

Ecology & Action

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IN THIS ISSUE



Toward a Common Coastal Future



Finding Resilience Through
Indigenous Knowledge



Turning Tides: Climate Resilience in
Commercial Fisheries

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CONTRIBUTORS

Brittney Garcia, Caitlin Skerratt, Florence Blackett, Katherine Martin, Kendra Abbie, Kerriane Ryan, Makayla Carnevale, Nancy Forde, Nicolas Winkler, Sappho Thompson, Brian Gifford, Susan Holtz, Ned Zimmerman

CONTENT EDITORS

Barrett Teft, Holly Isnor, Karen Gilmour, Mark Butler, Meredith Poirier, Rebecca Brushett, Sarah Moore, Sonali Sharma, Taryn Martin

CONTENT MANAGERS

Barrett Teft, Claire Parsons, Rowan Swain, Sarah Moore

PHOTOGRAPHERS

Nicolas Winkler Photography, Nancy Forde, Tom Cochrane, Rebecca Brushett, Nick Hawkins, Sebastião Pardo, Jimmie Pederson, Nicola Nemy, Joanna Bull, Simon Ryder-Burbidge, Jillian Ramsay, Stoo Metz Photo, Annabelle Valliant-Fraser, Matt Bawtinheimer, Kevin Prinoski, Raymond Plourde, Kayi Chen

COVER ART

Mary Kirkpatrick is an illustrator currently based in Montreal. You can see more of her work on Instagram at @marycolombekirkpatrick

DESIGN & PRODUCTION

Spencer Creelman

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Ecology & Action is published two times a year by the Ecology Action Centre (the EAC), a charitable organization (PM Registration # 40050204).

The EAC is a member-based environmental charity in Nova Scotia / Mi'kma'ki. We take leadership on critical environmental issues from biodiversity protection to climate change to environmental justice. We are grounded in community and a strong voice and watchdog for our environment. We work to catalyze change through policy advocacy, community development and building awareness. We take a holistic approach to the environment and our economy to create a just and sustainable society. Views expressed in *Ecology & Action* are those of the writers and do not necessarily represent the EAC or its supporters.

Ecology Action Centre

2705 Fern Lane

Halifax, Nova Scotia B3K 4L3

902.429.2202

ecologyaction.ca

/EcologyActionCentre

/EcologyAction

/ecologyaction

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Letter from the Centre

WE LOVE HEARING FROM YOU! EMAIL YOUR THOUGHTS TO MAGAZINE@ECOLOGYACTION.CA

Adaptation is a word that comes up a lot in discussions about climate change and biodiversity loss these days. How will we prepare for current and future impacts of these crises – like more intense hurricanes, floods and wildfires, and the loss of healthy and irreplaceable ecosystems? Adaptation is not about solving the massive, ever-changing problems of climate change and biodiversity loss, but it guides how we adjust our systems and behaviours to minimize harms, like damaged infrastructure, ecosystems and human health. Climate adaptation can help our communities become more resilient by building our capacity to prepare for, respond to, and recover from the impacts of the climate crisis.

That's what this magazine issue is all about: adaptation and resilience. This can be done on an individual level, but it's far more effective on a collective scale. You can see this reflected in a lot of our work at the Ecology Action Centre

— like installing a living shoreline on Lake Banook to reduce erosion, advocating for the Coastal Protection Act to adapt Nova Scotia's coast to sea level rise and supporting urban farmers and local food production. Find articles about each of these efforts in this issue!

In the pages of this issue, you can also read about the development of rope-less fishing gear to protect marine wildlife, why protected wilderness areas are important for a city's climate resilience and much more.

Care for our environment shows up in creative and exiting ways at the EAC. We hope you enjoy reading about a few of the ways that our communities are adapting and becoming more resilient in the face of the climate crisis and biodiversity loss. With more people in the environmental movement than ever before, the difference that we can make together is truly uplifting.

WHAT WILL YOUR LEGACY BE?

Make a legacy gift to the Ecology Action Centre



When you leave a gift to the EAC in your will, your commitment to support environmental protection beyond your lifetime ensures that we can keep our voice independent and strong for years to come. Use your legacy to build a sustainable and equitable future for all.

To discuss your lasting impact, please contact, Karen Gilmour at (902) 429-2202 ext. 115 or karen.gilmour@ecologyaction.ca.



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Protesters at the Coastal Protection Act Rally in downtown Halifax in May 2024. PHOTO: Nicolas Winkler Photography

Toward a Common Coastal Future

by NICOLAS WINKLER /// EAC Staff

Nova Scotia - Canada's Ocean Playground is printed boldly on our licence plates. However, cracks in this narrative emerge once you look closer at how our coastline is managed.

A staggering 86 per cent of Nova Scotia's 13,000 kilometres of coastline is privately owned. Nova Scotia has an estimated 58,000 properties with coastal frontage, meaning that out of more than a million inhabitants, less than six per cent of our population owns a vastly disproportionate amount of our coastline. With that exclusivity comes unbalanced control over what happens in coastal spaces or who gets to access the shore.

With some 70 per cent of Nova Scotians living within 20 kilometres of the coast, what happens there affects us all. When the current

Nicolas (he/him) is the coastal adaptation coordinator with the EAC. With a background in the natural and social sciences, he engages coastal and ocean issues as a multimedia conservation storyteller using photography, film, podcasting and writing to tell important ocean stories.

provincial government walked away from the long-anticipated Coastal Protection Act earlier this year, not only did it join a 50-year legacy of failed coastal management in Nova Scotia, it also reversed years of hard-earned progress. The decision will have long-lasting effects on all Nova Scotians.

A complicated place

Nova Scotia's iconic coastline hosts habitats that are crucial to our resilience to the harsh marine environment. Estuaries, wetlands, pine barrens, salt marshes and nearshore eelgrass meadows are vital for healthy coastlines. The ecological integrity of these ecosystems protects our shores from erosion and storms, filters water and supports the food chains on which our fisheries depend.

People are drawn to the coast for its diverse landscapes and ever-changing beauty. We seek its calm shores to recharge our energies and experience awe at the power of the sea when storms come ashore. Being on the coast is one of those quintessential human experiences that defies description and defines why many of us live here. On the coast we find identity, culture and inspiration.

The coast is a dynamic place. It represents a transitional space between land and sea dominated by natural forces where change is the only true constant. In the Anthropocene, we must also be content to balance our desire to be on the coast with the threat of sea level rise, coastal flooding, erosion and more frequent and severe impacts due to climate change.

The coast is a complicated place. Through colonial law and conquest, our modern society has divided it through the introduction of private property ownership and imposed multiple layers of complex government jurisdiction informed by and inherited from our colonial histories. Today, the coastal zone is simultaneously everyone's problem but no one's responsibility.

The coast is also a contested place. It is on the limited lands available on the coast that we see the social and political inequalities of society laid bare for all to see. It is also here that hubris meets the unrelenting, uncontrollable pressure of the ocean, with bolder developments arrogantly building ever closer to a rising sea.

Forging new relationships

It is in this dynamic, complicated and contested place that we must forge new ways to live with the coast in the face of existing climate realities – but also with each other. We can draw lessons from the artificial seawalls that feature throughout our province as they are an apt symbol for these relationships.

These costly structures made of large granite boulders offer, at best, only temporary protection from the forces of the sea – easily overtopped in extreme storms while saddling their owners and governments with a permanent need for upkeep. They require carbon intensive processes of quarrying, transportation and engineering to build, ironically contributing to the very forces owners hope to protect themselves from. They damage and fragment critical coastal ecosystems on which we all depend. Seawalls also perpetuate the power imbalance over the coast at the cost of others. They act to deflect and transfer wave energy, increasing the erosion risk of unprotected adjacent shorelines, whether these are neighbors or what little public coastal space we have access to.

Our relationships can also be understood through the cost of irresponsible coastal development and lack of holistic coastal planning. The predicted increased risks to our coastal communities due to climate change will come at cost to all Nova Scotians, not just those fortunate or wealthy enough to live on the coast. We will all share in the increased insurance premiums required for some of us to live on a more dangerous coast, or the cost of clean-up and assistance to coastal owners when disaster strikes. That is all before we account for the cost of shared infrastructure like roads and waterfronts.

In our decision-making, often missing from our coastal discourses are the voices of Indigenous peoples and African Nova Scotians and others that have been historically marginalized from desirable coastal lands. Re-examining our relationship with the coast is an opportunity to recognize and address historical wrongs while working to prevent new climate injustices.

A common coastal future

Five decades of failed coastal management in Nova Scotia has taught us that we cannot rely on the whims of those who govern based on short term cyclical election politics to make sensible, long-term decisions about our coastline. Ineffectual and costly ad-hoc coastal management duplicated across our municipalities will only further perpetuate this very notion.

We must therefore seek to boldly reimagine how we manage and govern these spaces, in which the shared values for a common coastal future are rooted in community dialogue, equity and justice.

We must acknowledge the existential challenges that climate change poses to our place on the coast, recognizing, in the face of the climate crisis, we may need to give way to nature before we are forced to do so.

In turn, it means we must redefine our relationship with the coast, one that sheds the extractive, utilitarian narrative for one that centres and respects the critical and vital ecologies of the coast and, importantly, accepts our place in its ever-changing nature.

Now is the time for a coastal ethic that forges a healthier, inclusive relationship with one another – one that acknowledges our history – if we are to successfully forge a common coastal future.



The foundation of former mayor of Halifax, Peter Kelly, at Eagle Head in Queens on a stretch of sand between the ocean and a wetland. PHOTO: Nicolas Winkler Photography

An Abundance of Joy

by NANCY FORDE /// EAC Volunteer



Rosmarie Lohnes, President and CEO of Helping Nature Heal, at her business headquarters in Sin So'sepe'kapik/Bridgewater. She's the architect behind the Living Shorelines projects. Abundance refers to the bottled kelp fertilizer her business sells.

PHOTO: Nancy Forde

In 2021, a historic property was returned to the stewardship of the Mi'kmaq First Nation. Part sale, part gift, this act of reconciliation was the manifestation of a dream long held by Jim and Margaret Drescher. For three decades they lived at **Windhorse Farm**, 200 hectares of ancient woodlot, waterways and riparian zones. This special place now holds a new name: Asitu'lisk, a Mi'kmaq verb meaning 'that which gives you balance.'

