

April 2023

Human Nature

Projects Ontario Newsletter



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EXECUTIVES OF THE MONTH

Congrats!



Helia Sayadnasab

I'm Helia, I'm a tenth grader from Bayview Secondary School, I decided to join HNP because I wanted to collect my volunteer hours doing something that I love, which is speaking up about the damage that is being done to our planet. I speak four languages and I love to play the piano.

EVENTS CO-DIRECTOR

Congrats!



Danya Shafi

Hello! I am Danya Shafi, a grade 11 student at John Fraser Secondary School and I am also one of the Events Co-Director at HNP. I like to spend most of my free time in or around nature and I love gardening. I joined HNP to learn about how I can incorporate sustainable practices into my life and also create tangible change in my community. I love being a part of the work that HNP does and I hope they continue to leave a positive impact on the environment!

EVENTS CO-DIRECTOR

THE AMAZON DROUGHT AND BIODIVERSITY LOSS

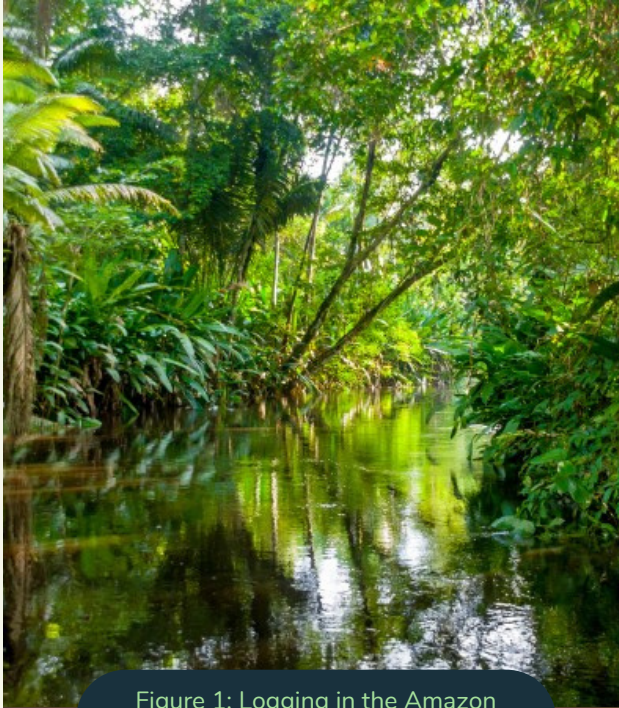


Figure 1: Logging in the Amazon
W, Johnathan. (2023)

THE AMAZON DROUGHT

Over the years, human activity that contributes to deforestation and drought has degraded more than one third of the Amazon rainforest. (Jonathan Watts, 2023). Increasing exponentially, the Amazon is threatened by deforestation and degradation. As a result, surface water has been lost, and rivers continue to be polluted (WWF, 2022). The Amazon Rainforest is responsible for regulating the climate, generating rainfall, storing carbon, and providing a feasible habitat for biodiversity while maintaining itself as an ecosystem (Johnathan Watts, 2023). While the rainforest suffers drought, biodiversity will not cooperate with each other to sustain life.

INTRODUCTION

As climate change continues to worsen, the conditions of the Earth's ecosystems such as the Amazon rainforest remains susceptible to drought and deforestation, slowly eliminating its biodiversity. According to CNN, a new study reveals that human activity and extreme droughts are causing far more damage to the Amazon rainforest than previously thought, in turn, exacerbating climate change (Laura Paddison, 2023). While these impacts seem irreversible, Brazil maintains hope for prevention by putting the future of their ecosystems into the hands of passionate politicians and foundations such as WWF.



THE AMAZON DROUGHT AND BIODIVERSITY LOSS

LOSS OF BIODIVERSITY

The Amazon rainforest houses a wide array of species. The WWF attributes species distribution to 9% of mammals, 14% of birds; 8% of amphibians; 13% of freshwater fish species; and 22% of vascular plant species (WWF, 2022). However, species are at significant risk of declining and even going extinct with droughts. According to a recent report by IPBES, an estimated one million species are at risk of extinction. This rate has accelerated in the last 40 years, with threatened and vulnerable species across taxa (Ashley Thomson, 2020).



Figure 2: Logging in the Amazon
W, Johnathan. (2023)



Figure 3: Da Silva being elected.
W, Katy. (2023)

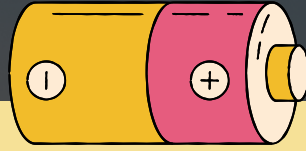
PREVENTION

A significant factor that was influencing the droughts and deforestation within the Amazon rainforest was Brazil's former right-wing president, Jair Bolsonaro. Bolsonaro was infamous for implementing policies encouraging deforestation and habitat destruction in the Amazon. However, left-wing Luiz Inacio Lula Da Silva has recently been sworn in as Brazil's new president. In his first speech, Lula vowed to build a country in "terrible ruins" (Katy Watson, 2023). This includes the rebuilding of the Amazon rainforest. Lula has reappointed Marina Silva assist in accomplishing the pledge for Amazon's "zero deforestation" policy by 2030 (Katy Watson, 2023).

