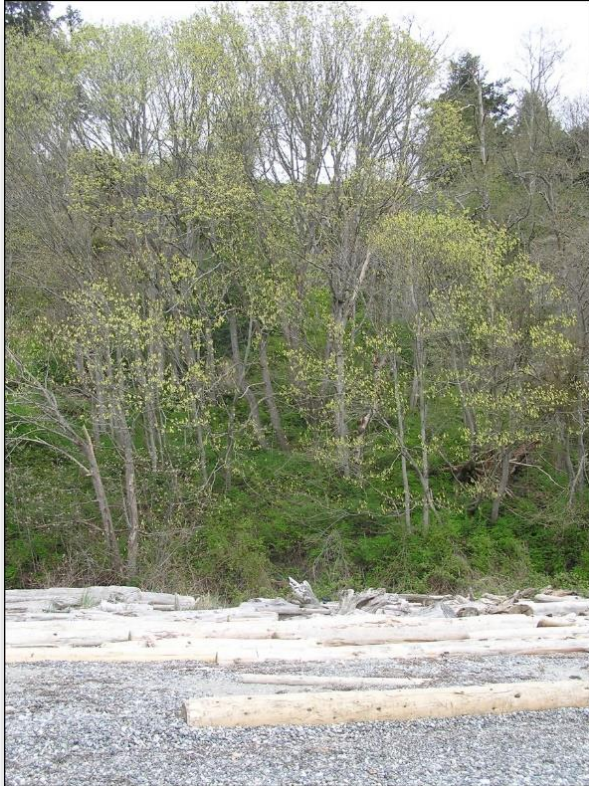


SeaChange Marine Conservation Society



2021-2022 Annual Report

www.seachangesociety.com

WHO WE ARE

SeaChange Marine Conservation Society, established in 1998, is a charitable non-profit environmental organization. We educate children and the public about marine and watershed environments and conserve and restore marine habitats in British Columbia in partnership with coastal communities.

OUR GOALS

- *To educate the public regarding the effects human populations are having on marine ecosystems.*
- *To conduct education workshops for schools and the public on marine conservation issues.*
- *To organize expeditions for on-site interpretation of ecosystems for the public.*
- *To cooperate with other environmental groups to promote systemic change in the ways we make use of marine resources.*
- *To participate with other like-minded organizations to create marine sanctuaries, collect data and organize workshops and conferences on the importance of rehabilitating and sustaining marine biodiversity.*
- *To reverse the continual degradation of marine ecosystems through restoration, rehabilitation and/or conservation activities.*



Notes from the Executive Director's Seat

"Chaos theory refers to the notion that obvious disorder actually belies an underlying order and that little changes in a part of the system can lead to large changes throughout the system."

Symbionomic Evolution: From Complexity and Systems Theory, to Chaos Theory and Coevolution
Joël de Rosnay

This past year has been a transition from so many recent events, including the global pandemic and increasing climate chaos. Social and economic systems have turned sideways. A cloud of uncertainty and anxiety befalls the world.

In the world of SeaChange we have not been immune. We closed our SeaChange office in Brentwood Bay in November 2021 and now all employees work from home; most of our gatherings with the public happen both in person and on a digital platform. We are concluding a five year funded nearshore habitat restoration project; work projects have been reduced for lack of funding, and the position of the Executive Director was open as the person in that place (me) has decided it is time to take a back seat.

Amidst this wave of change and uncertainty, SeaChange has come out on the other side with a clearer sense of where we are heading. Sarah Cook will be our new person at the helm; we will acquire a social enterprise to help fuel the SeaChange mission, and the spirit of the Board and staff is stronger than ever before.

SeaChange has focused much of its energy this year internally on our visions and how we might realize them. We held a two day Board Retreat in the fall of 2021 on Salt Spring Island, and a Board and Staff Retreat at Mary's Lake in the Highlands on the Saanich Peninsula (in person and on Zoom) in early 2022. From our collective lively discussions and with intense focus, we have charted a course for the coming years that will adapt to change and innovation. We have begun to work in closer working relationships with First Nations both locally and on the west coast of Vancouver Island. We are garnering more support for our estuarine conservation work. With the good will and labour of students from the University of Victoria's Geography Dept. we will be more in the public eye with a Visualization Project to highlight the coastal community spirit at work in the Salish Sea. We continue to plan the restoration of the shoreline in SNIDŹEŁ (Tod Inlet) with funding support from the Victoria Foundation through Stelly's Secondary School in Brentwood Bay and in Robert's Bay in partnership with Peninsula Streams & Shorelines Society and Tseycum First Nations.

