation Plans section, missing Chilkat Indian Village climate adaptation plan for Klukwan, which is also quite proactive. Klawock is also in the process of publishing/finalizing a plan. Would be good to mention that others are working on this as well
*
Under, Current Climate as Driver of Vegetation Distribution, yellow cedar does extend into northern Southeast. Would be good to distinguish here the difference between red and yellow cedar and their respective ranges.
* In the Wind/Windthrow section it mentions that the connection between storms/wind and climate change remains unresolved; however, we do know that storms are expected to increase in severity and frequency. We also know that the occurrence of atmospheric rivers has been increasing, which has caused flooding, landslides, and other harmful impacts to communities and ecosystems. Important to add more detail on this point.
* In, Climate Change Executive Summary, glacier retreat is impacting more than sea level rise. A few notable impacts in Southeast include changing downstream hydrologic patterns and impacts on salmon habitat. Please see Pitman et al (2020), Pitman et al (2021), Moore et al (2023), O'Neel et al (2015) for more detailed discussion.

* Climate Change Executive Summary mentions that ocean acidification, harmful algal blooms, and warming will likely impact harvest practices, however, HABs are already having impacts on harvest practices around the region and this will certainly continue as OA and HABs intensify. Important to be more direct on this point.

* In Historical and Observed Conditions, is it true that SWE is typically highest in the central panhandle and lowest in the Gulf? It's my understanding that the northern panhandle receives more snow. Are you referring to total precipitation?
* The section, Anticipated Trends in Glaciological Effects and Sea Level Change, cites O'Neel et al (2015) regarding projected glacier loss, consider using a more updated estimate. See Rounce et al (2023) or Hugonnet et al (2021)
o

Potentially useful - in the last two decades (2000-2019), Alaska accounted for 25% of the global glacier mass loss and 38% of accelerated global glacier thinning (Hugonnet et al., 2021).
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Important to mention the anticipated impacts of glacier retreat on future salmon habitat and the importance of glacial runoff in buffering climatic extremes during periods of heat/drought. Recent work by Moore et al. (2023) and Pitman et al. (2020) examines the reladonship between glacier retreat, increasing mining pressure, and threats to current and future salmon habitat in the transboundary region between western Canada and southeast Alaska.
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Consider adding a section detailing the importance of managing not just existing habitat, but future areas of habitat as well as climate change alters ecosystems and disrupts historic ranges. Glacier retreat and salmon colonization is an example of this but there are other species and dynamics to consider as well (e.g., yellow cedar).
* In, Invasive Species section (pg 24), should write out STA (Sitka Tribe of Alaska). Also, when listing invasive species plans, be specific - are you talking about a tribe or a municipality? Provide the full name.
* Missing references to:
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Atmospheric rivers and landslides
o

Harmful algal blooms
o
Impacts on ecosystems and food systems within Tongass

The Tongass as an Indigenous Place
This is a very important chapter that adds essential history and Tribal input and perspectives in the assessment. Based on numerous conversations with communities and Tribal partners across the region, current co-stewardship initiatives (such as the community forest partnerships) have been hugely successful in supporting local communities and jobs, has improved relationships and trust between USFS and communities, and is an important way to invest in communities and build local capacity. I would like to stress the points made in this chapter about working collaboratively with Tribes to steward and manage the lands and waters of Southeast. If we are to effectively manage the Tongass for generations to come, particularly in light of a changing environment, we must learn from and work with local communities.

Specific comments include:

* Page 27 - The end of the sentence is missing, "Permanent winter camps were typically located in areas protected saltwater areas with drinking water and good canoe landings, and were usually ____."
*
Very important point, "This history offers an opportunity for reciprocity within the Tongass Forest Plan with a need for change that builds understanding of the full history of the consolidation of Indigenous communities and loss of harvesting access within their homelands. The Forest Service should integrate indigenous harvesting infrastructure more broadly into land use designations, based off of Tribal consultation and request."
*
Pg 32 - Missing end of sentence, "However, it explicitly excludes subsistence harvesting sites, which are (46 CFR 2653) _____."
o

