

Ecology & Action

FALL 2022

IN THIS ISSUE



Green Hydrogen Comes to Atlantic Canada:
Smart Move or Decarbonization Distraction?



Keeping a Century-Old Fishery Alive



What a Four-Day Work Week Means for
Productivity, Well-Being, and the Environment

VOL 40 NO. 2

PM 4005 0204 | ISSN 2369-5943

A publication of



Ecology Action Centre

CONTRIBUTORS

Holly Isnor, Paige Crowell, Sarah Moore, Katherine Martin, Madeleine McIvor, Barret Teft, Ian Mallov, Shaun Trainor, Kate Duncombe, Mark Butler.

CONTENT EDITORS

Sarah Moore, Maggy Burns, Arved Sandstrom, Nour Khouri, Brenna Walsh, Nicole Tomasic, Thomas Arnason McNeil, Jacob Thompson.

COPY EDITOR

Rowan Swain, Sarah Moore, Claire Parsons.

CONTENT MANAGERS

Claire Parsons, Lucretia Groff.

PHOTOGRAPHERS

Zane Woodford, Holly Isnor, Sebastián Pardo, Raymond Plourde, Will Balsler.

COVER ART

Emma Fitzgerald

DESIGN & PRODUCTION

Dean Gallant, Pinwheel Communication Design

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Ecology Action Centre

Ecology & Action is published three 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. 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

www.ecologyaction.ca

/EcologyActionCentre

/EcologyAction

/EcologyAction

Letter from the Centre

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

This past year has seen so much hardship on an individual level. Inflation rates have started to decrease, but food and gas prices and cost of living are still rising, leaving many people struggling to afford the necessities. These changes are inevitably the byproduct of economic “progress” that is so often prioritized over essential measures to foster equity and protect our environment and our future.

We urgently need climate action, but not without due consideration of what economic priorities it is serving. The theme of this issue of Ecology & Action is the economy and the environment, and it is all about those dynamics. You’ll find examples of evaluating tools that are great at face value, like environmental impact assessments, green hydrogen, and climate adaptation, to make sure they are protecting our communities

rather than lining the pockets of corporations. You’ll also find ideas of how we can speed up the transition to a low carbon economy—at both a tangible level, by improving electric vehicle infrastructure, and at a policy level, by changing carbon emission cap exemptions.

The Ecology Action Centre as an organization, as well as our staff, are not immune to economic pressures. We’ve chosen to embark on an experiment to better support our people: a four-day work week (read more about in this issue!). As we continue to make business adjustments that reflect our values of resilience, care, and meaningful relationships, we hope you join us in re-evaluating the economic systems that govern our lives, and how we can best support the Earth and our communities to flourish.

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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 community giving manager, Paula Aceto at 902-448-9845.



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Keeping a Century-Old Fishery Alive

by **HOLLY ISNOR** /// EAC Staff

A century-old fishery

Nova Scotia has a long history of swordfish fishing. The Mi'kmaq have fished swordfish (Kinisku'nej) for millennia, while records of the commercial harpoon fishery date back to 1903, in the small Cape Breton fishing community of Neil's Harbour. When the commercial fishery took off, dozens of fishing vessels from all over the province could be seen trying to catch swordfish. Swordfish were abundant, a thrill to catch, and had a high price tag.

The swordfish harpoon fishery is one of the cleanest, most skilled and storied fisheries in the world. It became one of the first fisheries to gain certification with the Marine Stewardship Council for their sustainable practices and, with the Ecology Action Centre's support, secured a commitment from Whole Foods to take all their harpoon-caught swordfish at a premium market price.

Today, harpooners can be found in many coastal communities around Nova Scotia, including Neil's Harbour, Lockeport, Sambro, and more, but numbers are dwindling. Government management decisions, warming ocean waters, and the introduction of larger, more efficient methods to catch swordfish have resulted in a shrinking harpoon fishery.

Modern-day challenges

In recent years, changing ocean conditions are making swordfish harder to find. Harpooning requires the fish come to the surface of the water, where they can be seen. Although we know swordfish are abundant, fishers are seeing fewer and fewer. That's because swordfish are highly dependent on water temperature, with an ideal temperature of 15°C. Warming waters mean they are staying further below the surface, making fishing grounds less predictable than in years past. Now, with a dominant longline fishery, changing conditions, and dwindling catches, the harpoon fishery faces economic pressure and risks shutting down altogether.



Harpoon buoy gear, used before bringing swordfish aboard.

PHOTO: Sebastián Pardo

Harpooning involves having a crew member up in the 'crow's nest', a lookout platform several meters high, scanning the horizon in search for a glimpse of a fin. Once spotted, the vessel tracks and follows the fish, and at just the right moment the harpooner deploys their gear from a long platform off the front of the boat.



View from the crow's nest, looking down at the harpoon platform on a clear and calm day at sea. PHOTO: Sebastián Pardo

Proactive solutions and adaptation

This low-impact and sustainable fishery is tackling this dilemma head-on, coming up with their own vision for a new, sustainable economic future. To adapt and stay in business, the swordfish fleet have proposed the adoption of new low impact gear—rod and reel—to access their catches when harpooning is not possible.

In addition to this new gear type, this proactive fishery is proposing a solution to their reduced catch: a charter operation where fishers can offer trips to tourists and give them a chance to experience this thrilling and unique method of fishing one of the most unique species in our region. A charter fishery would mean that fishers can increase their revenue from each trip and therefore, each fish caught, and stay in business—all while staying within their allocated quota.



Our fisheries scientist aboard a swordfish harpoon boat preparing to depart from Lockeport for the first trip of the trial.

PHOTO: Holly Isnor

Lending a helping hand

Thriving coastal communities are at the core of the EAC's work. We are working alongside these fishers to get their new venture approved and on the water. We have supported the fleet's voice in conversations with Fisheries and Oceans Canada (DFO) this year and helped with each step of writing protocols, getting documents through the maze of regulatory red-tape, and overcoming political barriers along the way.

In the summer of 2022, DFO finally approved the first trial to start this small fleet on their new journey. The trial is intended to prove that rod and reel fishing is a suitable, sustainable alternative for these fishers.

The first trip of the trial took place in August, with EAC's fisheries scientist onboard to assist! It provided us and the fishers with the opportunity to learn how to use the new gear and begin important data collection to keep this initiative moving forward. We are thrilled to be part of this important first step in helping these fishers adapt for the future!

Opportunities for value-adding

Chartering businesses provide an opportunity to add value to catches, and support local businesses through increased tourism. There are many tourism-based fisheries businesses in Nova Scotia and Atlantic Canada, including the lucrative bluefin tuna charter fishery, which we supported with our work in the past. In the United States, swordfish charters run all along the East Coast, and there is a real opportunity to bring this business to Nova Scotia.

Although there are challenges, like navigating a complex regulatory landscape, the swordfish harpoon fishers see the potential for chartering to add value to their long and storied fishery and to keep the fishery alive.

To further support the fishery and wider communities around the province, we are undertaking an economic impact analysis exploring the possible added value chartering can provide. Keep an eye out for our report to come!

An experience like no other

Our fisheries scientist, Sebastián Pardo, tells us what it was like to join the fishers for the trial in August!

“A swordfish harpooning trip is a unique experience. To begin with, you have to go out to the edge of the continental shelf, a 10-hour steam 150 kilometres offshore from southern Nova Scotia. You must go in the fairest of weather as even small waves make them almost impossible to spot. When you're on top of the crow's nest to search for them, all you see is a flat ocean in all directions for miles and miles. An amazing sight to behold.

There is also the excitement of the search. You're looking for something that seems harder to find than a needle in a haystack: a pair of fins sticking out of the water in a whole vast ocean. While scanning the waters you inevitably end up seeing all kinds of wildlife: dolphins, sunfish, tunas, petrels, and shearwaters, among others.

The fishers going on these trips often say it's an experience like no other; a unique way to reconnect with nature, while also bringing food to the table through a fishery that is sustainable and uniquely has zero bycatch.”

Holly Isnor (she/her) is a Marine Campaign Coordinator at the Ecology Action Centre.

What a Four-Day Work Week Means for Productivity, Well-Being, and the Environment



by **SARAH MOORE** /// EAC Staff

The concept of a four-day work week is not new.

