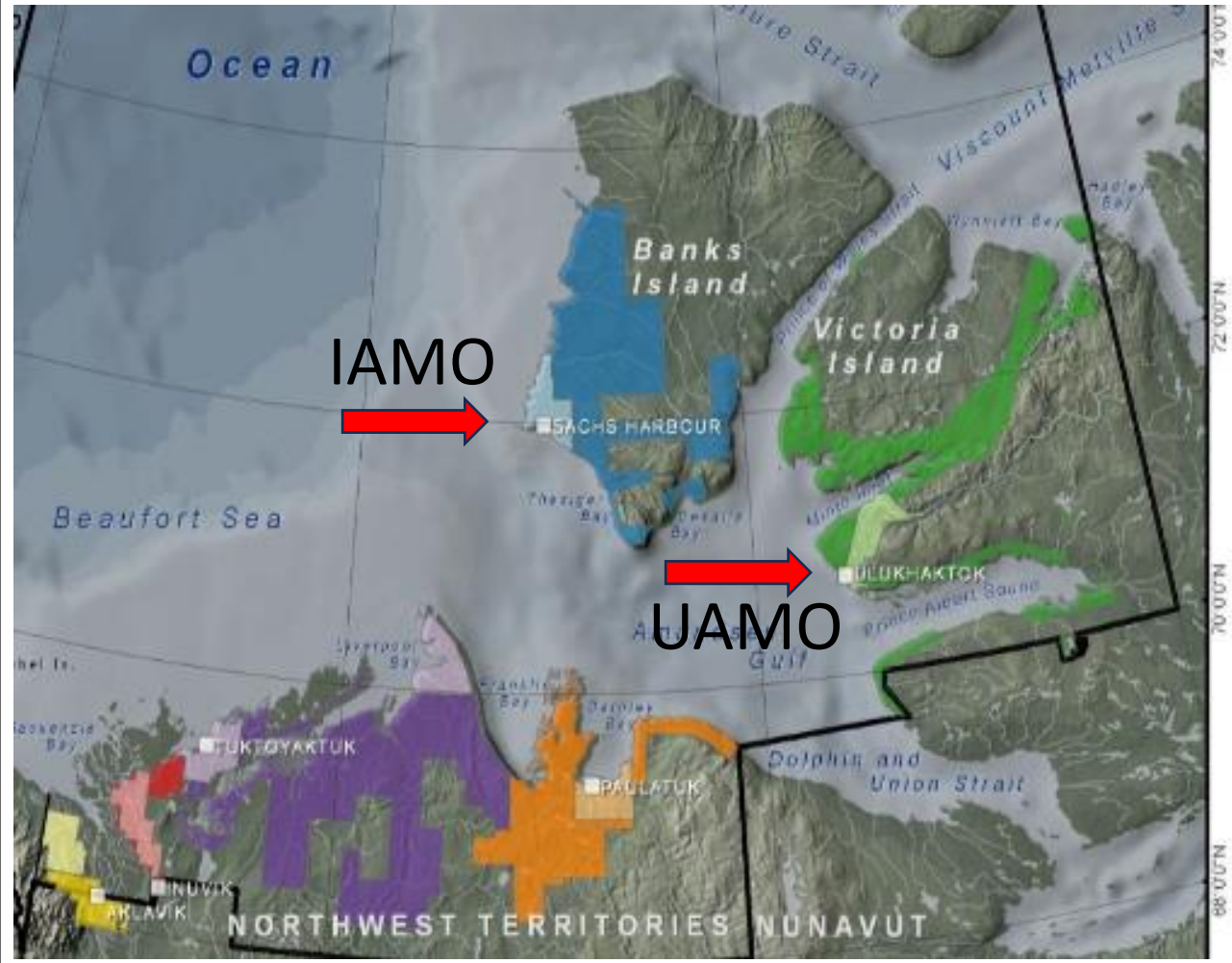