Before it switched hands, Windhorse Farm became a nutrient-rich fertilizer within the soil of Rosmarie Lohnes' mind where a seed had been planted in childhood: a dream of land restoration. Lohnes grew up in Val Caron, a small mining town near Sudbury, Ont. She spent her youth playing in lush forests only to witness their annihilation by mining companies, like the one that employed her father. Her dad's mining job financed her education at Toronto's York University. It also heavily influenced her degree focus. With a

Nancy (she/her) is an Irish-Canadian seannachai (storyteller) with an MA in documentary photography and photojournalism. She and her teen recently moved with their dog to Kijipuktuk where she's pursuing her MFA in creative nonfiction, writing a book on bogs, Bog People, death and preservation. Find out more at nancyforde.com.

new millennium approaching and an environmental studies degree under her belt, she stood poised and determined to reconcile her own intimate history around the harmful impact of resource extraction.

Upon meeting Lohnes, I feel an overwhelming urge to hug her. Her face beams as she nears, and I'm drawn in by her engaging aura. I almost open my arms as I step forward, but correct myself as she extends long, piano fingers toward my hand in greeting. It's the same magnetic pull Lohnes says she felt after completing an internship on Nova Scotia's south shore in 1999. "I was meant to head to B.C.," she confesses, "but ended up out East." Three months transitioned to over a year as Lohnes bobbed between two internships: seed-to-seed gardening, and eco-forestry, brilliantly shepherded by Jim Drescher at Windhorse Farm.

When the internships ended, Lohnes returned to Val Caron, but Mi'kma'ki had gotten under her gardening nails right through to her heart. She felt a strong tidal pull back to the Atlantic coast. She moved around a bit before settling in Sin So'sepe'kapik/Bridgewater where, in 2001, she founded **Helping Nature Heal**, an award-winning company that approaches land and coastal restoration via nature-based solutions.

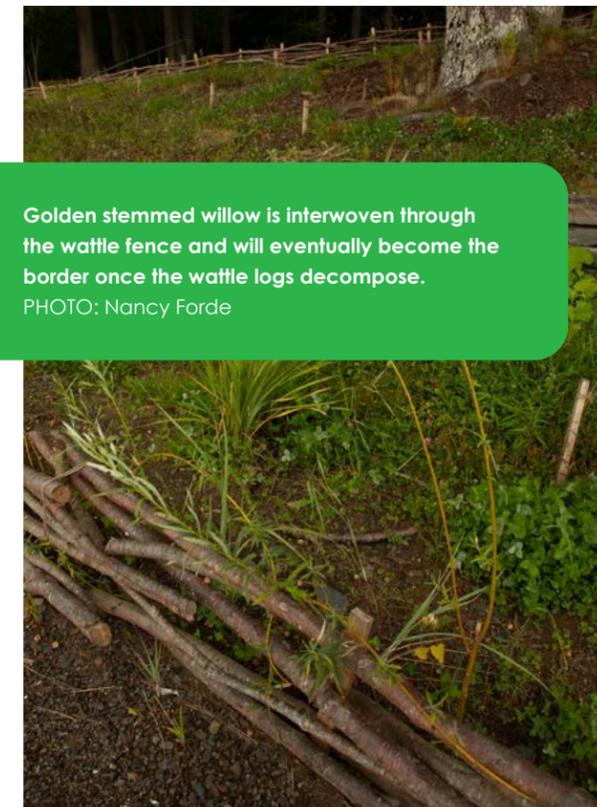
Early on a Friday morning, we meet at Birch Cove Park at Panuk/Lake Banook in Punamu'kwati'jk/Dartmouth, the site of a **Living Shorelines** project launched under Lohnes' direction in June 2024.

These projects address shoreline issues via nature-based solutions rather than band-aid fixes that are often only temporary and sometimes negatively affect the environment rather than strengthen it. Lohnes leads me down the garden path to assess what's changed since the three-day flurry of activity when 50 volunteers showed up, shovels in hand. A gasp escapes her lips. The difference to the space of three months is pronounced.

Prior to the project breaking ground, the grass was clipped too short. Lohnes describes the exposed roots of the Grandmother Oak nearest the shore as 'wounded.' The once bereft slope that inclines down to the lake now flourishes with flowers and shrubs that blanket the tree's roots. An old rock wall, built to inhibit erosion, hugs the slope's edge. My eyes follow Lohnes' index finger as she indicates ferns, mayapples, raspberries and roses to engage the root system with mycelium and inoculants. She gestures to the spiky leaves of an iris. I tell her irises symbolize hope and we exchange smiles.

Lohnes loves incorporating heritage plants and skills within her work. The border of the wattle fence, an old English tradition, gives the wild abandon of this natural space a more intentional aesthetic. Alongside the fence, Lohnes and volunteers planted golden willows, a heritage plant that migrated with European settlers. Acadians used it for dike systems. Its stalks are flexible and, when long enough, Lohnes asks volunteers and community members to interweave the plant through the wattle. It's all part of the long-term plan. "The logs will eventually decompose leaving the natural structure of a willow border," she explains.

When the idea for the Panuk location sprouted, the Ecology Action Centre (EAC) enthusiastically came on board. Lohnes explains the process:



Golden stemmed willow is interwoven through the wattle fence and will eventually become the border once the wattle logs decompose.

PHOTO: Nancy Forde

TAKE ACTION

Visit the Living Shorelines project at Panuk/Lake Banook (Birch Cove Park), step over the fence, clear litter, report issues to HRM and weave some willow through the wattle logs! Sign up for Helping Nature Heal's newsletter to learn more: helpingnatureheal.com.

"Normally, it takes time for projects to get off the ground. NGOs must find funding. That wasn't our burden here. Halifax Regional Municipality (HRM) heroically leapt in with the necessary investment. It meant we could begin right away."

For projects like Living Shorelines, the first year is critical. Community members are encouraged to join volunteer stewards in shepherding the space over three years. I ask about that duration. "On day one of the project, we planted three generations into the soil: seeds, immature plants and mature. By year three, the seeds planted become mature plants and seed the land themselves," says Lohnes. She may be CEO, but she concedes that Nature is the boss here.

Monday afternoon, I race to downtown Kijipuktuk/Halifax where Andrea Brown, a Living Shorelines volunteer steward, sits patiently waiting. I order an Americano while she sings Lohnes' praises. Brown is a recent Dalhousie graduate with a joint honours degree in biology and international development. Living Shorelines is the first large-scale project she's worked. Brown volunteered over the first two days of the initial three-day launch in June. I am curious about her biggest takeaway.

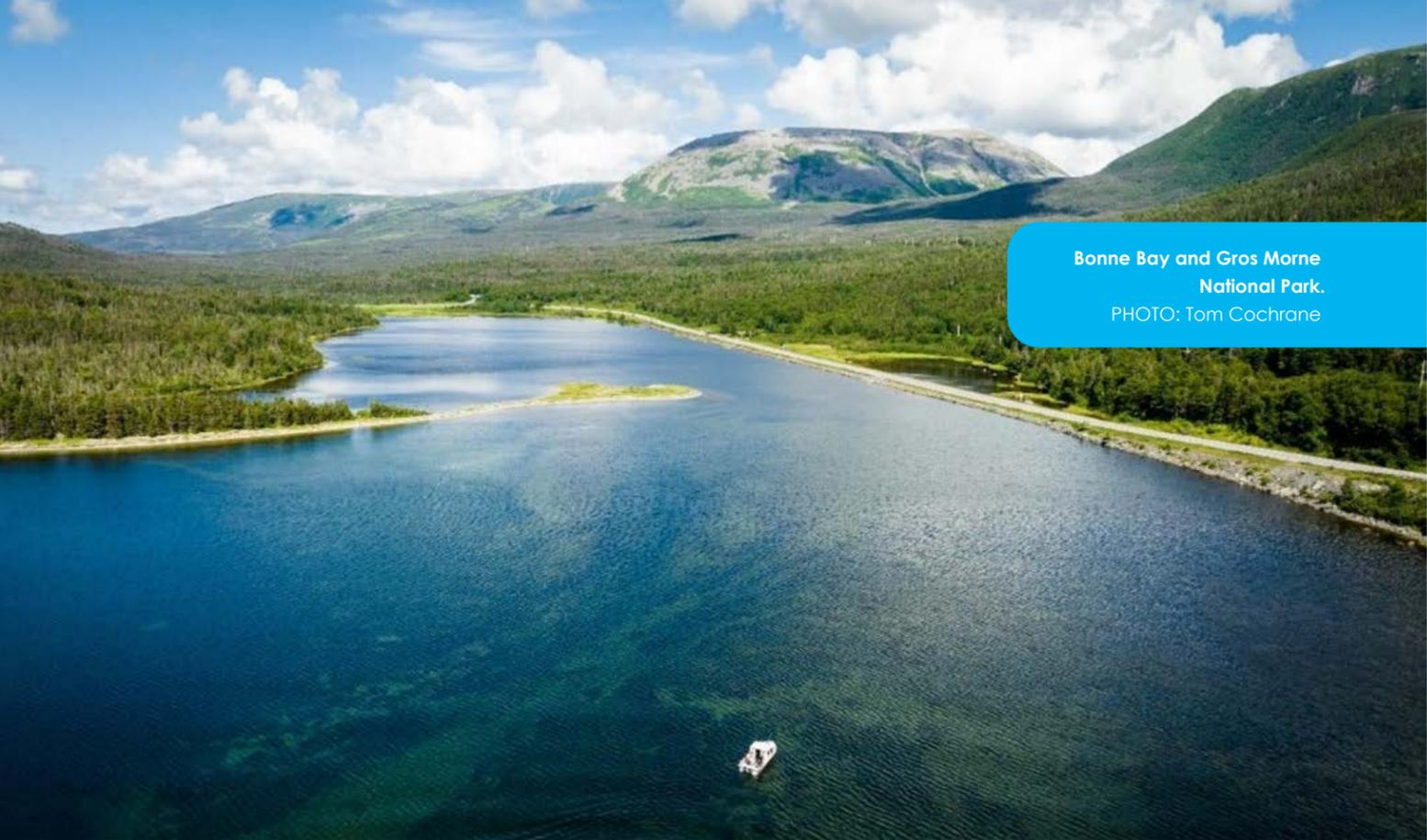
"The mindfulness," she replies. "Rosmarie encouraged us to take a moment with each plant, talk to it and send good thoughts and energy into the ground with it." So much of science is cold, clinical data, but Lohnes' approach deeply resonated with Brown. I ask how she first learned about the project.

She smiles as she answers, "Mimi O'Handley."

O'Handley, wetlands and water coordinator with the EAC, has a slight tickle in her throat, so we connect online ahead of my drive to Helping Nature Heal to visit its nurseries. We discuss the Living Shorelines project and she remarks how positive it's been. A unique experience for HRM: the project has garnered more praise than complaint. O'Handley's grin widens. "It's been a win-win for everyone involved: the NGOs, government, private sector and community. Everybody's happy with it!"

