

JULY 2022

HNP

Newsletter



Table of Contents



FEATURE: DAM BUILDING ALONG THE MEKONG 3-5

HOMEPITCH FEATURE 6

FEATURE: THE CONSEQUENCES OF THE OVERUSE OF PLASTIC PRODUCTS 7-9

HIRING FOR THE B.C BRANCH 10

FEATURE: INVASIVE SPECIES + EVENT COVERAGE 11-13



EXECUTIVE OF THE MONTH 14

UPCOMING EVENTS 15

OUR SOCIALS 16

BIBLIOGRAPHY 17-18

CREDITS 19

SHARE THE NEWSLETTER 20

NEWSLETTER OPT-OUT FORM 21

Dam Building

ALONG THE MEKONG



INTRODUCTION

Much of the world's greatest rivers root from the mighty Himalayas. One of these rivers, the Mekong, flows from Tibet, China, to the south of Vietnam (Mekong Basin, n.d). The river is the backbone of Southeast Asia, passing through Chinese Tibet and Yunnan, as well as Myanmar, Thailand, Laos, Cambodia, and Vietnam (Mekong Basin, n.d). However, with China being the most populous country in the world as of 2022, their government needs to supply their vast population with electricity (Eyler, 2020). In turn, China has built over 30 large-scale dams in Yunnan and Tibet (Eyler, 2020). However, the consequences are severe to the countries of Southeast Asia, its biodiversity, and its economy. Consequences which may have been done deliberately or out of desperation.



Credit: Sion Ang/SOPA Images/LightRocket/Getty Images

WHY DOES THE MEKONG MATTER?

In terms of fish biodiversity in rivers worldwide, the Mekong ranks second place which is just behind the mighty Amazon River (Mekong River, n.d). Furthermore, the Mekong River is in fact the world's largest inland fishery, with an estimated haul of 2.6 million tons of fish per year (Mekong River, n.d).



LILLIAN SUWANRUMPHA/AFP VIA GETTY IMAGES

In addition to its great fish biodiversity, the Mekong River and its floodplains are home to approximately 20,000 species of plants, 1,200 bird species, 430 mammalian species, as well as 800 reptilian and amphibian species. Furthermore, according to the WWF, more than 1300 new species have been logged in this region since 1997 (Mekong River, n.d). The Mekong is also home to some of the world's most rare and endangered species, such as the Saola and the Irrawaddy Dolphin (Mekong River, n.d).

WHAT IS HAPPENING TO THE MEKONG?



Looking into Geopolitics

Geopolitics have recently revealed strange and often mischievous decisions made by some of the world's superpowers. From a western standpoint, China is an example of this with its territorial claims to restore the lands of the former Qing Empire, claims in the South China Sea, and also to mention its dam building along the Himalayas and the tributaries of the Mekong (Krishnankutty, 2020). Since the majority of major rivers in East Asia spring from Tibet, China has control of the tributaries that converge to form the Mekong. With 13 operating dams in China, and 6 in construction, China has control over the water-levels of the Mekong (Eyler, 2020). This means that China is able to assert control over the river to serve its own needs while forcing Southeast Asia to its influence (Eyler, 2020). With the combination of the annual El Niño, the impacts become more severe with more intense droughts and lower river basins (Eyler, 2020). According to a wet season precipitation map of Southeast Asia during 2000-2018, the average wet season tends to be more wet in China; in contrast, the wet season is more dry in Southeast Asia when compared to China (Eyler, 2020).



YANG ZHENG/ IMAGINE CHINA VIA AP PHOTOS



MAOLLO YOEBYE VIA PINTREST



CREDITS: INTERNATIONAL RIVERS

WHAT IS HAPPENING TO THE MEKONG?



The Water Rising Trends of the Mekong

Chinese dams are shown to affect the water flows of Mekong. During the wet seasons, the water flows are seen to be reduced whereas during the dry seasons the water flows are shown to be increased. Storage dams primarily contributed to the increased water flow during the dry seasons. This is due to the discharge of water for energy production. 12.65 billion cubic metres of water discharged from the Jinghong hydropower reservoir during March to May 2016. This totalled to 40–89% of flows to various sections of the Mekong river. If these releases did not occur flows would have been 47% lower at Jinghong, 44% lower at Chiang Saen, 38% lower at Nong Khai and 22% lower at Stung Treng (MRC, n.d.).