Estuaries serve as transition lands and waters for salmon and the life they depend upon. SeaChange will serve as the transition between people and marine habitats to lead to a larger change in how we collectively care for our world.

Thank you for being a part of this healing.

Executive Director

SeaChange accomplishes much because of the dedication of the

SeaChange Board of Directors 2021-2022

Doug Biffard (President), Ken Josephson (Vice-President), Lukas Gehring (Treasurer), Kitty Lloyd (Secretary), Garry Fletcher, Pauline Finn, Kathleen Fenner, Alisa Preston and Anne-Marie Daniel.

And....



Coastal Photography Studio

Alison Prentice, Administrative Assistant, Sarah Cook, in-coming Executive Director, Leanna Boyer, Communications Coordinator; all SeaChange Volunteers; Coast Salish, Cowichan, Tsleil-Waututh, shíshálh and Squamish First Nations; Jamie Smith, Justin Bland and Viktorie Kolatkova, SCUBA divers and eelgrass restorers, and the Salish Sea Regional Coordinators: Dianne Sanford, Anuradha Rao, Ann Eriksson and Fiona Beaty.

All donors and funders

Department of Fisheries & Oceans

Seagrass Conservation Working Group

Pacific Salmon Foundation

World Wildlife Fund

Parks Canada

Local Businesses

Coastal Photography Studio

University of Victoria Geography Department

Cynthia Durance, R.P. Bio., Precision Identification



SEEC teacher Martin Avenich

...and all the environmental conservation groups with whom we have had the privilege of working:

Association of Denman Island Stewards, Conservancy
Hornby Island, Coastal Restoration Society, Cowichan
Estuary Education Centre, Denman Island Conservancy,
Friends of Tod Creek Watershed, Gabriola Shorekeepers,
Galiano Conservation Association, Hornby Island Diving,
Howe Sound Marine Reference Guide, Islands Trust Conservancy,
Lasqueti Island Nature Conservancy, Mayne island Conservancy Society,
Moonstone Enterprises, Pender Islands Conservancy Association, Mt.
Arrowsmith Biosphere Biodiversity Research Institute, Peninsula Streams
& Shorelines Society, Saanich Inlet Protection Society, Saturna
Ecological Education Centre (SEEC), Saturna Island Marine Research
Education Centre (SIMRES), Seaquaria in Schools, Squamish River
Watershed Society, Thetis Island Nature Conservancy, Valdes Island
Conservancy and World Fisheries Trust.

