Mapping Plastic Pollution in Coastal British Columbia

Integrating shoreline debris and ghost gear datasets to understand patterns, hazards, and conservation implications

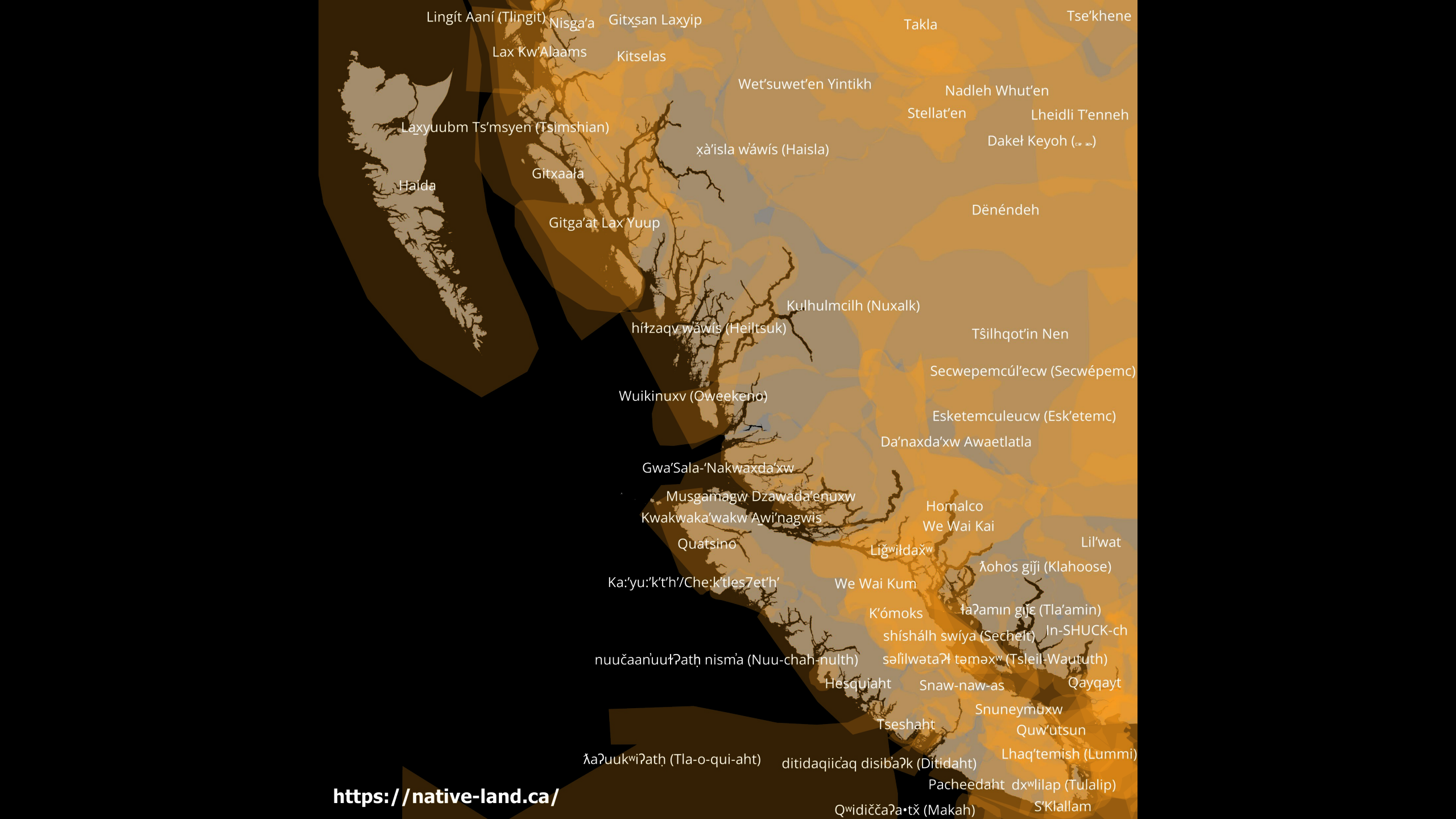
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Coastal Marine Ecosystems Research Program