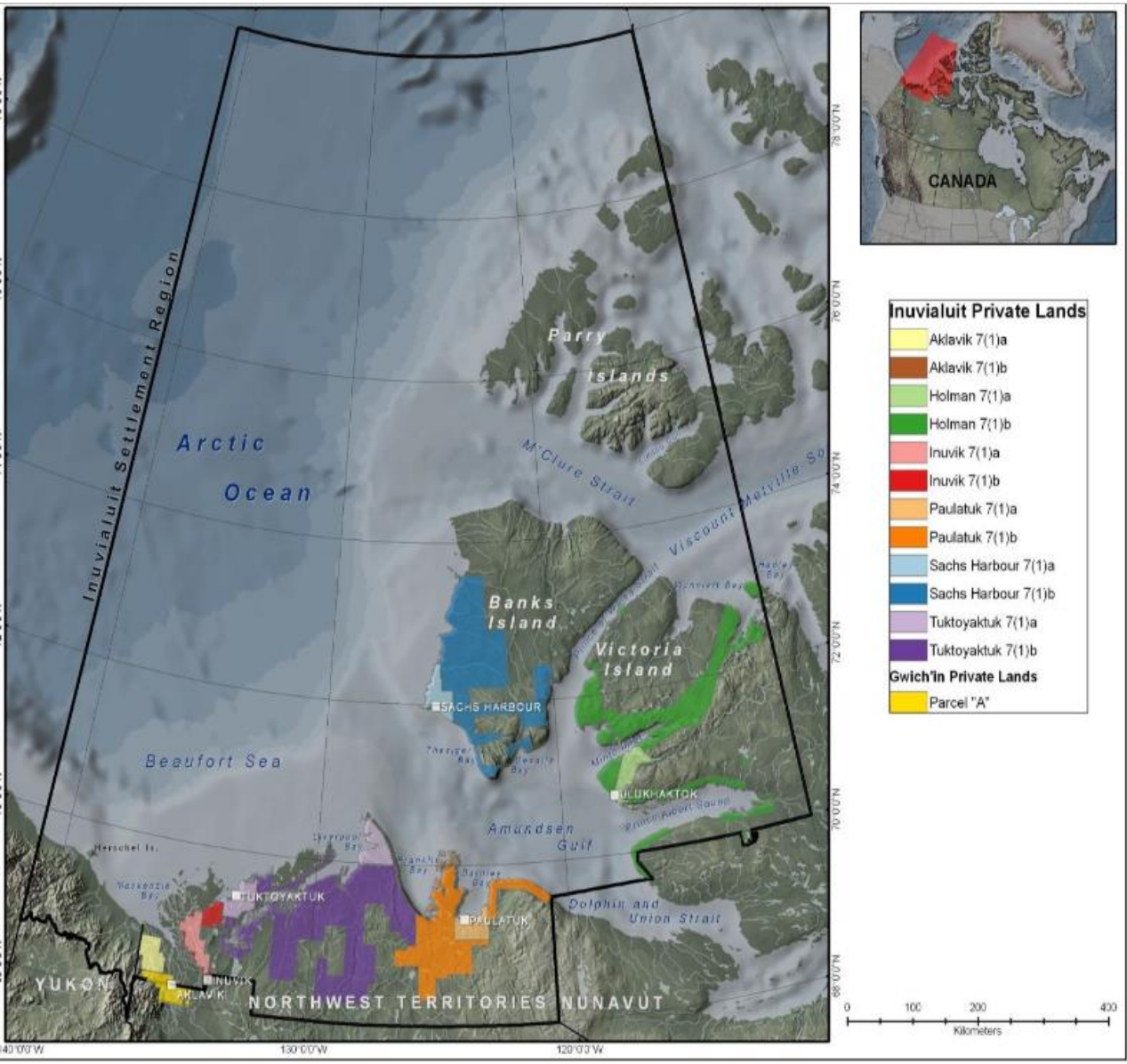


