

Átl'ka7tsem/Howe Sound

# Marine Stewardship Initiative



Art by Di

2023

An update to share with you in celebration of **World Ocean Day**. The United Nations theme this year is Planet Ocean: Tides are Changing.



A project of

MakeWay



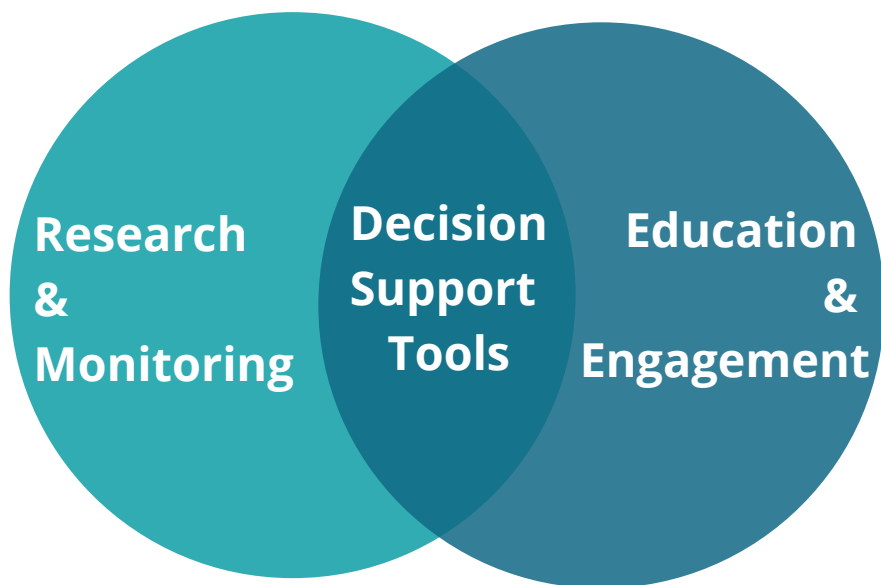
# About Átl'ka7tsem

Átl'ka7tsem/Howe Sound is within the traditional, ancestral, and unceded territory of the Skwxwú7mesh Úxwumixw (Squamish Nation) and borders the Tsleil-waututh, Sechelt and Musqueam Nations' territories. Átl'ka7tsem is one of three Squamish Nation place names for this deep-water fjord, and describes paddling out of the fjord toward the Salish Sea. The region's waters are ecologically rich and support thriving cultures, livelihoods, and communities. Being directly adjacent to the growing metropolis of Vancouver, Átl'ka7tsem faces unique opportunities and challenges to preserving its socio-economic, cultural, and ecological integrity.



# About the MSI

The Marine Stewardship Initiative (MSI) conducts aquatic research and monitoring, and education and community engagement in service of marine planning and relationship building. The MSI provides up-to-date resources and tools for decision-makers, marine spatial planners, and marine sectors (e.g., industry, recreation, tourism, conservation, education) so regional health and sustainable economic development can flourish in tandem.