Meat should be meet
* Consider adding some insight from Forest Haven's PhD dissertation, which discusses the history of ANCSA/ANILCA and how rural preference and the current legal definition of "subsistence" continues to undermine/impede Indigenous harvest rights
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Specifically, in regards to ANILCA, which safeguards rural subsistence rights for both non-native and native Alaskans, she argues that by not ensuring the subsistence rights of all AK Native people, it further harms cultural and traditional harvest practices. This could interface well with a paragraph on page 38 which discusses how urban AK Native interests aren't protected.
*
Great discussion of cedar, especially the deep cultural significance and relationships

* Important that this assessment names specific management practices that tribes are requesting within the new forest management plan. To be successful and to continue rebuilding trust with local communities, it's essential that the new forest plan addresses Tribal priorities.

* Great use of examples to show what a different relationship/dynamic between USFS officials and Tribes could look like - e.g., cultural heritage workshop put on by tribes to teach USFS about cultural use of cedar and engagement with AK Youth Stewards

* Great discussion of the need to clarify co-management/ co-stewardship, and the imperative to invest in this work. Partnering with Tribes and local communities is essential if we are to support sustainable use of the lands and waters of the Tongass, particularly as the stressors of climate change continue to challenge ecological and social systems.

* Klukwan has also created a climate adaptation plan

* Kuti is spelled Kutí

Geology and Geologic Hazards Chapter
This chapter does a good job illustrating the need to work across jurisdictions and management boundaries in order to successfully manage hazards in the Tongass and mitigate risk to

downstream communities. This holistic approach is needed not just within the context of geologic hazards but also ecological and hydrological management. To effectively manage the Tongass, particularly in light of climate change, we need work together across agencies to ensure that management reflects the dynamic nature of ecosystems and community needs as systems change.

Specific comments include:
* In the section, Opportunities for mitigation and adaptation in Geologic Hazards, good discussion of risk mitigation/adaptation strategies; it is also worth mentioning that education is essential. While much of the current infrastructure in the region remains outside the purview of the Tongass management plan, it's important to work across agencies and governments to ensure that we work to reduce risk and phase out development in avalanche/landslide prone areas.
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Good engagement with the recent history of landslides and research
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Page 20 - Should add that direction of atmospheric rivers affects the severity of an event in different communities. See Nash et al (2024) for more detail.
* In the Landslide section, Opportunities for Adaptation and Mitigation it talks about landslide restoration through seeding but doesn't mention that much of the seeding is with invasive species of grass. The new management plan needs to address strategies for reseeding with native species only.
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Also important to mention the importance of zoning/restricting building in and below landslide susceptible slopes
* In the section on Flooding, great that it mentions the interconnected nature of waterways and the need to manage across administrative, management, and property boundaries.

Subsistence and Other Harvests
As recognized in this discussion, it's essential that Tribal and local harvests are prioritized and protected in the Forest Plan Revision. Part of accurately reflecting local priorities in the management of the Tongass is addressing that in the last decade, local wild salmon runs have been highly variable with salmon returning smaller. As currently written, the state of salmon and yellow cedar sections do not appropriately reflect the scale of concern of Tribes and communities across the region. Please see notes below for more specifics.

* Important that the discussion of subsistence in the introduction includes Indigenous conceptions of subsistence; it is more than just sustaining oneself.
* Should include Marie Gutgesell and Ryan Bellmore's (USFS) research on the Tongass as a food system. This unpublished study found that rural communities in the Tongass and Chugach National Forests harvest ~477 servings of food/year/person of wild food and harvest over 130 species.

* Important to discuss the dynamics of increased tourism / sport fishing and localized depletion around community centers. ANILCA prioritizes rural subsistence harvests, however, local depletion from sport fishing/hunting continues to be an issue in many communities. It's essential that subsistence rights are prioritized in the new Tongass

management plan (per ANILCA) and that it works to mitigate depletion of important community harvest areas by non-residents.

