

Chapter 3:

**INCLUDING COASTAL
COMMUNITY VOICES IN THE
MARINE DEBRIS CONVERSATION:
PERSPECTIVES FROM ST. PAUL
ISLAND, ALASKA**

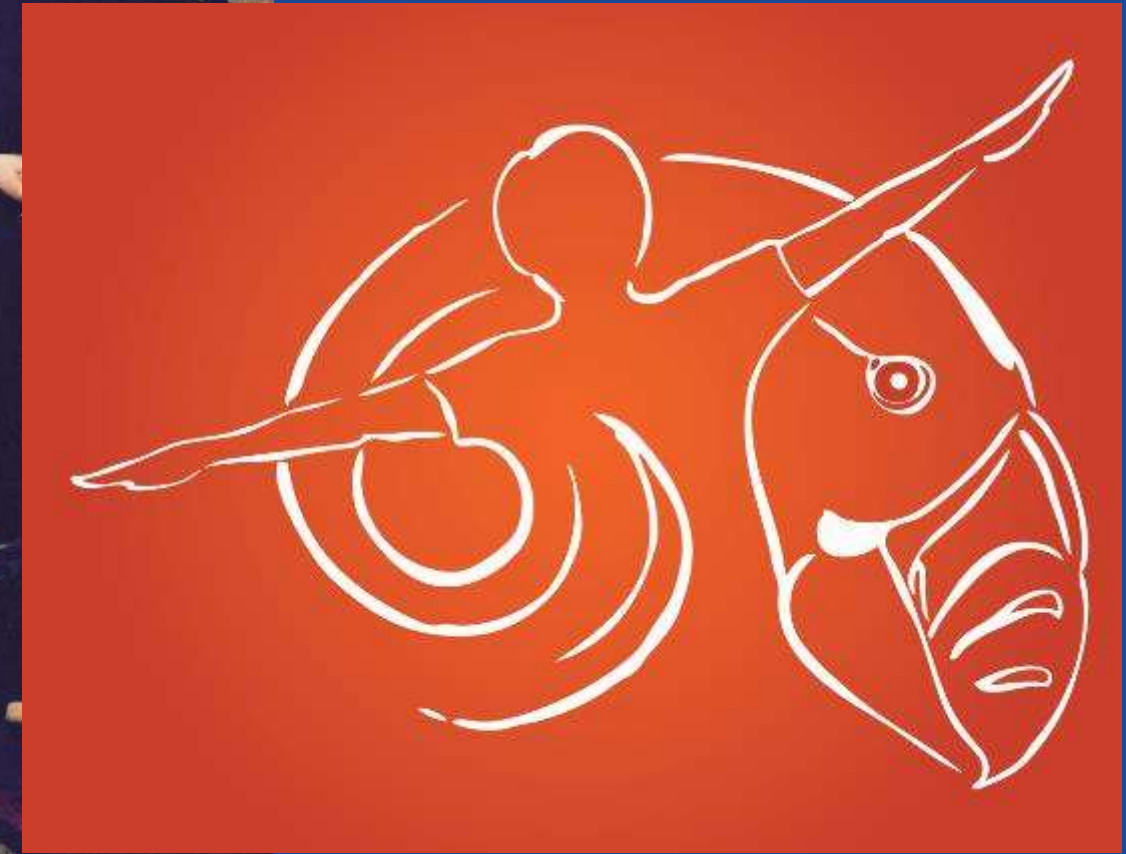
Veronica Padula, Anne Beaudreau, Douglas Causey, Lauren Divine, and Marissa Mercurieff

An aerial photograph of the Hawaiian Islands, showing the main chain of islands from the bottom left to the top right. A white octagon is drawn around a small island in the central part of the chain, which is St. Paul Island. The text "Community Perspectives from St. Paul Island" is overlaid in white on the map.

Community Perspectives from St. Paul Island



St. Paul Island



How do coastal communities experience marine debris?