I think of Grandmother Oak whose roots are now protected. "She looks happy," Lohnes says as we turn to leave the site. The tour of the project and Helping Nature Heal's headquarters is illuminating. I attribute that brightness to Lohnes' personal passion, deep knowledge and the special aura that results from upholding Nature and being upheld, in turn, by its generous, healing and sustaining reciprocity.

We lean in for a farewell hug without hesitation. The good energy from Lohnes, her volunteers and the thriving flora and fauna at Living Shorelines stays with me.



Bonne Bay and Gros Morne National Park.
PHOTO: Tom Cochrane

Connecting with Communities:

CREATING THE GROS MORNE COMMUNITY-LED MARINE ATLAS IN WESTERN NEWFOUNDLAND

by **BRITNEY GARCIA** /// EAC Staff

Situated on the unceded, traditional territory of the Beothuk and the Mi'kmaq, the Gros Morne region today is home to just over 3,000 people within seven enclave communities, as well as Gros Morne National Park which welcomes up to 200,000 visitors annually. This region spans over 1,800 square kilometres of

Britney (she/her) loves the ocean and being outside. She holds a B.Sc. and a master of environmental science and has been working with the EAC's marine team for two years in marine planning and management. She loves to travel and immerse herself in different cultures. She enjoys diving, hiking and reading in her free time.

brehtaking pristine fjords, mountain ranges, old-growth boreal forests, wetlands and coastal ecosystems, and it is now recognized as a UNESCO World Heritage Site. The unique fjords found within this region reach a maximum depth of 230 metres in Bonne Bay and are home to many rare species including soft Arctic corals, Bonne Bay Acadian Redfish, American eel, wolffish and more. A long history of fishing and deep family ties to the inshore fishery remains present today, with lobster, snow crab, mackerel, halibut and many others making up most catches today.

Creating the atlas

The Gros Morne Community-led Marine Atlas (the atlas) was first brought to life through Memorial University of Newfoundland

TAKE ACTION

Stay tuned for the full release of the printed atlas to learn ways your community can work together with decision makers to conduct effective community engagement sessions and collect baseline research to create your community-led marine plan.

research that was done by Rebecca Brushett, marine protection and planning coordinator with the Ecology Action Centre (EAC). This research began in 2015 to map the social and ecological values that people attach to marine areas surrounding Gros Morne. This research was then expanded in 2020 with the EAC's Marine Team and Rebecca leading the way.

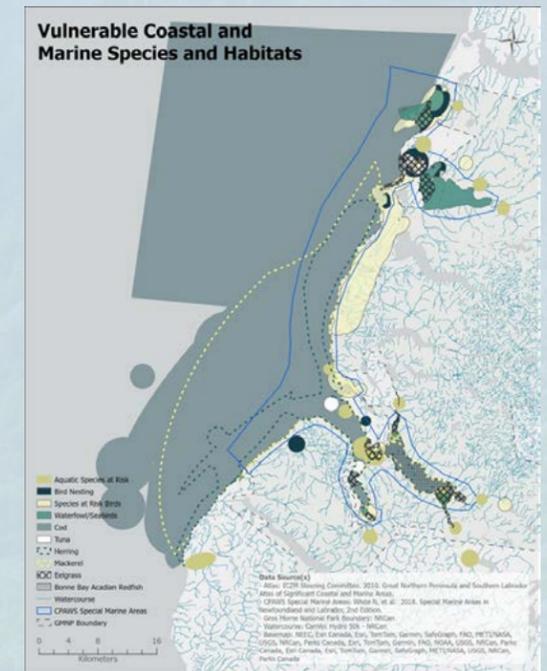
We drew on several existing marine planning initiatives, such as the Marine Plan Partnership for the North Pacific Coast (MaPP) for guidance and inspiration in the development of the Atlas and methodology. We merged learnings from projects like MaPP with the EAC's expertise in community engagement, protection and planning, marine policy, data analytics and geographic information systems. This foundation enabled us to gather, interpret and ultimately map input from community participants and long-term biological and social science research which started in the late 1960s.

This process included multiple phases to build relationships with participants and to better understand and refine the places and activities most important to community members. We connected with over 400 people including local fish harvesters, academic experts, Indigenous First Nations, town councils, business operators and other local stakeholders. Along with the EAC's mapping and survey workshops, we also organized and digitized over 50 years of biological and social science research conducted in Gros Morne and housed at Memorial University of Newfoundland's Bonne Bay Aquarium and Research Station, creating an inventory with over 400 published and unpublished reports on ocean ecosystem and local cultural values tied to the marine environment.

Cumulatively the final maps showcase areas where sensitive marine habitats and species exist, areas most important to the small-scale fisheries and eco-tourism sector and areas to monitor and protect against future impacts from aquatic invasive species and anthropogenic activities.

Collaborating on ocean management

The co-management of marine space is a practice that is often talked about in academic circles, but rarely put into action in meaningful ways. As our ocean continues to change, and competing industries look to expand the blue economy, it's more critical than ever for the community's voice to be heard. The atlas is a tool that does just that. It offers a holistic view of the ecosystem and captures the cultural and economic significance of these waters. It does this through combining traditional ecological knowledge on important fish stocks from fish harvesters, completed research and gaps to fill by marine experts, the most important areas for the thriving



Vulnerable and keystone marine species and habitats found in the Gros Morne region. It showcases aquatic species at risk, birds species at risk, cod, tuna, herring, mackerel, eelgrass, and bonne bay Acadian redfish. The light blue inland features are the various waterways present within the park. MAP: Kayi Chan



EAC 2020 community engagement session with local fish harvesters in Rocky Harbour, NL.

PHOTO: Rebecca Brushett

tourism industry and key themes and activities the region supports or opposes now and into the future.

One of the key features of the atlas is its focus on sustainable livelihood opportunities. By identifying areas where conservation and economic activities can coexist, the atlas provides a roadmap for balancing environmental protection with the needs of local communities.

The atlas serves as both a valuable tool for policymakers and stakeholders as it reinforces the idea that effective conservation is deeply rooted in local knowledge and community engagement. Through this project, we are paving the way for a future where the conservation of marine biodiversity and sustainable livelihoods go hand-in-hand.

The atlas also serves as a model for other regions looking to develop similar tools. The process to create the atlas with the people of Gros Morne is itself something to celebrate as it demonstrates how we can capture all stakeholders' values and expertise in a way that is balanced and open to all who live, work and play in this area. Involving the region from the beginning has shown that mapping these activities and capturing their values will provide a more holistic tool that all levels of government can use to make more informed decisions. If used correctly, the atlas can help to prevent projects or activities that may impact vulnerable coastal or marine environments if not granted social licence by the community.

The atlas will continue to play a vital role in guiding the management of Gros Morne's coastal and marine ecosystem and benefiting the community by having an ocean plan that was created by the people of the region. It will remain a living document, being updated as new research and engagement with the region is done – protecting the long-term values of the region and our changing ocean.



Lobster in eelgrass meadow.

PHOTO: Nick Hawkins

Finding Resilience Through Indigenous Knowledge

AN INTERVIEW WITH CHRIS GOOGOO

by SAPPHO THOMPSON /// EAC Volunteer

A hemlock woolly adelgid infestation on the underside of an eastern hemlock tree.

PHOTO: iStock

TAKE ACTION

Consider the ways in which you engage with the environment and how you can incorporate Indigenous ways of knowing into this. Learn more from Indigenous Elders and Knowledge Keepers in your community and be inclusive in discussions surrounding climate change. For more information about how you can support Asitu'lisk in their work, go to asitulsk.ca

Asitu'lisk is an Indigenous learning centre on Sin So'sepe'katik/Bridgewater. I spoke with Chris Googoo about Indigenous environmental knowledge, his experience in building the community of Asitu'lisk and how he approaches his work. Here are some highlights from our conversation.

Tell me about Asitu'lisk and the work you're doing there.

Asitu'lisk is a healing and education centre that is entering its third year of operation. Asitu'lisk is a verb in Mi'kmaq that means "to give you balance," and that is exactly what the old growth forests of our area do.

When we were looking at the property, known at the time as Windhorse Farm, there were these 500, 600-year-old hemlocks there, pre-contact, pre-colonial. So I saw a bit of a narrative to build on; when you go there, it's like you bring people back in time. We can view the trees as our elders who hold valuable knowledge that is important to transfer back to the people.

I'm a [man] of science, and Asitu'lisk is a place to build on this. Etuaptmunk, or two-eyed seeing, shows that the spiritual connection we have to the trees and our land can be physically explained. The trees are our relations, and that affects our bodies, health, mind and even spirit. So, this space is not only educational, but also healing.

When we were making our transition, I looked at it as a place where I can bring children and elders together. We set the intention to empower youth voices, so that once youth absorb the knowledge from our elders, they can express it in many different ways: books and poetry, but also videos, songs and performance.

How do you maintain a good relationship with the Earth?

It's a mental mindset. To look at a piece of wood as not just lumber, but an extension of the natural world. It helps to build a more direct relationship and appreciation for the Earth.

Once, when trying to implement more teachings of the Mi'kmaq language into our centre, one Elder spoke up and said, our language isn't important here. It's the language of the trees and the species that

you need to listen to. We like to believe our voices are important, but we need to listen to our relations too. To just sit there to listen and to feel forces us to listen more to our bodies and the world around us.

Tell me about your current project in saving the Hemlock trees.

Last year, we learned about how serious the issue was of the Hemlock woolly adelgid, an invasive species that kills Hemlock trees. I believe the forest called me and I had to answer their call.

We are doing what we can. We have made a \$100,000 commitment to save as many hemlocks as we can with that money. We plan to focus on saving the areas that are important for the land and the ecosystems, as well as areas that have specific spiritual significance.

We also present this process as a gathering of elders and youth. This project is about building community and increasing our knowledge in the forestry sector of climate change. We can educate people about the role they play in carbon sequestration and ecosystems, as well as the relation they have to us as human beings. We involve elders in these discussions, and they provide us with new knowledge and language we've never heard. It's an amazing process.

Sappho Thompson (she/her) is a community development and music major at Acadia University, nature lover and climate activist. She loves playing piano, climbing trees and her dog, Hazel.



Turning Tides:

CLIMATE RESILIENCE IN COMMERCIAL FISHERIES

by KATHERINE MARTIN /// EAC Volunteer

In the crow's nest of a boat, scanning the water for swordfish.

PHOTO: Sebastián Pardo

Climate change is influencing the distribution, abundance, growth and competition of marine species. Many species are moving toward the polar regions to escape intensifying marine heatwaves. These distribution changes can lead to new or growing populations of invasive species and create problems like increased competition and predation for native species. Species are being forced to adapt to these new conditions; we must adapt with them.

The fishing industry in Atlantic Canada employs more than 12,000 people. Climate adaptation within the commercial fishing industry is fundamental for protecting marine ecosystems while also supporting the livelihood of seafood harvesters.

