

Coastal Collaboration: Exploring How Indigenous-led Conservation and Co-Governance Strategies Can Equitably Tackle the Issue of Anthropogenic Marine Debris on the BC Coast.

Keywords: Marine Debris, Ocean Plastics, Environmenal Anthropology, Marine Pollution, Ocean Governance, Marine Protected Areas, Social and Environmental Justice

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(This is a condensed and incomplete version of Oriana’s final honour’s thesis)

Abstract:

Anthropogenic marine debris is plaguing the British Columbia (BC) coast, and it is going to take a decolonial approach to equitably tackle this issue. Outdated colonial top-down conservation management efforts do not provide just solutions for the coastal communities that are most impacted by this problem (Bennett et al, 2022; Smith, 2021; Youdelis et al, 2021). A community-based bottom up approach can better represent the disproportionate socio-economic, cultural, and environmental impacts of marine debris to guide equitable solutions (Vince & Stoett, 2018).

Although still in its infancy, **a collaborative environmental protection strategy is burgeoning on the BC coast**. In an effort to protect biodiversity and mitigate the problem of marine pollution, the Coastal Marine Strategy (BC Government) aims to improve the health of the ocean and those who depend on it. For the purpose of this research, I am interested in state-funded and Indigenous-led conservation strategies, as a mechanism to better understand the geographically disproportionate impacts of marine debris distribution. I will look at equitable monitoring and mitigation efforts aimed at community-based solutions. Although reconciliation mandates are incorporated into state government conservation strategies, time will tell what those frameworks look like when addressing intergovernmental environmental stewardship to tackle the issue of marine debris on the BC Coast.