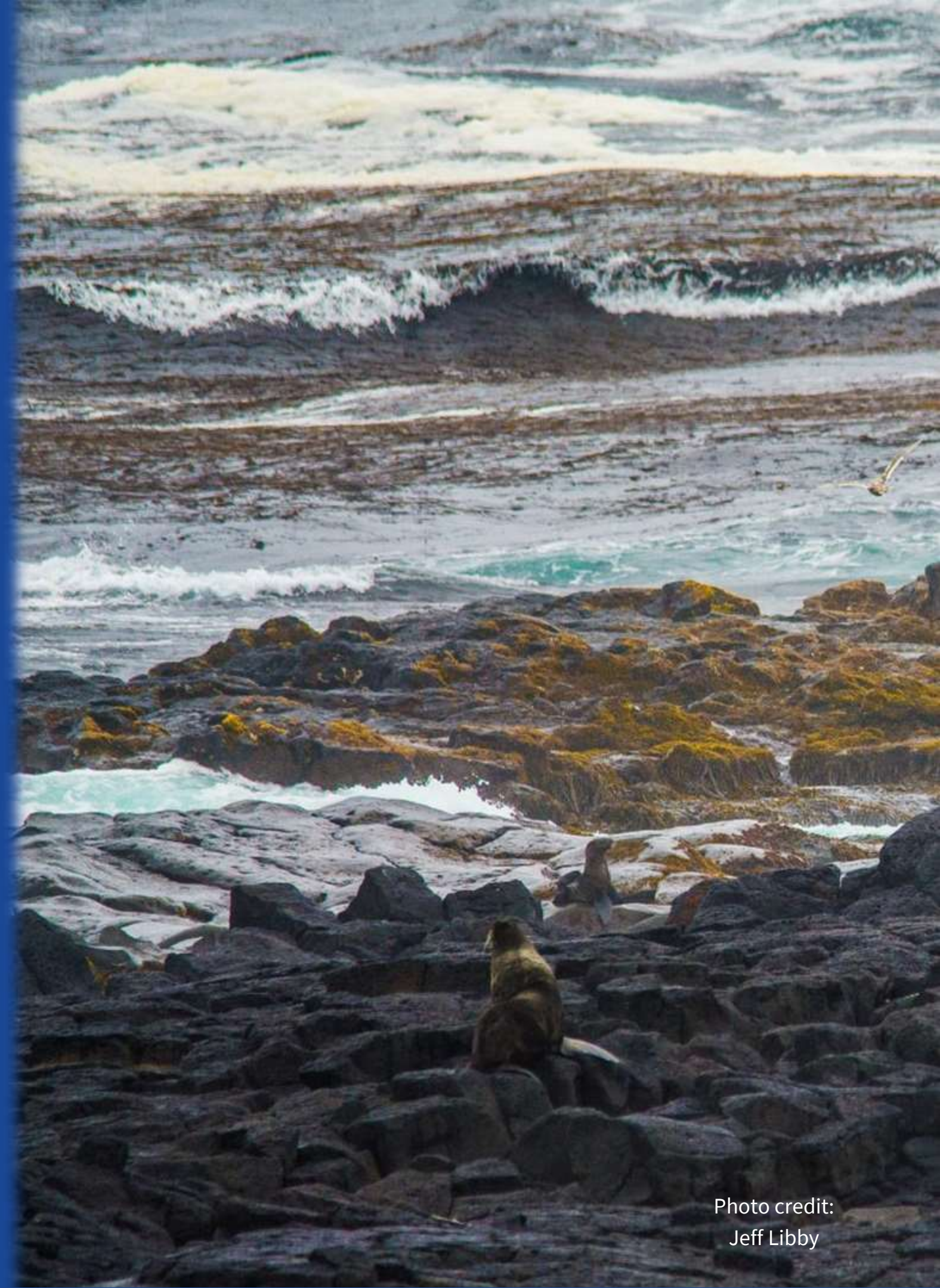
**ALEUT
COMMUNITY OF
ST. PAUL**

**Ecosystem Conservation
Office**



Objectives

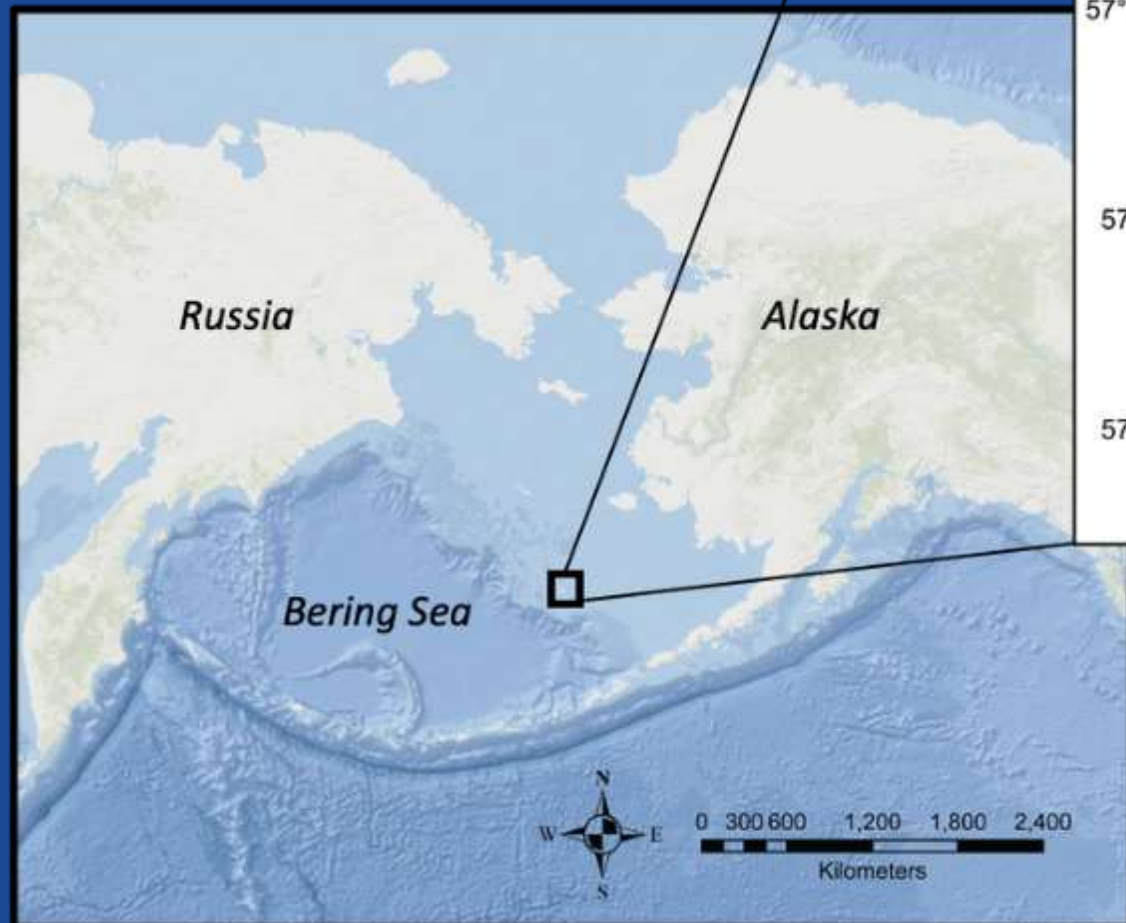
- Examine trends in type, relative abundance, and distribution of marine debris based on St. Paul Island residents' observations
- Understand community members' perceptions of marine debris origins and its impacts on the local environment





To catalyze the inclusion of local knowledge in marine debris solutions for St. Paul Island, Alaska and other coastal communities