If a marine population becomes less productive or shifts regions, that can mean the loss of livelihood for seafood harvesters. Nova Scotia's seafood exports hit \$2.5 billion in 2021¹, emphasizing the need for stakeholders and decision-makers to support the commercial seafood industry as it adapts to the impacts of climate change.²

Katherine (she/they) is a recent graduate of Dalhousie University and a current student in Nova Scotia Community College's oceans technology program. They have a passion for ocean sustainability and marine conservation.

The increasing vulnerability of marine species and importance of the seafood industry highlight the need to increase sustainable fisheries management while exploring new ways for harvesters to continue their livelihood.³ Right now, there is no framework or action plan to address climate adaptation in the commercial fishing industry. Many changes are made on an individual basis, after the industry is feeling the impact.

Testing on-demand fishing gear

Critically endangered North Atlantic right whales have shifted their summertime home in Canada from the Bay of Fundy to the Gulf of St. Lawrence. This shift was largely due to a distribution shift of their food sources and it increased their risk of entanglement and vessel strike. In 2017, 12 whales were found dead, entangled in fishing gear in Canada, prompting swift management action and fisheries closures to reduce the risk to these whales.⁴

Lobster and snow crab fishers in Atlantic Canada are reducing risk to whales by using on-demand fishing gear – systems that remove rope from the water column, prevent marine mammal entanglement and allow harvesters to fish in zones where whales may be present.

In an interview with Madeline Tanner, a marine fishing gear technologist with the Canadian Wildlife Federation, she discusses the need for meaningful consultation with stakeholders.

“Change can be difficult, especially when it comes to transforming generations-old traditions,” says Madeline, explaining that building relationships with harvesters is the key to success.

“If you want to work with commercial fish harvesters to build resiliency, you need to build up mutual trust, respect and empathy. It is so important to see things from their perspective when talking about the effects of climate change because it impacts not only the world around them, but their direct livelihood.”

Madeline works with harvesters to ensure that their voice is heard when it comes to the development of these systems. “We have worked directly with harvesters for years by trialing on-demand fishing gear on their vessels with their deckhands, and have taken their feedback to developers so that when the time comes and there's a closed fishing zone, harvesters can use the most optimized technology to continue to earn their livelihood.”

The Halifax-based **CanFish Gear Lending Program** is the first of its kind in Canada, featuring eight different types of rope on-demand systems for harvesters to test.⁵ The program emphasizes the need for collaboration when it comes to creating a more sustainable and resilient commercial fishing industry.

Finding value-adding options

The swordfish harpoon fishery in Nova Scotia is also adapting to changing conditions. The Ecology Action Centre (EAC) is working with these harvesters to implement rod-and-reel to licences as an alternative low-impact gear method to harpooning.⁶ Although harpooning is a very sustainable fishing method, the changing ocean conditions are making it harder to locate swordfish that are basking and can be easily harvested. Being able to use both harpoon and rod-and-reel will enable greater access for fishers to catch their quota.

Holly Isnor, marine campaign coordinator with the EAC, says, “It's critical to prioritize the adaptation of the swordfish fishery to proactively safeguard against climate change, which we see affecting ocean conditions and leading to reduced catches. Adding a rod-and-reel licence and charter operations would provide economic relief to fishers, benefit Nova Scotia's rural coastal communities and keep a sustainable food source on the market.”

Despite clear support from industry, and years of work to get this venture off the ground, regulatory processes are creating roadblocks for this proactive fishery. Government and decision-makers need to support sustainable initiatives that allow fisheries, like the swordfish harpoon fleet, to adapt to changing conditions.

The future of climate resilient fisheries

Supporting the development and implementation of climate-resilient technology and adapted fishing practices will be integral for addressing the challenges of climate change. Action must be taken to include more information on the effects of climate change in fisheries management while including insights from seafood harvesters. With better information on current and future conditions of the oceans, commercial fisheries can implement new strategies to adapt and respond. Sustainable fisheries technology needs support now more than ever to help the industry adapt to what's ahead.

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These wildlife overpasses open corridors for animals.
PHOTO: iStock

Protecting Nature's Pathways: THE IMPORTANCE OF WILDLIFE CORRIDORS IN A CHANGING WORLD

by **KENDRA ABBIE** /// EAC Volunteer

In a time where the natural world is being forced to adjust to a landscape drastically altered by human-caused impacts such as development and climate change, wildlife corridors can increase species resilience to these changes.

Through development and industrialization, many natural wildlife habitats have been lost and turned into cities and croplands to meet human needs. The remaining areas of suitable habitat are often isolated from each other due to obstacles such as urban areas, dams,

Kendra (she/her) is a student currently finishing her undergraduate degree in marine biology. She loves writing about science and nature, as well as spending time outdoors and by the ocean.

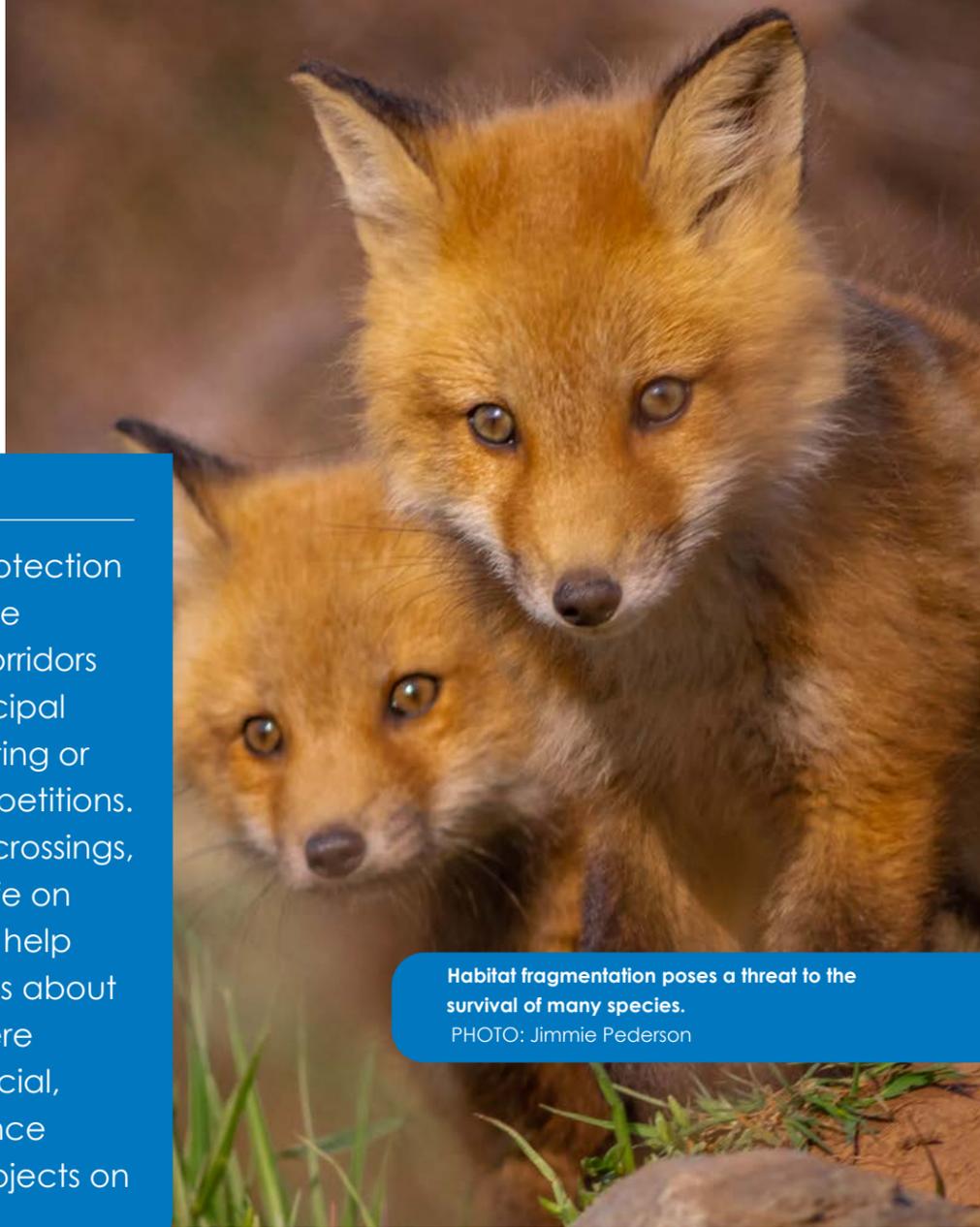
roads or other developments. This fragmentation prevents animals and plants from freely passing between habitats to find essential resources like food, water or mates, posing a strong threat to the survival of many species.

Wildlife corridors are one important conservation method in combating this habitat fragmentation. These corridors are connections between habitats; this may mean that larger habitats are linked by protected passages between them, or that 'wildlife crossings' are built to provide animals a safe passage across obstacles like roads or dams dividing the habitat areas.

Wildlife corridors are important in maintaining biodiversity and increasing species resilience in a changing world. They allow animals to travel across the landscape to access essential resources and for species to maintain **migration routes**. These corridors also allow animals to access mates beyond the limits of a small habitat area and therefore help to maintain genetic diversity and resilience

TAKE ACTION

Advocate for both the protection of existing habitats and the conservation of wildlife corridors through contacting municipal representatives and creating or supporting initiatives and petitions. On roads without wildlife crossings, keep an eye out for wildlife on and around the roads. To help develop knowledge bases about wildlife locations and where corridors would be beneficial, participate in citizen science biodiversity monitoring projects on apps such as iNaturalist.



Habitat fragmentation poses a threat to the survival of many species.
PHOTO: Jimmie Pederson

in the population. Wildlife corridors are also important in the face of climate change. Increased temperatures may push species to shift their distribution ranges to stay in areas with suitable temperature conditions, which is only possible if these plants and animals are able to move between different habitats.

When done right, wildlife corridors have been shown to help species to persist in the face of human-caused changes. **Banff National Park** is one example of this; the habitat is fragmented by the Trans-Canada Highway, and local species were facing high road mortality rates. Wildlife corridors were developed in the forms of both open overpasses, preferred by deer and grizzlies, and more sheltered underpasses, preferred by black bears and mountain lions. Fencing along the highways is used to direct animals to these passes, as opposed to crossing on the road. These crossings decreased road mortality by 80 per cent and help to maintain genetically healthy populations through **strengthened mating and gene flow** between animals on either side of the highway.