Achievements over the last fiscal year

July 1, 2021 – June 30, 2022

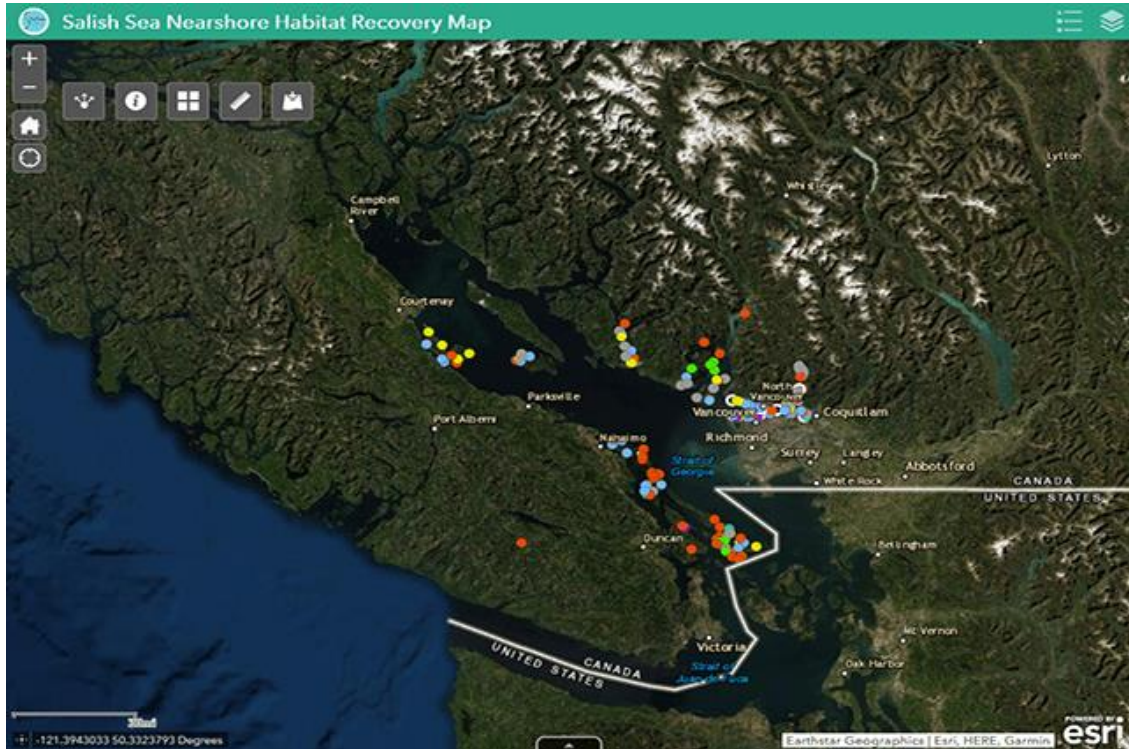
Education

Digital environmental education continues to be practiced over the last year. We continue to work with the Tsartlip First Nation to support the indigenization of an environmental program in SNIDØEŁ (Tod Inlet). The Teaching House could serve as a cultural and science lab for an integrated Indigenous and Western Science perspective of the Inlet. This is an ongoing conversation. SeaChange staff will support in any way requested by the Nation.

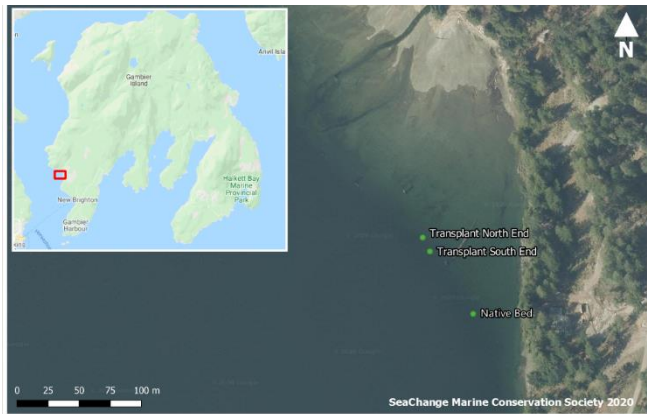
We received requests for in-person and Zoom presentations related to nearshore marine ecology, restoration and conservation. Groups included the Society for Ecological Restoration for the Decade of Ecological Restoration, Gorge Waterway Action Society, Gabriola Shorekeepers, University of Victoria Geography classes, First Unitarian Church of Victoria, the Pacific Salmon Foundation, the Cowichan Naturalists, the Sunshine Coast Conservation Society and several walk-about in SNIDØEŁ to converse about its multi-cultural history and the on-going story of the restoration of the estuary.



Restoration

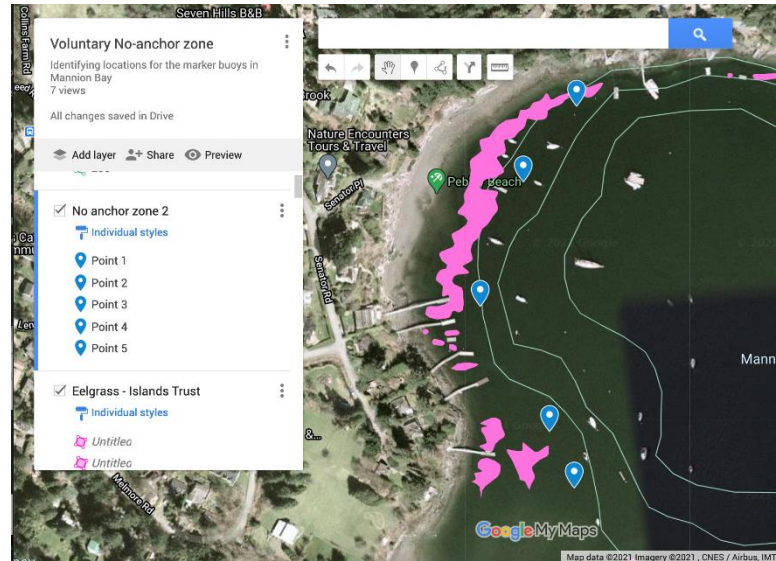


The dots on the above map designate the sites we have surveyed, cleaned up or restored over the last five and half years, thanks to support from DFO's Oceans Protection Plan: Coastal Restoration Fund.