St. Paul Island, Alaska





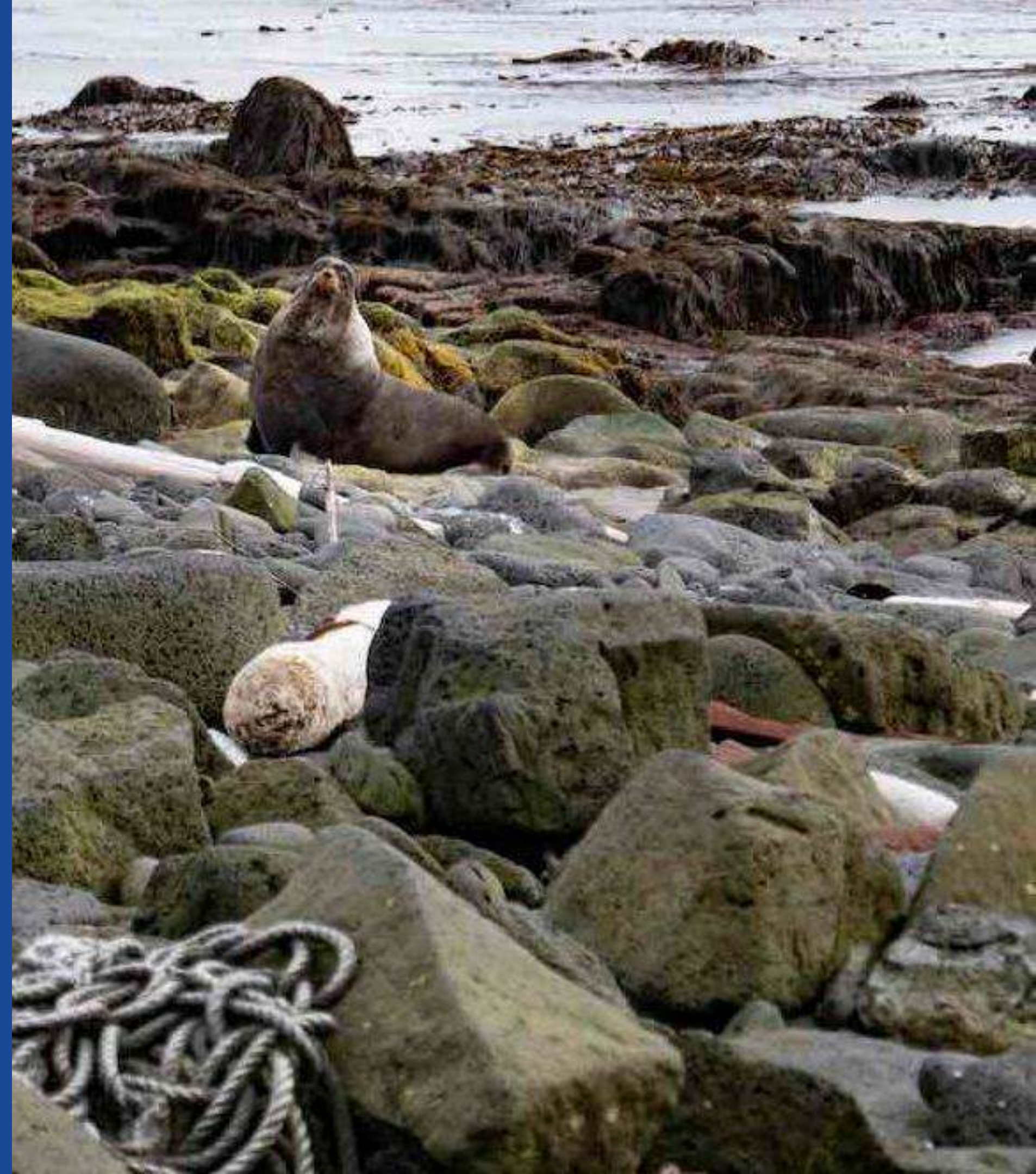
**Life is gifted to you
What you make of it is your gift
in return**

Methods

Semi-structured interviews

- Participants were 18 years and older and have lived and/or worked on St. Paul
- Combination of open and close-ended questions

(Bernard, 2011)



Quantitative Data: Likert-scale



	1960s	1970s	1980s	1990s	early 2000s	late 2000s	since 2010
Buoys		Low	Med	Med	High	High	High
Containers							
Fishing Gear							
Fishing Line							
Food Wrappers							
Glass Bottles							
Plastic Bottles							
Rope (line)							