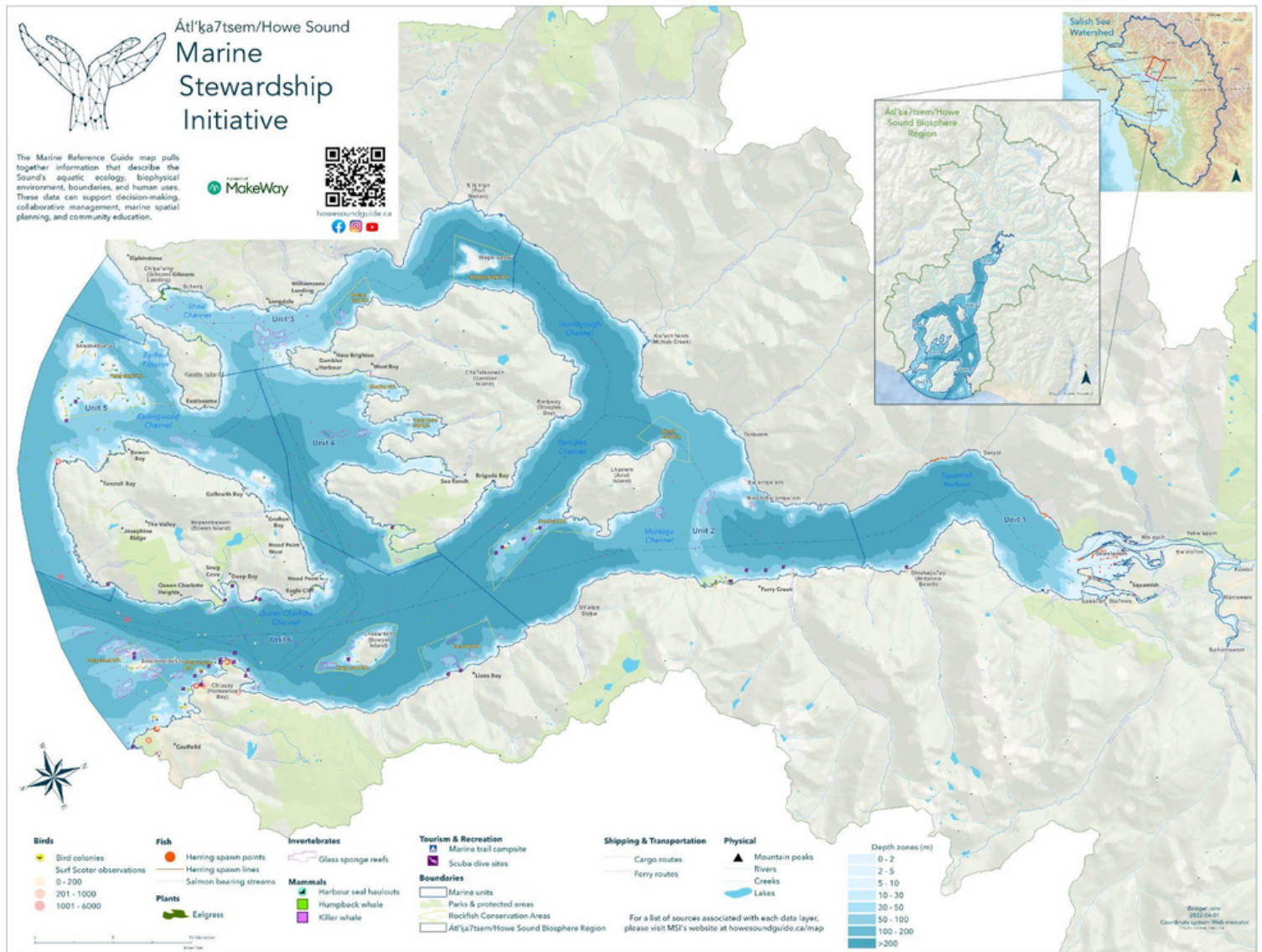
On April 2023, the Marine Stewardship Initiative was featured on Esri Canada's podcast "Geographical Thinking". Check out Season 3, Episode 11: A living encyclopedia embodied in an online map [here!](#)

"For this many stakeholders to come together to protect the ecosystem of Howe Sound, takes lots of data and coordination which makes the Marine Reference Guide astounding." –ESRI Canada

In 2023, the Marine Stewardship Initiative was one of 15 winners for the Esri Canada Map Calendar Contest!

Submissions were evaluated based on visual appeal, uniqueness, geographic diversity and how cartography was used to tell a story. We are honoured that our static Marine Reference Guide map was selected as a top submission, and is featured for the month of December.

Check out our winning submission [here!](#)





# 4 things you can do to protect Átl'ka7tsem



## 01 Share your knowledge

Connect with us to share what you value in Átl'ka7tsem/Howe Sound so we can include your voice, knowledge, and perspective in our project deliverables. Contact us [here](#).

## 02 Learn and Explore

Explore some of the decision-support tools and research reports we have produced over the past year to document the Átl'ka7tsem's communities and water! Check out our [Resources page](#).

## 03 Volunteer

Interested in building community? Looking to develop research skills? Passionate about making an impact? We are eager to work with you – please get in touch [here](#)!

## 04 Donate

Our project flourishes on the support and generosity of community members and organizations. A gift toward the Marine Stewardship Initiative supports direct, positive action toward protecting Átl'ka7tsem's environment and community for generations to come. [Donate today](#).

# Explore our resources

Click on the pictures and buttons to  
explore links and resources



Visit our website:  
[howesoundguide.ca](https://howesoundguide.ca)



Dive into hundreds of  
data layers and learn  
Squamish Nation place  
names in the [Marine  
Reference Guide](#)



Discover the magical  
world of [herring](#)!