As we navigate the challenges of increased development and climate change, it is essential that we integrate wildlife corridors into our planning to better support natural ecosystems. While wildlife corridors can be very effective in helping species to survive, there is still room for improvement. The Nova Scotia Crown Share Land Legacy Trust supported local knowledge holders in developing a **report** identifying corridors that could enhance habitat connectivity around Kijipuktuk/Halifax. However, without action to protect these corridors, ongoing development may continue to erode these connections. Even in Canada's protected land areas, only **21 per cent** of these habitats have protected connections to other habitats, a critical gap in our conservation strategy. In the face of so many human-caused changes, it's essential that we adapt our developments to prioritize ecological connectivity. Doing so will not only improve species resilience but also preserve and expand greenspaces, enhancing both our enjoyment of nature and the survival of wildlife.



We support the Ecology Action Centre because they have successfully demonstrated the connection between environmental issues, local communities and the local economy. That is why we donate \$ 500 every time an EAC member buys or sells a property using our services, helping to strengthen EAC's voice and impact. We're thankful to partner with EAC to help make this a better a world.

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LEARN MORE AT: advisor.assante.com/sustainable-wealth-family-office

Tending a plot at CRUF. The farm offers robust programs, events, workshops and monthly community meals.

PHOTO: Nicola Nemy/Common Roots Urban Farm

Urban Farming in Mi'kma'ki

by **CAITLIN SKERRATT** /// EAC Staff
with contributions from **FLORENCE BLACKETT** /// EAC Volunteer

We are struggling to feed ourselves here in Mi'kma'ki. Despite a rich history of agriculture, Nova Scotia is losing farms faster than the national average. The percentage of food-insecure households in Nova Scotia jumped to 28.9 per cent in 2023 and food prices have increased by 21 per cent over the last four years. Households are struggling to feed their families and food banks are overwhelmed.

Food insecurity is racialized. Nationally, 40 per cent of Black people, and 36 per cent of Indigenous people, live in food insecure households. This is far higher than the national average for non-racialized households. Income is the top determinant of food insecurity, and in 2022 racialized Nova Scotians had a poverty rate of 20.6 per cent, much higher than 8.6 per cent for non-racialized residents.

Urban agriculture across Mi'kma'ki offers a grassroots response. It reminds us that communities have the inherent ability to find unique, resilient and creative ways to support one another in times of crisis.

Caitlin (she/her) is a community food coordinator at the EAC. Caitlin is passionate about food systems and collaborative learning. She loves swimming, sewing clothing and her fluffy rescue cat, Penny.

Florence (she/her) is the Indigenous food coordinator at the Mi'kmaw Native Friendship Centre.

What is urban agriculture?

Urban agriculture ranges from apartment balcony gardens and raised beds, to neighborhood community gardens and rooftop gardens, to large-scale production plots.

By transforming underused spaces into gardens, we can promote the resilience of urban environments. Many local governments now permit urban farming on municipal land, leading to projects like **HRM's Community Gardens Program**. More cities are incorporating urban farming into climate plans (see **HalifACT** actions to improve food security and resilience through strategies like the **JustFOOD Action Plan for Halifax**).

Foodshed challenges

The Halifax region's foodshed (the geographic area that supplies a population with food) is vulnerable to climate change. As a coastal region, we can expect to see more extreme weather events, invasive species and rising sea levels leading to crop damage, poor livestock health and compromised water quality. This will make it more difficult and expensive to bring food into Nova Scotia and to produce our own food.

Urban agriculture promotes local food supply chains and reduces

the heavy carbon footprint of long-distance transportation. It also shows us that cities are not separate from nature. Unused fields and rooftops can be transformed into thriving garden spaces, restoring ecosystems and promoting biodiversity while supporting our pollinator friends and mitigating flood and drought risk.

Urban communities are taking food production into their own hands for many reasons, from relieving climate anxiety to taking pressure off household food budgets.

Urban farm profile: Common Roots

Commons Roots Urban Farm (CRUF) Bi-Hi Park sits on municipal land at the

Exploring the raised beds and learning about urban agriculture.

PHOTO: Nicola Nemy/Common Roots Urban Farm

Local Food Shops in HRM



A Halifax Brewery Farmers' Market
1496 Lower Water Street, Saturday 8 a.m.–1 p.m.

B Local Source Market.
2790 Windsor Street,
Tuesday–Sunday 10 a.m.–7 p.m.

C Halifax Forum Farmers' Market
6205 Almon Street, Saturday 8 a.m.–1 p.m.

D Gateway Meat Market
667 Main Street,
Dartmouth, open daily 8:30 a.m.–8 p.m.

E Dave's Fruit and Vegetable Market
322 Main Street, open daily

F Mobile Food Market
26 Courtney Road, Tuesday 4:30–7:30 p.m.
2285 Gottingen Street, Saturday 12:30–2 p.m.
44 Vimy Avenue, Saturday 9:30–11 a.m.

G Warehouse Market
2867 Isleville Street,
Wednesday–Saturday, 9 a.m.–6 p.m.

H Common Roots Urban Farm seasonal markets
296 Pleasant Street, Wednesday 2–5:30 p.m.
298 Pleasant Street, Thursday 12–1 p.m.

I Alderney Landing Farmers Market
2 Ochterloney Street, Saturday 8 a.m.–1 p.m.

J Fairview Farmers Market
27 Vimy Ave, Thursday (June–October) 4–7 p.m.

K Seaport Farmers Market
961 Marginal Road,
Saturday 8 a.m.–2 p.m., Sunday 10 a.m.–2 p.m.

L Hope Blooms Market
2346 Brunswick Street,
Thursday (June–September) 4:30–6:30 p.m.

M Musquodoboit Harbour Farmers' Market
7895 Highway 7,
Sunday (May–September) 10 a.m.–2 p.m.
67 Park Road,
Sunday (October–April) 10 a.m.–1 p.m.

N Novalea Farmers' Market
3540 Novalea Drive,
Saturday (July–October) 8 a.m.–12 p.m.

O Prospect Communities Farmers' Market
2141 Prospect Road,
Wednesday (June–October) 4:30–7 p.m.,
with bi-weekly online ordering October–June

P Sackville Farmers' Market
650 Sackville Drive,
Saturday (May–December) 9 a.m.–1 p.m.

Q Spryfield Farmers' Market
205 Herring Cove Road,
Sunday (June–October) 12–3 p.m.

R Tantallon Village Farmers' Market
16 Sonny's Road,
Tuesday (June–October) 2–6 p.m.



Produce and flowers grown at CRUF for weekly markets.

PHOTO: Nicola Nemy/Common Roots Urban Farm

TAKE ACTION

There are many ways the Halifax Regional Municipality (HRM) can promote urban agriculture, from increasing access to land for growing to expanding support for existing community gardens. Contact your municipal councillor and tell them you want to see council promote community food production through continued funding of the [JustFOOD Action Plan](#).

Cultural resurgence by Florence Blackett

Adapting to the environment has long been crucial for the survival of the Mi'kmaw people. Land occupation, landscape changes and environmental shifts have necessitated resilient approaches in the methods used to sustain traditional practices.

Knowledge keepers are once again harvesting from the land and waters to provide community members with traditional foods. Communities are coming together to plant and harvest gardens using traditional companion planting methods, train butchers to process traditional meats, and return to the waters to harvest fish.

Indigenous individuals living in urban areas often face more challenges in accessing these foods and teachings. They rely on community connections built through organizations like the Friendship Centre and initiatives like a new food security program, Pugsialikgs'gwet, that integrates traditional teachings and sustainable food practices. This Two-Eyed Seeing approach respects cultural heritage while promoting food sovereignty and community health.

Resilient communities

From an urban farm with plots cared for by newcomers to the resurgence of traditional Mi'kmaw harvesting practices, local food production strengthens the social and economic well-being of our communities, protects the environment and builds resilience to supply challenges and price fluctuations.

In the face of rising food insecurity and climate change, urban farming offers hope. By diving into these grassroots solutions and supporting local food initiatives, we're not just growing food – we're growing a stronger, more connected community for ourselves and for future generations.

bottom of Bayers Road in Kijikpuk/Halifax. CRUF is a non-profit hybrid farm with 100 community plots, a bustling market garden and common plots where passersby can help themselves to what's growing. Nicola Nemy, coordinator of Bi-Hi Park, says that over half of the community plots are gardened by newcomers. Many self-identify as consistently food insecure.

CRUF's community plots waitlist has surpassed 100 people, and Nemy hears from volunteers, plotters and farm staff that being on the farm has huge impacts on mental and community health. Teaching people how to grow food increases knowledge about and access to seasonal, preferred foods, while also promoting community wellness. CRUF offers robust volunteer and newcomer programs, diverse events and workshops and monthly community meals that offer a chance to gather.

Nemy says that we should be using every available greenspace to nourish our growing population, noting that there is lots of capacity to share the knowledge and benefits of urban farming.



Puppet building at an art night in April 2024.
PHOTO: Joanna Bull

Nurturing Well-being: A KEY PART OF ECOLOGICAL ACTION

by **KERRIANNE RYAN** /// EAC Volunteer

Connecting to the natural world boosts mental well-being and resilience. But the ongoing destruction of the natural world threatens this connection and leads many to an ever-growing sense of worry about the future of the planet. To adapt to the realities of this change, we must build resilience by caring for our mental well-being, both as individuals and communities.

Of late, a growing body of research has linked chronic stress on ecosystems to mental health consequences in humans¹, including eco-anxiety², eco-grief³ and solastalgia.⁴ Eco-anxiety refers to the stress and worry associated with the current ecological crisis and our future state. Described by the American Psychological Association as a “chronic fear of environmental doom,” this anxiety is reinforced by real-life local experiences of the climate crisis. Ecological loss, recently experienced in Mi'kma'ki/Nova Scotia from fires and flooding, can lead community members to experience eco-grief. Much like other forms of grief, people can experience sadness in the absence of their past lived interactions with species, places or ways of knowing. For those aware of ongoing risks, these events highlight impending future loss, which can lead people and communities to lose their sense of comfort and solace, a phenomenon known as solastalgia.

Kerrienne (she/her) is a scientist and writer with a PhD in biology. She loves spending time being active in nature with her family, music, dance, learning new things and playing with her dogs, Eevee and Looloo.

Naming, normalizing and legitimizing these responses to ecological losses and climate change can help overcome associated feelings of loneliness, isolation or shame.

Everyone copes differently in response to these environmental realities. We face a fork in the road that leads us down one of two paths. On one side, some may cope by avoiding the distressing subjects, adopting a sense of acceptance that the situation is irreversible, or may place hope in intervention by outside forces through spirituality or technology. On the other side, these emotions can move some to engage in planning creative solutions, actions and educating others to inspire change. These different responses can polarize communities and inhibit a sense of belonging. So, what can we do?

