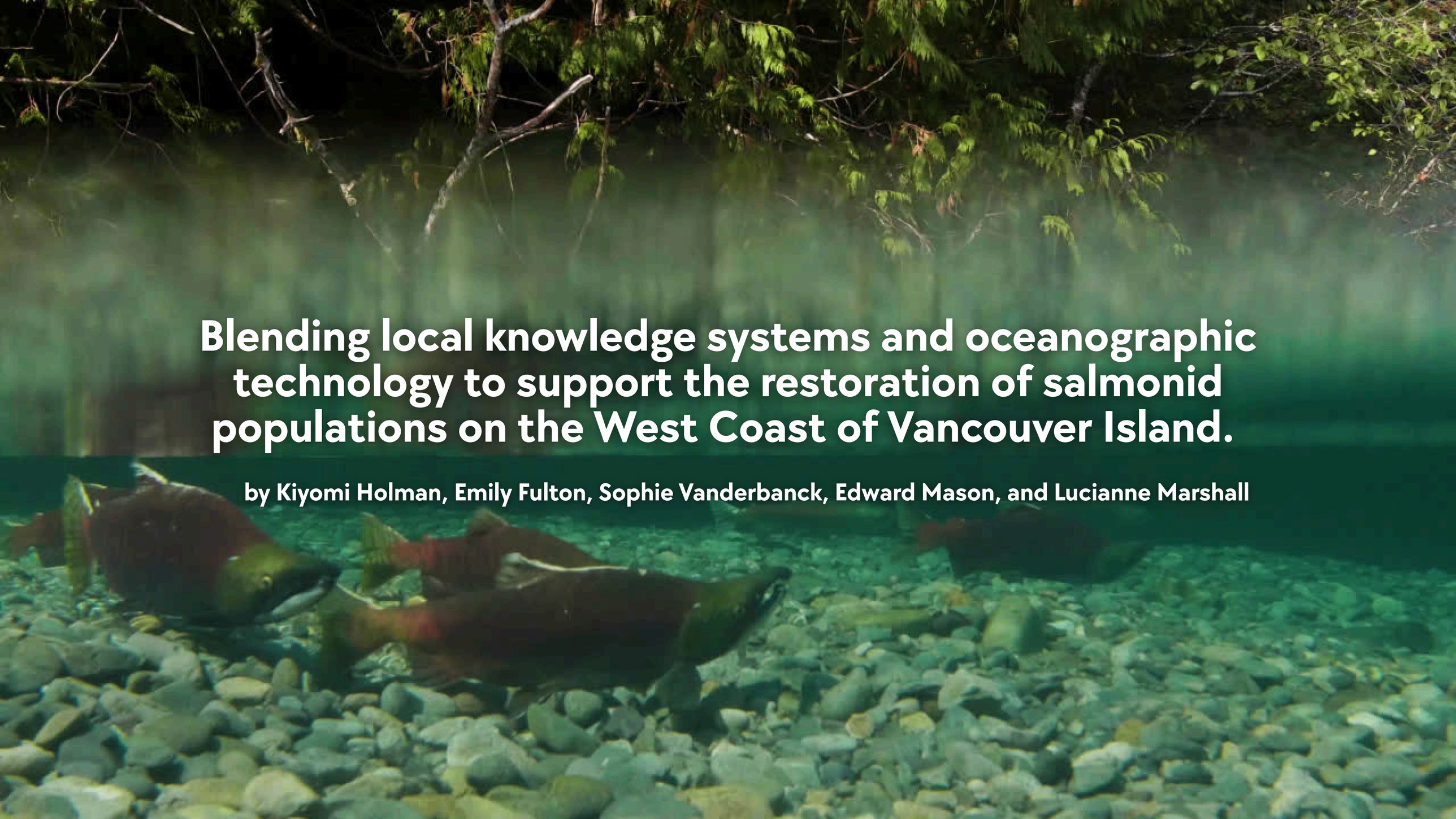


Blending local knowledge systems and oceanographic technology to support the restoration of salmonid populations on the West Coast of Vancouver Island.

by Kiyomi Holman, Emily Fulton, Sophie Vanderbanck, Edward Mason, and Lucianne Marshall