MSEA
MARINE SPATIAL ECOLOGY & ANALYSIS

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https://native-land.ca/

GOALS

- Compile coastwide plastic pollution data – macro-micro, shoreline-seafloor
- Examine regional patterns in abundance and debris type
- Assess overlap and risk to conservation areas



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Data available

Shoreline

- Ocean Wise Shoreline Cleanup – citizen science led cleanups
- BC Province Clean Coast Clean Waters Initiative - tourism operators, First Nations, NGOs

Seafloor

- DFO Ghost Gear Fund – supports NGOs, companies, Indigenous groups, academics, non-federal governments, individuals


Photo: DFO Ghost Gear Initiative


Photo: BC Clean Coast Clean Waters

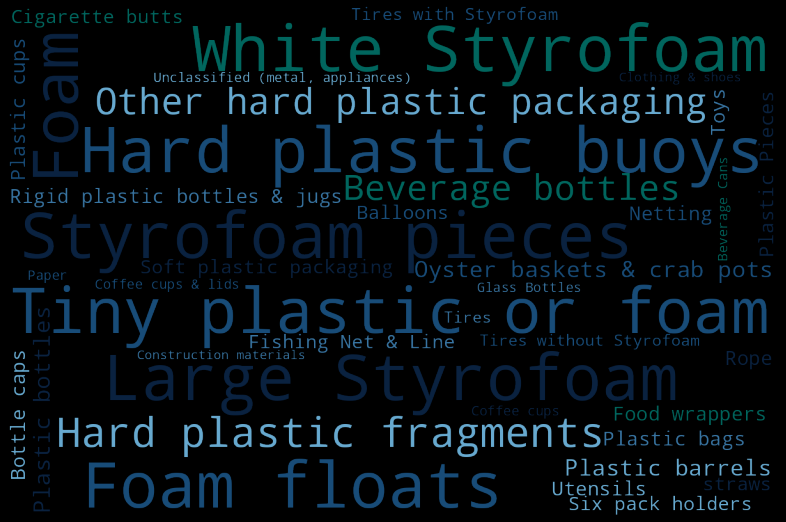


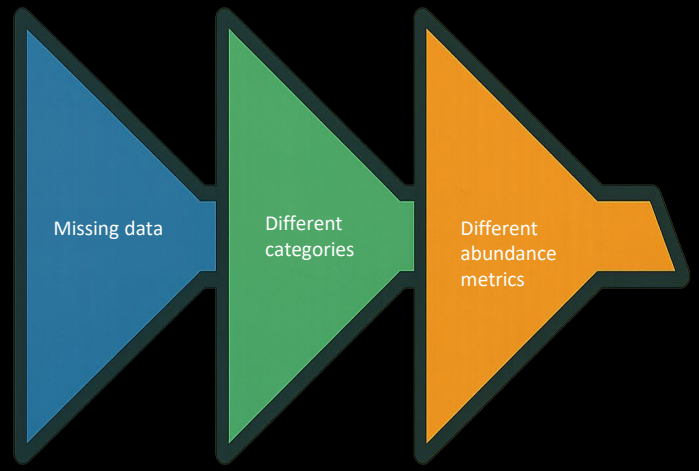
Photo: Ocean Wise

Data compilation challenges

- QA/QC
- Different methods, debris categories, abundance metrics
- Unknown/uncategorized data
- Inconsistent effort data