We can actively seek social support from others through communities or organizations focused on ecological issues. Initiatives like the local **Climate Café** led by Dr. Nancy Blair on the third Thursday of each month welcome individuals to bravely and safely discuss their feelings about the climate crisis and climate emergencies. These social communities can help to reignite a sense of belonging and provide a safe space to discuss fears or emotions. Within community organizations, it is also important to foster empathetic communication by allowing time within our busy schedules to discuss, listen and validate fears. The **THRIVE Learning Centre** is a free virtual learning centre in association with the **Canadian Mental Health Association Nova Scotia** that offers workshops, including past workshops on eco-anxiety and mental wellness for non-profits. Building safe, open communities can help us work together to mobilize toward specific and much-needed actions.

We can find hope through action in the face of the daunting challenges of environmental destruction and climate change. In addition to community support, getting involved in the world of conservation, climate justice, sustainability or natural disaster recovery can provide a sense of agency. However, action requires energy, and the work involved in these initiatives is often challenging and multi-faceted. So, to cultivate hope, communities and organizations should balance broader aims and realities with achievable goals that can be celebrated together to foster a sense of achievement.

The unending nature of climate-related work means those involved often balance stress in response to ecological issues alongside a sense of exhaustion or overwhelm. Urgent crises and frequent emergencies can make it hard to grant yourself time to care for personal well-being. But physical and mental wellness provides a foundation from which to effectively work, fight or advocate to address these crises. Seeking professional mental health services can help cope with anxiety, depression or grief. The Canadian Mental Health Association provides a list of professional services available to Nova Scotians, including crisis supports, non-crisis supports and peer or self-help group supports. The list includes links to organizations and databases such as Couch of H.O.P.E. that provides free or low-cost counselling services; The Indigenous, Black & People of Colour Service Provider Database and The Affordable Therapy Network that lists low-cost or sliding-scale counselling options.



There are also ways to begin to support yourself while balancing stress and eco-anxiety. Self-care is associated with a variety of preconceived ideas but ultimately boils down to a core set of activities: connecting with others and self, eating nutritious food, nature-based interventions, healthy sleep habits and engaging in movement. Specific approaches to these self-care practices can be as unique as individuals. Some individuals may face barriers to engaging in specific practices, so it is critical to have space to identify and modify these approaches to meet individual needs. Dealing with ongoing environmental challenges is stressful, but we can start by engaging community and exploring self-care to support the important collective work of ecological and climate action. Check out the list below to consider some options.

TAKE ACTION

To address ongoing ecological challenges, we need to care for our personal and community well-being. We can support this well-being by normalizing responses to ecological loss, employing empathy in our interactions, seeking social supports like **Climate Café** and ecological organizations, getting involved to take action, celebrating small achievements within our communities and seeking professional supports for our mental health.

Connection: Call friends or family, meet ups, classes, volunteering, meditation, journaling, art or music, community groups, **Climate Cafe** or **peer support groups**.

Eating nutritious food: **Loaded ladle-free** plant-based meals, **free healthy eating programs**, **Farmers' Markets of Nova Scotia**, community pantries and food banks (@communityfridgeartmouth and @communityfridgehfx on Instagram, **Feed Nova Scotia find a food bank site**) and **Nutrition Education and Counselling (Dietitians)**.

Nature-based interventions: Visit natural parks and shorelines, nature journaling, home or community gardening, urban gardens or forests, indoor plants, environmental volunteering (shoreline cleanups, planting, monitoring), outdoor meditation or yoga, camping, hiking.

Sleep hygiene: Breathing exercises, consistent sleep schedules, bedtime routines, avoiding screens, caffeine, alcohol and heavy meals before bedtime, regular exercise, exposure to bright light during the day, reduced noise and optimizing temperatures in the sleeping environment, sleep meditations. Consult a healthcare professional if you have persistent sleep issues.

Movement: **NS Walks program** and walking groups, dance, swimming, yoga, cycling, gardening, taking the stairs, playing with your kids, community centre programming, rowing or paddling, gardening, fitness classes, **free virtual physical activity programs**, walking or wheeling meetings, housework, adaptive exercise and **sport programming**.

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BMBCL could become a national urban park.
PHOTO: Simon Ryder-Burbidge

How the Blue Mountain-Birch Cove Lakes Wilderness Area Could Contribute to a More Climate-Resilient HRM

by MAKAYLA CARNEVALE /// EAC Volunteer

When I first began my studies at Dalhousie University, one of my earliest experiences was a field trip to Point Pleasant Park. We spent the day exploring the woods, learning to identify various trees and ecosystems. During our trek, we came across a stand of hemlock trees and took refuge in under their densely woven canopy. The temperature dropped noticeably, and our professor seized this moment to share a fascinating insight: trees do more than just provide shade – they actively cool their surroundings. Through the release of organic compounds, (much like how they release oxygen), trees attract water droplets in the air, increasing the speed of cloud formation. These clouds in turn reflect sunlight away from the Earth, cooling down local environments and potentially the globe. This moment was a revelation for me: it illustrated how landscapes could actively regulate climate and their potential as a climate adaptation tool.

Makayla (she/her) is a graduate of Dalhousie University's master of resource and environmental management program and now works as an environmental scientist. Amongst other things she enjoys good coffee, great books and thrifting.

Fast forward a year, and I am standing in the parking lot of the Kent in Bayer's Lake. If you follow the winding footpath past the paved asphalt edge of the business park, you'll enter a realm of lakes, wetlands, and Wabanaki Forest. That is where I found myself – staring out at the placid waters of Susie's Lake for the first time. Poised there above the water, the city skyline had been replaced by forest, the thrum of cars by the whistle of wind through leaves and the smell of exhaust by the smell of pine needles, wet earth, moss and wood.

This patch of land is among the last wild spots in the city. Known as Mnikwaqnik, it is a place where the Mi'kmaq used to hunt caribou, harvest birch bark and build birch bark canoes. In more recent years it has been a beloved spot for hiking, canoeing, birding and outdoor recreation among Haligonians. Today it goes by another name: the Blue Mountain - Birch Cove Lakes Wilderness Area (BMBCL). This particular plot is one of several, scattered between watercourses and developments, that together make up the BMBCL's 1,782 hectares of wilderness.

Since 2021, the Friends of the BMBCL, in partnership with Halifax Regional Municipality (HRM) and Parks Canada, have been working toward establishing BMBCL as one of Canada's next urban national parks. Pre-feasibility studies have identified four key objectives of the

potential BMBCL Urban National Park: environmental protection and conservation, enhancing ecological connectivity, providing access to nature-based education and recreational opportunities and Indigenous reconciliation. One glaring omission was climate change adaptation.

Climate change is often thought of in terms of carbon emissions and reduction technologies; it can often feel as nebulous as the clouds of carbon emission in our atmosphere. But it doesn't have to be. It can be as real and tangible as stepping into a grove of trees and feeling the temperature drop. By linking climate adaptation efforts to the land and recognizing its role in mitigating climate change, we can tackle both climate change and the biodiversity crisis simultaneously.

Ecosystems critical to species' survival were the original carbon capture and reduction technology. The most well-known examples are forests. We've all heard it – the growing cycle of a tree draws down carbon from the atmosphere in exchange for oxygen, storing that carbon in its roots, leaves and branches. The ecosystems that capture and store the most carbon are also the healthiest, most suitable habitat for species. Forests are not the only natural carbon storehouse; ecosystems like wetlands and their soils can store large amounts of carbon too. If left untouched, these natural storehouses can remove carbon from the atmosphere for hundreds of years and provide critical habitat for many species.

The forests within the BMBCL are not only a powerful carbon capture and reduction tool, but they also play a crucial role in protecting against floods and heatwaves. When it rains the forest canopy acts like one giant umbrella, slowing the descent of raindrops to the forest floor. Once the rain reaches the forest floor, roots within the soil absorb it like a sponge. These roots also aerate the soil, creating pathways for water to seep through the soil and replenish groundwater supplies. Another key ecosystem within the BMBCL is wetlands. These natural holding tanks collect and store excess water like rain and runoff, and gradually release it back into the environment. Together these ecosystems reduce the risk of flash floods, landslides and erosion in the neighbourhoods surrounding the BMBCL.

During heatwaves, green, leafy spaces like those in the BMBCL lower surface and air temperature by providing shade and through evapotranspiration – essentially the way in which a plant sweats. Evapotranspiration uses heat from its surroundings to transform water into vapour and cools the air in the process. Lakes and other waterbodies in BMBCL also play an essential role keeping temperatures cooler. As climate change progresses, cities will become hotter and harder to live in, including the HRM. In the past year alone, our province has experienced a severe winter storm, a record-breaking heat wave and deadly flash flooding. Functioning ecosystems like those within the BMBCL will be necessary for the well-being of those living within the HRM, both human and animal alike.

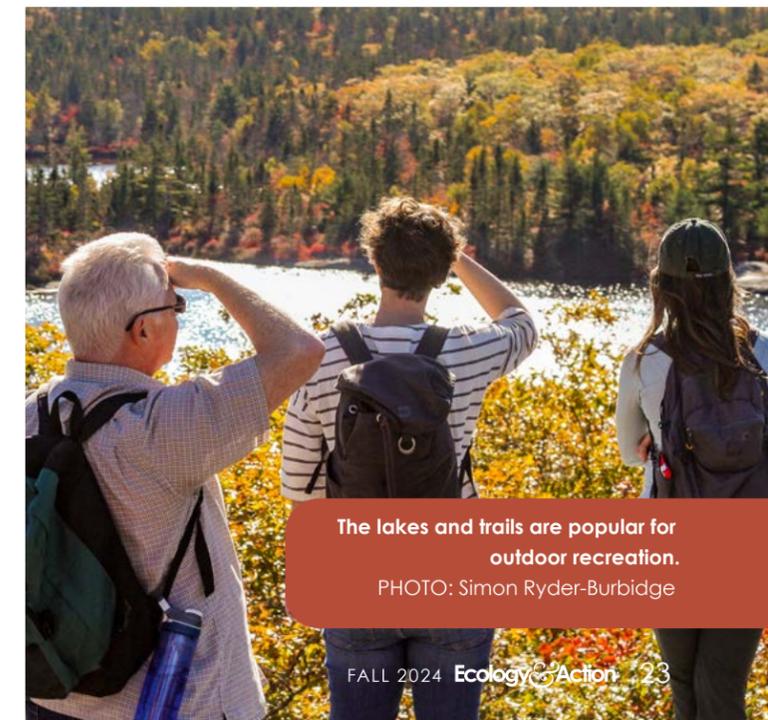
As climate change continues to degrade and fragment vital habitats, wildlife will increasingly need safe passage to more climate-resilient

TAKE ACTION

Help protect BMBCL by becoming a member of, volunteering with or donating to Friends of Blue Mountain-Birch Cove Lakes at <https://bluemountainfriends.ca>

refuges. The BMBCL is uniquely positioned in Nova Scotia to serve as a critical corridor for our native species, offering them a lifeline to escape the pressures of a changing climate. This area is intricately connected with nearby green spaces, including the Ingram Wilderness Area and Five Bridges Lakes Wilderness Area. Along with the Sandy Lake – Sackville River area and the Halifax Backlands, the BMBCL forms the Halifax Greenbelt, a vital network of green spaces that spans the city. Preserving these connections, along with the habitat patches between them, is essential to safeguarding our native species.