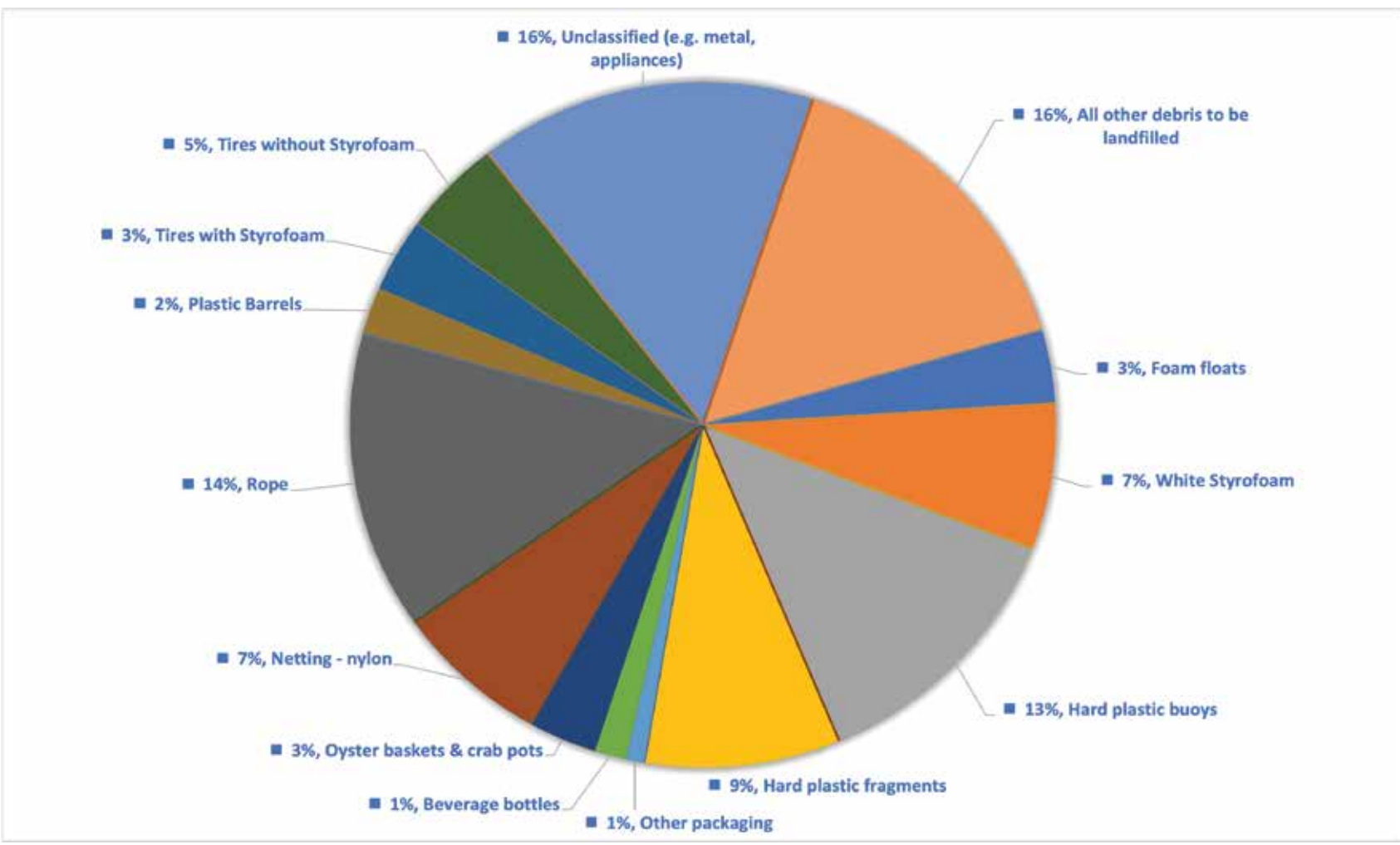


Creating a Baseline:

In 2020, the COVID-19 pandemic put a complete stop to many industries around the world. On the BC Coast, marine tourism was one of the industries forced to remain dock-side. Federal and Provincial discussions began around financial aid to assist with the spiking unemployment rates and significant economic downturn. As tourism operators addressed this issue of putting their crew and vessels back to work, the Province of BC had contemporaneous conversations around the issue of marine debris.

Prior to the emergence of the global pandemic, the former Secretary of the Provincial Ministry of Environment and Climate Change Strategy, Sheila Malcolmson published a report titled “What We Heard on Marine Debris in BC” (Malcolmson, 2020). Malcolmson and her team met with other Federal and Provincial Ministries, Indigenous Nations, industry, and coastal communities to determine the severity of the problem of marine debris on the BC Coast. (Malcolmson, 2020). Although predominantly volunteer and community-organized groups have been cleaning beach-cast debris from the BC Shorelines for decades, prior to the *Clean Coast*, *Clean Waters* initiative, a formal calculation of the problem did not exist, nor was there funding to support it. Therefore, this initiative created a baseline on the severity of marine debris on the BC Coast.

2021 *Clean Coast*, *Clean Waters* Marine Debris Data
(Government of BC, Ministry of Environment and Climate Change Strategy)



Plastic Removal, Remediation, and Regulation:

Countless studies have determined the extent of the global issue of plastics entering the ocean environment, and it is estimated that more than 10-million metric tonnes of marine debris (interchangeably ocean plastics or marine litter) enter the ocean every year, and in some regions threatens to outweigh biomass (Vince & Stoett, 2018). **The resulting impacts include disruptions to food security and food sovereignty, loss of biodiversity, environmental pollution, and climate change** (Bennett et al, 2022).

Removal and remediation initiatives are important pieces to tackle this issue on the BC Coast, however, without “turning off the tap” this debris is going to continue to wash ashore year-after- year (Liboiron, 2021; Bennett, 2022). As the majority of the material is related to the commercial fishing industry, further regulation around lost or abandoned gear is needed.



In order to find equitable solutions to removing beach-cast debris in BC, it is important to understand how the accumulation of marine debris is affecting the cultural practices and livelihoods of coastal communities (Bennett et al, 2022). One of the main threats of marine debris includes the breakdown of toxic ocean plastics to smaller particles known as microplastics (smaller than 5mm)(Geyer, 2017; Gall, 2015; Markel, 2021; Clark, 2018; Aswani, 2021; Malcolmson, 2020). **These particles can then be consumed by fish and other marine species and bioaccumulate when they enter the food chain, thus negatively impacting human health and well-being in communities who depend on the ocean for food security** (Bennett et al, 2022; Clarke et al, 2018).

Whereas larger items such as nets and rope can entangle marine mammals and disrupt fishing practices and harm biodiversity (Bennett et al, 2022). By adopting a community-based approach, those who are impacted can decide what targets are most important and feasible to them, to direct the removal and remediation process in their community.



The Research:

My research focuses on inequities around marine pollution distribution and authority over coastal jurisdiction to monitor and mitigate the areas of greatest impact. As my key anthropological lens is nested within environmental and socio-cultural anthropology, I analyze the power dynamics in environmental policy and social equity with marine plastic and ocean pollution policies in Canada and British Columbia. This includes assertion of Indigenous rights to monitor and steward traditional territories affirmed by Section 35 and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). I also analyze Provincial and Federal reconciliation mandates that encourage co-governance and Indigenous-led conservation strategies.