Because of delays in being able to gather in person due to COVID-19, we were able to receive an extension of time to complete this work. Two eelgrass restoration events occurred in Howe Sound in 2022. Gibsons Harbour received 1800 shoots in August; Cotton Bay on the west side of Gambier Island received 966 eelgrass shoots in September.

Eelgrass surveys by Fiona Beaty, Regional Coordinator for Howe Sound and the Dive Team determined the placement of five Voluntary No Anchor Eelgrass Protection buoys to keep boats from anchoring into the habitat in Mannion Bay and in Gibsons Harbour. Blue markers show the locations of the buoys in Mannion Bay.



Cowichan Estuary Transplant

For the fourth consecutive year, Cowichan community members, including Guardian from Cowichan Tribes, helped to establish eelgrass meadows on the north side of the Estuary. In the fall of 2022 nearly 8000 shoots were planted over five days. Monitoring six months later showed that the transplants over the last four years are continuing to expand. Five Voluntary No Anchor buoys were installed to protect the transplants. We hope to continue this work with the Nation over the next years.

A stunning article was written about the state of eelgrass worldwide and about this restoration in the Globe and Mail: *Life in the Underwater Meadow* (story and photos by Shane Gross)

<https://www.theglobeandmail.com/canada/article-life-in-the-underwater-meadow/>



Restoration of the Shores in SNIDØEL



SeaChange is continuing the shore restoration work initiated in 2017 in SNIDØEL. The above photos illustrate the sand and rock sediment deposited in 2017 is mixing. Monitoring of these sediments is demonstrating recruitment of oysters and clam larvae. There also seems to be a marked increase in the abundance of native oysters in the Inlet, unrelated to our restoration efforts, but encouraging just the same.



With the support from the Victoria Foundation's Vital Youth funding program, we are able to collect and analyze sediment contaminants in the backshore to the east of this beach so that an additional deposition of crushed oyster shell hash can be deposited on shore. This work will occur in the coming year.

The Saanich Peninsula Blue Carbon Recovery Project

Roberts Bay in Sidney is part of the Shoal Harbour Migratory Bird Sanctuary designated as such in 1931.

The shore has been heavily impacted by the construction of sea walls. As winter storms increase in intensity, the beach is being squeezed. Mermaid Creek wetland is decreasing dramatically in size. Eelgrass habitat is moving more off-shore. The habitat was surveyed in 2022 by the SeaChange crew. There does not seem to be any gaps in the continuous bed caused by boat anchoring or moorages.



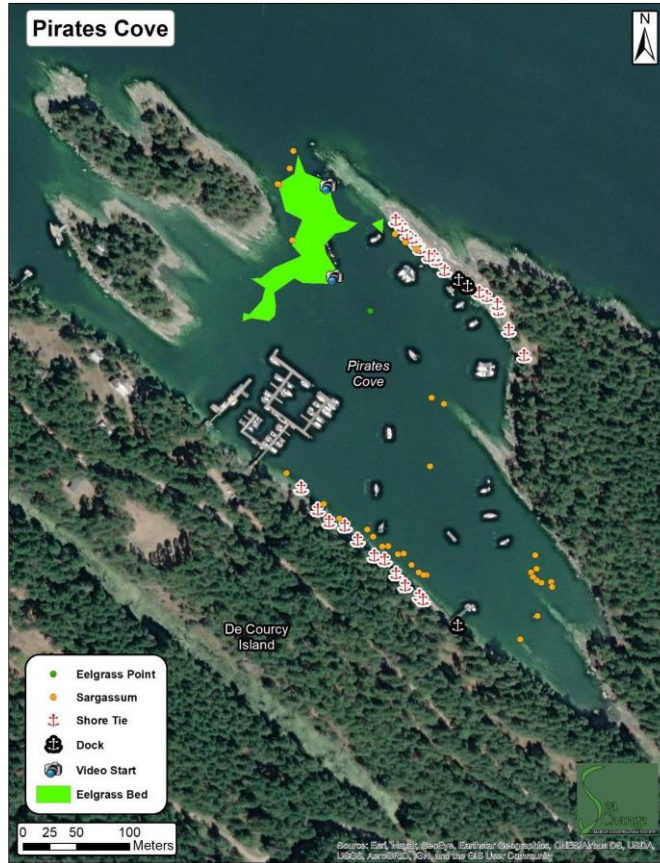
SeaChange is asking Tseycum First Nations Elders for knowledge they feel able to share about the harvesting and cultural practices on these shores so that we can gain a fuller comprehension of the historical biological and physical features here to establish a baseline from which to proceed.