Four years after the seminal 1973 work *Small is Beautiful: A Study of Economics As If People Mattered* by E.F. Schumacher was published, researchers Richard Hartman and Mark Weaver looked at factors that influence organizations to switch to a four-day work week.

They noted that American organized labour leader Walter Reuther bargained for a shortened work week in the 1950s, “yet it is only since 1970 that the current rapid increase in interest ... has emerged.”ⁱ

The idea didn’t gain further traction, remaining a radical departure in industrialized countries from the 40-hour status quo. That might not be the case for much longer.

The Ecology Action Centre, with staff pictured here, is one organization breaking from the status quo and implementing a four-day work week.

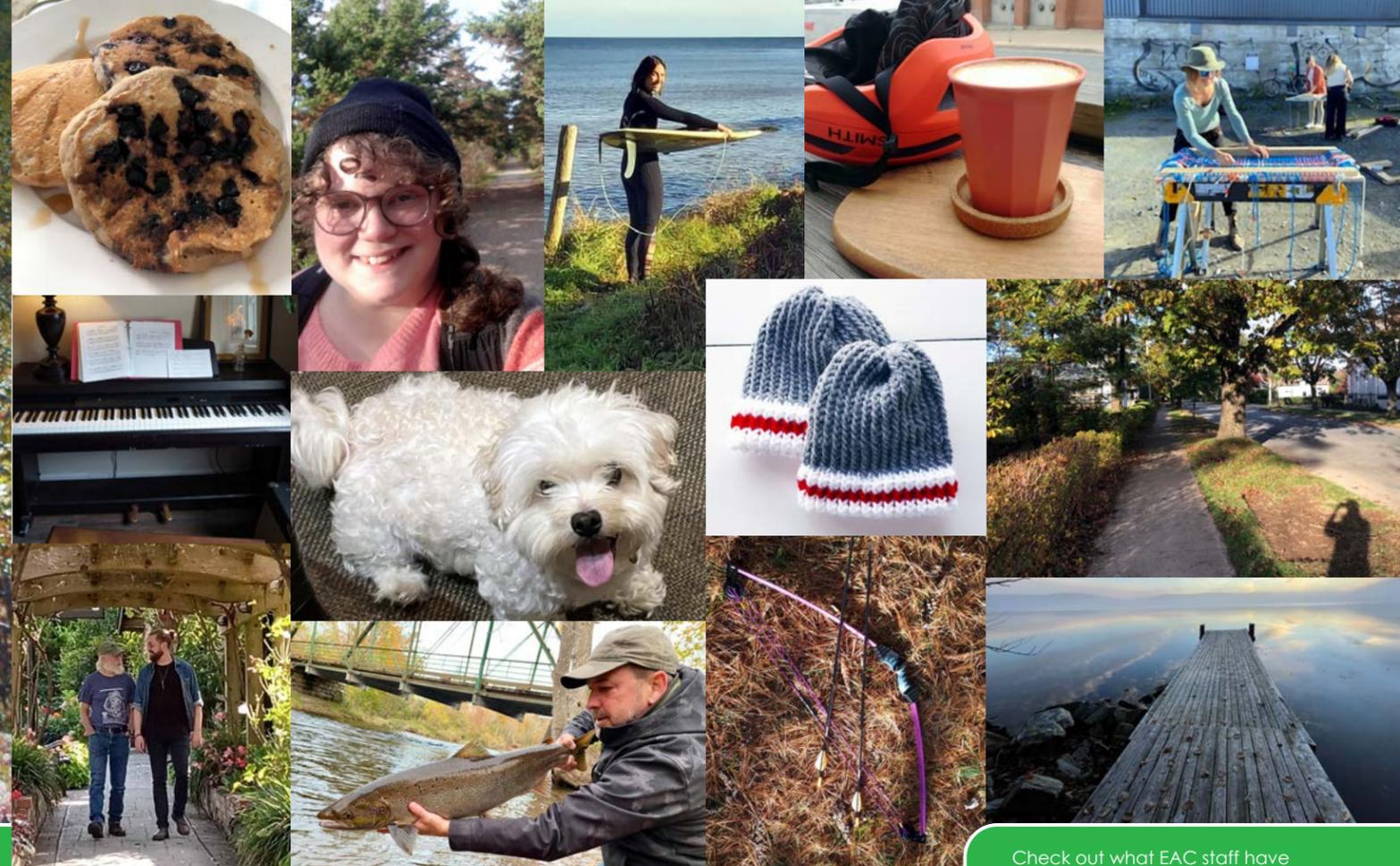
Before the pandemic, shortened work weeks were becoming more common. Then COVID-19 disrupted many workplace practices altogether, and organizations adapted to remote work and hybrid events.ⁱⁱ

Now some are proactively changing the status quo. The Ecology Action Centre is one: on October 3, we launched a nine-month pilot of a four-day work week. So did the Impact Organizations of Nova Scotia, New Dawn Enterprises, and the Cape Breton Centre for Craft and Design.

Productivity and environmental gains

In 1977, many firms reducing work hours actually “experienced a positive impact on productivity,” a fundamental reason to make the switch permanent, wrote Hartman and Weaver.

Today, a six-month pilot of a four-day work week in the UK has shown positive results at its halfway point. Of more than 70 companies taking part, 46 per cent said productivity has remained around the same level, while 49 per cent reported slight or significant improvement.ⁱⁱⁱ



Check out what EAC staff have been up to on their Fridays!

Not only that, but 86 per cent said it is “extremely likely” or “likely” that they will continue the policy after the trial ends—which, with lower emissions from commuting and electricity use in offices, is good news for the planet.

One study estimated that cutting work hours by 25 per cent could result in reductions of ecological footprint, carbon footprint, and carbon dioxide emissions of 30.2 per cent, 36.6 per cent, and 10.5 per cent, respectively.^{iv} Another analysis indicated that reducing working time by one per cent could reduce energy use by 0.7 per cent and greenhouse gas emissions by 0.8 per cent.^v

These reductions may be offset by activities people do on that fifth day. Most of us are caught in an exhausting, relentless cycle of material growth: work more to earn more to buy more to be more. It’s not sustainable—for us or the planet.

Slowing down

The good news is, there’s another way to do things. EAC staff shared what they were looking forward to in the new paradigm. Chief among them: more time—to rest, enjoy time with friends and family, volunteer, explore hobbies and creative opportunities, be outside, and, tellingly, “have an identity between workhorse and couchslug.”

As Christine Emba wrote in 2021, many such pursuits “are unlikely to be recognized as creating economic value. But they’re obviously rich in human value.”^{vi}

A four-day work week, with intentions of degrowth and slowing down, carves out space for these worthwhile pursuits. Organizational productivity is just a bonus.

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Sarah Moore (she/her) is a communications officer at the Ecology Action Centre. Her writing has been published in CBC News, the National Observer, Maclean’s, and more.

Green Hydrogen Comes to Atlantic Canada:

SMART MOVE OR DECARBONIZATION DISTRACTION?

by **PAIGE CROWELL** /// EAC Volunteer

Anyone who has visited Newfoundland can tell you that it's windy. Really windy. And it's in this setting that Prime Minister Justin Trudeau and German Chancellor Olaf Scholz met in August, to announce a "hydrogen alliance" that calls for the harnessing of Newfoundland's winds to supply Germany with green hydrogen as an alternative energy source to fossil fuels. The politicians met in Stephenville, part of the Port au Port peninsula, to sign a "joint declaration of intent" which once implemented will establish a hydrogen supply chain from Canada to Germany. But what exactly is green hydrogen, and what could this mean for energy development in Atlantic Canada?

What's in a name?

Hydrogen gas can be produced by splitting water molecules into hydrogen and oxygen. The hydrogen is then stored and used as a fuel source which, when burned, releases no greenhouse gases. However, how the hydrogen is produced matters, and this is where wind comes in. Producing hydrogen requires energy, and "green hydrogen" is produced through the use of renewable resources. Therefore, the use of wind energy is what renders the proposed outputs of the Canada-Germany agreement "green hydrogen".

In hydrogen nomenclature, there are nine different colours of hydrogen energy, each of which corresponds to the specific way in which the fuel is produced. Forms that rely on fossil fuels fall in the grey, brown, and black category. Blue hydrogen is also produced using fossil fuels, however the resultant emissions are sequestered through carbon capture and storage technology.