Qualitative Data: Open-ended Questions

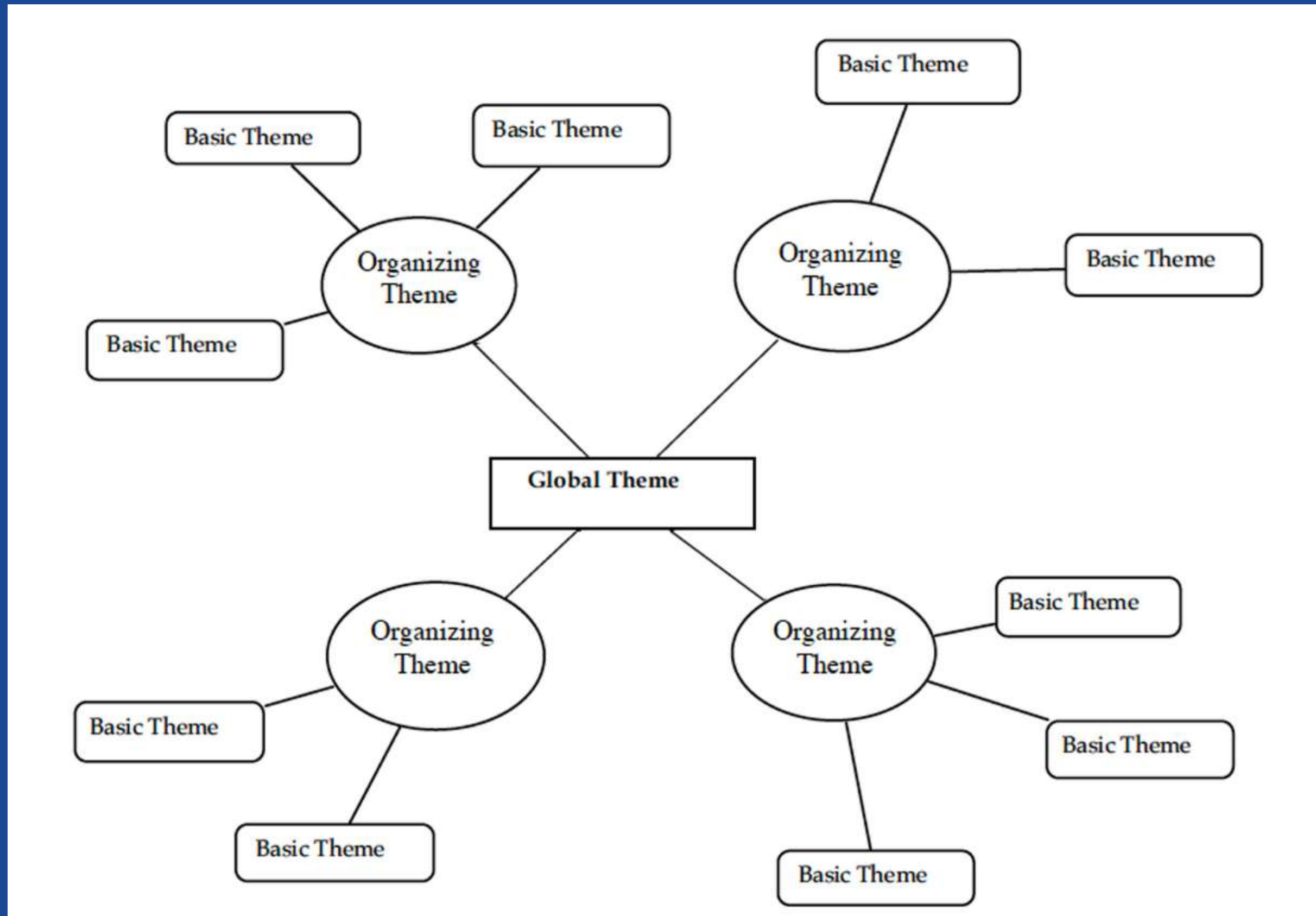
How would you define marine debris?

What kinds of materials are marine debris made of?