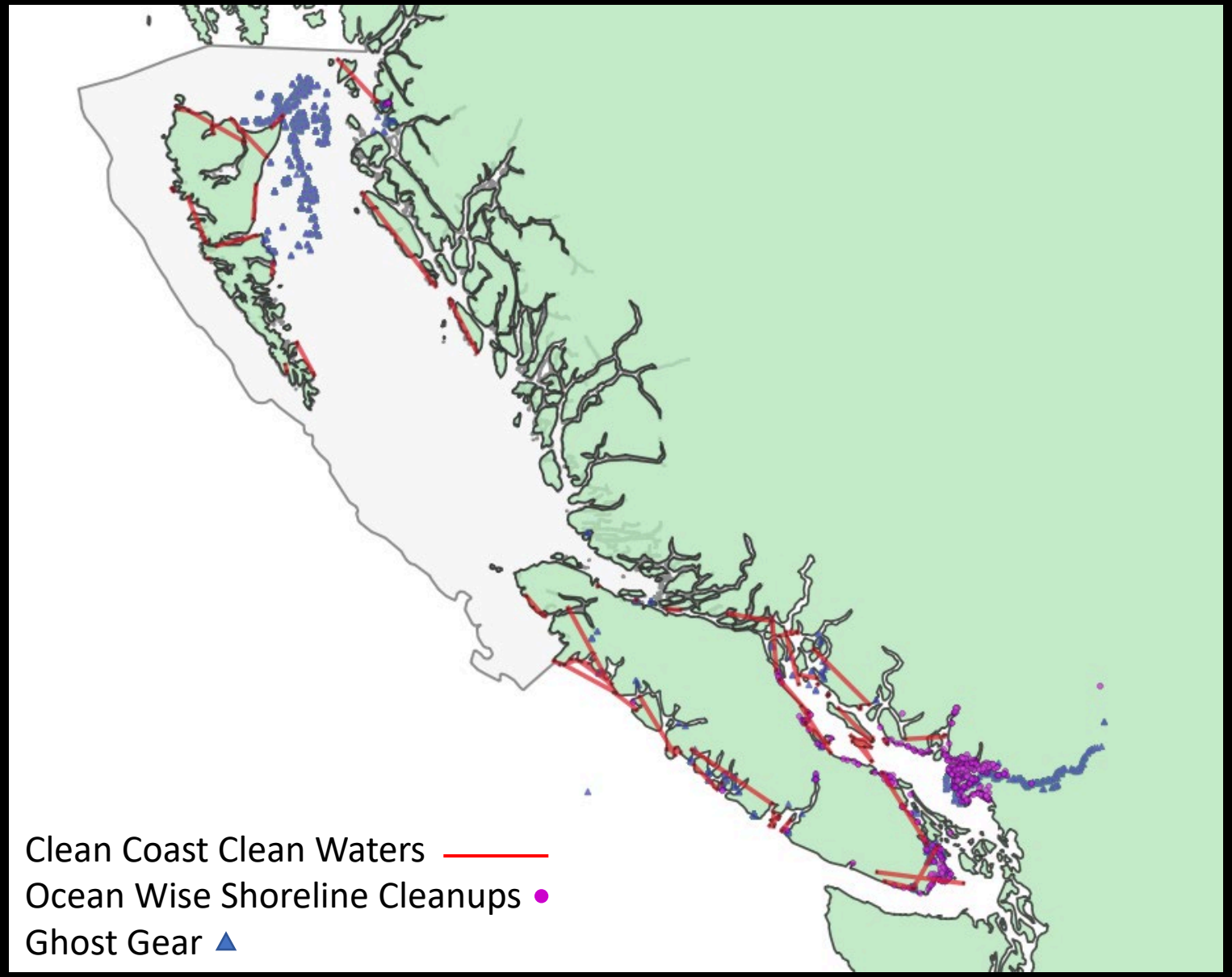






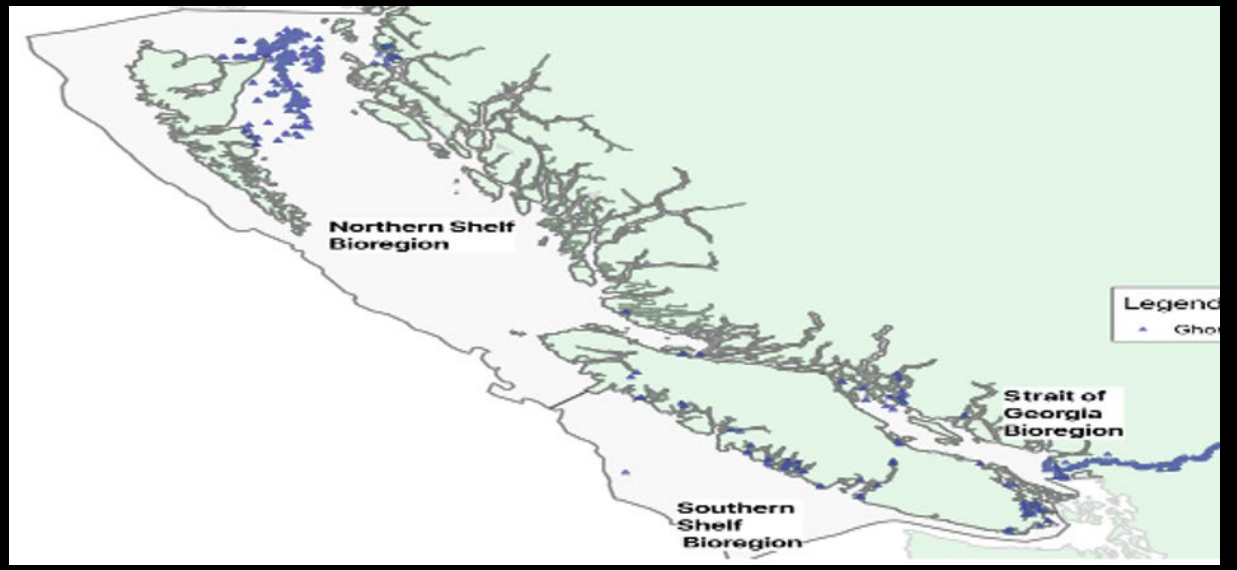
Foam
Hard
Soft
Rubber
Mixed
Glass
Cardboard
Other mixed