Because hydrogen gas is difficult to transport, it is often transformed into liquid ammonia, shipped as such, and then either chemically split upon arrival, or used directly as ammonia. The recently inked Canada-Germany agreement aims for the first trans-Atlantic shipment of ammonia by 2025.

Paige Crowell (she/her) is a conservation biologist living and working in Halifax. In her spare time, she enjoys being in and on the water.

Why here, why now?

For Germany, this agreement comes as part of efforts to reduce the country's dependence on Russian natural gas. Canadian green hydrogen offers one alternative supply chain for Germany's highly industrialized and energy intensive economy. But why Newfoundland? The basic requirements for green hydrogen production and export are renewable resources, water, and transport capacity. Newfoundland possesses all three, in the form of wind, water, and established shipping facilities. The recent lifting of a provincial moratorium on wind energy development further paves the way for the 164 wind turbines proposed by the Port au Port-Stephenville Wind Power and Hydrogen Generation Project. However, this is not the only interest in green hydrogen in Atlantic Canada, and the new Canada-Germany agreement calls on Canada to accelerate the development and export of green hydrogen. So...what's next?

Nova Scotia's green hydrogen action plan

In Newfoundland and Labrador alone, over a dozen proposals for wind development on crown lands have been received. In Nova Scotia, the government has announced its intentions to grant leases to produce five gigawatts of offshore wind energy by 2030, to support green hydrogen production within the province. Premier Tim Houston explained that "setting this target sends a clear signal to the world that Nova Scotia is open for business and becoming an international leader in offshore wind and green hydrogen development," and that the province "is taking every opportunity to develop [its] renewable energy market." A green hydrogen action plan to be released in 2023 will outline the role of green hydrogen in attaining the province's goal of net-zero emissions by 2050. To manage this expansion, the Canada-Nova Scotia Offshore Petroleum Board will become the Canada-Nova Scotia Offshore Energy Board, and will regulate offshore renewable energy. Thus far, there is only one green hydrogen project proposed for Nova Scotia; EverWind Fuels has proposed a hydrogen production facility in Point Tupper, Cape Breton.



PHOTO: Raymond Plourde

TAKE ACTION

Hydrogen is a quickly emerging industry in Nova Scotia. Stay tuned for opportunities to provide input to ensure hydrogen supports decarbonization in ways which are effective and fair.

The future is...green?

The appeal and potential of green hydrogen is undeniable. Besides being carbon-neutral in both production and combustion, hydrogen gas is energy dense, stores well, and ships well (as ammonia). It has also been heralded as a key alternative for industries that have been slow to decarbonize, including industrial processing, heavy transportation, and marine industry. However, one barrier to broader market access is the price, as green hydrogen is far from being cost-competitive with existing fuel sources. However, this has not dampened industry and political excitement at the prospect of hydrogen development as a means to contribute to emission reductions while providing local jobs and revenue.

As with any common resource, green hydrogen production must be carefully considered and balanced against the potential impacts of utilizing this resource. The same community and environmental concerns that surround wind energy by extension apply to green hydrogen proposals in Atlantic Canada, as evidenced by community concern in the Port-au-Port area slated for development. These concerns include the potential noise pollution from the development, as well as how the project's spatial footprint, including during construction, could impact the unique local ecosystem. The scale of this development has some questioning if smaller initial test sites are a better option, and the pending provincial environmental assessment for the project will no doubt be closely read.

Hydrogen, hydrogen everywhere

Closer to home, offshore wind is the fuel of choice for Nova Scotia green hydrogen proposals. Offshore wind energy provides its own series of considerations, especially impacts to benthic and marine habitats and the animals who rely on them. Additionally, there is the question of how the hydrogen will be produced, and where it will end up. While green hydrogen has been hailed as a means to reach the province's goal of supplying 80 per cent of electricity through renewable energy by 2030, it is unclear how much green hydrogen would actually contribute to this. For example, the EnergyWind project, the only in-province project proposed thus far, would export the final ammonia product, rather than returning it to the provincial electricity grid. This proposed business model obscures the link between in-province hydrogen production and the decarbonization of Nova Scotia's electrical grid.

The demand, both local and global, for clean energy sources is steadily increasing, and Atlantic Canada seems poised to make the leap into the green hydrogen industry. This renewable resource, produced locally, could aid in the region's transition away from carbon-based energy. However, in the rush to market, careful consideration must be paid to the potential impacts on local communities and ecosystems, and a transparent accounting of production, from development to fuel consumption, should be provided to ensure that the reality of green hydrogen in the region lives up to the hype.

Tricky Economics and Inconsistent Pricing Impede Transition to Electric Vehicles in Nova Scotia

by IAN MALLOV /// EAC Volunteer

The January 11, 1914 edition of The New York Times carried a story where Henry Ford described his next plans to redefine the nascent automobile. He proposed to enlist the help of a notable friend.

“ Within a year, I hope, we shall begin the manufacture of an electric automobile. I don't like to talk about things which are a year ahead, but I am willing to tell you something of my plans. The fact is that Mr. Edison and I have been working for some years on an electric automobile which would be cheap and practicable. Cars have been built for experimental purposes, and we are satisfied now that the way is clear to success. The problem so far has been to build a storage battery of light weight which would operate for long distances without recharging. Mr. Edison has been experimenting with such a battery for some time. ”

The story of electric vehicles (EVs) is of a painful missed opportunity – in the early twentieth century, it was not at all clear that the internal combustion engine would eclipse the electric motor as the choice to power cars. Now, 108 years later, is the way to EVs finally “clear to success?”

The short answer might be: it depends where you live. Here in Nova Scotia, the answer is probably not.

“Education, rebates, infrastructure and supply are recognized as the four pillars of EV adoption,” says Thomas Arnason McNeil, Ecology Action Centre’s climate policy coordinator for sustainable transportation.

The latter three of these pillars are essentially economic. Let’s take a look at these, widening our discussion of the second pillar to include full cost rather than only rebates. Where is Nova Scotia lacking?

Of course, cost includes the upfront price of buying a vehicle, and the continuing costs of energy and maintenance. Henry Ford’s gasoline-powered Model T came in at about \$440 USD in 1914, affordable for the small but growing American middle class. Converted to 2022 dollars, this is about \$16,000 CAD. What’s remarkable is how little this baseline figure for a cheap, gas-powered car has changed. The cheapest EV’s bought new, by contrast – say, a Nissan Leaf or Chevy Bolt – come in at just under \$40,000 CAD.

However, a substantial offset – for those who can afford the upfront cost – is the approximately **47 per cent reduction** in maintenance costs of EVs compared to gas-powered vehicles.

This past August, I bought a 2017 Bolt from the only used EV dealership in Nova Scotia. My Bolt has a brand new battery due to a recall. With the new battery, it has an estimated maximum range of 420 kilometres– just about the distance by road from Halifax to Sydney. I got lucky. A modest windfall from the sale of the start-up company I work for allowed me to afford it.



PHOTO: Courtesy of All EV Canada - Electric Vehicle Store

But relying on people getting lucky and choosing to use their extra money on an EV is not a winning strategy. The decision to buy a car, and what to buy – or not to buy one at all – is an area where public policy enables consumer choice.

What are the federal and provincial governments doing to speed the transition from gasoline to electric? As usual, it's a tale of carrots and sticks.

Wherever you live in Canada, there is something of a carrot. The federal government offers up to \$5,000 for a new EV, though nothing for a used one. **Nova Scotia** offers a \$3,000 rebate for new EVs and a \$2,000 rebate for used, **less generous** than the other Atlantic provinces, Quebec, and B.C., but more generous than Ontario. The prairie provinces offer no incentives.

Some American states offer a larger carrot to help middle-income earners. **Vermont's incentive model** is tied partially to income. A buy-back program rewards taking gasoline powered vehicles off the road as well as putting EVs on the road. And we have a history of using Vermont's models, as Efficiency Nova Scotia took partial inspiration from Efficiency Vermont.

But this now brings us to the next pillar of EV adoption: infrastructure. And infrastructure means charging stations.

Here things get tricky.