[Donate here](#)



Connect with  
likeminded groups  
through our  
[Community Map](#)!





# Team

## Steering Committee Members

Fiona Beaty, Chair - University of British Columbia  
Ruth Simons - Átl'ka7tsem/Howe Sound Biosphere  
Region Initiative  
Jay Ritchlin - David Suzuki Foundation  
Isobel Pearsall - Pacific Salmon Foundation  
Charlene Williams - Squamish Nation



Photo by Bridget John

## Management Team

Courtney Smaha - Project Director  
Bridget John - Program Manager  
Melany Sanchez - Project Coordinator  
Nikita Wallia - GIS Analyst (David Suzuki  
Foundation)  
Vivian Joseph - Indigenous Research  
Coordinator  
Matthew Van Oostdam - Herring Project  
Coordinator

## Dedicated Volunteers

Angela Phan	Emalee Vandermale
Amy Essery	Brian Hockenstein
Thomas Bratty	Sarah McCaw
Sarah Boisvert	Ian Lowe
Alyana Lalani	Sooz Shankar
Briony Gray	Erin Galloway
Hannah Schriber	Jane Pendray
Halia Simon	Lesley Douglas
Chantal Underdown	Sarah McJannet
Lauren McKay	Emry McJannet
Sewells Marina	Krystal Chin
Jody Phillips	Sanjay Carter-rau
Kieran Brownie	Marina Fabris
Tina Currie	Clea Rochon-Berman
Patrick MacNamara	Kevin Feet Banks
Sean Sweeney	Jane Pendray
Keith Robinson	Tyler
Henry Banks	Eden
Brendan MacDonald	Deanna
Jessica Herman	



Photo by Kieran Brownie

# Contributors and collaborators

Thank-you immensely.







# Our achievements

## Decision-Support Tools

In 2019, a series of winter storms led to the formation of a marine debris layer within the Marine Reference Guide. In 2022, it was noted that this layer needed to be continually updated to ensure information within the Marine Reference Guide accurately reflected the on-the-ground reality of marine debris present within our aquatic environment.

Over the summer of 2022, through the Ocean Pathways Program, the Marine Stewardship Initiative recruited a Marine Debris Coordinator, who was tasked with creating a reporting button on our website. Using this button, individuals within the community can report sightings and/or removal of marine debris, to ensure data reflected within the Marine Reference Guide is current. This button can be used across all devices.

Simply drop a location pin to our map, add details specific to the debris found, attach a photo, and submit your entry!

To date, data reported through the Marine Debris Reporting button has been used to inform over five targeted shoreline clean-ups, removing thousands of tonnes of marine debris in our shared environment! This year, we hope this information is used to remove reported derelict vessels and abandoned boats, and begins to identify the most common sources of marine debris found in Átl'ka7tsem/Howe Sound, so we can advocate for solutions that prevent pollution at its source.

"The marine debris reporting feature is an invaluable tool when conducting marine debris clean-ups. The NSMEC team made use of this feature of the Marine Reference Guide in 2022 while performing extensive clean-ups in the Átl'ka7tsem/Howe Sound. The reporting feature allowed us to pin-point areas that marine debris had been located and concentrate our efforts there, such as Anvil Island. We also used the marine debris reporting form to record any debris we saw but were unable to remove at that time." – Jenny Wright, Aquarium Curator, NSMEC