Annual Disasters to come with Dam-Building

From feeding jungles, irrigating crops for millions of people, and supporting the tonle sap lake—the most productive fishery on the planet, the Mekong river has significant importance. However, the annual disaster to come with the hydropower dams will have a devastating effect on the Mekong river and its services. These include unseasonable flooding and droughts, high water levels in wet seasons and drops in the amounts of sediment carried by the river, with drastic consequences for biodiversity and fisheries (Ronny, 2022).

HOW IS THE LOCAL BIODIVERSITY DOWNSTREAM AFFECTED?

During the last century, the water-levels of the Mekong River faced drastic changes in rises and reductions. Much of the countries in Southeast Asia depend on the Mekong River to generate hydroelectric energy. However, some of these countries don't have enough money to sustain the ecology and generate hydroelectricity. An example of this scenario can be seen in the nation of Cambodia, where frequent blackouts are common across the country (Sukanan, 2019). Cambodia often purchases its hydroelectricity from neighboring countries like Thailand (Sukanan, 2019); however, there is only so much a country can do with constantly purchasing electricity. Therefore, this is why the Cambodian government is looking towards building more hydroelectric dams along the Mekong (Sukanan, 2019). While beneficial for the economy, the dams may affect the migration of fish species from Tonle Sap to the Mekong in Northern Cambodia during the monsoon season. Furthermore, much of South Cambodia's economy is dependent on fishing (Sukanan, 2019). Therefore, these migrations play a big role in both the biodiversity and economy of Cambodia.



Homepitch Feature



HNP Ontario got Featured on the Homepitch Newsletter!! Check it Out!

“WE VALUE THE POWER OF THE COMMUNITY SO PEOPLE CAN BECOME MORE ENVIRONMENTALLY CONSCIOUS WITHIN THEIR OWN COMMUNITIES AND BEYOND, IN ORDER TO ADVOCATE,” EVENTS CO-DIRECTOR, CINDY ZHU SAID.

WITH CLIMATE CHANGE ALREADY CAUSING MORE FREQUENT AND SEVERE EXTREME WEATHER EVENTS, THE LATEST REPORT BY THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC) SHOWS GREENHOUSE GAS EMISSIONS CONTINUE TO RISE, AND CURRENT PLANS TO ADDRESS CLIMATE CHANGE ARE NOT AMBITIOUS ENOUGH TO LIMIT WARMING TO 1.5°C – A THRESHOLD SCIENTISTS BELIEVE IS NECESSARY TO AVOID EVEN MORE CATASTROPHIC IMPACTS.

THESE STATS CAN FEEL OVERWHELMING, BUT HNP BELIEVES IT’S BETTER TO START NOW WITH ACTIONABLE SOLUTIONS LOCALLY. MANY ENVIRONMENTAL GROUPS LIKE HNP ARE URGING COMMUNITIES AND GOVERNMENTS TO ACCELERATE THE GLOBAL TRANSITION TO CLEAN ENERGY AND REACH “NET-ZERO” EMISSIONS AS SOON AS POSSIBLE.

**“LOOKING INTO OUR FUTURE, WE DON’T HAVE THAT MUCH TIME REALISTICALLY TO FIX THIS, BUT WE MUST START SOMEWHERE. START NOW. START TODAY. IT’S DIFFICULT, BUT MAKE THE EFFORT, BECAUSE WE DON’T HAVE THAT MUCH TIME.”
EXECUTIVE CO-DIRECTOR SRIJA DAS**



Photo by Melissa Embury.



Photo by HNP.

To read more

[HTTPS://THEHOMEPITCH.COM/?P=660](https://thehomepitch.com/?p=660)

WRITTEN BY : MELISSA EMBURY

The Consequences of



THE OVERUSE OF PLASTIC PRODUCTS

INTRODUCTION

There are thousands of inventions that help us in our everyday life, plastic being one of them. Although they are quite useful and common in today's society, do you really know the consequences of using one too many plastic products?