There are 3 levels of chargers: Level 1 is simply your average outlet and generally only adds 6-8 kilometres of range to your EV per hour. Level 2's are most commonly installed at home, and also the vast majority of public charging stations: they add, as an average, about 30 kilometres of vehicle range per hour. Level 3 DC fast chargers add up to 200 kilometres per hour of range (more for Tesla fast-chargers).

Since Ford's 1914 musings which led to nothing, gas stations have proliferated to nearly every village, city neighbourhood, and stretch of rural highway. While EV drivers who own a home with a driveway can install a Level 2 charger and plug-in to get a full charge or close to it overnight, everyone else – condominium, apartment, or co-op dwellers – have to find a public charging station. Currently, 80 per cent of charging in Canada takes **place at home**, indicating that ownership of a home with a driveway is still a hurdle to EV adoption. The Nova Scotia government has **incentivized the installation of chargers at multi-unit residential buildings** through Efficiency Nova Scotia, but the program is far too small in scope. And the public charging infrastructure in Nova Scotia is inconsistent and unregulated.

TAKE ACTION

Electrifying our school bus fleet is an important step in lowering emissions from transportation in our province. That's why we're calling on the government of Nova Scotia to put in place a mandate and clear targets to achieve a 100 per cent electric school bus fleet over the next 10 years. Go to ecologyaction.ca/take-action-electric-school-buses-nova-scotia to join the call, or email [thomas.arnasonmcneil@ecologyaction.ca](mailto:arnasonmcneil@ecologyaction.ca)!

The vast majority of public charging stations are Level 2 chargers. These cost about \$50,000 to install, while the Level 3 DC fast chargers cost around \$500,000 to install. But for a stop on a long haul or a charge for those without a home charger, Level 3's are far more appealing.

Who is installing these chargers? And what of the costs and logistics to plug in and charge up at these public chargers? The answer to the first question is a mishmash of community groups and private businesses, incentivized by government grants. Most require an app to access – most commonly Flo, Chargepoint, or JuiceBox (a notable exception is the Petro Canada Level 3 “Electric Highway” chargers in Halifax off Herring Cove Road and in Stewiacke. Tesla chargers are incompatible with other EVs, though Teslas can plug into other chargers with an adapter. Public chargers charge by the hour, but the rates don't always show up on the app, and there is a lack of transparency as to how much energy you're actually getting. This situation is complicated by the fact that older EVs or those with partially charged batteries will add charge more slowly. But the charging stations billing you for time don't care.

Different chargers, different rates of cost, different rates of charge: all of these make for a complex picture. Fortunately, possible solutions are on the horizon: Measurement Canada is **considering** standards for per-kilowatt-hour billing. Additionally, some charging stations have flat fee per-use charges. While these novel pricing structures will do more to ensure accountability and transparency, it remains to be seen which of them will become the new standard.

Finally, let's look at supply. The unfortunate truth is that EV manufacturers send more cars faster to bigger markets – Quebec and B.C. in Canada, California in the U.S. And so wait times for new EVs – already long before the supply chain issues which

have exacerbated in 2022 – are stretching into the years. But the slow pace of EV delivery to smaller markets such as Nova Scotia slows the demand for charging infrastructure. Poorer infrastructure makes Nova Scotia a less appealing destination for EV drivers from elsewhere, and hinders the growth of larger EVs for the transport of goods. It also slows the rate at which people become familiar with EV cost, charging, and maintenance.

Why are certain EV markets considered desirable while others are ignored? The ‘larger markets’ mentioned above have chosen to employ a stick and carrot approach: In addition to higher rebates, British Columbia and Quebec have followed in the footsteps of fourteen states, most notably California, to implement a Zero Emissions Vehicle (ZEV) mandate: 100 per cent of new light-duty vehicles must be so-called zero emission vehicles by 2035. (We'll save the discussion of the term “zero emission vehicle” for another time: a useful but somewhat misleading term, ZEVs encompass both electric vehicles and plug-in hybrids; the “zero” refers to tailpipe emissions rather than lifetime emissions).

Could Nova Scotia implement an EV mandate soon? Arnason McNeil thinks so;

“While we were successful in pressing NS to put a ZEV mandate on the books last year, they still have yet to implement that regulation. When the federal government announced they were designing a nation-wide ZEV mandate this year, we joined the province in pressuring them to adopt regional sales targets for smaller, have-not provinces. But if federal policy making ignores Atlantic Canada and forces us to compete with larger markets, the cycle of long wait times for EVs and slowed infrastructure deployment will continue unabated.”

So, the solution appears to be a mixed bag. Higher incentives, more public charging stations (and especially more Level 3 fast chargers) would be a start. Mandates for EVs either by flat numbers or as a percentage of vehicles sold, and specifically targeting the less populous provinces in federal legislation would be another logical step.

Recent data shows transportation is responsible for consistently **around 25 per cent** of Canadian greenhouse gas emissions. MIT's **carbon counter app** estimates that an electric vehicle generates 30-40 per cent of the lifetime emissions of a comparable gas vehicle. This includes emissions associated with manufacturing and mining of metals for batteries. Where precisely your vehicle falls within this 30-40 per cent also of course depends on the sources of energy which power your battery charges.

Some quick math will tell us that, if the total number of vehicles remained the same and all were converted to electric, Canada would cut 15-17 per cent of its emissions by this measure alone. But until smaller provinces like Nova Scotia catch up, the way to widespread EV adoption is certainly not yet “clear to success.”

Ian Mallov (he/him) is a chemist and writer originally from Truro, now living in Halifax.

PHOTOS: Courtesy of All EV Canada - Electric Vehicle Store



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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 world.

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Sustainable Wealth Family Office

In their own personal ways, Richard Nickerson's clients work hard to leave the world a better place than they found it. For many clients, this means investment decisions that support companies which act in accordance to that client's values. Richard is a socially responsible investor and he supports his clients in choosing high quality investments that align with their values.

LEARN MORE AT: assantehydrostone.com/advisor/richard-nickerson



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LEARN MORE AT: helpingnatureheal.com

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LEARN MORE AT: garrisonbrewing.com

Two Environmentalists, Taken Abruptly and Too Soon

by **MARK BULTER** /// EAC Volunteer



**Burkhard
Plache**

1965-2022

I last saw Burkhard Plache determinedly cycling up the long incline of Devonshire Avenue on his way home from work. On September 10, Burkhard drowned while swimming in the Northumberland Strait. Burkhard was a physicist and worked as a software developer and system engineer. He could have been driving home in a shiny SUV but instead he was commuting on bicycle between work and his home in Jollimore where he lived with his loving partner, Ingrid. Burkhard moved from Germany to Canada in 1993. His ever-deepening knowledge and love of nature eventually lead him to become President of the Halifax Field Naturalists. Burkhard was a member and supporter of EAC and other nature groups for many years.

An account of his amazing life can be found at <https://bit.ly/BurkhardPlache>

Mark Bulter (he/him) is a senior advisor with Nature Canada, proud member of EAC, East Coast Environmental Law Association board member, and consultant.



**Meinhard
Doelle**

1964-2022

In remembering Meinhard, I will start with a personal story. On September 13, I wrote to him asking if he would have a few minutes in his busy schedule in the coming week to help us think through and untangle a policy problem. Meinhard wrote back and said how about right now? My colleague and I hastily assembled our thoughts and, in the ensuing discussion, Meinhard untangled us. On the call he mentioned he was looking forward to the weekend and going to the family cottage on the Bay of Fundy. On Saturday September 17 he was killed by a motorist while out cycling.

In the tributes and memorials that followed one learnt that he was a mentor to so, so many. He was kind, generous and thoughtful to family, friends, colleagues, students, and to Nova Scotia and Nova Scotians. Lisa Mitchell, Executive Director of East Coast Environmental Law, in addressing a room of 600 people at Dalhousie, said she had a running list of questions for Meinhard, and he always found time to answer them. Meinhard was both generous and smart, qualities that aren't always found together.

Meinhard Doelle was a law professor at Dalhousie Law School and taught on climate, energy, and the environment. He made numerous and practical contributions to environmental policy and where it counts, to protecting the environment. He helped draft or advise on provincial and federal environmental legislation, including the Nova Scotia Environment Act. Written with his colleague, Bill Lahey, their **report** on aquaculture in Nova Scotia is one of the best guides to sustainable use of natural resources that exists. Meinhard was equally active off campus. Seeing a gap in Atlantic Canada, he founded the East Coast Environmental Law Association in 2007. He sat on the Board of the Ecology Action Centre for several years and was involved with other organizations at the national and international level.