In partnership with Peninsula Streams & Shorelines, consultations are proceeding with coastal engineers. Work on the shore to buffer wave action on the saltmarsh will begin in 2023. We appreciate funding support from several sources, including World Wildlife Fund and the North American Partnership for Environmental Community Action (NAPECA).

Conservation

In 2022, SeaChange Marine Conservation Society contracted with the Ministry of Environment and Climate Change Strategy to survey native eelgrass (*Zostera marina*) and the presence of *Sargassum* (introduced Japanese wire weed) in four Provincial Marine Parks within the Gulf Islands. The Marine Parks included Princess Cove and Conover Cove on Wallace Island, Montague Harbour on Galiano Island and Pirates Cove on De Courcy Island.

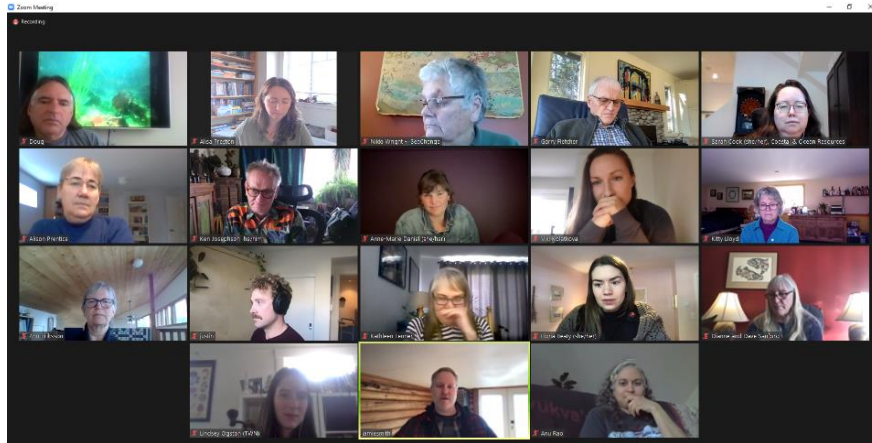
Stern tie and boat mooring locations were mapped and spatial maps were created and distributed to the Islands Trust and the Ministry of Environment and Climate Change Strategy. Recommendations for improved conservation of nearshore habitats within these locations were included in this Report, which can be found under *Resources* on the SeaChange web site (www.seachangesociety.com). SeaChange suggested these conservation efforts be pursued in concert with community groups, such as Marine Parks Forever Society, First Nations, local conservancies, and other local organizations.



This report will hopefully lead to the reduction of impacts from recreational boating and further improve conservation and protection of marine nearshore habitats within the Gulf Islands.