Inuvialuit Settlement Region (ISR) Aquatic Monitoring and Observation (AMO) Program



Map from: Environmental Impact Review Board (EIRB) activity report 2014-2015

Figure 1. Private Inuvialuit Lands and Crown Lands within the Inuvialuit Settlement Region.

ISR Aquatic Monitoring and Observation (AMO) Program



Figure 2. The 2023 ISR-AMO teams at the annual gathering in Ulukhaktok, NWT From L-R: Naomi Klengenber (Youth Assistant), John Noksana Jr. (Oceans North), Allen Pogotak (Ulukhaktok Elder Director), Tony Alanak (Field Researcher), Roland Notaina (Field Researcher), Jeff Kuptana (Field Researcher), FRONT: Warren Esau (Field Manager) & Kitok Pat Akhiatak (Field Manager) - Photo by Helen Drost (Science Consultant – Sheluqun Consulting)

ISR Aquatic Monitoring and Observation (AMO) Program: Mission Statement

We are an Ocean People. Understanding the ocean and its inhabitants is important in keeping it for future generations to come. Bridging the gap between traditional knowledge and modern science will help us to understand the history and direction the ocean will take us.

Aquatic monitoring and observing will also help us in being sovereign and bring a presence in the region, scientifically and traditionally.

- We are hired by the Hunters and Trappers Committee (HTC) and work for the community
- We get training to use the equipment, create and use data management & analysis protocols, conduct and get direction from our yearly interviews/sharing circles with Traditional & Local Knowledge (TLK) keepers
- We apply our expert ecosystem knowledge and receive community direction to select priority species and locations for data collection based on their value to the community for harvesting and cultural reasons
- We assist our people and Elders when needed. e.g. Using our ROV-camera to retrieve sunken snowmobile!! 😊

Full description of the Ulukhaktok AMO (UAMO) program at:

<https://www.oceansnorth.org/en/blog/2023/01/monitoring-change-in-ulukhaktok/> (by Paul Labun – Oceans North)

ISR Aquatic Monitoring and Observation (AMO) Program: Key Goals

- Monitor aquatic ecosystems to qualify and quantify the impact of climate change and other stressors (e.g. ocean acidification, contaminants, shipping)
- Secure long term funding for core program operations
- Take on client fee-based projects to increase our funding and capacity
- Contribute to the Traditional & Indigenous Knowledge-base
- Support community directed monitoring, protection and conservation management under the principles of the Inuvialuit Final Agreement (IFA)
- Support the priorities of the ISR Community Conservation Plans
- Support community empowerment, add to local employment opportunities and build upon existing community resilience to the global climate crisis
- Involve youth in all AMO activities
- Ensure safe operations and have fun!

ISR Aquatic Monitoring and Observation (AMO) Program:

Traditional and Local Knowledge (TLK) Direction

Akhiatak et al., in review -
Arctic Science Journal

Interviews are conducted independently by the Elder Director and team members with consent forms and a formal process to ensure the safety and well being of all the participants. Examples summarized and compiled by the UAMO TLK team and Social Scientist Dr. Patti Johnston from 2021:

- Elders have seen a range of changes related to a warming and changing climate that cause them serious concern including concern for the safety of those travelling on ice, but also for the health of ocean life and the community's ability to access country food in the future
- Elders believe young people need to be better informed concerning Traditional Knowledge related to hunting and fishing, but also climate change. The Elders would like to see youth more involved in meetings and ongoing work related to climate change
- Elders recognize climate change has resulted in a heightened reliance on western technology, but they continue to hold necessary knowledge that young people will need into the future. Communication among generations holds challenges
- Elders described the interconnectedness of different species, the land, ice, snow, ocean and tides, as well as external events (e.g., forest fires) and how changes in any one thing or area impacts others
- Elders are witness to changes in existing species, and to arrival of new species to the Inuvialuit Settlement Region (ISR)

ISR Aquatic Monitoring and Observation (AMO) Program: Main Activities -1

Underwater
Camera



Water quality
data logger
(CTD)