When Meinhard died, his friend and colleague from University of Calgary, Dave Wright, immediately flew out to Nova Scotia to comfort and support family and friends. He organized a walk in Point Pleasant Park. Finding solace in their grief, Wendy, his wife, and Meinhard's three daughters, Klara, Alida and Nikola, were there to celebrate Meinhard's incredible life. Dave Wright said it well: "The finest human indeed."

A full description of Meinhard's many and enduring contributions can be found at <https://bit.ly/Meinhard>

Greenwashing or Good Shopping?

by **MADELEINE MCLVOR** /// EAC Volunteer

Living amidst the chaotic web of human consumption versus resource depletion and destruction, being a consumer can often feel confusing and hopeless. Demands for one's moral attention are at every corner when companies are frequently accused of ploys like greenwashing – an exploitation of the growing need for sustainable products by simply presenting themselves as environmentally sound, rather than doing the real work to be so.

The result is often ironic, usually colouring well-known disposable and wasteful products such as plastic bags or disposable razors green – trying to depict them as “natural”, while also stamping the word “eco” or “bio” in front of the brand's name. It can be flashy narratives of ethically sourced and reusable fibres, or stamps of approval that claim they are doing restoration, covering up the reality that these companies are nowhere near an environmentally net-positive or neutral effect.

However, there are certain harsh realities that exist in the underlying structure of our economic system. For example, let's imagine a small business owner who does their best to source all of their materials ethically and locally: there can still be unavoidable environmental costs, so it is difficult to determine what is greenwashing and what is merely a lack of better solutions. How far should one go when scrutinizing certain claims?

Ethics and corporations can often be like oil and water. A company's presentation of its “green” products is tainted by the base desire to produce items that cost the planet finite resources. At a certain point, one can only do their best in trying to find products that are mostly sustainable. So how as consumers can we vote with our dollar and pressure companies to do better? How might one navigate the complex maze of determining what good shopping is despite greenwashing?



A few straightforward things to look for are third party certifications, transparency and clear goals. Identifications such as B-corp certification (bcorporation.net) or Ecologo (ul.com) can help indicate if a company has worked to keep up to a certain environmental standard. Additionally, if a company is transparent about how they operate it is easier to determine whether or not they are making sustainable products. However, sometimes with larger corporations, it is difficult to know if they are truthful in their ecological claims, so shopping locally allows one to have the opportunity to get to know a company more intimately and decide whether or not they deliver environmentally friendly products. Finally, a company should be able to demonstrate its goals and how its products are actively sustainable. For example, if a product has unnecessary packaging or uses eco-friendly buzzwords such as biodegradable, organic, and net-carbon, rather than describing the way their product is sustainable, this is a good indicator of greenwashing. What about the product is actually reducing its impact on the environment? Does the company have a clear plan and goal for reducing their impact?

Ecologically aware shopping can sometimes feel futile and pointless. But the reality is one can only be as good a shopper as the products they have access to. Avoiding greenwashing is the best we can do as consumers, but it is up to the companies themselves to provide access to better and more sustainable products.

Madeleine Mclvor (she/they) is a writer, artist and lover of unusual and beautiful things. She recently graduated with a BA in philosophy and creative writing, and has been a volunteer with EAC since 2021.

Environmental Impact Assessments:

ARE THEY ANOTHER FORM OF GREENWASHING?

by KATHERINE MARTIN /// EAC Volunteer

Environmental assessment in Nova Scotia

Companies often use Environmental Impact Assessment (EIA)* to showcase the “environmental awareness” of their projects. EIA, also known as an Environmental Assessment (EA)* in Nova Scotia, is an evaluation framework used to determine the environmental impacts of a development. An EA provides a project description, a description of the existing environment, predictions of the project’s impacts, and plans to mitigate any suspected effects. When implemented properly, the EA process promotes sustainable development, provides more environmental awareness for industries, and encourages transparency, confidence, and community involvement throughout the planning process.

**Not to be confused with Environmental Site Assessment (ESA) which is used to determine if previous land use has led to property contamination.*

People are beginning to question the legitimacy of the EA framework. Nova Scotia has approved an increasing number of projects despite being under scrutiny from local ecologists.

In Nova Scotia, EAs are divided into two classes of assessment. The assessment framework is dependent on many factors, including the size, scope, and location of the project.

Class I Undertakings

Small-scale projects that may or may not cause significant impacts.

Class II Undertakings

Large-scale projects that have potential to cause significant impacts.

A photo showcasing the present ecosystem at Eisner Cove Wetlands. PHOTO: Zane Woodford (2022)



Changes to legislation

Currently, the EA framework is based on the federal *Impact Assessment Act (IAA)* (2019) and the Nova Scotia *Environment Act* (1994). After an overhaul of the *Canadian Environmental Assessment Act (CEAA)* (2012), IAA (2019) aims for a more holistic and integrated approach to assessing both the negative and positive impacts of a project. Environmental impacts tend to be the major focus, although these assessments include social, economic, and health impacts. Gender-based analysis has also been introduced to determine how these impacts affect genders differently. The guidance of these assessments is also based on local evidence, indigenous knowledge, and scientific information. There is a greater emphasis on the engagement of Indigenous communities throughout the entire development process.

The process as greenwashing

Greenwashing is the process companies use when providing misleading (or false) information about a project’s environmental impact. Although there have been some improvements from CEAA’s bare-bones legislation, there are many factors of the EA process that are lacking.

Loopholes

Project Exemptions

Some projects are completely excluded from the EA process, like maintenance or repairs on existing facilities, and projects for fill pits and quarries. This seems like a quick and easy way to make less work for the government, and contributes to a lack of accountability in the EA process.

Weak Environmental Regulations and Definitions

Although the Environment Act (1994) defines many terms, it lacks important values. For example, the term “significant” is defined as an “adverse effect” on various parameters (such as magnitude, area extent, duration, frequency, degree of reversibility, and possibility of occurrence). The definition may be present, but there is major room for interpretation on what is considered adverse. People cannot understand and comply with regulations with ill-defined and inconsistent definitions.



A group of signs in protest of the housing development on Eisner Cove wetlands. Protests and public outcry have been ignored by Timothy Halman and his decision to dismiss the appeals.

PHOTO: Zane Woodford (2022)

TAKE ACTION

Join the Nova Scotia environmental assessment mailing list! Members are updated on new environmental assessment project registrations and Ministerial decisions. To subscribe, send an email message with your name in the body of the email to join:ea@lists.gov.ns.ca

Time scale

The length of the EA process in Nova Scotia is very short. The Minister of Environment and Climate Change has approximately 50 days to respond for Class I projects, and 275 days for Class II undertakings. This small amount of time is certainly not enough to determine all the direct, indirect, and cumulative impacts on the environment. To truly grasp the important factors in the ecosystem, in-depth monitoring and ecosystem analysis is necessary, and it can’t be completed that quickly. These quick turnover times are certainly the government’s attempt to speed up the development process. Although it may slow the overall schedule of developments, it’s more important to understand the impacts they will have.

“There’s fairly steeply sloping land on either side of it, and that’s the land they are developing, so I don’t think it’s got a chance ... it’s just not going to survive as it is. You can’t filter that out with a buffer; (salt) just goes through everything.”

– David Patriquin, Former Biology Professor; Dalhousie University, Member of Nova Scotia Wild Flora Society.

Public participation

The Minister’s Decision

The final approval of an undertaking is left to the Minister of Environment and Climate Change. According to section 138(2) of the Environment Act (1994), the Minister’s final decision cannot be appealed by the public, placing little-to-no value on public opinion.

“Meaningful” Consultation

When it comes to new developments in our communities, our voices deserve to be heard! Nova Scotia EA Regulations state that there are many opportunities to engage with proposed projects. Despite these chances, it seems no one is listening no matter how much push back there is. Without placing more value on public participation, these actions are strictly performative.

The degree of public consultation also varies depending on the size of the project and the decisions by the Minister. Does this mean the communities’ opinion is only valid sometimes?