My methodology is rooted in literature analysis and qualitative review and centered around emergent design. I conducted semi-structured interviews with the Kitasoo/ Xai'xais First Nation Stewardship Authority and the Province of BC, to allow for in-depth insight of the issue of marine debris on the BC Coast. I assess Indigenous-led Marine Protected Areas as an example of ways to better represent the knowledge systems that have been systematically marginalized and historically excluded from the colonial conservation discourse (Vandenberg & Ota, 2022), therefore aiding in uplifting social justice and human rights in Canada (Bennett et al 2022; Tran et al 2020).

References:

Bai, Natalie, Emma Wilson, and Doug Neale. "Strong Historical and Ongoing Indigenous Marine Governance in the Northeast Pacific Ocean: a Case Study of the Kitasoo/Xai'xais First Nation." *Ecology and society* 24, no. 4 (2019): 10-.

BC Government. (December 2022). Coastal Marine Strategy For British Columbia. [Policy Intentions Paper]. Ministry of Waters, Lands, and Resource Stewardship. <https://engage.gov.bc.ca/app/uploads/sites/121/2022/12/Coastal-Marine-Strategy-Intentions-Paper.pdf>

Bennett, Nathan J. "Navigating a Just and Inclusive Path Towards Sustainable Oceans." *Marine policy* 97 (2018): 139-146.

Bennett, Nathan J., Juan José Alava, Caroline E. Ferguson, Jessica Blythe, Elisa Mogera, David Boyd, and Isabelle M. Côté. "Environmental (in)justice in the Anthropocene Ocean." *Marine policy* 147 (2023): 105383-.

Clarke Murray, C., Maximenko, N., Lippitt, S., (2018). The influx of marine debris from the Great Japan Tsunami of 2011 to North American shorelines. *Mar Poll Bull* 132: 26-32

Gall SC, Thompson RC (2015) The impact of debris on marine life. *Marine Pollution Bulletin* 92: 170-179

Geyer R, Jambeck JR, Law KL (2017) Production, use, and fate of all plastics ever made *Sci Adv* 3: e1700782

Kitasoo/Xai'xais First Nation. (June 22, 2022). Declaration of the Gíldhoo-lagwaka (Kitasoo Bay) Marine Protected Area. <https://akemtu.com/wp-content/uploads/2022/06/DECLARATION-OF-THE-GILDHOO-LAGWAKA-Kitasoo-Bay-MPA-signed.pdf>

Liboiron, M. (2021). Pollution is Colonialism. *Duke University Press*. <https://doi.org/10.1515/9781478021445>

Markel, R. (December 18, 2020). SSTOA and WTA Marine Debris Removal Initiative: 2020 Coastal Environmental Protection, Employment, and Economic Recovery During the COVID-19 Pandemic. Small-Ship Tour Operators Association & Wilderness Tourism BC. [Report].

Malcolmson, S. (February 2020). What we Heard on Marine Debris in BC. Government of British Columbia, Ministry of Environment and Climate Change Strategy. https://www2.gov.bc.ca/assets/gov/environment/waste-manage ment/ze o-waste/marine-debris-protection/marine_debris_what_we_heard_report_final_web.pdf

Tanya C. Tran, Douglas Neale, Kitasoo/Xai'xais Stewardship Authority, Jonaki Bhattacharyya, and Natalie C. Ban. "Borders Don't Protect Areas, People Do": Insights from the Development of an Indigenous Protected and Conserved Area in Kitasoo/Xai'xais Nation Territory." *Facets* (Ottawa) 5, no. 1 (2020): 922-941.

Youdelis, Megan, Justin Townsend, Jonaki Bhattacharyya, Faissal Mocha, and JB. Fobister. (2021). "Decolonial Conservation: Establishing Indigenous Protected Areas for Future Generations in the Face of Extractive Capitalism." *Journal of political ecology* 28, no. 1

Vandenberg, J., & Ota, Y. (Eds.). (2022). Towards an Equitable Approach to Marine Plastic Pollution. *Ocean Nexus Equity & Marine Plastic Report 2022*. Nippon Foundation Ocean Nexus Center, & Earth Lab, University of Washington 79 p. <https://oceanexus.uw.edu/equi ty-marine-plastic-pollution-report/>