Plastic is any synthetic or semisynthetic organic polymer. While plastics may be made from just about any organic polymer, most industrial plastic is made from petrochemicals. The two main types of plastic are thermoplastics and thermosetting polymers. The name "plastic" refers to the property of plasticity, the ability to deform without breaking (Helmenstine, 2020). Due to their molecular structure, it is difficult for the material to break down naturally. The majority of plastics could even remain in their original state for a century, which will end up as deadly waste in landfills and the ocean.



By the end of the 20th century, plastics had been found to be persistent pollutants of many environmental niches, from the slopes of Mount Everest to the seabeds of our magnificent oceans. Whether being mistaken for food by animals or flooding low-lying areas by clogging drainage systems, plastics have become one of the main pollutants in the 21st century (Moore, 2022).

1	2	3	4	5	6	7
PET	PE-HD	PVC	PE-LD	PP	PS	O
Polyethylene Terephthalate (PET, PETE)	High Density Polyethylene (HDPE)	Polyvinyl Chloride (V)	Low Density Polyethylene (LDPE)	Polypropylene (PP)	Polystyrene (PS)	Other (O) – includes miscellaneous plastics (e.g non-recyclable nylon) & bioplastics

From The Green Chemistry Initiatives Blog. Flickr



Many birds often mistake shredded plastic bags as food, filling their stomachs with toxic debris. For hungry sea turtles, it's nearly impossible to distinguish between jellyfish and floating plastic shopping bags. Fish eat thousands of tons of plastic a year, transferring it up the food chain to even bigger fish and marine mammals.

Eventually, microplastics are consumed by people through food and in the air. It's estimated that globally, people consume the equivalent of a credit card of plastic every week. It is also expected that there will be more plastic than fish in the sea by 2050 (Centre for Biological Diversity, n.d.)

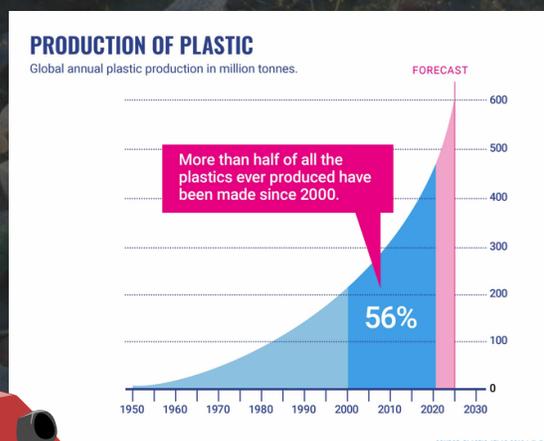


<https://www.playbuzz.com/glitterhorse200412/jellyfish-or-plastic-bag>

HOW DID THIS ISSUE COME TO BE?

The fossil fuel industry plans to increase plastic production by 40% over the next decade. These oil giants are rapidly building petrochemical plants across the United States to turn fracked gas into plastic. This means more plastic in our oceans, more greenhouse gas emissions and more toxic air pollution, which exacerbates the climate crisis that often disproportionately affects communities of colour (Centre for Biological Diversity, n.d.). The majority of this plastic goes to low-income countries because of the lack of better waste management systems - something only countries with high incomes are able to afford.

The overuse, and mass production of plastic products is a serious problem that affects not only the environment, but as well as the entire animal kingdom, society, and humans. Ever since the 1950s, plastic production has increased 200-fold on a yearly basis, which leads us to now, where the world is surrounded by more than 381 000 000 tonnes of plastic; equivalent to the mass of more than 2/3 of the global population.



PLASTIC ATLAS 2019 | © PLASTIC SOUP FOUNDATION



CONCLUSION

Realistically, the practice of plastics is not easy to reduce or eradicate, so much of our world has come to rely on plastics for safety, food management, clothing, and other uses we take for granted. Whether it be banning plastics as a whole, or finding eco-friendly substitutes, consumer consumption and demand is so high in today's society that said substitutes would deplete our natural resources, which will lead to global consequences. Going forward with this generation and the next to come, we can attempt to personally reduce our eco-footprint in our daily life by wasting less plastic; it is a commitment that politicians aren't ready to follow through with.

Having the entirety of our systeming shift in order to be more eco friendly would require great amounts of effort that most governments are not willing to put in yet. Therefore, some ways that we can reduce plastic use as individuals would be by using reusable containers, buying local and in season produce, growing and sustaining local food, purchasing necessities to avoid waste, avoiding fast fashion, and various other daily actions we often overlook.