Is Anyone Listening?

The Eisner Cove wetland development is a prime example of the government’s disregard for opinions from environmentalists and Indigenous communities. The fate of Dartmouth’s largest wetland ecosystem is up in the air with the dismissal of the appeals to the proposed housing development in the area. Two appeals were submitted to Timothy Halman, the Nova Scotia Minister of Environment and Climate Change, opposing the project’s go-ahead due to the sensitive ecology in the area. The appeals included asks for why this development did not undergo an EA.

Currently there have been no formal ecological studies to determine the biodiversity present at the site, but it is speculated that this area provides suitable habitat for wood turtles, an endangered species in Nova Scotia, and houses many rare plants and waterbird species. The planned 45-hectare housing development will damage a relatively untouched old growth forest, and 12 hectares of highly biodiverse wetland. The public is begging to have their voices heard, to tell the Minister that this project has more in opposition than favor. Despite the outcry, Clayton Developments has already begun to clear out the land.

The Nova Scotia EA process has a lot of work to do. We need more strict regulations to implement ecological studies throughout the process, more value in Indigenous and community engagement, and in-depth studies on the short and long-term impacts of projects throughout each sector and industry. The government needs to ensure that they’re developing our province in a way that fits the needs of all Nova Scotians, not just those with deep pockets. We need true sustainable action now, or we’re going to continue to pay for it later.

Katherine Martin (she/they) is a fourth-year Biology student at Dalhousie University with a passion for sustainable development and environmental health.

The Costs of the Climate Emergency

by **BARRETT TEFT** /// EAC Volunteer

The latest tropical storm to devastate the Atlantic coast — Hurricane Fiona — has yet again highlighted Canada's lack of preparation for the advancing climate crisis. The damages suffered during events like this demonstrate the economic toll that global warming has and will continue to produce.

The Insurance Bureau of Canada (IBC) reported an estimated \$660 million CAD in insured damages to Eastern Canada from Fiona, and \$385 million of that was in Nova Scotia alone. However, as homeowners insurance rarely includes damages due to storm-surge flooding, the actual cost of damages is projected to be much higher. Events like Fiona are likely to continue growing in intensity, and with that comes increasing costs: insured damages from extreme weather have quadrupled since 2008, according to the IBC. Canadian homeowners will continue to pay.

Flooding during tropical storms is caused by storm pressure pushing the ocean water toward the coastline, and is exacerbated by rising sea levels. According to the Intergovernmental Panel on Climate Change (IPCC), the sea level has risen a global average of 0.2 metres since 1900, and they predict another global average rise of 0.59 metres during this century. A study of Hurricane Katrina that looked at the relationship between rising sea levels and flooding during tropical storms estimated that, as a result of the rising sea levels, flood elevation during storm events was 15-60 per cent higher than it was in 1990.

Another study, this one on Hurricane Sandy, estimated that the increase in sea levels has led to flooding during storm events being three times as likely — a likelihood that will continue to rise as the sea levels do. In Nova Scotia, where it is predicted that the sea level will rise more than the global average, reaching one metre by 2100, this is severely impactful to communities: 70 per cent of the population lives on the province's 13,300 kilometres of coastline.

In the past, to protect against surges, communities built dykes, which act as barriers against the tide. However, organizations such as the Clean Foundation claim that these dykes only worsen the issue by blocking water drainage during intense storms. Instead, focusing on restoring the coast's natural ecological balance will protect communities against the increasing intensity of these events.



Clean-up of MacCormacks Beach in Eastern Passage after a bad winter storm. PHOTO: Will Balsler

TAKE ACTION

These projects need volunteers! In order to sign up, visit the Clean Foundation's website at cleanfoundation.ca/clean-coasts

Salt marshes have been an area of interest for an increasing body of scientific literature concerning their ability to protect against tropical storms. A restored coastline provides multiple florae that slow and break up oncoming waves and surges. Unlike the dyke system, salt marshes allow water to drain back out during storm events.

An American study estimated the value of salt marsh protection to be up to \$5 million USD (almost \$7 million CAD) per square kilometre. Furthermore, once restored, these salt marshes are self-sustained ecosystems requiring little to no maintenance.

In 2018, the Canadian government approved \$7 million in grants for four organizations working to repair the Canadian coastline. Among these was the Clean Foundation, which received the largest grant of \$2.4 million to focus on the restoration of the Northumberland Strait Salt Marsh. Similarly, the government granted Saint Mary's University \$1.8 million to remove dyke systems — to allow for a restoration of the salt marshes — throughout the Bay of Fundy. Both projects listed their durations to be five years, finishing next year.

Barrett Teft (he/him) lives in Halifax with his girlfriend and studies at Dalhousie University. He enjoys having electricity and an apartment that is not flooded.

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5664 Charles St, Halifax

Carbon Cap-And-Trade Controversy:

IT'S TIME TO END EXEMPTIONS FOR LARGE POLLUTERS

by **SHAUN TRAINOR** /// EAC Volunteer

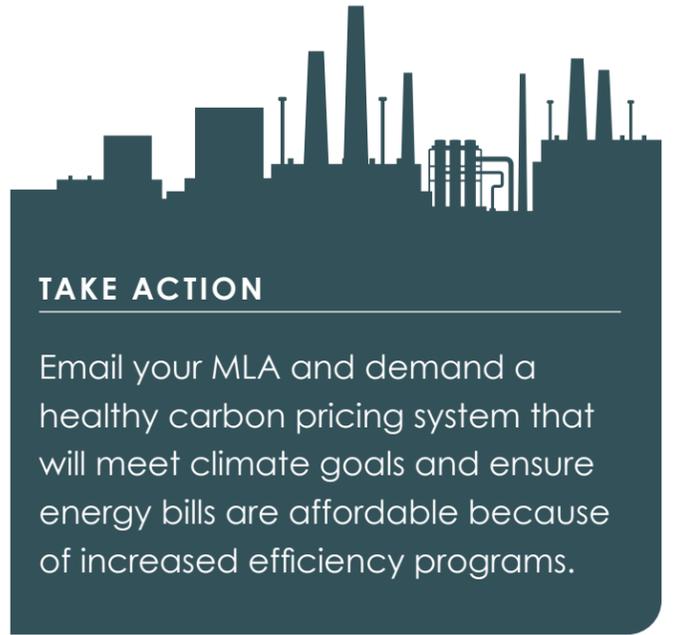
Cap-and-trade

The oil and gas sector and coal mining sector are the largest sources of greenhouse gas emission in Nova Scotia. In order to ensure government targets are met, and the most severe impacts of climate change are averted, measures need to be put in place to reign in these sectors. One such method that is at the disposal of governments is a carbon emission cap. Carbon emission caps are often known as a cap-and-trade system. Currently, Nova Scotia has a cap-and-trade system in place (which will be in place until the end of 2022. At the start of 2023, Nova Scotia will have either an Output Based Pricing System standalone, or a hybrid system that also includes the federal carbon tax (with rebates)). The cap-and-trade system works by setting a total limit (a cap) on the emissions produced by all participating emitters. From here, a price is set and automatically adjusts to the target. Under this system any polluter that emits more than their quota must purchase the right to do so. They cannot, however, just buy any amount. The available emissions that can be bought are sold by polluters that emit less than their quota and thus have excess emissions to sell. Thus, emissions are kept to a capped amount per year that, over time, will be lowered by the government in order to bring down overall emissions and reduce the risk of global average temperatures rising above 1.5°C. This is the idea and the hope. However, there is a lot of criticism of this system saying that it distracts from larger systemic changes that are needed and is a status quo approach to addressing the climate crisis. Nova Scotia is no stranger to controversy around its own cap-and-trade system.

Exemptions: What is the point if the largest polluters are exempt?

Nova Scotia has received criticism for a number of reasons regarding its cap-and-trade system. One that has come to light recently is that of Donkin Coal Mine. Recently the mine started up operations again but had sat idle for two years. The mine began operations in 2017 and has exceeded Nova Scotia's cap on emissions nearly every year since. Even during the two years that the mine sat idle it exceeded the emissions cap. Additionally, as highlighted by the Sierra Club of Canada and Dave Risk, an Earth sciences professor at St. Francis Xavier University and lead researcher at the Flux Lab specializing in methane measurements, the Donkin Mine is likely the largest methane emitter in the province and its emissions need to be included in the cap-and-trade system.