Introduction



Kiyomi Holman
Ocean Networks Canada



Sophie Vanderbanck
Redd Fish Restoration Society



Emily Fulton
Redd Fish Restoration Society

MAAQUTUSIIS HAHOULTHEE STEWARDSHIP SOCIETY

REDD FISH RESTORATION

'tukʷaaʔath

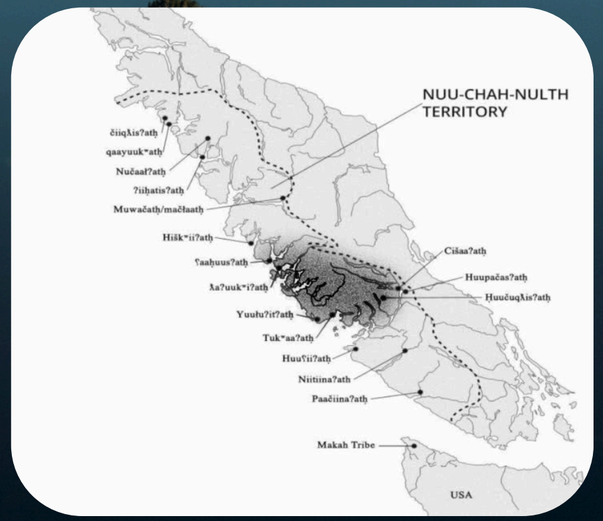
TLA-O-QUI-AHT FIRST NATION

Yuutuʔitʔath

OCEAN NETWORKS CANADA

Redd Fish Restoration Society



















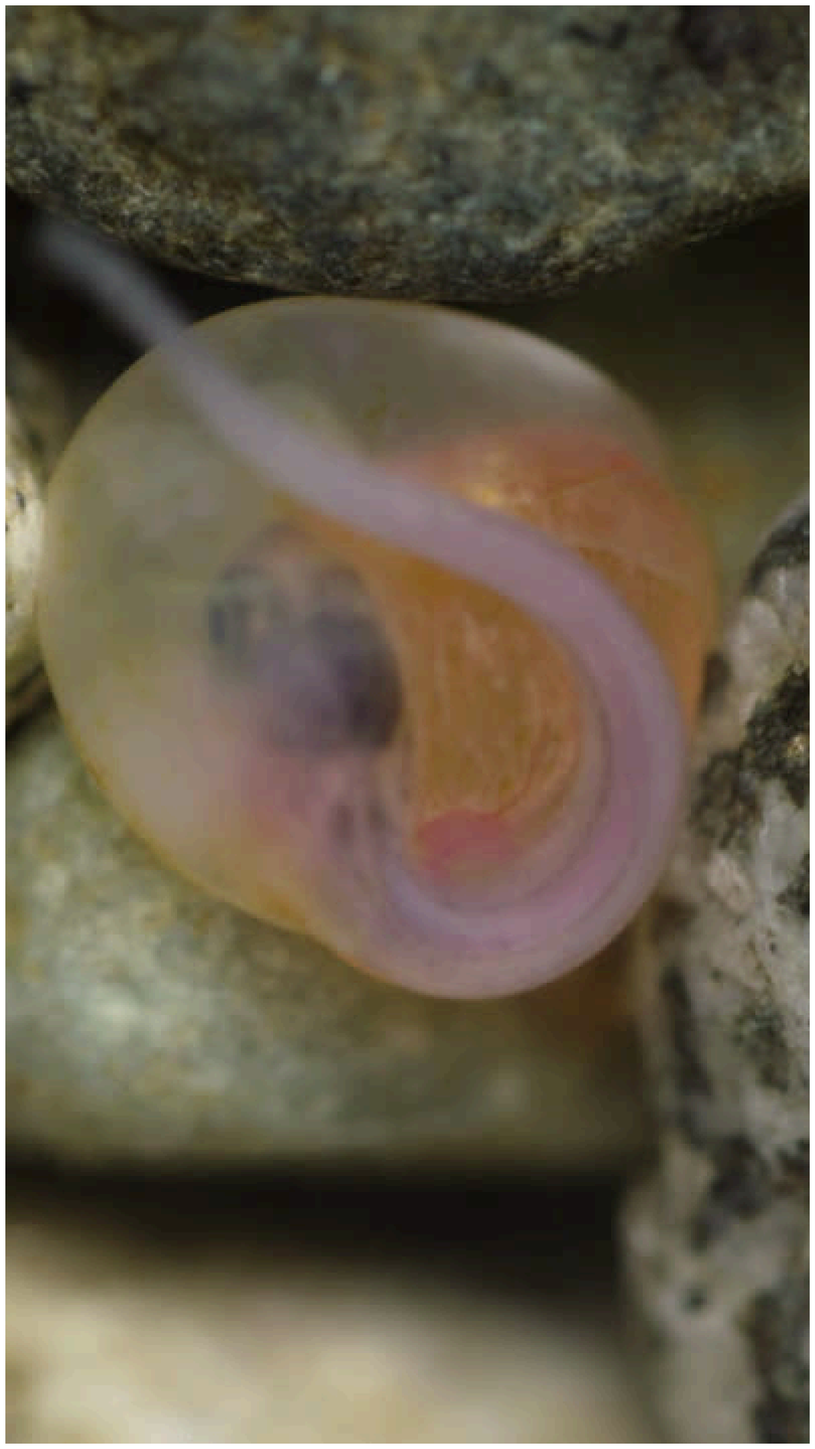
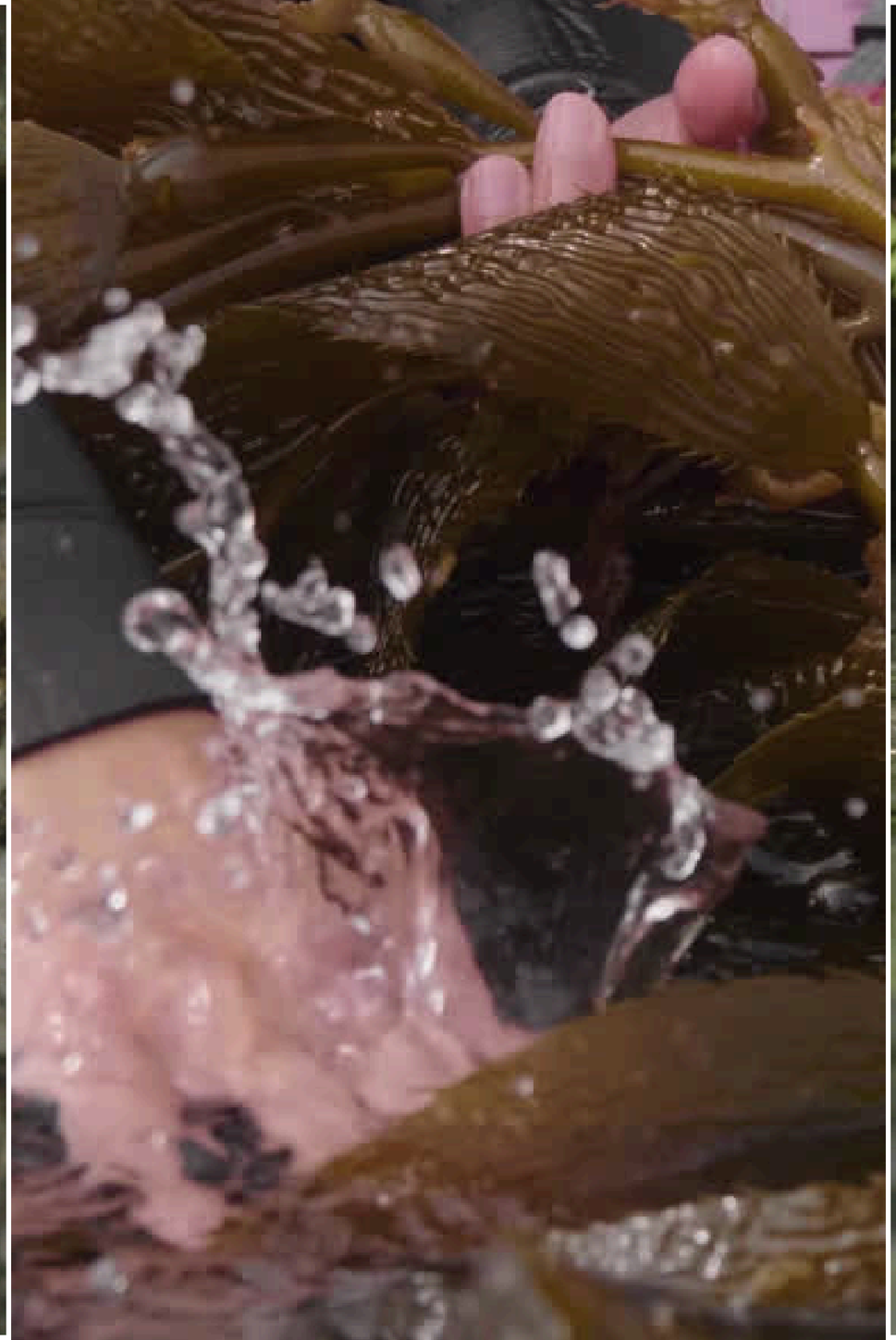
ƛaʔuukʷiʔatḥ