As stewards of the lands, oceans, and skies of the Earth, we must guarantee its sustainability for future generations to come and civilization as a whole.

LEAVE YOUR MARK IN THE FIGHT TO ELIMINATE PLASTIC!



Hiring for the B.C. Branch!

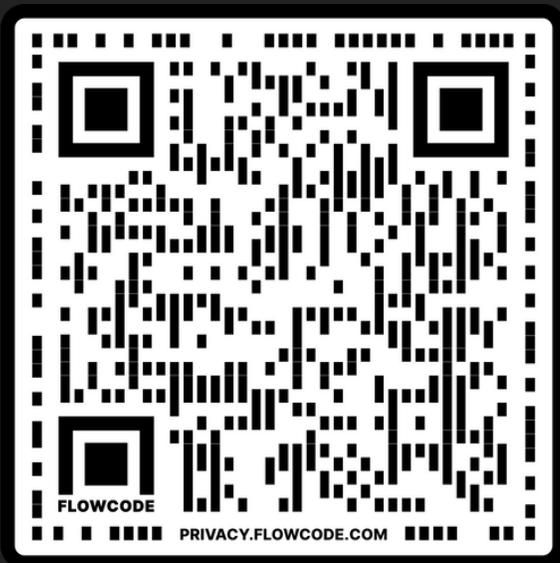


Do you Live in B.C, Canada?

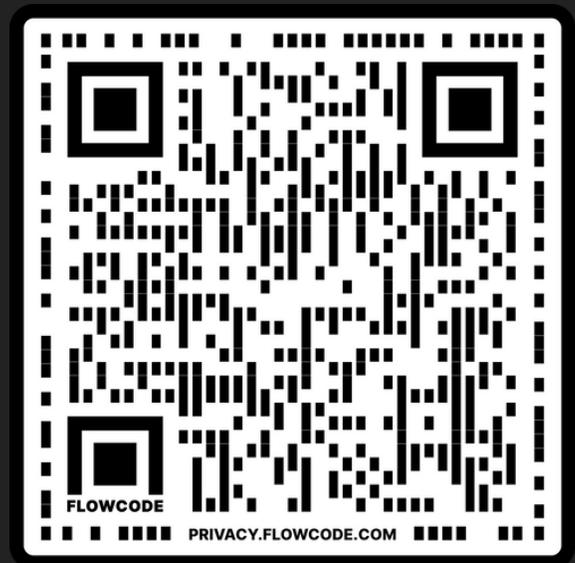
Are you looking for an opportunity of leadership?

Do you want to make a difference in the fight against climate change?

APPLY NOW



**Executive Information
Document**



Hiring Form

Invasive Species: Garlic Mustard

WHAT ARE THEY?

A biannual or winter annual plant, garlic mustard is a Class A noxious weed that typically reaches heights of 2–6 feet. This weed spreads by seed and has the ability to self-pollinate, which helps it quickly supplant native plants in places like woodlands, riverbanks, and along footpaths.

Native wildflowers and tree seedlings are quickly displaced by garlic mustard's fast expansion and the roots emit chemicals that alter the makeup of the soil and make it more difficult for native plants to thrive by preventing essential fungi from growing, which are, furthermore, necessary for native plants to obtain nutrients.



© Rachel Rogge

HISTORY AND IMPACTS

This species, which was initially introduced from Europe as a food plant, is now a major threat in forests throughout North America.

A biennial non-native plant that spreads by seed is garlic mustard. Although it is edible for humans, neither local fauna nor insects consume it. Once established, it is challenging to eradicate since it may self- or cross-pollinate, produces a lot of seeds, outcompetes local flora, and can grow in a very stable forest understory and it thrives in both areas of deep shade and sunlight.

It hinders other plants by interfering with the growth of fungi that bring nutrients to the roots of the plants.

The plant threatens several of Ontario's species at risk, including American ginseng, drooping trillium, false rue-anemone, hoary mountain mint, white wood aster, wild hyacinth and wood poppy (Garlic Mustard | Ontario's Invading Species Awareness Program, n.d.).

HOW CAN WE HELP?