The fact that Donkin Mine, and others, continue to receive exemptions from Nova Scotia's carbon emissions cap is having an effect on all Nova Scotians. Not only are exemptions ensuring that more carbon emissions are released into the atmosphere, thus locking in more global heating for decades to come, but there is a more immediate and tangible effect. One may not realize it, but just giving Donkin Mine an exemption from the cap-and-trade program is raising the price of electricity for all Nova Scotians. This is due to the fact that the cost of mitigation is shifted onto other parties. Instead of Donkin Mine paying its fair share and curbing its emissions, entities such as Nova Scotia Power, one of the province's largest greenhouse gas emitters, must carry the burden. And in order to do so Nova Scotia Power passes this additional cost onto the people of Nova Scotia through higher electricity rates.



TAKE ACTION

Email your MLA and demand a healthy carbon pricing system that will meet climate goals and ensure energy bills are affordable because of increased efficiency programs.

Systemic change

Exemptions for the largest emitters, for fossil fuel corporations, is a justice issue. These exemptions are a perfect example of larger, systemic failures that are hindering our ability to truly tackle the climate emergency. Continuing to enable the largest polluters and multi-billion-dollar corporations to be exempt from the cap-and-trade program, a program the current Nova Scotia government has brought to an end, is a slap in the face to Nova Scotians. The cost of living is on the rise, wages are not, yet the government looks away as the cost of enabling corporations to make ever greater profits comes at the expense of Nova Scotians and the planet. Nova Scotia needs greater accountability and a real plan to address the climate crisis through a climate justice lens. Exemptions, such as that given to Donkin Mine, need to come to an end. These exemptions are unfair to Nova Scotians who are working hard to make ends meet and to do their part in addressing the climate crisis. The government needs to step up and ensure that corporations, especially those in the fossil fuel and coal mining industries, are held accountable for the emissions that they produce. To enable these exemptions is fuelling greater levels of poverty and insecurity in Nova Scotia now and in the long term. Addressing the climate crisis today, with bold action, not exemptions for the largest polluters, is both the most cost effective and just thing to do. So, whether you approach this from a monetary or justice point of view, it is clear that the best way forward is to implement a system that tackles the climate crisis and holds the largest polluters in Nova Scotia to account.

Nova Scotians deserve better. It is time to bring exemptions for the largest polluters to an end.

Shaun Trainor (they/them) is a passionate advocate for mental wellbeing in the climate crisis and the role of art in fostering resilience and regeneration.

Action is Our Middle Name

WILDERNESS

Nova Scotia continues to be threatened by the growing gold mining industry. Atlantic Gold's request to increase the tailings dam wall at their mine at Moose River was approved by the province without an environmental assessment, further risking a dam breach. Another company, Anaconda, was granted approval to open a gold mine at Goldboro. We continue to advocate against these destructive mines and push for government processes that truly prioritize the environment and communities.

The government has made little progress on further implementing recommendations from the "Lahey Report" on forestry practices, or on designating more protected areas. These were commitments in the Progressive Conservation election platform in 2021, and were enshrined in legislation in EGCCRA.

To reconnect people with nature, we partnered with Our HRM Alliance to host guided hikes at three locations in HRM's fledgling greenbelt. There are still places worth fighting for in Nova Scotia.

TRANSPORTATION

The ever-popular Pop-Up Bike Hub (PUBH) was on the road again all summer long, the program partnered with over 19 communities across Nova Scotia to provide 20-minute tune-ups. The PUBH mini, our new electric cargo bike version visited five HRM communities on a weekly basis. Between the two programs over 450 bikes were repaired.

Our Youth Active Transportation and Art project is now complete! School groups designed, printed, and distributed their designs and posters to share their stories about active transportation successes in their communities and the Active Transportation challenges they faced.

We had three successful Bike Buddy cohorts with 40 participants throughout the Spring and Summer. Many buddies continue to meet up and arrange their own group rides post participation!

The Nova Scotia Active Transportation Future dashboard has been updated! Federal funding has been approved with quarterly updates to follow through June 2024. This dashboard enables us to track the province's active transportation infrastructure goals.

MARINE

We worked closely with our partners at Dalhousie this summer on our pilot eelgrass restoration project, studying the potential for restoring damaged eelgrass meadows and the role that eelgrass plays in sequestering carbon.

We also launched our Kelp Kurious project this summer, and our new Seaweed Farming Education Centre is up and running in Mahone Bay. Kelp Kurious is helping folks learn about opportunities in the seaweed sector - supporting small-scale seaweed farming and small-scale seaweed product entrepreneurs.

In September, with contributions from our coastal community partners, we submitted comprehensive recommendations to the province to reform Nova Scotia's system of regulation for aquaculture. We also teamed up with the Healthy Bays Network to launch "Salmon Wars" — an explosive exposé on the sea-cage salmon farming industry. With award-winning journalists Doug Frantz and Catherine Collins, we hosted six events across Nova Scotia to demand a transition away from open-net pen salmon farming.

FOOD

The Food Team continues to develop the JustFOOD Action Plan for the Halifax Region, a municipal food strategy co-developed by the Halifax Food Policy Alliance and HRM. Public engagement for the plan is complete and has been captured in a What We Heard Report. We will present this report to Regional Council in the new year, where we will ask Council to sign on to the Milan Urban Food Policy Pact.

As a member of the Nova Scotia Coalition for Healthy School Food, we continue to advocate for the province to deliver a federally supported school food program that is adapted to the community context, culturally appropriate, and locally sourced.

We're also working hard to ensure there are strong policies to support farmers under the newly announced Sustainable Canadian Agricultural Partnership (SCAP). The Food Team is lobbying the province to develop climate-friendly cost-share programs that will be delivered under this framework.

BUILT ENVIRONMENT

The Built Environment Team has continued to be a voice for sustainable growth across Halifax Regional Municipality. During summer and fall of 2022, we collaborated with Our HRM Alliance to deliver the 'hike the greenbelt of Halifax' guided hike series. Over 100 people came out to learn about the Halifax Greenbelt, a network of green spaces in HRM that provide free and public access to nature and help direct growth into existing urban areas. The Built Environment Team engaged with every opportunity for public input in the Municipality's review of the Regional Plan, the HRM's highest level planning document that sets the vision and strategy for future growth. This included formal written submissions and presentations at public hearings. We continue to push for more livable and resilient complete communities through advocating for implementation of the Municipality's priority plans for integrated mobility, protecting our natural assets, and economic prosperity.

ENERGY & CLIMATE

The Energy & Climate Team has been busy! The Faithful Footprints program has successfully engaged with over 20 congregations across Atlantic Canada to significantly reduce energy use and operating costs in churches. We've leveraged needs assessments from indigenous communities to identify how energy efficiency can best serve community members.

We provided detailed submissions to the federal consultation on the clean electricity regulation, emphasizing the need to send a clear market signal to transition to renewable electricity generation.

In July, we released the Atlantic Loop report, detailing specifics on how Nova Scotia and New Brunswick could build out energy supply and increase regional coordination in decarbonizing the electricity sector.

In June, we successfully lobbied for an Atlantic Canada-wide feasibility study for electric school bus deployment. We are currently engaged in discussions with the federal government to lower EV wait times by establishing sales targets for smaller provinces within a federal EV supply mandate.

COASTAL

The Coastal & Water Team continues our work with Nova Scotia Environment & Climate Change staff in finalizing the Coastal Protection Act (CPA) and pushing for follow-up legislation to address gaps in on-site septic system and well regulations. We are hopeful that the CPA will roll out in early 2023.

Throughout this fall and winter, we will be working with three Dalhousie students - one in planning and two in law - on research projects related to our new coastal access initiative. Understanding and improving coastal access in Nova Scotia is a critical part of improving our relationship to shoreline ecosystems, and adapting to a changing ocean.

We also continue to advocate for stronger wetland protection across Nova Scotia, and are actively working with other organizations as we plan for World Wetlands Day on February 2, 2023.