The BMBCL is on track to becoming a national urban park, which would result in increased recognition, accessibility and Mi'kmaq involvement. However, this designation may not include legal protection of more land, and this uncertainty means this landscape's resilience to climate change is not guaranteed. For the BMBCL to succeed as a resilient urban national park, strategic land acquisition is key. Without it, natural features critical to climatic resilience, ecological integrity and the identity of the BMBCL may be lost to development. Choices made for the BMBCL today will set the precedent for land protection tomorrow. Will our future be one defined by environmental protection and sustainability – or by the unchecked spread of development? The answer is in our hands.



The lakes and trails are popular for outdoor recreation.
PHOTO: Simon Ryder-Burbidge

Action is Our Middle Name

MARINE

The Marine Team hosted Kelp Fest in May, bringing together hundreds of farmers, entrepreneurs, foodies, researchers and policymakers to celebrate amazing local kelp-based products being developed and further explore opportunities and identify the support needed to help realize a thriving, sustainable kelp farming sector in Atlantic Canada.

Throughout the summer, we advanced eelgrass programming in all four Atlantic provinces. As a partner on Dalhousie University's Community Eelgrass Restoration Initiative, we assisted with youth engagement programming to bring kids into the wonderful world of eelgrass, and we expanded membership in our citizen science iNaturalist program.

We're working with the Atlantic Healthy Oceans Initiative (AHOI) in western Newfoundland to support eelgrass survey efforts in several special coastal areas in the Gros Morne region, including the rarely visited St. Paul's Inlet. AHOI data was then added to our Gros Morne community-led marine atlas project over time to inform marine planning in the region. We also continued collaboration with six watershed partner groups across P.E.I. and New Brunswick, supporting data collection in dozens of Gulf region eelgrass meadows. We co-hosted a workshop with Kouchibouguac National Park on our kayak survey protocols and developed a series of methodological videos to demonstrate SeagrassNet survey, acoustic survey and kayak survey methods.

In August, we released a report highlighting the work we have done with the Nova Scotia swordfish harpoon fishery titled Keeping a century-old fishery alive. The report includes findings from rod-and-reel gear trials, an economic analysis of potential returns from charters, surveys exploring the potential benefits and challenges of this emerging venture and our recommendations to make this venture a reality.

Together with our partners at Make Stewardship Count, we effectively lobbied for a crucial review of the long-outdated FAO Guidelines for Seafood Ecolabelling at the 36th Annual UN FAO committee on fisheries. These guidelines, pivotal for certifications like the Marine Stewardship Council, are overdue for updates that will raise standards across certification schemes, ensuring greater sustainability in seafood ecolabelling practices.



PHOTO Raymond Plourde



PHOTO Stoo Metz Photo



PHOTO Sebastian Pardo



PHOTO Simon Ryder-Burbidge



PHOTO Jimmie Pederson

WILDERNESS

The Wilderness Team successfully opposed a very sudden proposal for a new spring bear hunting season, which would have taken place at a time of year when no hunting season for any species has ever existed in the province. The proposed spring bear hunt was a very bad idea and was rightly cancelled, meaning that Nova Scotians can continue to enjoy our shared woods and waters in the spring.

Along with community groups across the province, we are working to better protect our provincial parks through our campaign to amend the Provincial Parks Act. Ensuring the Provincial Parks Act is finally updated and strengthened is necessary to close the loopholes in the Act and protect our provincial parks from being targeted by private interests, like Owls Head and West Mabou Beach Provincial Parks have been.

We sounded the alarm about Atlantic Mining/St. Barbara attempting to get out of their mine remediation obligations at the Moose River gold mine. Talking to the media about the risk of the mine being abandoned helped to raise public awareness about the common problem in Canada.

The second annual Wetlands Appreciation Week was a huge success. Together with 12 other organizations across the province, a variety of events to celebrate Nova Scotia's wetlands took place, including webinars, guided hikes, a bird walk, a bioblitz and other fun interactive activities.

PHOTO Annabelle Valliant-Fraser



PHOTO Matt Bawtinheimer

TRANSPORTATION

The Transportation Team was busy across Nova Scotia this summer, with the Pop-Up Bike Hub (PUBH) visiting 19 communities, distributing 100 safe cycling accessories and fixing a grand total of 560 bikes! Our PUBH Mini, which focuses on HRM neighbourhoods using a cargo bike to commute with all its gear, repaired 178 bikes.

Under the Welcoming Wheels umbrella this year, we gave away 67 bikes during the Kids Gifting Session. In the Earn-a-Bike Program, 19 people registered and participated as volunteers in our Repair Nights. Our Bike Buddy program, where we pair newcomers with experienced cyclists, had 68 participants!

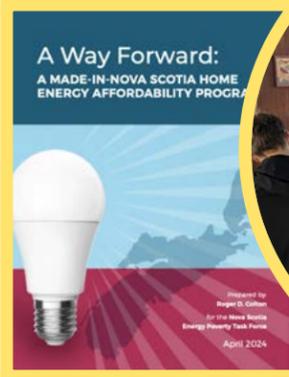
We offered our new Local Activation program, partnering with Eskasoni First Nation, Spryfield and New Glasgow to both continue and initiate the co-creation of active transportation (AT) interventions with community partners to help increase sustainable transportation options.

We provided public AT education by installing a bus bike rack at Bike Again (HRM) where you can practice getting your bike on and off public transit in a stress-free environment.

We held our annual International Walk to School Month event in October.

Our team collaborated with the Art of City Building to bring the wonderful folks from Equiterre to Halifax to present their advocacy work on vehicle weight and size culture.

We developed new resources for communities developing active transportation plans. The first is a Request For Proposals (RFPs) template and guide – this tool is for small municipalities and organizations to navigate writing RFPs. The second is our How to Engage with Public Engagement guide, a resource for both the public and municipal staff to help understand the logistics of good community engagement practices.



ENERGY & CLIMATE

The Energy & Climate Team is pushing for renewable and affordable energy in the provinces and an Atlantic net-zero energy grid. To further push for regional cooperation, we are developing an east coast coalition for net-zero and creating five case studies on sustainable energy pathways.

We're engaging with communities to address the energy poverty crisis, launching A Way Forward: A Made-in-Nova Scotia Home Energy Affordability Program report and campaign with Roger Colton and the Energy Poverty Taskforce (EPT). It promotes a home energy affordability assistance program. We held engagement sessions with municipalities to see how they were addressing the crisis on a local level. We created a stakeholder thinktank to address the benefits and challenges of deep retrofits for affordable multi-family housing. We conducted 45 free energy audits for faith buildings in partnership with Efficiency Nova Scotia, Clean Foundation and Faith & the Common Good. Further addressing energy equality, we hired ASBB Consulting to conduct a study on job growth in the energy sector and how it can address high unemployment rates in equity-deserving communities.

On the community engagement front, we held five presentations on Energy is Life for the Seniors College Association of Nova Scotia. We launched the Electric School Buses for Children's Health campaign and spoke to 45 classrooms, busting the myth that gas-powered school buses are healthier than diesel by putting them through an air monitor test.

Our team is continuing to push for a sustainable, just and equitable energy future.

BUILT ENVIRONMENT

The Built Environment Team led a campaign to promote choosing green leaders in this year's municipal elections, which took place on Saturday, Oct. 19, 2024. The EAC developed and distributed voter materials, including **toolkits for HRM, CBRM, and rural municipalities**. We sent out a survey to all council and mayoral candidates in HRM, which 53 out of 79 candidates completed. We hosted a fair in which 20 civil society groups interacted with about 50 candidates about their platforms. Our aim was to make climate and environmental justice top election issues and to elect the most environmentally conscious regional council to date.

The Built Environment Team is gaining momentum in advocating for a protected Halifax greenbelt, actively engaging both new partners and existing members of the Our HRM Alliance coalition, we continue to focus on curbing urban sprawl and safeguarding our valuable natural assets. This summer and fall, we hosted over 10 public events, including hikes, family-friendly activities, invasive species surveys and bioblitzes. These events aimed to enhance education about the beauty and significance of HRM's blue and green network for people of all ages.

The Built Environment Team is still eagerly awaiting the new Regional Plan for HRM, which is the city's vision for how and where HRM will grow to a population of one million. Halifax continues to face record population growth, leading to challenges with housing affordability, transit capacity and service delivery, among others. Meanwhile, the EAC remains steadfast in advocating for the greenest possible Regional Plan.

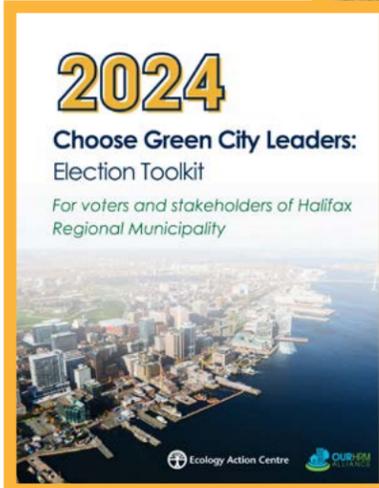


PHOTO Jillian Ramsay

COASTAL & WATER

The Coastal & Water Team has continued to mobilize Nova Scotians and advocate for the Coastal Protection Act (CPA), which the province announced in February 2024 that it would not be proclaiming. We engaged in a province-wide reach out to MLAs, Minister Halman and Premier Houston to make it clear that this important piece of legislation is needed to protect our coastal ecosystems and communities.

The Coastal Coalition, a grassroots group of local activists that the EAC is part of, distributed hundreds of 'CPA Now' lawn signs across the province. In collaboration with the Coastal Coalition and Nature Nova Scotia, we held a hugely successful rally at the Nova Scotia legislature on Wednesday, May 8. Hundreds of Nova Scotians, including municipal and opposition leaders from Yarmouth to Cape Breton, showed up to demand the government reverse its decision and proclaim the CPA. We also launched another letter writing campaign with over 1,100 people once again contacting their MLA and Minister Halman to demand immediate action.

In August, we commissioned a telephone poll conducted by Narrative Research to gain insight into how Nova Scotians feel about coastal protection in the province. The results align strongly with what the EAC is hearing from community, and the numbers confirm that there is broad, continued support for the CPA across the political spectrum in 2024 as there was when the act was passed with all party support in 2019.