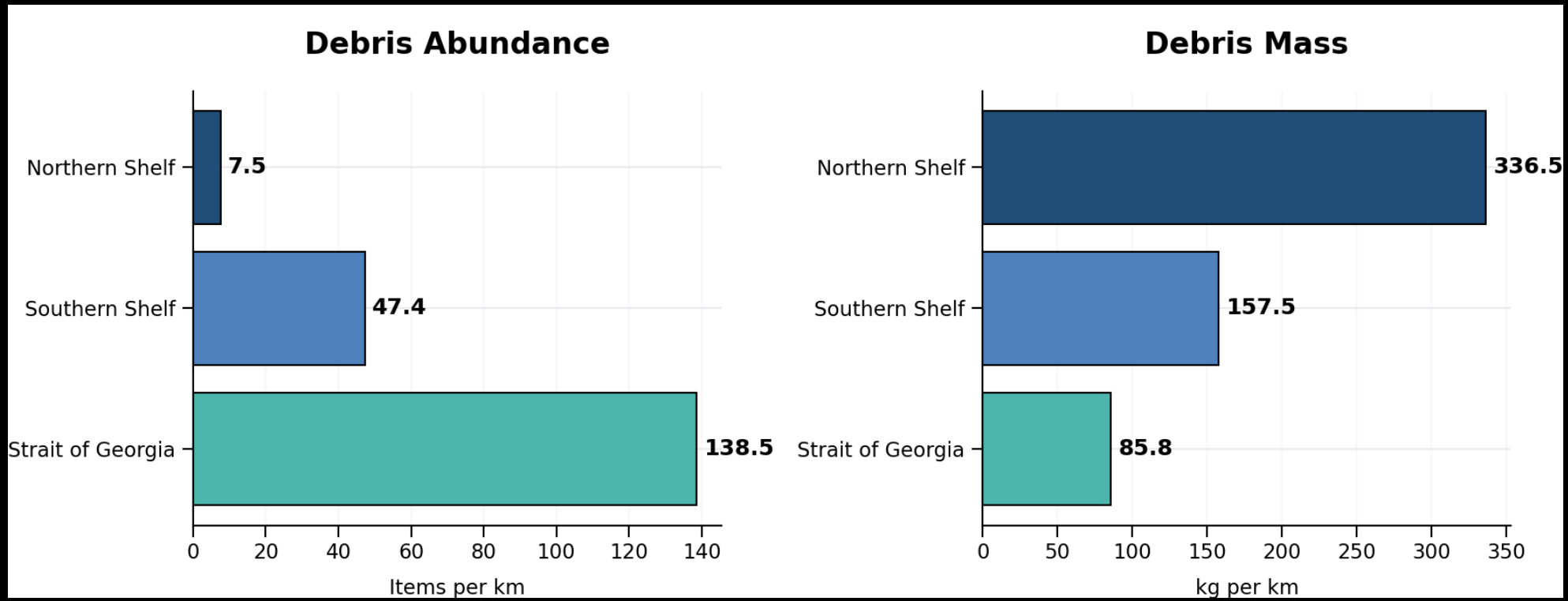
Shoreline and seafloor debris removals 2021-2025