The Seasonal Gourmet

by **KATE DUNCOMBE** /// EAC Volunteer

Vegan Pumpkin Chocolate Loaf

It's a great feeling finding a vegan recipe that causes disbelief in folks who tell you how delicious it is. That's what we find with this Pumpkin Loaf. Shockingly good, and shockingly egg and dairy free. As a cafe, we want everyone who comes in to feel welcome, which means including options for gluten free goods, as well as vegan treats to make sure no one leaves feeling left out. We do work right next to a preschool after all...

When one of our employees who is vegetarian herself found this recipe by Gina Burgess, and asked to try it, we said "oh heck yes." And we never looked back. Using everyday, easy to find ingredients like canned pumpkin and pumpkin seeds, warming spices like allspice, cinnamon and ginger, it is one of the easiest recipes we've ever made. You can also spice it up during harvest season by using local pumpkins to make your own pumpkin purée.

This recipe also bakes well in muffin form, making it easy to pack into a lunch box or to enjoy with friends and family under the changing leaves. Enjoy!

DRY INGREDIENTS

- 2 cups** plain, all purpose flour
- 1 1/4 tsp** baking powder
- 1 tsp** baking soda
- 1/2 tsp** salt
- 2 tsp** cinnamon
- 1/4 tsp** nutmeg
- 3/4 tsp** ground ginger
- 1/4 tsp** all spice or cloves
- 1 cup** brown sugar
- 1/2 cup** pumpkin seeds (save some for topping!)
- 3/4 cup** dark chocolate chips - same as above, save those bad boys for some extra chocolatey goodness on top

WET INGREDIENTS

- 1 cup** pure pumpkin puree (canned is okay!)
- 2 tsp** vanilla extract
- 1/4 cup** coconut oil (or any neutral oil)
- 2/3 cup** dairy free milk of choice (such as oat or soy)

DIRECTIONS

- 1 Preheat your oven to 350F and grease and line a loaf pan.
- 2 Mix the dry ingredients together (except for the chocolate chips) in a large bowl.
- 3 Mix the wet ingredients together in another bowl (using a hand mixer works well!)
- 4 Add the wet mixture to dry and mix together until a smooth batter forms, then fold in the chocolate chips.
- 5 Pour into the lined loaf tin and sprinkle with pumpkin seeds and chocolate chips.
- 6 Bake in the oven for 50-60 minutes, until golden brown and a toothpick comes out clean. Your kitchen will smell delicious.



Kate Duncombe (she/her) manages the Lawrencetown Beach Cafe on the Eastern shore and is a lover of people and food. She manages an amazing staff, who are all passionate about using local and seasonal produce, as well as finding recipes that put smiles on faces. Cafe owner Sam McKenna has a mission to use sustainable sources and is all about forging relationships with growers, makers, and food tasters.

DIRECTORS

- MAGGY BURNS** Executive Director /// maggy.burns@ecologyaction.ca
- DAVID HODD** Director of Operations and Development /// david.hodd@ecologyaction.ca
- MARLA MACLEOD** Director of Programs /// marla.macleod@ecologyaction.ca

OPERATIONS STAFF

- CARLY HOMINUK** Member Relations Officer /// carly.hominuk@ecologyaction.ca
- CLAIRE PARSONS** Strategic Communications Manager /// claire.parsons@ecologyaction.ca
- EMMA MOORE** Membership Relations Office /// emma.moore@ecologyaction.ca
- HELEN BRANDON** Accounting Clerk /// helen.brandon@ecologyaction.ca
- JOANNA BULL** Community Engagement Manager /// joanna@ecologyaction.ca
- JULIA POLLACK** Accounting Manager /// julia@ecologyaction.ca
- JULIA SENT** Database and Development Administrator /// julia.sent@ecologyaction.ca
- LISA LEE STECKLER** Office Coordinator /// lisalee.steckler@ecologyaction.ca
- NANCY JULIEN** Human Resources Manager /// nancy.julien@ecologyaction.ca
- PAULA ACETO** Community Giving Manager /// paula.aceto@ecologyaction.ca
- ROWAN SWAIN** Communications Officer /// rowan@ecologyaction.ca
- SARAH MOORE** Communications Officer /// sarah.moore@ecologyaction.ca
- TIM BARLOW** Facilities Officer /// tim.barlow@ecologyaction.ca

PROGRAM STAFF

- ANIKA RIOPEL** Sustainable Transportation Coordinator/Seaweed Education Centre Coordinator /// anika.riopel@ecologyaction.ca
- ASHLEIGH BOERS** Making Tracks Coordinator /// mt@ecologyaction.ca
- BEN HAMMER** Transportation Officer /// benhammer@ecologyaction.ca
- BEN LEMPHERS** Community Food Coordinator /// ben.lemphers@ecologyaction.ca
- BRENNA WALSH** Energy Coordinator /// brenna.walsh@ecologyaction.ca
- CHRIS BENJAMIN** Energy Efficiency Coordinator /// chris.benjamin@ecologyaction.ca
- CHRISTINA CALLEGARI** Sustainable Seafood Coordinator /// christine.callegari@ecologyaction.ca
- CLAIRE MORLEY** Energy Efficiency Officer /// claire.morley@ecologyaction.ca
- HOLLY ISNOR** Marine Conservation Officer /// hollyisnor@ecologyaction.ca
- ISABEL CHAVEZ** Active Transportation Officer /// isabel.chavez@ecologyaction.ca
- JACOB THOMPSON** Energy Coordinator /// jacob.thompson@ecologyaction.ca
- JESSIE CRAWLEY** Community Outreach Officer /// jessie.crawley@ecologyaction.ca
- KAREN MCKENDRY** Wilderness Outreach Coordinator /// karenmckendry@ecologyaction.ca
- KORTNEY DUNSBY** Sustainable Cities Coordinator /// kortney.dunsby@ecologyaction.ca
- LAURA KARAHKA** Marine Communications and Administration Officer /// laura.karahka@ecologyaction.ca
- NIKITA POPLI** Community Engagement Officer, Electrified Transportation /// nikita.popli@ecologyaction.ca
- MERYDIE ROSS** Project Manager, Seaweed and Community Economic Development /// merydie.ross@ecologyaction.ca
- MIMI O'HANDLEY** Wetland and Water Officer /// mimi.ohandley@ecologyaction.ca
- MORE VAIL** Community Food Coordinator /// more.vail@ecologyaction.ca
- RAYMOND FLOURDE** Senior Wilderness Coordinator /// wilderness@ecologyaction.ca
- REBECCA BRUSHETT** Marine Planning and Engagement Coordinator /// rbrushett@ecologyaction.ca
- SEBASTIÁN PARDO** Sustainable Fisheries Coordinator /// seb.pardo@ecologyaction.ca
- SHANNON ARNOLD** Senior Marine Program Coordinator /// sarnold@ecologyaction.ca
- SIMON RYDER-BURBIDGE** 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** Energy Coordinator, Electric Vehicles /// thomas.arnasonmcneil@ecologyaction.ca
- WILL BALSER** Coastal Adaptation Coordinator /// will.balsler@ecologyaction.ca

Want to know what it feels like to join
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Become a member of the Ecology Action
Centre today and find out!

How?

Call or email Emma Moore of our membership team.

Call: 902 429 2202 ext. 107

Email: membership@ecologyaction.ca

Or sign-up online: ecologyaction.ca/become-member



In 2021, the Ecology Action Centre celebrated our 50th anniversary! We collaborated with our friends at Zuppa to commission 50 original works of art from multiple disciplines, inspired by the successes and challenges of the past five decades of environmental action in Mi'kma'ki.

Our 50th anniversary may be over, but the remarkable and inspiring results of this collaboration can still be enjoyed!

- Download the app **50 Things: An Art Adventure** to explore the art as a Halifax-wide scavenger hunt!
- Explore the art online at 50things.nowhere-app.com
- Check out **Carry the Spark: Songs from 50 Things** on Bandcamp, with music from Braden Lam, Terra Spencer, Blue Lobelia, George Woodhouse, Keeper E., and BARE Theatre Co.
- Listen to our limited edition podcast, **Carry the Spark: Reflections on the Movement**, available wherever podcasts are found. Hear conversations about the impacts of 50 years of environmental activism and what the future looks like.

To learn more visit ecologyaction.ca/50things.

CARRY^{THE}
SPARK

Original design by Colleen MacIsaac