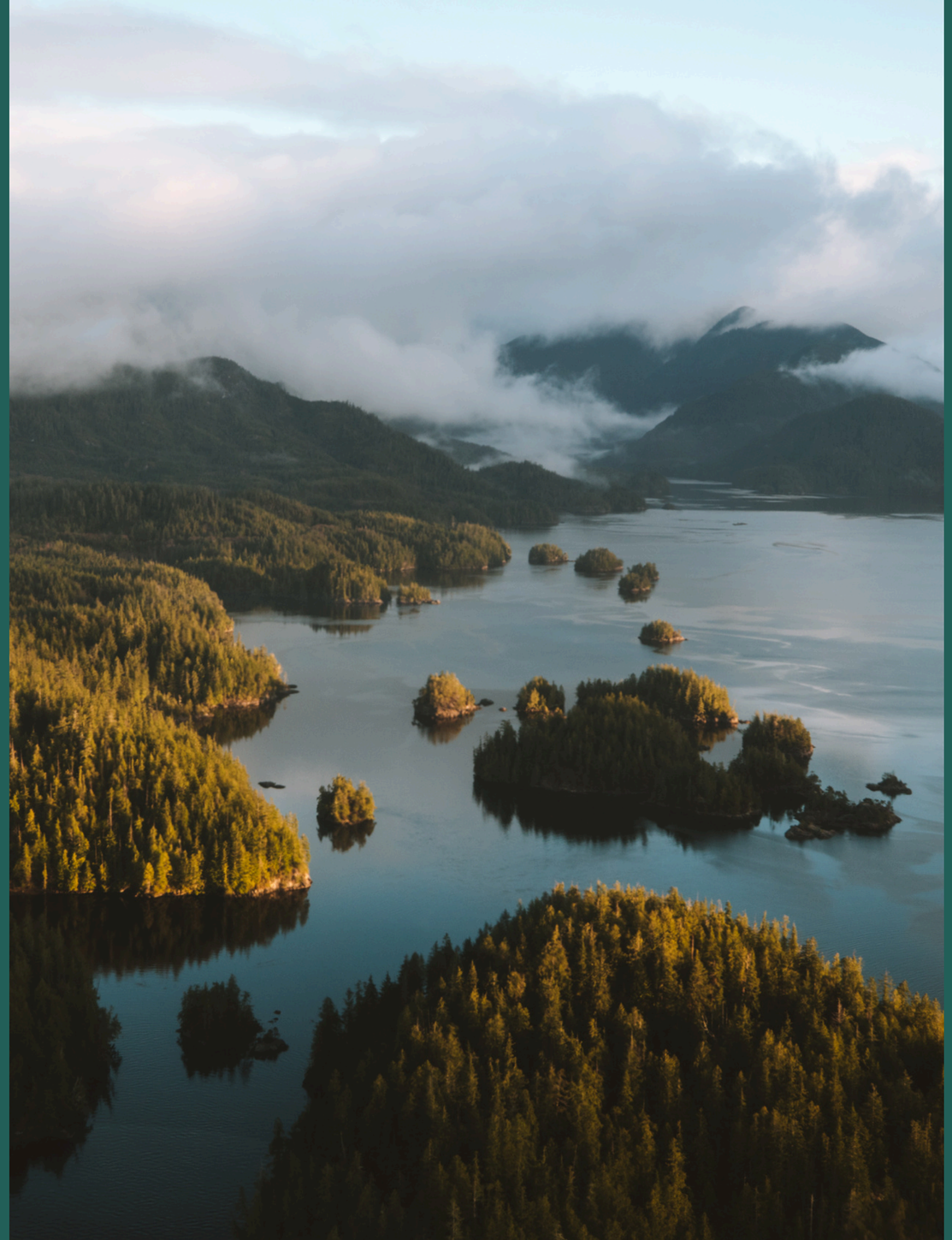
hiišukʔiš ć̓awaak | Everything is connected, we are all one