Community
Open House
Events



Local school
show and tell

TLK interviews
Picture taken by
Allen Pogotak –
2021 UAMO TLK team



& community service
(a sunken snowmobile was retrieved
using the AMO underwater camera)

ISR Aquatic Monitoring and Observation (AMO) Program:

Main Activities -2

The AMO program is guided by the principle of community data ownership, which includes control, access and possession of all AMO data (OCAP®)

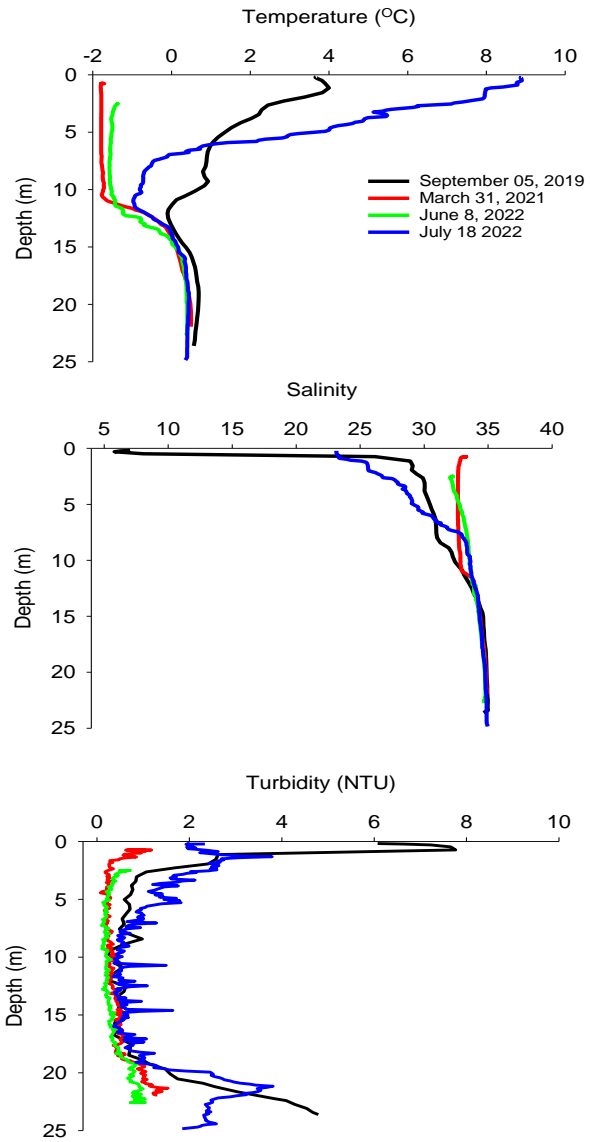
- Reporting the data results and sharing selected data with the public is controlled by the community with HTC approval required
- The Traditional and Local Knowledge (TLK) and the scientific data collected by expert fishers and hunters (AMO field researchers) are presented in AMO data workshops and open house community events to collaboratively review all the TLK and scientific data and field observations collected
- Indigenous Intellectual Property Rights and Data Sovereignty are upheld by Canadian law with the adoption of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) Act on June 21st, 2021



ISR Aquatic Monitoring and Observation (AMO) Program:

Example Water Quality Data

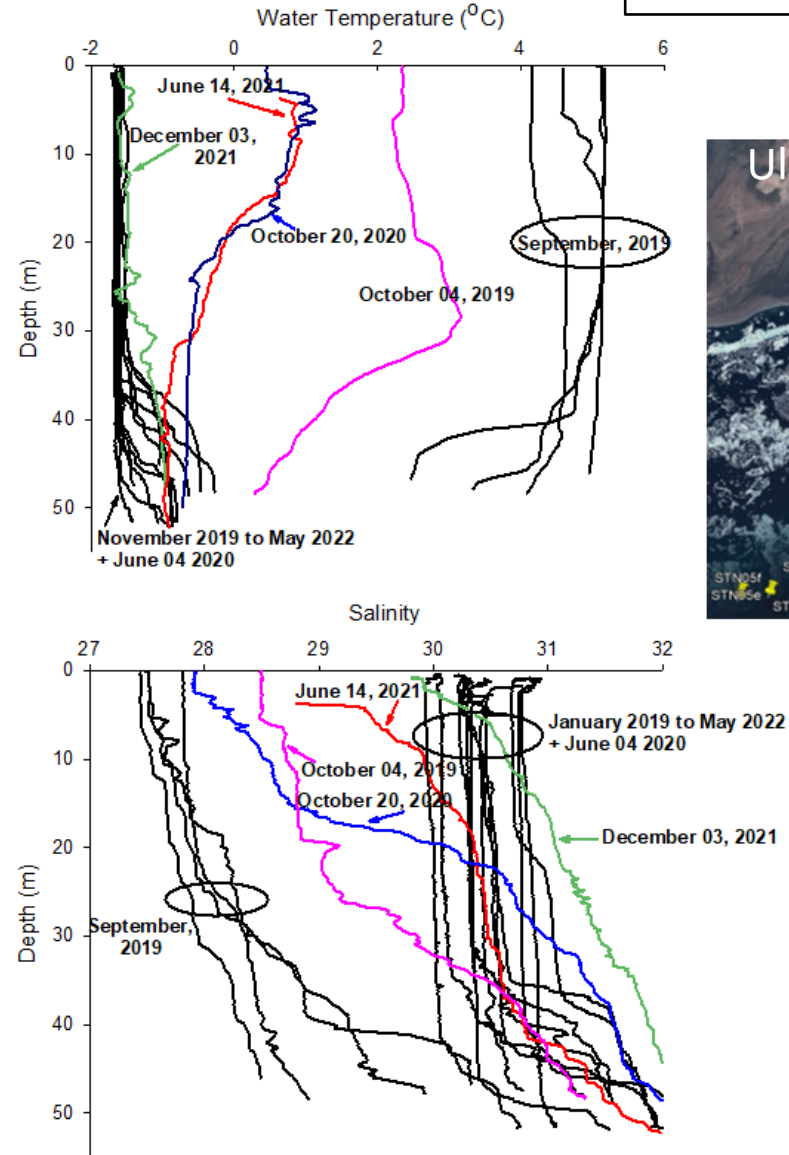
Akhiatak et al., in review - Arctic Science Journal



IAMO



Temperature (top), Salinity (middle) and Turbidity (bottom) at Station SH-R18 over 4 years (from Sept. 2019 to July 2022). Incredible stability of parameters at ~15 meters



UAMO

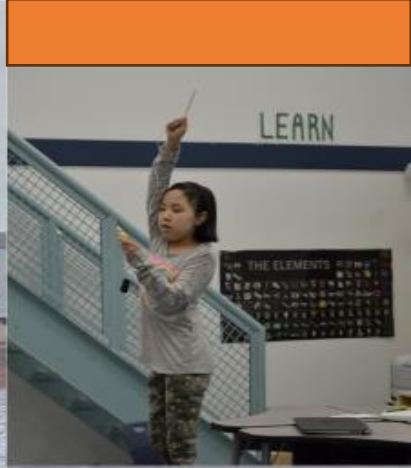


Water temperature (top) and Salinity (bottom) time series CTD profiles

Six yellow pins on map mark Station 05 (a to f) situated 2.5 km's from Ulukhaktok. This dataset does not include profiles for July or August months

ISR Aquatic Monitoring and Observation (AMO) Program: Challenges

1. Weather
2. Small boats limit distance from shore
3. Securing long term funding
4. Recording field observations
5. Shipping Lithium batteries for instruments (and PO Box deliveries)
6. Covid pandemic impact
7. Cost of travel in the Canadian Arctic
8. Including traditional languages in all AMO program activities



Koana, Quana,
Thank you!
Questions /
Comments?



Funding since 2019 from:
*Oceans North, CIRNAC, Inuvialuit
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