Invasive Species: Pull-Out Event



Because this plant is so difficult to eradicate once it is established, familiarize yourself with the flower, the plant, and the habitat where it grows to find infestations early. Monitor sites regularly to remove plants prior to seed set, learn how to identify these plants, and avoid using them in landscaping. Hand-pulling individual plants are effective if the entire root is removed. Flowering or seeding plants must be put in a bag and discarded in the garbage. Before leaving the area, carefully and completely wipe off boots, clothing, and equipment to prevent spreading the small seeds to other locations.

On June 18th, 2022, HNP organised an invasive species dog strangling vine pull at the Middle Mill. ----

Last week's event was done in partnership with Toronto Nature Stewards and garnered over 60 youth from across the GTA, that helped to remove Dog Strangling Vines, and gave native species a helping hand! The sponsor for the event was EcoExistence!



EcoExistence, an eco-friendly lifestyle store, who has contributed over \$100 in prizes for the event!

Prizes include:

- EcoExistence Eco-friendly Market Basket x 1 (\$50)
- EcoExistence Versatile Insulated Water Bottle x1 (\$30)
- EcoExistence coupons x 4 (\$10)

HOW
CAN
WE
HELP?



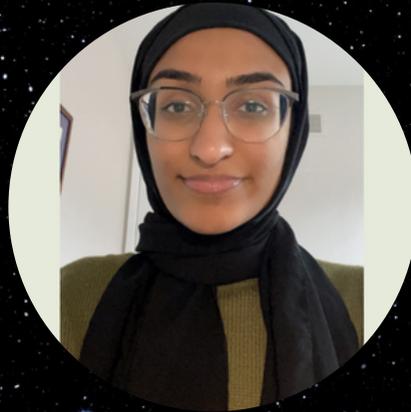
Invasive Species: Pull-Out Event



Executive of the Month



congratulations



RIDAH AFSHAL

Hi there! My name's Ridah and I am a first year student at the University of Toronto for Life Sciences. Some of my interests include photography, cooking, baking, and reading! I joined HNP as I loved their strive to raise awareness on climate change and informing the youth on this as well as being able to make an impact on my community. I'm excited to grow with this organization and let it reach its full potential!



Upcoming Events



ECO-CAREER WEBINAR SERIES

We will be exploring different careers in the field of environmental sciences and learning about possible pathways. Guest speakers will be joining us to talk about their experiences and challenges while pursuing an eco-career. Stay updated by following our social media platforms for more information and links!

Volunteer hours will be given out for this event.

DATE - Sunday, July 24th, 2022

LOCATION - ZOOM



Follow HNP on Instagram to be updated on these events 15



@HNPONTARIO



www.hnpontario.org



HNP ONTARIO



@HNPONTARIO



@HNPONTARIO



HNP ONTARIO



<https://discord.gg/2rfG9SyBNW>

Bibliography



DAM_BUILDING ALONG THE MEKONG

Eyler, B. (2020, April 22). Science shows Chinese dams are devastating the Mekong. Foreign Policy. Retrieved June 23, 2022, from <https://foreignpolicy.com/2020/04/22/science-shows-chinese-dams-devastating-mekong-river/>

Eyler, B. (2021, April 30). The Mekong Matters for America and America matters for the Mekong • Stimson Center. Stimson Center. Retrieved June 29, 2022, from <https://www.stimson.org/2020/the-mekong-matters-for-america-and-america-matters-for-the-mekong/#:~:text=The%20Mekong%20Basin%20is%20the,tens%20of%20millions%20of%20people.>

Krishnankutty, P. (2020, July 15). Not just Us, India - china is involved in 15 other territorial disputes in Asia. ThePrint. Retrieved June 29, 2022, from <https://theprint.in/theprint-essential/not-just-india-tibet-china-has-17-territorial-disputes-with-its-neighbours-on-land-sea/461115/>

Mekong River Commission. (n.d.). Mekong basin. Mekong River Commission (MRC). Retrieved June 23, 2022, from <https://www.mrcmekong.org/about/mekong-basin/#:~:text=The%20Mekong%20River%20is%20one,PDR%2C%20Cambodia%20and%20Viet%20Nam.>

(MRC), M. R. C. (n.d.). The effects of Chinese dams on water flows in the lower Mekong Basin. Mekong River Commission (MRC). Retrieved June 29, 2022, from <https://www.mrcmekong.org/news-and-events/news/the-effects-of-chinese-dams-on-water-flows-in-the-lower-mekong-basin/>