ʔiisaak | Practice respect, observe, act with care and awareness

ʔuuʔathluk | To take care of; to look after



Ocean Networks Canada

Ocean Networks Canada (ONC), an initiative of the University of Victoria, is **one of Canada's Major Research Facilities.**

ONC operates world-leading observatories in the deep ocean and coastal waters of Canada, and in the Southern (Antarctic) Ocean.

The **Community-Based Monitoring** team at ONC works with Indigenous communities, organizations and coastal communities to develop and support community-based ocean monitoring initiatives that meet local needs.


ONC DATA POLICY
FAIR
CARE
OCAP
TRUST
NISR

Community Fishers

A program to collect standard oceanographic data in coastal regions by community members.

- Community-driven
- Provides training & data acess
- Data collection & management support





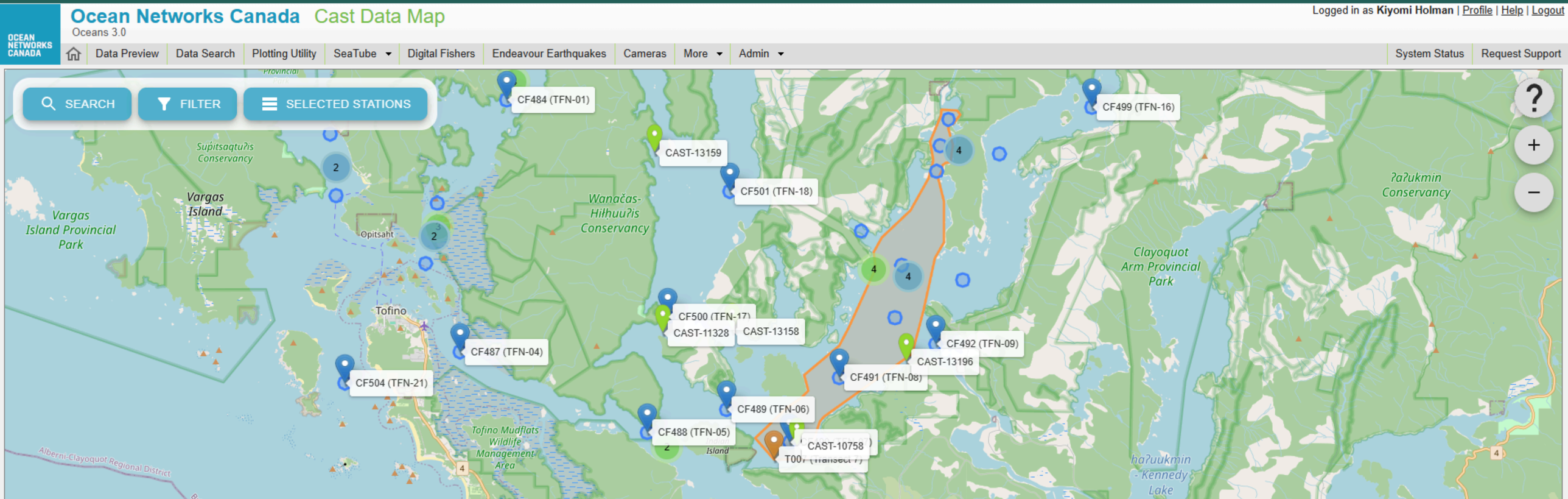


This photo is co-owned by the Nunatsiavut Government and Ocean Networks Canada, who are working in partnership to support community-based ocean initiatives.