Where do you think the marine debris comes from?

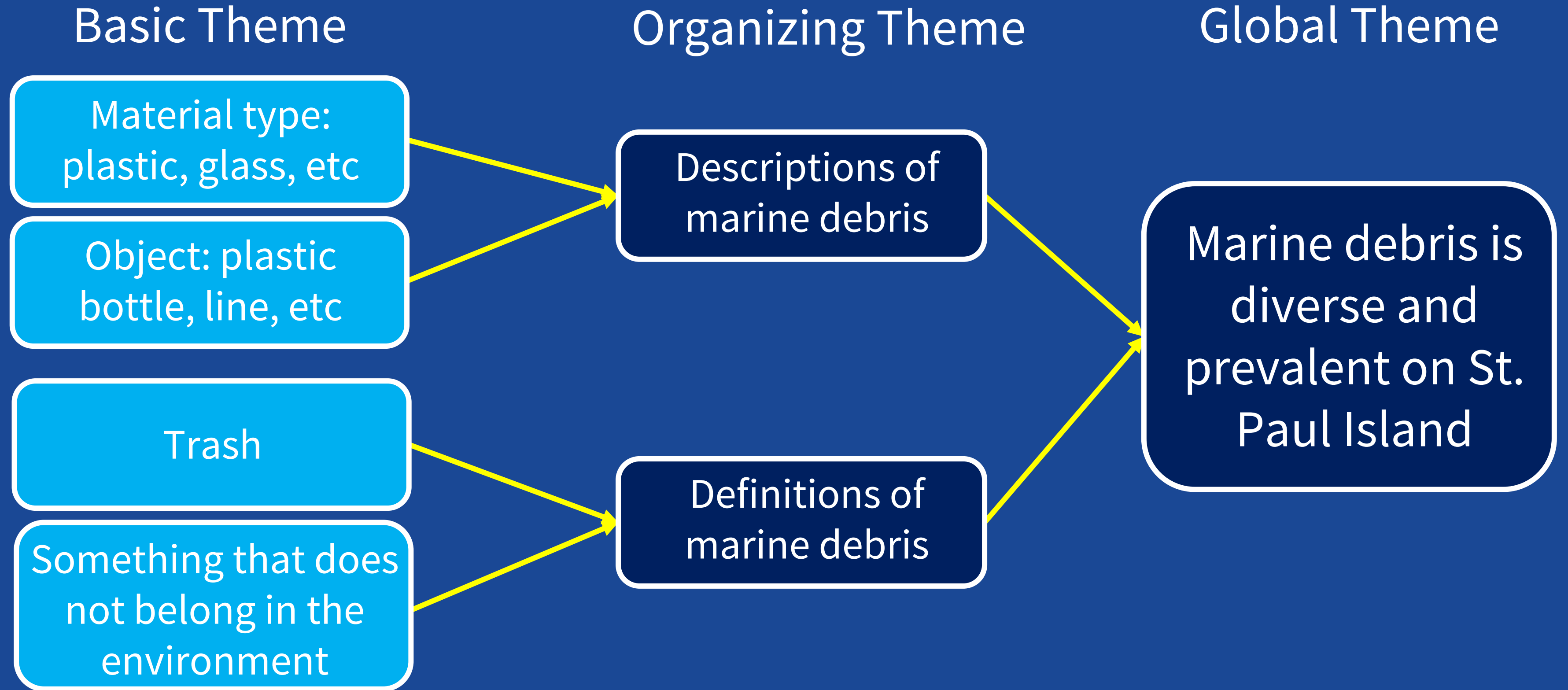
Do you think plastic affects the environment?