Roney, T. (2022, January 12). What are the impacts of dams on the Mekong River? The Third Pole. Retrieved June 29, 2022, from <https://www.thethirdpole.net/en/energy/what-are-the-impacts-of-dams-on-the-mekong-river/>

Sukanan, D. (2019, September 19). A new dam on the Mekong could cause a biodiversity crisis. Sustainability Times. Retrieved June 29, 2022, from <https://www.sustainability-times.com/environmental-protection/a-new-dam-on-the-mekong-could-cause-a-biodiversity-crisis/>

World Wildlife Fund. (n.d.). Mekong River. WWF. Retrieved June 29, 2022, from <https://www.worldwildlife.org/places/greater-mekong#:~:text=The%20Greater%20Mekong%20has%20no,have%20been%20catalogued%20since%201997.>

OVERUSE OF PLASTIC PRODUCTS

Bibliography



Centre for Biological Diversity. (n.d.). 10 Facts About Single-use Plastic Bags. Center for Biological Diversity. Retrieved June 8, 2022, from https://www.biologicaldiversity.org/programs/population_and_sustainability/sustainability/plastic_bag_facts.html

Definition, Sources, Effects, Solutions, & Facts. Encyclopedia Britannica. Retrieved June 11, 2022, from <https://www.britannica.com/science/plastic-pollution>

Nat Geo Image Collection. (n.d.). Jasper Doest. [Photographer]. Flickr https://i.natgeofe.com/n/fe039476-4f1a-4149-aeb1-3ec392fd964d/01-animals-plastic-nationalgeographic_2729678_16x9.jpg?w=1200

Ritchie, H., & Roser, M. (2018, September 1). Plastic pollution. Our World in Data. Retrieved June 12, 2022, from <https://ourworldindata.org/plastic-pollution>

The Green Chemistry Initiatives Blog. (n.d.). Flickr https://miro.medium.com/max/1168/0*r4t4dTabAMn4y8IK

Helmenstine, A. M. (2020, April 10). Plastic Definition and Examples in Chemistry. ThoughtCo. Retrieved June 11, 2022, from

<https://www.thoughtco.com/plastic-chemical-composition-608930> Moore, C. (2022, March 30). plastic pollution

INVASIVE SPECIES- THE GARLIC MUSTARD

Garlic Mustard | Ontario's Invading Species Awareness Program. (n.d.). Ontario's Invading Species Awareness Program. <http://www.invadingspecies.com/invaders/plants/garlic-mustard/>

Garlic mustard. (n.d.). Wwww.natureconservancy.ca. <https://www.natureconservancy.ca/en/where-we-work/ontario/our-work/stewardship/garlic-mustard-ON.html>

Garlic mustard identification and control: *Alliaria petiolata* - King County. (2021). Kingcounty.gov. <https://kingcounty.gov/services/environment/animals-and-plants/noxious-weeds/weed-identification/garlic-mustard.aspx#:~:text=Introduced%20from%20Europe%20originally%20as>