Cast Data Map

Depending on individual data agreements, Community Fishers data are discoverable on the Cast Data Map on Oceans 3.0.

https://data.oceannetworks.ca/CastDataMap



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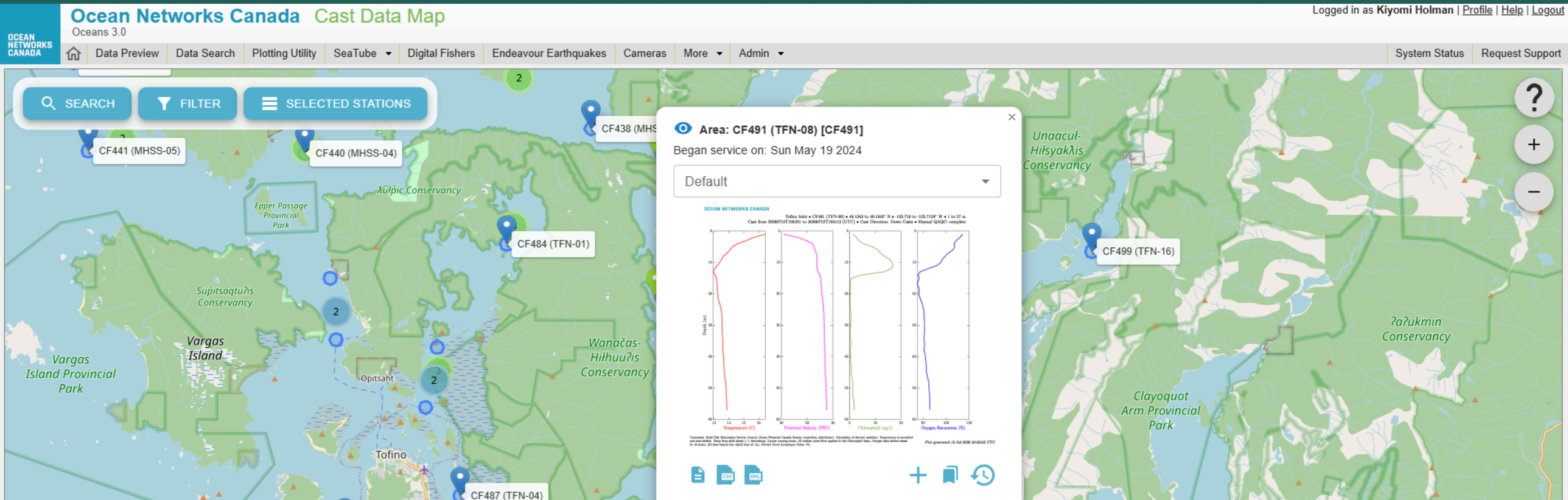
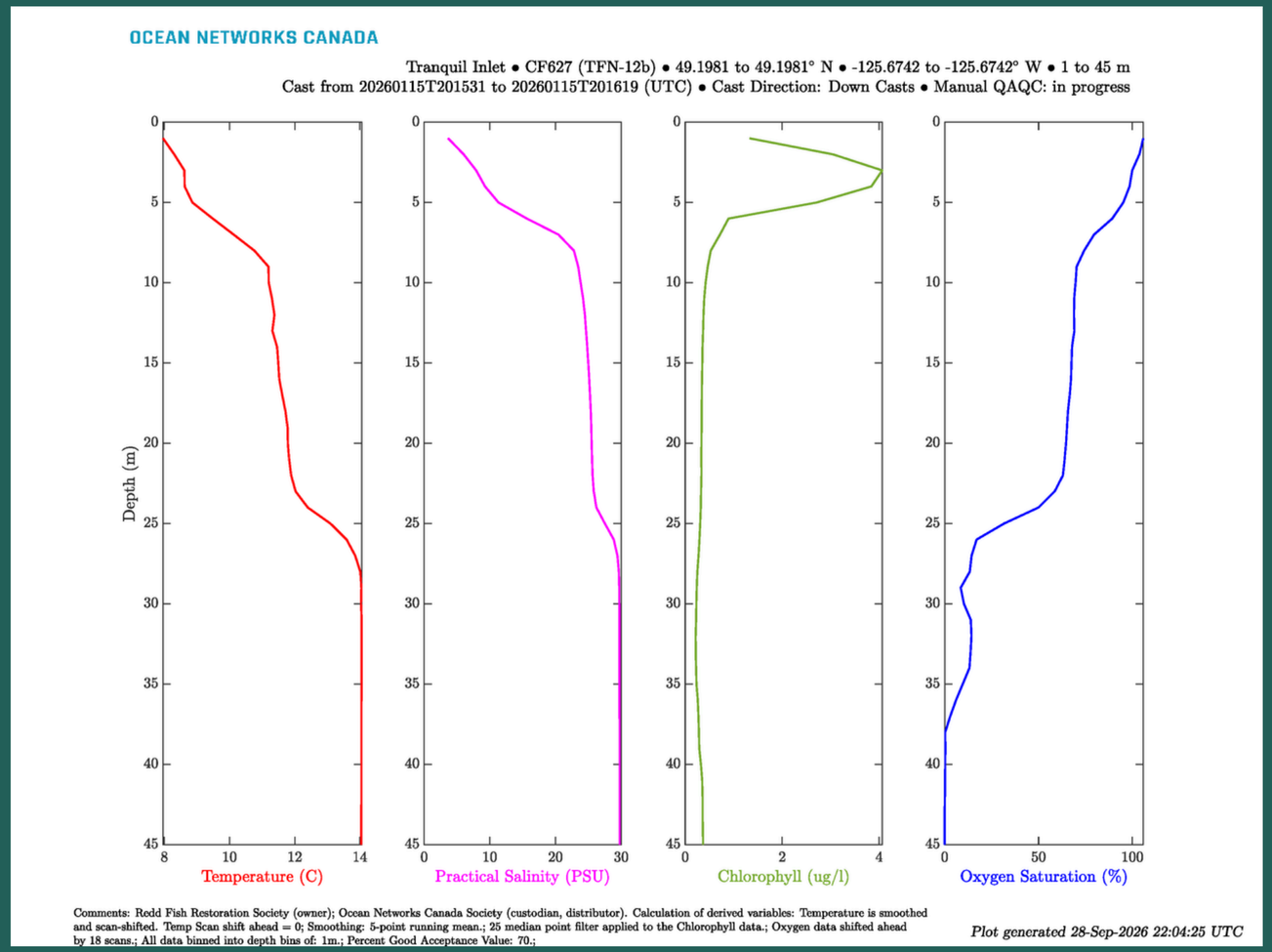
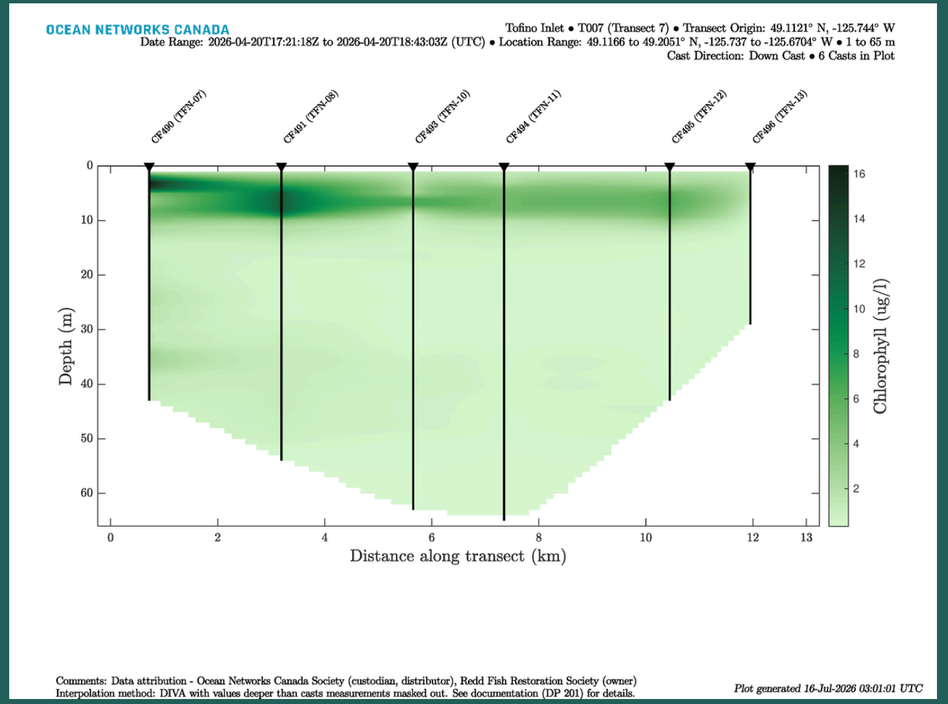
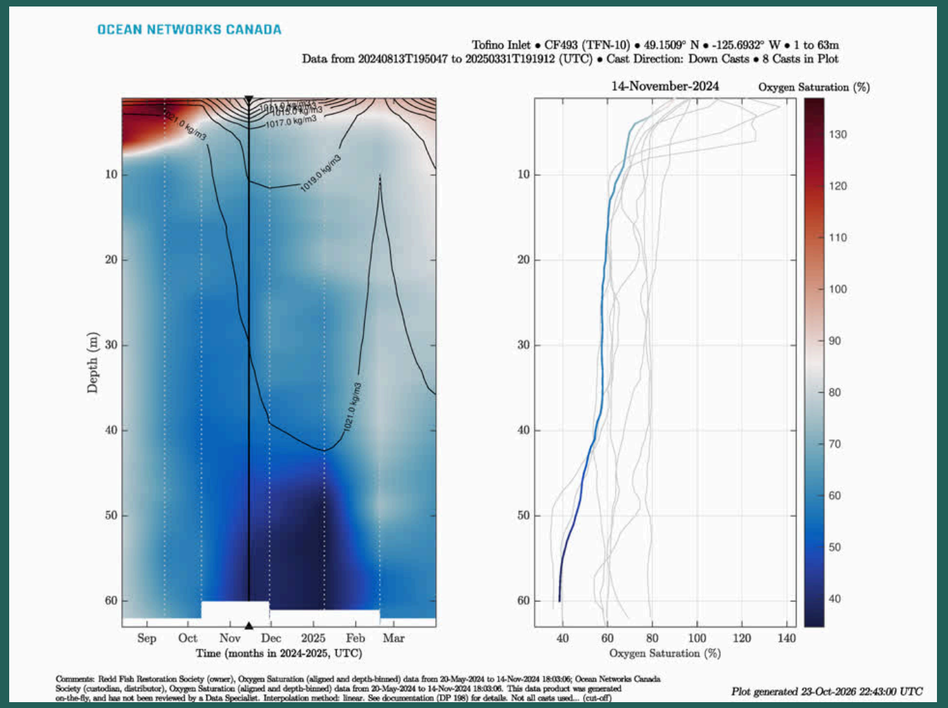