Meanwhile the province has spent hundreds of thousands of tax dollars to spin its failure on coastal protection as a win, but the EAC will not waver in our campaign to demand the proclamation of the CPA.



PHOTO Nicolas Winkler Photography



PHOTO Kevin Prinoski



PHOTO Nicolas Winkler Photography



PHOTO iStock

FOOD

Between April and June, the Food Team worked closely with governance consultants to dissolve the Halifax Food Policy Alliance and in its place establish the Halifax Food Council (HFC). The HFC is a collaborative food governance body responsible for the implementation and oversight of the JustFOOD Action Plan. In July, the HFC hired two new staff members: an Indigenous food coordinator and an African Nova Scotian and Black (ANSB) food coordinator. These staff will support JustFOOD implementation and oversight and will advance food sovereignty and justice recommendations drafted by Indigenous and ANSB advisory bodies.

In October, the HFC hired two additional staff members, an engagement and government relations coordinator and a research and evaluation coordinator. These staff will work alongside the Indigenous and ANSB food coordinators to support the JustFOOD Action Plan implementation and evaluation, maintain and grow regional partnerships and develop knowledge products, among other responsibilities.

Throughout the summer and fall, the HFC has worked with community partners to support the JustFOOD program delivery, including delivery of an urban orchard pilot, an ANSB traditional meal preparation program and an English for Migrant Workers Pilot. The EAC Food Team continues to support the Coalition for Healthy School Food – Nova Scotia Chapter in its advocacy around the province's forthcoming universal school lunch program, focusing on localizing the school food program to allow for more choice and flexibility in menu development and creating pathways for schools to develop and maintain relationships with local food suppliers.

Remembering Bill Zimmerman

by BRIAN GIFFORD, SUSAN HOLTZ,
NED ZIMMERMAN AND OTHERS

Long-time clean energy activist, conservationist and Ecology Action Centre (EAC) supporter Bill Zimmerman died unexpectedly on Sept. 24, 2024 following a heart attack and COVID-19. Nova Scotia has sadly lost a lively, well-informed champion of safe, clean renewable energy, nature conservation and the arts, among other things.

Bill and Susan Hauer, his wife of 57 years, raised their son, Ned, on Great Island off Nova Scotia's South Shore near Port Medway. In 2010 they protected Great Island and Selig Island through Nova Scotia Nature Trust. You can see a short film about this here: bit.ly/GreatSeligIsland.

They joined the board of the EAC in the 1970s and Bill provided well-grounded advice on many campaigns, including the Wreck Cove Hydro Power project, Nova Scotia's potential participation in New Brunswick's nuclear Point Lepreau and later the campaign against uranium mining in Nova Scotia.

When Nova Scotia's potential involvement in nuclear energy or a suggested massive tidal power project was a public issue, Bill and Susan Holtz, the EAC's energy coordinator at the time, gave a series of well-attended, and controversial, public lectures in towns across the province. These public talks emphasized not only the environmental benefits but also the economic viability of a provincial energy policy based on efficiency, conservation and renewable energy – a radical idea then. The public discussion did eventually become broader, and the anti-nuclear campaigns were successful, along with increasing support for this new policy focus.

Bill also promoted renewables in many other ways by living what he and Susan believed. Their Great Island home, which he designed, was passively solar heated and a small windmill provided electricity.

Passive solar home designer/builder Don Roscoe recalls Bill's help in figuring out passive solar design with Don and others in the 1970s and '80s.

Bill was a wonderful advocate and resource, with a lively mind and great personality. He had a great depth of knowledge that enabled him to make invaluable contributions about energy planning and development over the years. We and many others have great respect for him and his contributions.

In addition to his work on renewables and energy planning, Bill was a Wolfville town councillor for two terms and a supporter of the arts. He helped found the Fundy Film Society that initiated the Acadia Cinema Cooperative, which formed to purchase the Acadia Cinema building in Wolfville. As a volunteer, Bill designed the new theatre and second floor smaller venue and oversaw the reconstruction project for the new cooperative that re-opened as the Al Whittle Theatre for film, live performances of all genres and as a community meeting place.

Bill, along with his wife Susan and their son Ned, was very positive and constructive in outlook and spirit, a joy to meet and work with.

Susan and Bill have been supporters of the EAC for over 50 years and Bill continued to engage in the deliberations and advocacy of the EAC's Energy Action Team.

The EAC extends our condolences to Ned, Susan and other family members as we mourn and celebrate his life.

His obituary can be found at, billzimmerman.greatisland.ca

As Bill would end his messages...Aloha.

EAC Staff & Contacts

DIRECTORS

MAGGY BURNS
Executive Director
maggy.burns@ecologyaction.ca

MARLA MACLEOD
Director of Programs
marla.macleod@ecologyaction.ca

NANCY ANNINGSON
Director of Operations & Development
nancy.anningson@ecologyaction.ca

OPERATIONS STAFF

BRANDY RIVERS
Events & Volunteer Officer
brandy.rivers@ecologyaction.ca

CLAIRE PARSONS
Senior Strategic Communications
Manager
claire.parsons@ecologyaction.ca

EMILY ROBINSON
Assistant to the Directors + Strathmere
Group Administrative Coordinator
emily.robinson@ecologyaction.ca

EMMA EAGLESON
Administrative Assistant
emma.eagleson@ecologyaction.ca

HELEN BRANDON
Accounting Clerk
helen.brandon@ecologyaction.ca

JOANNA BULL
Senior Community Engagement Manager
joanna@ecologyaction.ca

JULIA SENT
Database & Development Administrator
julia.sent@ecologyaction.ca

KAREN GILMOUR
Community Giving Manager
karen.gilmour@ecologyaction.ca

LISA LEE STECKLER
Office Coordinator
lisa.lee.steckler@ecologyaction.ca

MADELAINE MCGARR
Relationship Development Officer
madelaine.mcgarr@ecologyaction.ca

ROWAN SWAIN
Communications Coordinator
rowan@ecologyaction.ca

SARAH MOORE
Communications Officer
sarah.moore@ecologyaction.ca

PROGRAM STAFF

ABBY LEFEBVRE
Community Engagement Officer
abby.lefebvre@ecologyaction.ca

ANIKA RIOPEL
Senior Sustainable Transportation
Coordinator + Seaweed Education
Centre Coordinator
anika.riopel@ecologyaction.ca

ASHLEIGH BOERS
Senior Transportation Coordinator
ashleigh.boers@ecologyaction.ca

BADIA NEHME
Energy Coordinator
badia.nehme@ecologyaction.ca

BEN HAMMER
Transportation Officer
benhammer@ecologyaction.ca

BENNETT BRULE
Kelp Kurious Officer
bennett.brule@ecologyaction.ca

BELLE TEIXEIRA
Built Environment
Communications Coordinator
belle.teixeira@ecologyaction.ca

BRITTNEY GARCIA
Marine Planning & Community
Engagement Officer
brittany.garcia@ecologyaction.ca

CAITLIN SKERRATT
Community Food Coordinator
caitlin.skerratt@ecologyaction.ca

CHRIS BENJAMIN
Senior Energy Coordinator
chris.benjamin@ecologyaction.ca

CHRISTINA CALLEGARI
Senior Coordinator, Marine Program
christine.callegari@ecologyaction.ca

EMMA NAUGLE
Kelp Hatchery & Farm Technician
emma.naugle@ecologyaction.ca

HANNAH MINZLOFF
Energy Efficiency Coordinator
hannah.minzloff@ecologyaction.ca

HOLLY ISNOR
Marine Campaign Coordinator
holly.isnor@ecologyaction.ca

JILLIAN RAMSAY
Green Cities Officer
jillian.ramsay@ecologyaction.ca

JULI BISHWOKARMA
Energy Officer
juli.bishwokarma@ecologyaction.ca

KAREN MCKENDRY
Senior Wilderness Outreach Coordinator
karenmckendry@ecologyaction.ca

KATE BROOKS
Community Climate Activator
kate.brooks@ecologyaction.ca

KATHARINE TURNER
Energy Coordinator
katharine.turner@ecologyaction.ca

KORTNEY DUNSBY
Sustainable Cities Coordinator
kortney.dunsby@ecologyaction.ca

LINDSAY LEE
Wilderness Community Outreach Officer
lindsay.lee@ecologyaction.ca

MATT BAWTINHEIMER
Sustainable Transportation Coordinator
(Pop-up Bike Hub)
matt.bawtinheimer@ecologyaction.ca

MERYDIE ROSS
Project Manager, Seaweed &
Community Economic Development
merydie.ross@ecologyaction.ca

MIMI O'HANDLEY
Wetland & Water Coordinator
mimi.ohandley@ecologyaction.ca

MORE VAIL
Community Food Coordinator
more.vail@ecologyaction.ca

NICOLAS WINKLER
Coastal Adaptation Coordinator
nicolas.winkler@ecologyaction.ca

RAYMOND PLOURDE
Senior Wilderness Coordinator
wilderness@ecologyaction.ca

REBECCA BRUSHETT
Marine Planning &
Engagement Coordinator
rbrushett@ecologyaction.ca

SARA FARIAS
Community Active Transportation Officer
sara.farias@ecologyaction.ca

SHANNON ARNOLD
Associate Director, Marine Programs
sarnold@ecologyaction.ca

SHREETEE APPADU
Community Outreach Officer
shreetee.appadu@ecologyaction.ca

SIMON RYDER-BURBIDGE
Senior Marine Campaign Coordinator
sryderburbidge@ecologyaction.ca

SIMONE MUTABAZI
Community Cycling Activation Officer
simone.mutabazi@ecologyaction.ca

STEPHANIE JOHNSTONE-LAURETTE
Youth Active Transportation Coordinator
stp-cb@ecologyaction.ca

THOMAS ARNASON MCNEIL
Senior Energy Coordinator
thomas.arnasonmcneil@ecologyaction.ca

VICKI MADZIAK
Community Food Coordinator
vicki.madziak@ecologyaction.ca

Become a volunteer today!



Volunteers are vital to our work at the Ecology Action Centre. Whether it's helping with an **event**, joining a **committee**, taking part in a **project**, or more, our volunteer mailing list is the best place to **start volunteering with us and to learn about upcoming opportunities!**

Visit ecologyaction.ca/volunteer to learn more.

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Looking for the best way to stay in-the-know on environmental news, upcoming events and ways to take action on critical issues from biodiversity protection to climate change to environmental justice?

Sign up to receive our bi-weekly email newsletter at ecologyaction.ca/enews



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How?

Call or email Karen Gilmour of our membership team.

Call: 902 429 2202 ext. 115

Email: membership@ecologyaction.ca

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