Qualitative Data: Thematic Network Analysis



Qualitative Data: Thematic Network Analysis

Interview responses to the questions about definitions and descriptions of marine debris



A photograph of a rocky beach with dark, jagged volcanic rocks. In the foreground, there is a large, tangled pile of bright blue fishing netting. Several pieces of bleached, white driftwood are scattered across the rocks. In the background, the ocean waves are visible, crashing against the shore. A semi-transparent blue rectangle is overlaid on the right side of the image, containing the word "Results" in white text.

Results

Photo credit:
Patricia Chambers,
Ocean Conservancy

Interviews

- 2017 - 2021
- 30 interviews
- 36 participants

**Plastics
Fishing Gear**



Debris Trends

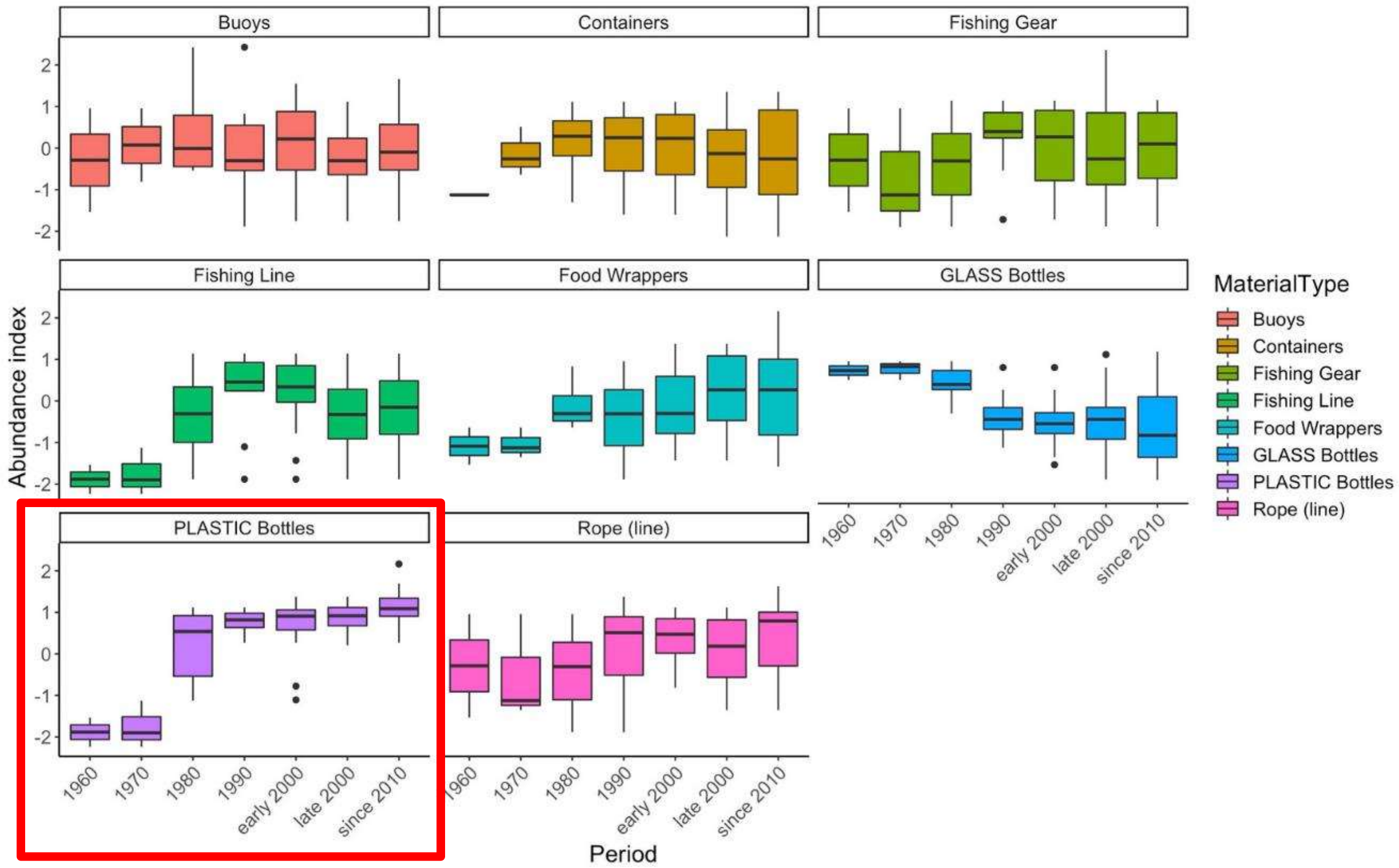


Photo credit:
Patricia Chambers,
Ocean Conservancy

Global Theme 1:

Marine debris is diverse and prevalent on St. Paul Island



Photo credit:
Patricia Chambers,
Ocean Conservancy

Examples

- Fishing Gear
 - Bottles
- Packaging
 - Boxes
- Containers
- Packing Bands
- Wrappers



Global Theme 2:

Marine debris quantity has been stable or increased since the 1960s, with variation among specific types of debris



Photo credit:
Patricia Chambers,
Ocean Conservancy




“Plastic containers, plastic bottles, plastic oil barrels, buckets... the trend started going towards plastic in the ‘80s for sure, ‘90s, and all the way up... there’s plastic all over the place, it was everywhere...”

- Fisherman who grew up on St. Paul Island

Global Theme 3:

Marine debris does not originate on St. Paul Island



An aerial photograph showing a large pile of marine debris on a sandy beach. The debris includes numerous white plastic bags, yellow and blue plastic containers, and other unidentifiable trash. In the background, there are wooden pallets and some scattered debris on the sand. The foreground shows a dark, possibly wet, area with more trash and a white car partially visible in the bottom right corner.


“It’s pretty obvious, fishing vessels, vessels in general, that would be the number one... when I see marine debris on the beaches today or trash or items on the beach I almost look at all of it as marine debris not so much as island trash.”

- Beach cleanup participant since early 2000s

Global Theme 4:

**St. Paul Island community members
are concerned about the impacts of
marine debris**





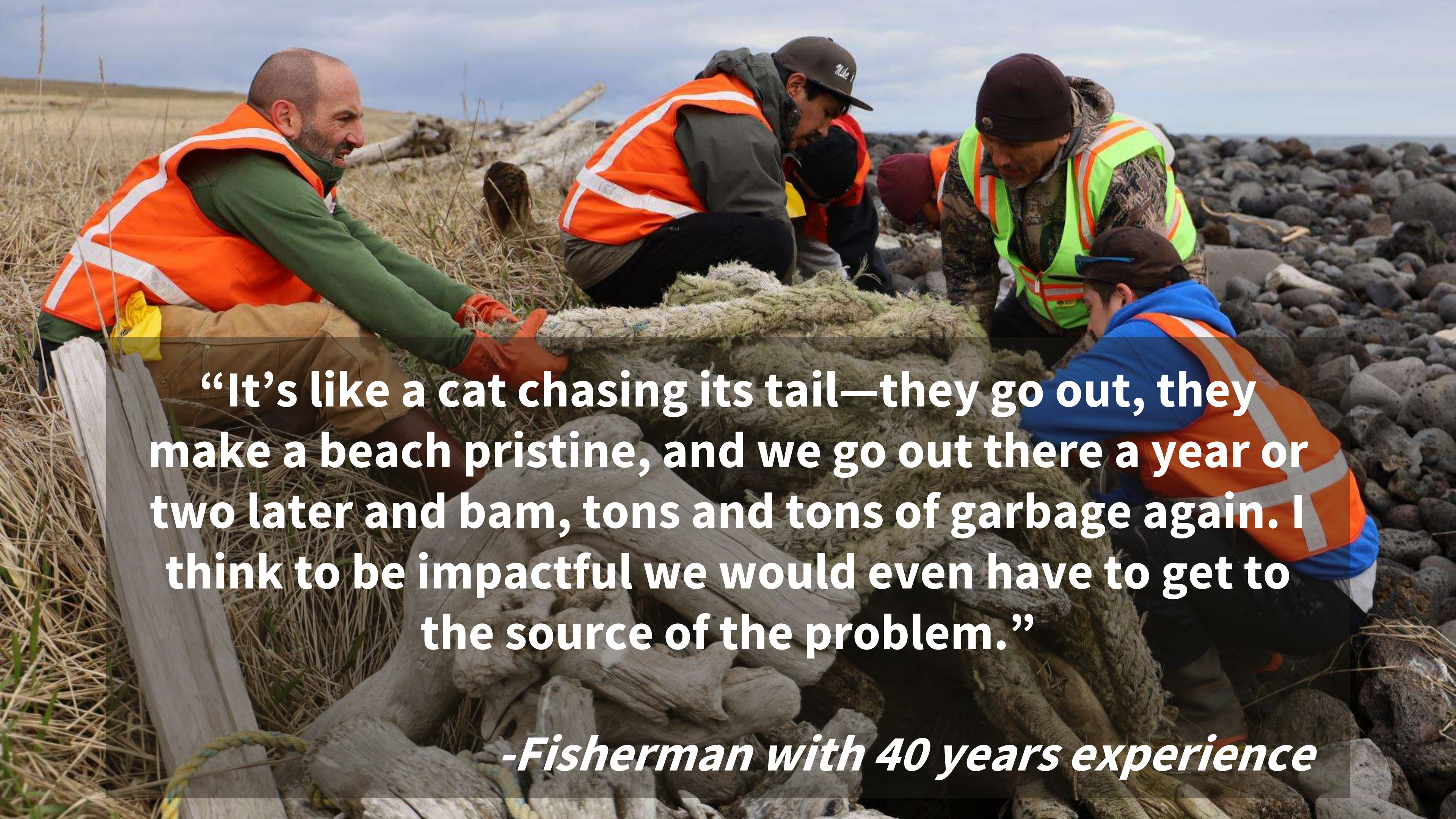
“We shouldn’t even be having to do this. No, it’s not cool that I’m going out with a group of kids and we’re picking up garbage, we should be out here gathering good things and eating good things and enjoying life.”

- Beach cleanup participant since early 2000s

Solutions

Marine debris cleanups are helpful but do not solve the problem





“It’s like a cat chasing its tail—they go out, they make a beach pristine, and we go out there a year or two later and bam, tons and tons of garbage again. I think to be impactful we would even have to get to the source of the problem.”

-Fisherman with 40 years experience

A brown fur seal is resting on a beach composed of numerous dark grey, smooth pebbles. The seal is positioned on the left side of the frame, facing right. Its fur is a mix of brown and black, and its whiskers are prominent. The background is a dense field of similar pebbles, creating a textured, repetitive pattern.

Research priorities:

- Distribution of microplastics in the Bering Sea ecosystem
- **Distribution of plastic-associated contaminants**
- **Community perspectives on the issue**
- Long-term ecological impacts

Conclusions

- Marine debris is an environmental justice issue for coastal communities
- The marine debris issue is complex and requires multi-scale solutions
- Community voices need to be included in development of marine debris action plans



**To wrap
this up...**

Multi-scale Solutions

International

National

State

Local





Photo credit:
Patricia Chambers,
Ocean Conservancy



Circular Economies

Photo credit:
Max Romey

**It's not
ALL
terrible**





Photo credit:
Naomi Bargmann

Thank you!

Thank you!

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Thank you!