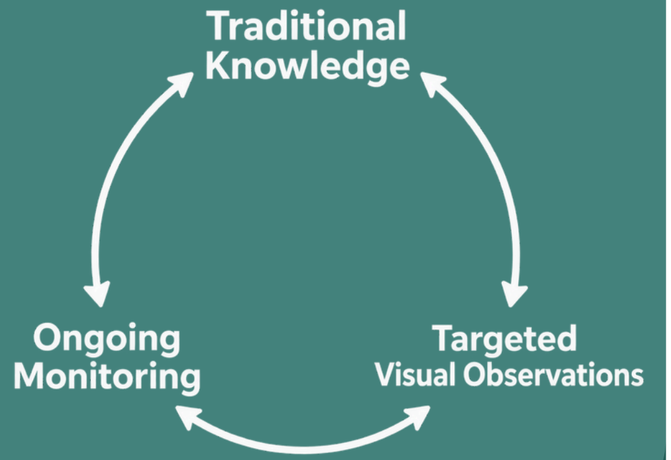
Data Products

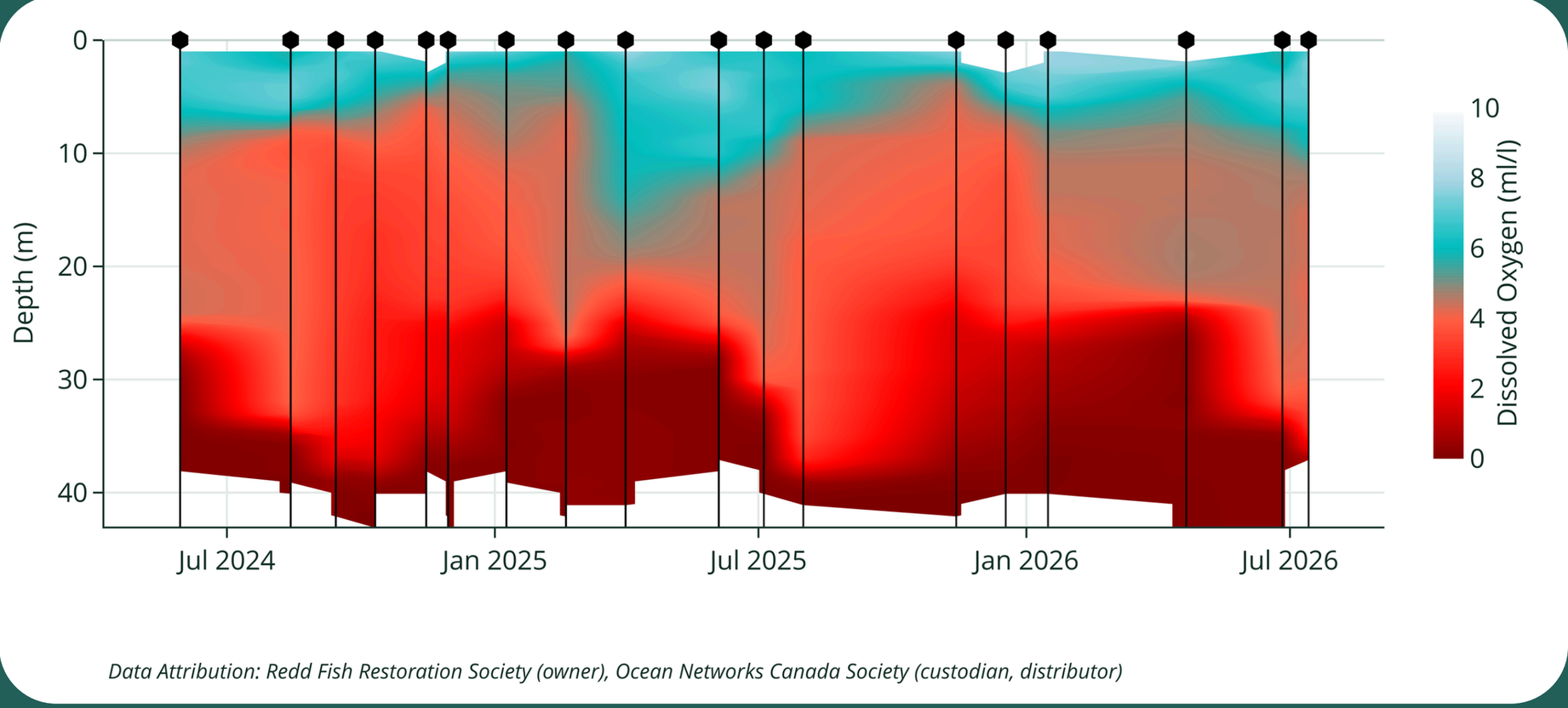




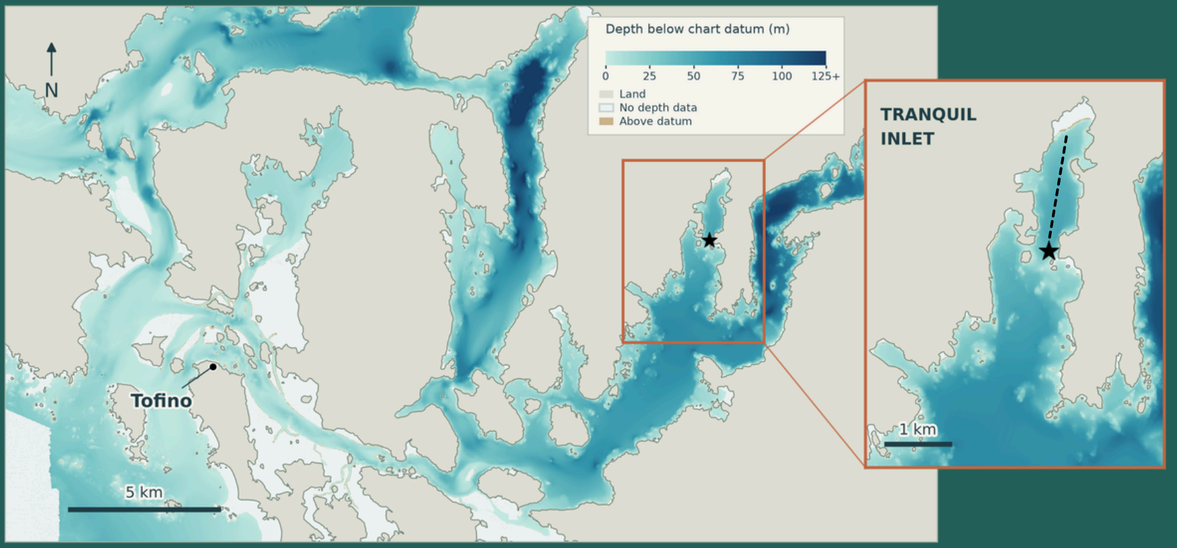


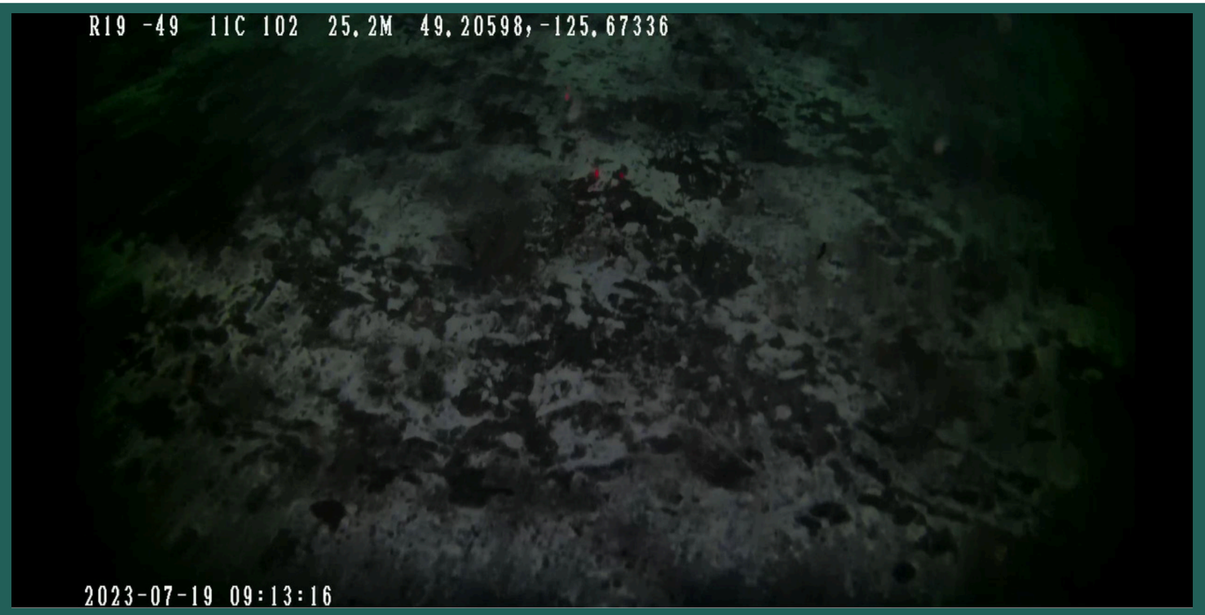
TFN Data





Data Attribution: Redd Fish Restoration Society (owner), Ocean Networks Canada Society (custodian, distributor)





Bathymetry: CHS NONNA-10 | Coastline: Province of BC, TRIM 1:20,000 | Non-navigational use



Why This Data Matters

Time Series

Year-round water quality monitoring tracks temperature, dissolved oxygen, salinity, and hypoxia hotspots to **establish regional environmental baselines** and **detect long-term trends.**

Ecosystem Health & Restoration

Assess kelp forests, eelgrass meadows and juvenile salmon habitats to support conservation and restoration efforts.

Nation leadership & Capacity building

Puts scientific instrumentation into hands of local experts and decision makers to take an active role leading the environmental monitoring in their waters. This also **gives Nations control over their data** and how it is managed, accessed, and used.

ƛaʔuukʷiʔath Marine Restoration



- Integrating Traditional Knowledge and oceanographic data to identify high-value habitats and restoration sites.
- Since 2024, monitoring has supported restoration planning and understanding of juvenile salmon distribution and abundance.
- TFN launched a kelp restoration project in 2025, with successful growth in 2026 and an eelgrass restoration pilot currently underway.



Future Scope

- Project-based funding remains a challenge
  - ONC working on costing models
  - Collaborating on funding applications
- Refine monitoring approaches and learn iteratively
- This project has increased capacity for TFN's Tribal Park Guardians, created meaningful hands-on work in the territory, generated a robust dataset and has supported the Nation's data sovereignty goals.



Nate Currie collecting a CTD cast, June 2025.



ƛ́eekoo

Thank you

For more information please reach out to
kiyomiholman@uvic.ca | emily@reddfish.org