* It's not just chinook salmon that are declining in body size and returns in the Tongass, there's been high variation in returns in recent years and fishermen have been struggling to make ends meet. Important to discuss in more depth the impacts of hatcheries on wild populations of salmon and that broadly wild populations of salmon are declining. Furthermore, should address events such as the Blob, a marine heat wave that lasted from 2014-2016, which had long lasting negative impacts on salmon runs and marine food webs. The impression given in this report regarding the health of salmon runs does not accurately capture local community and fishermen's concerns regarding the health of salmon populations in the region and the significant declines / fluctuations that have been happening over the last decade. Further discussion of these concerns should be included and greater emphasis given to the importance of restoring and protecting salmon runs for generations to come.
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See Oke et al (2020) for more details on declining salmon size in Alaska; see Amoroso et al (2017) and Connors et al (2024) for discussion of complexities related to hatcheries.
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See Suryan et al., 2021; Von Biela et al., 2019; Walsh et al., 2018 for more details regarding marine heat waves and impacts on salmon, marine food webs, and ?sheries.

* Should mention that USFS is partnering with tribes to co-steward and restore salmon systems and logged habitat through the community forest partnerships. This new way of working with communities and Tribes has been widely celebrated throughout the region.
*
Good discussion of roadless ruling hearings and the regional emphasis on maintaining current road systems but not developing new roads for further extraction

* Good discussion of climate change impacts on subsistence and the need to work with local communities and Tribes to adjust management as harvests/species patterns change

* In Alaska Yellow Cedar Conditions and trends of species and associated use, it opens by saying yellow cedar is secure; however, yellow cedar die off in the region is well documented and is of high concern to local communities and tribes. While the species may be globally secure, in the Tongass the significant die off of yellow cedar is of great concern. This should be more accurately reflected in the discussion.

Terrestrial Ecosystems Resource Assessment
As it's currently written, the role of the Tongass as a food system is a rather minor point in the ecosystem services sections. Many of the sections emphasize timber resources more than other categories, even though the timber industry is largely dormant in the region. Recognizing the Tongass as a major part of community food systems needs to be more central to this section and the Tongass Forest Plan revision more broadly.

* Learning from and collaborating with Tribes is essential for sustainable management of the lands, forests, and waters of the Tongass. There is good acknowledgement of this at the beginning in, Indigenous Knowledge of Ecosystems. This should continue to be a top priority for the Forest Service and the Tongass Forest Plan Revision as a whole.

* It mentions that only 4% of the Tongass has been logged and 8% of productive old growth, however does this include areas (such as glaciers or the alpine) that aren't forested? It is important to include an additional percentage that reflects the total logged area in the Tongass relative to the total area with viable timber. Otherwise, the current metric is rather misleading.

* Alpine ecosystems also offer important recreation opportunities for locals and visitors alike, not just for tourism or hunting. Consider the extensive alpine trail systems in Juneau and Sitka!
* In the Well Drained Forest Section, it is important to emphasize the Tongass as an essential part of food systems for communities in the region - reference the research by Bellmore and Gutgesell (USFS

Watershed Condition and Water Resource Assessment
The metrics used to measure watershed condition in this report are quite large scale and do not necessarily reflect what communities would consider a "functioning" watershed. It's important that the assessment address that there are numerous salmon systems that no longer support healthy runs in areas that have been highly logged. Many of these systems are important to Tribes and communities. While the designations used for this report may count these systems as "functioning watersheds," for those living on the land (human and otherwise), this does not constitute functioning properly. It's important that the Tongass Forest Plan Revision reflects the priorities and needs of local communities, who rely on healthy rivers and salmon runs for food, cultural connections, and local economies. This should be more clearly reflected in the assessment.

* Need to address the fact that there are numerous historic salmon systems that no longer support healthy runs in areas that have been highly logged. This is particularly impactful near community centers, and areas like Prince of Wales.
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Include perspectives / knowledge from local communities and Tribes on the state of important community watersheds, consider reaching out to the Community Forest Partnerships.
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Significant that 40% of stream crossings do not meet juvenile fish crossing, need to prioritize restoration of these sites.
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Little to no discussion of local priorities, need to partner/work with Tribal and local communities to restore priority watersheds, and value/learn from local and Indigenous knowledge. This is essential if the USFS wants to do a better job building relationships and caretaking the land in partnership with those living here.
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The municipal water supply map is rather confusing as there at least several watersheds that actively don't supply nearby communities (for instance those identified between Juneau and Haines along Lynn Canal). Perhaps worth clarifying.