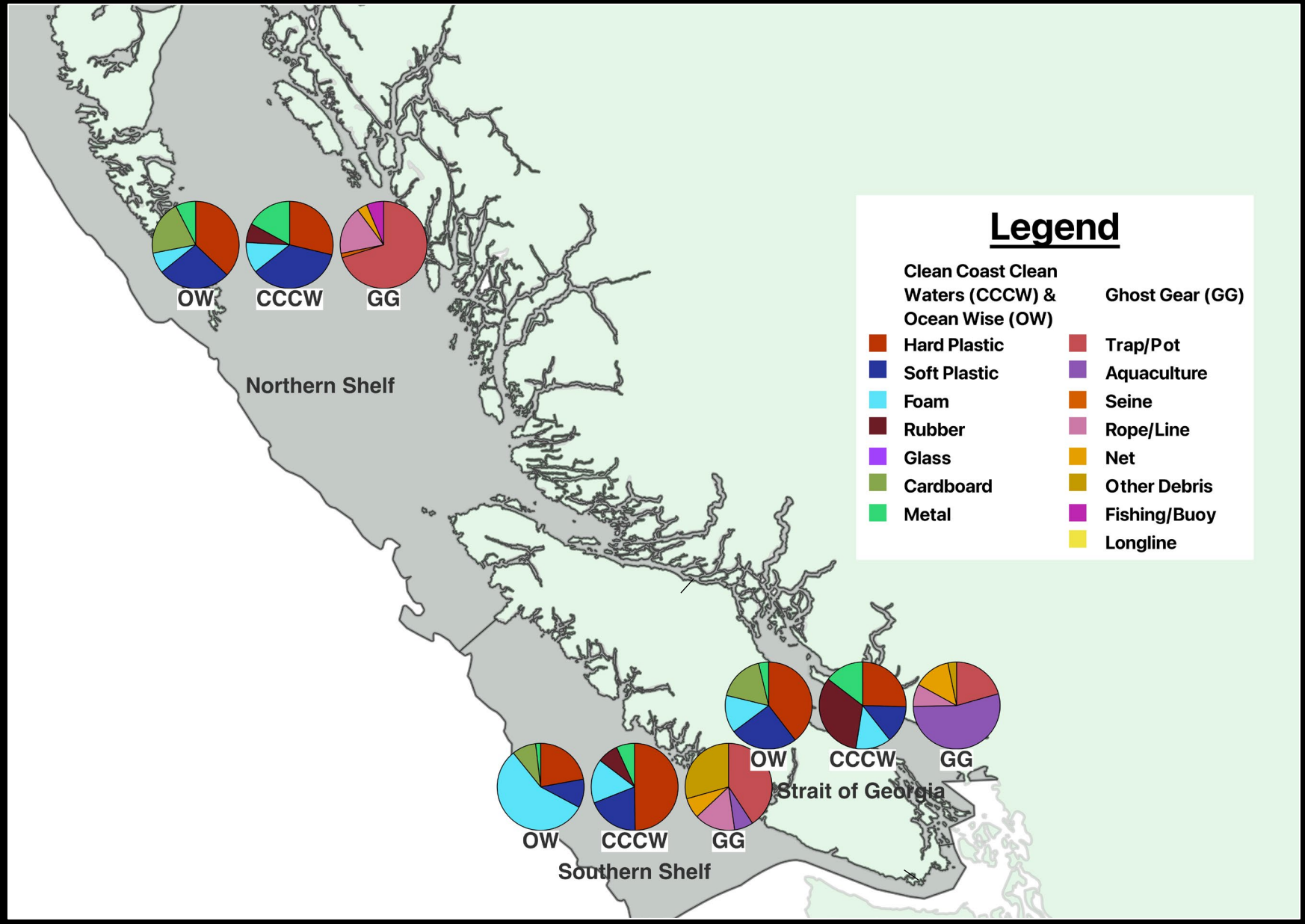
Debris abundance







Debris type – top 5



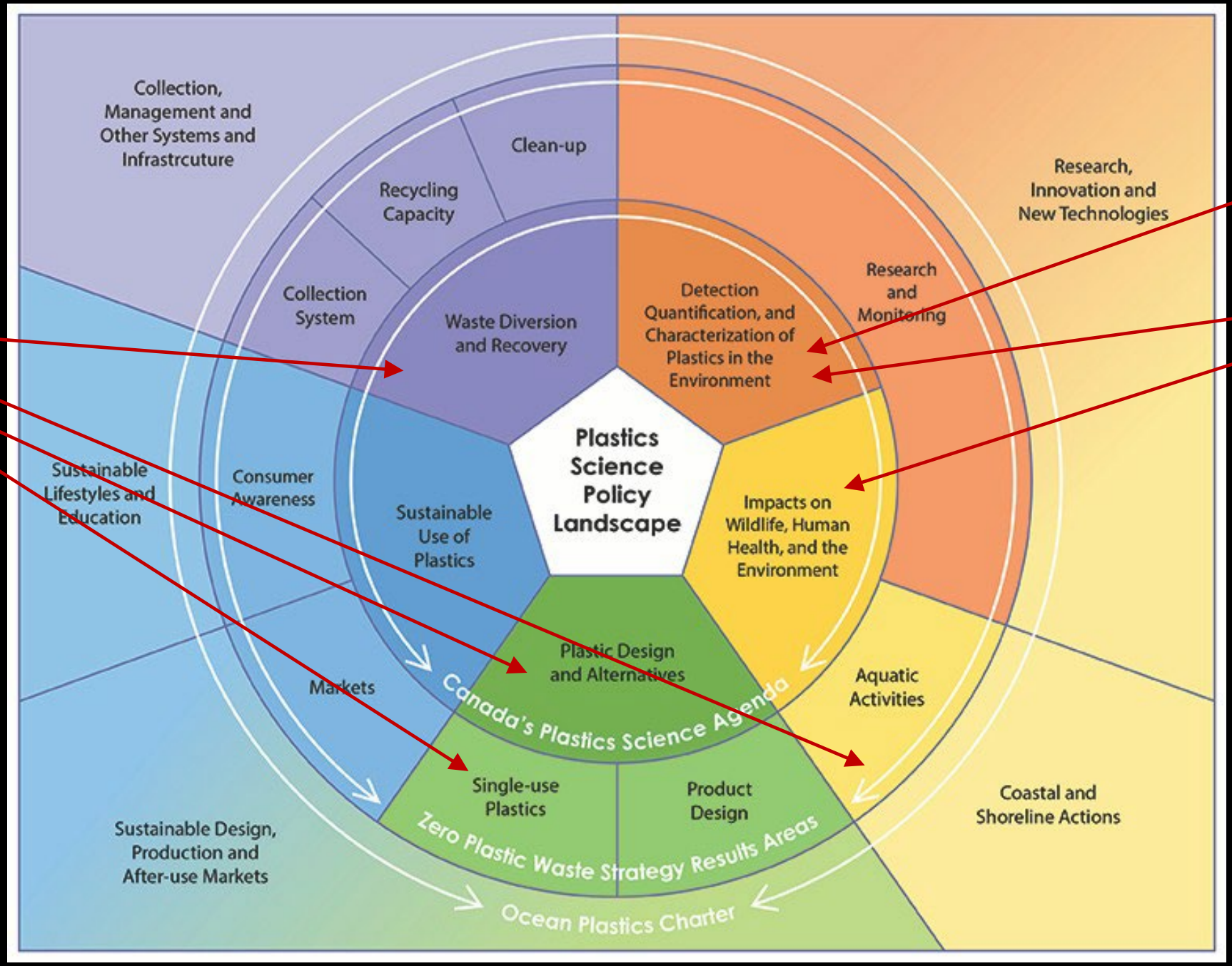
Connecting data to policy

- Debris types – categories
- Distribution – location, abundance
- Baseline - change over time





Raft Cove 2021 after the Zim Kingston container spill



Debris type

Baseline data

Distribution data

Acknowledgements

BC Clean Coast Clean Waters – Julie Gardner, Gwendolyn Lohbrunner
Ocean Wise Shoreline Cleanup
Fisheries and Oceans Canada Ghost Gear Initiative

First Nations, community organizations, cleanup crews and volunteers