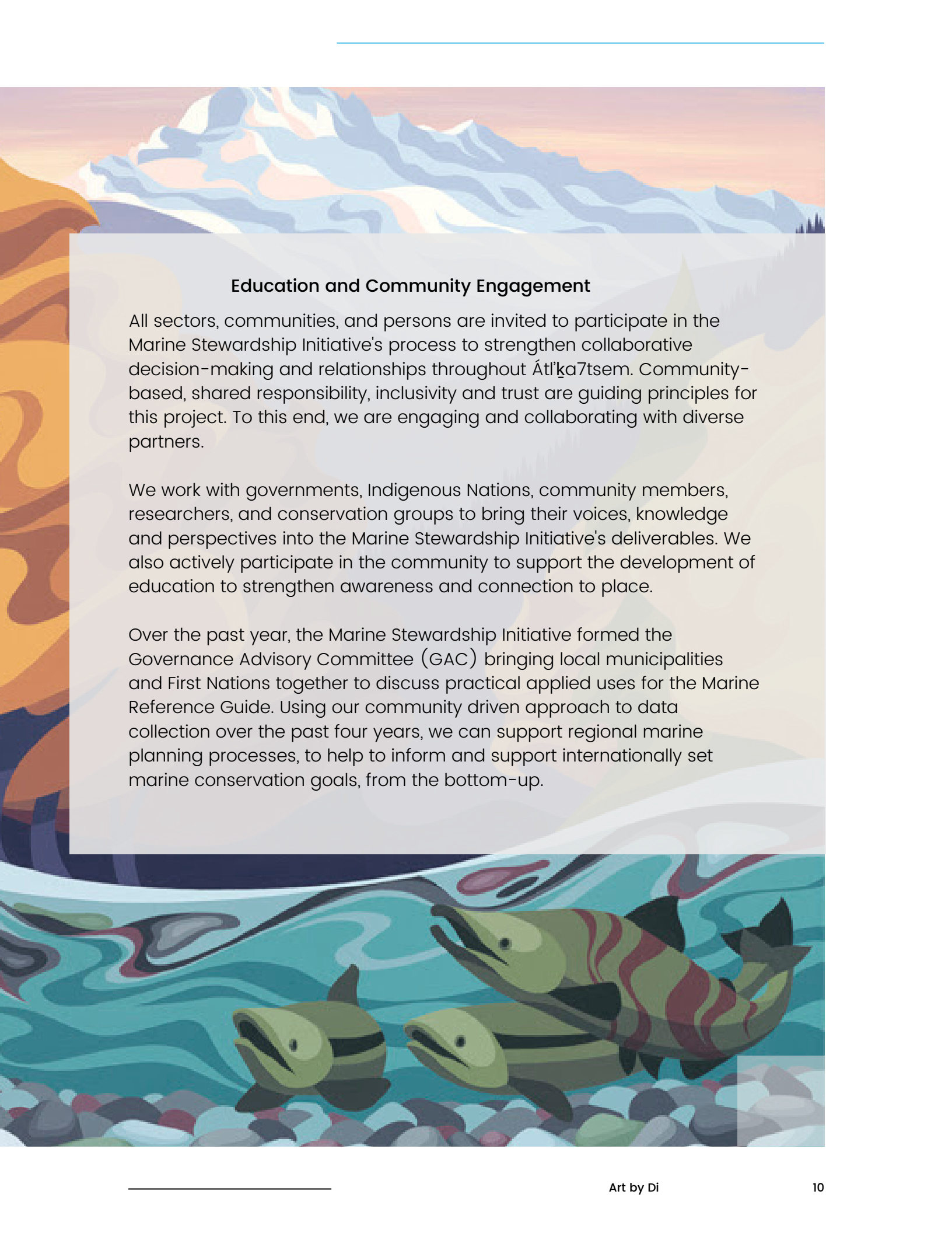
## Research

Átl'ka7tsem/Howe Sound supports a diverse array of marine invertebrate species, which play a key function in healthy ecosystems. Dungeness crab is one marine invertebrate species that plays a critical ecological, cultural, and economic role in our local waters. Before Dungeness crab make their way onto the ocean floors of Átl'ka7tsem/Howe Sound, they undertake a series of life stages, drifting in ocean currents that transport them to this region before they become mature adults. The timing, arrival, and distribution of young crabs are key to understanding the abundance of populations as the number of Dungeness larvae have been shown to predict the number of adult Dungeness crabs years later. Like most invertebrates, Dungeness crabs face numerous anthropogenic threats from overfishing to climate change.

In 2022, the Marine Stewardship Initiative joined the Hakai Institute in their Sentinels of Change Project, to better understand populations of this important invertebrate in our region, and the broader Salish Sea. Over the months of April to September a light trap is deployed off of Sewells Marina in Horseshoe Bay. Crab larvae are attracted to the light emitted by a light probe and enter the trap, where an active team of trained and engaged volunteers count and measure the larvae, before releasing them back into their habitat. By undertaking this work, the MSI helps to fill important knowledge gaps and develop place-based knowledge, whilst building collaboration amongst community groups, sharing knowledge and capacity within our region.