Meet Our Comms Team



NEELAKSHA SRISANGAR

Communications Director



SHIFA NATHANI

Newsletter/Media Writer &
Communications Associate



ADRIEN RAVINDRAN

Newsletter/Media Writer &
Communications Associate



VISHURDEEY SIVAKUMAR

Newsletter/Media Writer &
Communications Associate

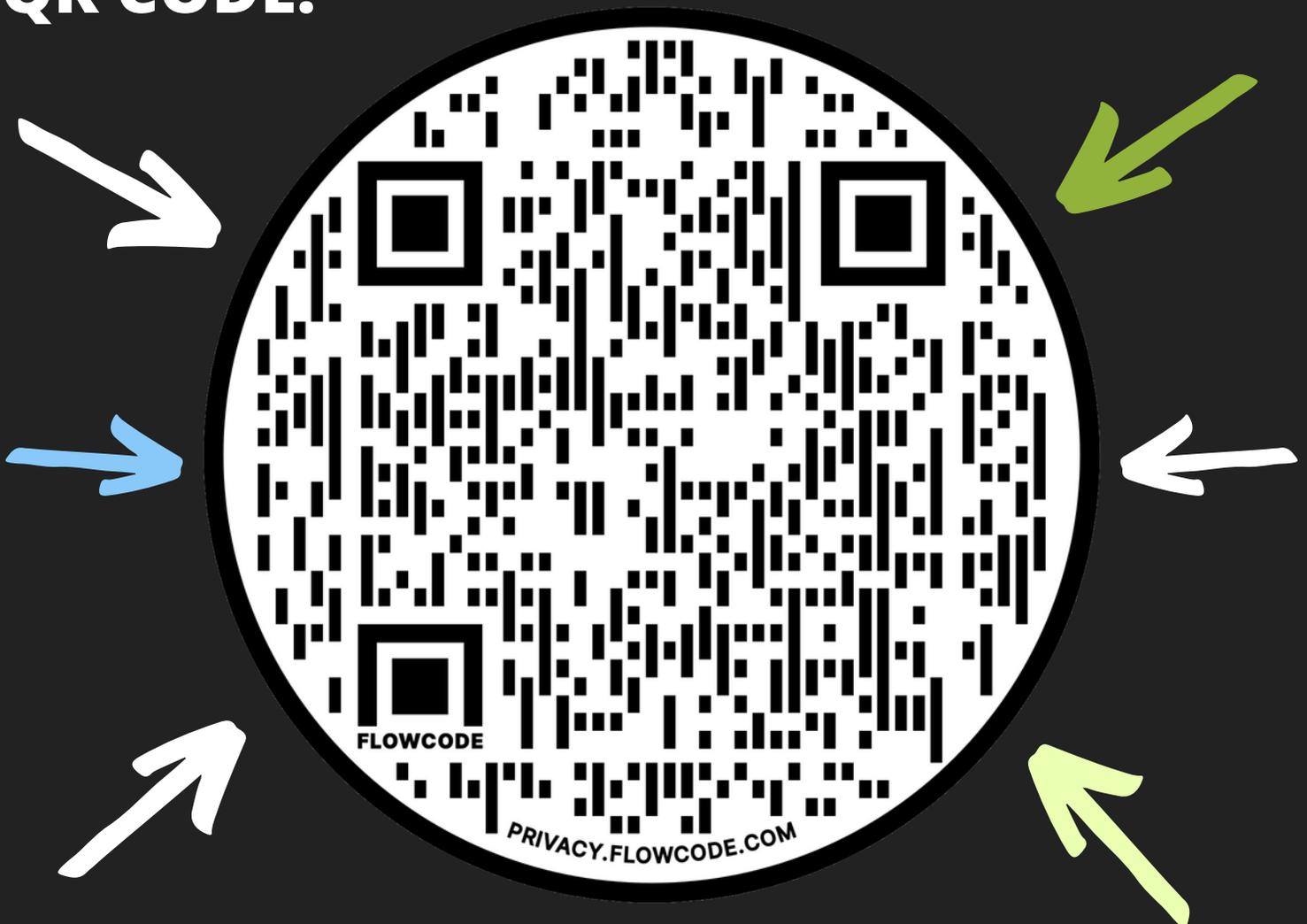
Share the Newsletter!



LINK TO SIGN UP:

<https://forms.gle/wQdXnsdyLQxrbpwJA>

QR CODE:



Newsletter Opt-Out Form



NO LONGER WANT TO RECEIVE HNP'S MONTHLY NEWSLETTER ?

Opt-Out of our Monthly Newsletters!

Our monthly newsletters will include extensive research on current and pressing environmental issues, along with events for that month that you can participate in. However, if you don't want to continue receiving future newsletters from HNP Ontario, please fill out this form.* **

Note: * This Opt-out form is only to opt out of HNP's newsletter e-mails. You will still receive e-mails from HNP; however to a lesser extent.*
** To confirm you do not want to receive any further newsletters, make sure to click the box. If you do not click the box, this application will not be counted.**

 hnpontario@gmail.com (not shared) [Switch account](#)

* Required

Full Name *

Your answer

Unsubscribe by filling out the HNP's
newsletter Opt-Out Form.

https://docs.google.com/forms/d/e/1FAIpQLSfdIRtSgiZCwmujfkxxCo9yLSAt-2RZYZoflrdrgk1ANYAa4g/viewform?usp=sf_link