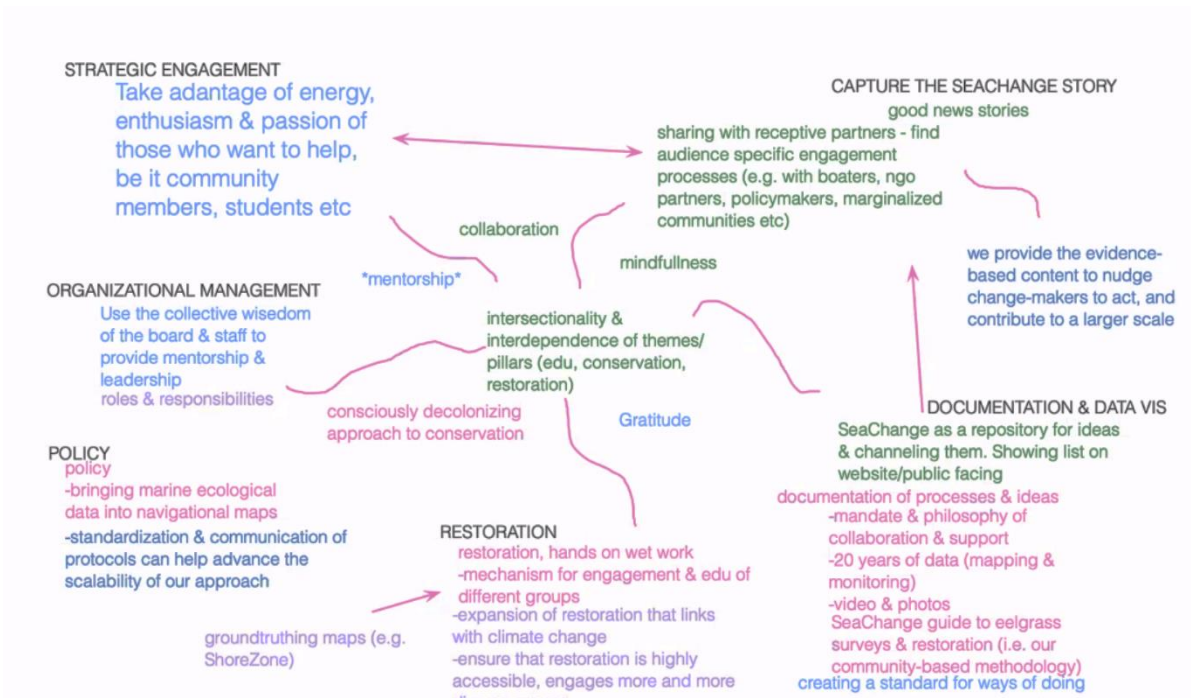


The Future



During our Board –Staff Retreat in early 2022, we focused on what future work would reflect the following values:

- Inclusivity and Equity; having a generational, cultural and racial balance.
- Hands on, wet programming that is community based. Need more robust digital platforming. Use the website to get the word out. Need more articles, connections with Hakai Institute.
- Be patient and kind. Listen to everyone, open communication, flexibility, plan well, healthy relations, creative, fun, cutting edge.
- There is nowhere else to be. Act like you plan on staying.
- Need to have hope. Restoration is an act of hope.
- Climate Budgeting for SeaChange. Respond to Climate Change
- United Nations Environmental Program (UNEP). Hotspots where seagrasses are threatened. Small groups are involved. We are contributing to this data base.



SeaChange will continue to work with coastal communities surrounding the Salish Sea. We are presently planning a four year, three phased resilient estuary project for three Regions in the Strait. Through research, site assessments and restoration and conservation actions, we will collaboratively and strategically address the issues of climate change effects on marine habitats and lessen the human influence where possible to increase adaptation to these changes.

Cynthia Durance and Nikki Wright are creating an Eelgrass Survey and Restoration Primer for anyone interested in eelgrass conservation, with support from the Pacific Salmon Foundation. We hope to complete this document by the end of 2023 and reach out to DFO staff, conservation groups and individuals along this coast. Cynthia has taught SeaChange everything we know about eelgrass ecology in B.C. and made our restoration work in degraded environments possible. Overall, we have approximately a 70% success rate with the over 40 sites we have recovered since 1999.

We are working with Coastal Restoration Society, based in Tofino, to teach eelgrass survey methods to First Nations community members, including Guardians who are increasing the capacity of their respective Nations to protect the marine waters within their Territories.

Chaos seems to be on the loose, but perhaps we can help see the patterns of change and assist the underlying processes taking place.



Funding/In-Kind Support

2021 - 2022

Ministry of Environment and Climate Change Strategy	Partnership Agreement for work in SNIDØEŁ; Cash and In-kind support for conservation activities; eelgrass surveys in four Marine Parks
Department of Fisheries & Oceans	Salish Sea Nearshore Habitat Recovery Project (SSNHRP)
North American Partnership for Environmental Community Action	Marine Restoration
Pacific Salmon Foundation	Marine Conservation and Education
Roy Group	Education
Charitable impact Foundation	Marine Conservation
Victoria Foundation	Marine Restoration
World Wildlife Fund	Marine Restoration
Provincial Employees Community Fund	Marine Conservation
The Benevity Community Impact Fund	Marine Conservation
Centre for Inspired Living Campbell River	Marine Conservation

Supportive Local Businesses

Brentwood Bay Village Emporium

Frank Whites Dive Shop

Wilson's Dive Shop

Soap Exchange

Glass Foundry (Salt Spring Island)

Horne Coupar Barristers and Solicitors

Pixelart Computers

Polster Environmental Services Ltd.

“If you look at the science that describes what is happening on earth today and aren't pessimistic, you don't have the correct data. If you meet people in this unnamed movement and aren't optimistic, you haven't got a heart...”

“What I see everywhere in the world are ordinary people willing to confront despair, power, and incalculable odds in order to restore some semblance of grace, justice, and beauty to this world.”

— Paul Hawken, [Blessed Unrest: How the Largest Movement in the World Came Into Being and Why No One Saw It Coming](#)