We are happy to announce that in 2023, a second light trap has been adopted by the Nicholas Sonntag Marine Education Centre, further enhancing our ability to capture more fulsome data pertaining to the abundance of Dungeness crab populations, across different Marine Units within Átl'ka7tsem/Howe Sound.



The background of the page is a stylized illustration. At the top, there are mountains in shades of blue and white against a pink and orange sky. Below the mountains, there are stylized waves in blue and white. In the foreground, there are three fish, likely salmon, swimming in blue water over a rocky riverbed. The fish are colored in shades of green, yellow, and red. The entire illustration is composed of bold, flat colors and simple shapes.

## Education and Community Engagement

All sectors, communities, and persons are invited to participate in the Marine Stewardship Initiative's process to strengthen collaborative decision-making and relationships throughout Átl'ka7tsem. Community-based, shared responsibility, inclusivity and trust are guiding principles for this project. To this end, we are engaging and collaborating with diverse partners.

We work with governments, Indigenous Nations, community members, researchers, and conservation groups to bring their voices, knowledge and perspectives into the Marine Stewardship Initiative's deliverables. We also actively participate in the community to support the development of education to strengthen awareness and connection to place.

Over the past year, the Marine Stewardship Initiative formed the Governance Advisory Committee (GAC) bringing local municipalities and First Nations together to discuss practical applied uses for the Marine Reference Guide. Using our community driven approach to data collection over the past four years, we can support regional marine planning processes, to help to inform and support internationally set marine conservation goals, from the bottom-up.

# 2022-2023 milestones and team

June

Attended the World Ocean Conference in Lisbon



Lions Bay Beach Clean-up



Uncharted Waters, a documentary highlighting the work of youth in Átł'ka7sem, is completed!

Published reports on [plankton](#) and [herring](#)

December

July

[Marine Debris Reporting](#) button added to our webpage



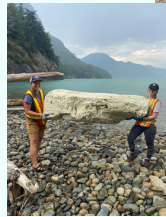
UBC Design for People Project Started

Uncharted Waters Screening on Bowen Island!

January

August

Supported 4 Marine Debris and Shoreline Clean-up activities, collecting 1000's of tonnes of waste



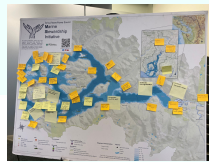
The team makes a splash at IMPAC5, delivering 3 presentations and screening Uncharted Waters!

Began herring (silhaw't) surveys to document the distribution of herring and ch'em'esh (herring eggs)

February

September

Finished Year 1 of the Dungeness Crab Megalopae Surveys



Began Year 2 of Dungeness crab light trap surveys in partnership with the Hakai Institute and Sewells Marina to understand Dungeness crab distribution and abundance in Átł'ka7sem

UBC Design for People Project Completed

March

October

Completed MRG Training with local municipalities



Delivered key note speech alongside the Biosphere at the 2023 Rotary Conference

First assembly of the Governance Advisory Committee

CBC [What on Earth](#) Podcast Feature

Completed herring (silhaw't) surveys for the 2023 year

April

November

Featured on Esri Canada's [Podcast](#)



Melany Sanchez joins as Project Coordinator!

Uncharted Waters Screening Vancouver

Esri Canada Coastal Marine and Freshwaters Forum Presentation

May

2022

2023



# 2018 - 2023 at a glance

Uploaded over

**743**

data layers and reports into our online maps

**44**

presentations to local, provincial, federal, and First Nations governments

**27**

instances of sharing our data and resources to industry, provincial, federal, and local governments, and non-profit organizations

**\$865,000**

funds raised to date

**39**

research reports and blogs written and published to our website

**24,596**

unique web visits

**60**

presentations to communities, non-profits and businesses

**2918**

participants at our workshops

Participated in and provided advice at

**76**

events, conferences, and workshops

**31**

media articles

**37,326**

social media reach\*  
\*2022-2023 data only

**185**

days on the water surveying herring, plankton, stream health, and eelgrass

Photo credit: Taz, Sporkist

# Thank You

for working to protect our treasured region's  
ocean and communities!



[howesoundguide.ca/](http://howesoundguide.ca/)



[marinestewardshipinitiative@gmail.com](mailto:marinestewardshipinitiative@gmail.com)



@marinestewardshipinitiative