CONCLUSION

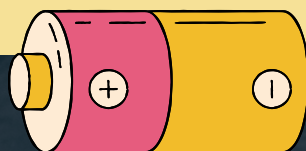
The Amazon Rainforest is under severe threat from deforestation and droughts. The more deforestation continues to occur, the more susceptible the Amazon rainforest is to droughts from a lack of precipitation and carbon absorption. While the diversity of biodiversity needs to be protected, Brazil can only accomplish this by continuing to implement policies that can protect the biodiversity and the droughts in the Amazon. As Brazil progresses with the restoration of the Amazon rainforest, entire ecosystems will reform, wildlife will seek extra protection and a balance between carbon and oxygen levels will be attained.

BATTERY DRIVE RECAP



Last February, our team hosted a virtual challenge to help participants learn about their city's waste management system. Over the course of 2 weeks, participants were tasked with looking for small batteries around their homes that were no longer in use. We provided a variety of resources that allowed participants to dispose of and recycle in their batteries in an appropriate manner.

This challenge gave youth an opportunity to delve into the urgency of environmental action by disposing of batteries appropriately and learning more about their city's waste management methods.



BRITAIN AND IRELAND'S (U.K) EXPONENTIAL DECLINE IN NATIVE PLANTS

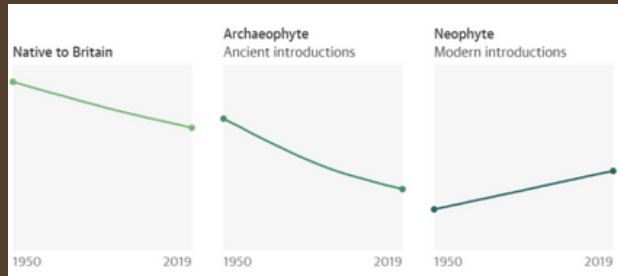


Figure 1: Trend lines of plant species over the years (The Guardian, The Botanical Society of Britain and Ireland. Plant Atlas 2020.)

INTRODUCTION

The UK and Ireland have long been known for their rich flora and wide variety of plant species. The populations of these nations' native plants, however, have been declining recently. The 20-year research project, published in Plant Atlas, provides a description of how local ecosystems are being destroyed by climate change in both countries (Elton, 2023). The Botanical Society of Britain and Ireland (BSBI) estimates that native plant populations have decreased by 53% since the 1950s. The findings demonstrated how species ranges have changed since the 1950s, with neophytes, or modern introductions, growing and most native species, archaeophytes, or ancient introductions, falling (Bennett, 2023).



Figure 2: Corn Marigold (Euro Green News, n.d)

THE CAUSES OF DECLINE

The UK and Ireland's declining native plant populations are caused by a number of factors. The destruction of ecological habitats is a significant factor. The decline of native plants and the development of the abundance of non-native plants are both caused by habitat loss, nitrogen fertilizers, overfertilization, and reseeding. Several species that once flourished in these places now face the threat of extinction. The reduction of species like heather and harebell has been attributed to changes in farming practices during the 1950s, including nitrogen enrichment, habitat destruction, and changes in grazing pressure. Furthermore, wet fields have been drained, which has resulted in significant losses in plants like devil's-bit scabious, a plant that rare butterflies consume. With a 62% reduction, historically cultivable wildflowers like corn marigold suffered worse than other species. This is a result of traditional grasslands having been over-fertilized or reseeded. In addition, plant populations are negatively impacted by changes in temperature, precipitation patterns, and the frequency and severity of extreme weather events (Horton, 2023)

BRITAIN AND IRELAND'S (U.K) EXPONENTIAL DECLINE IN NATIVE PLANTS



“The loss of natural habitats due to modern farming methods over the last 70 years has been an unmitigated disaster for wildflowers and all the species that depend on them including insects, bats and birds. But it’s not too late to stop this catastrophe.”

Craig Bennett, Chief Executive of The Wildlife Trusts.

THE CONSEQUENCES OF DECLINE

The natural ecosystem is greatly supported by native plants. They support soil health, help animals find food and shelter, and add to the environment's general biodiversity. A decrease in biodiversity brought on by the extinction of these plants may have repercussions on the ecosystem as a whole (“What’s so great about native plants?”, 2013.) Many native plants are efficient in storing the greenhouse gas carbon dioxide, especially long-lived trees like oaks and maples. For pollinators including hummingbirds, native bees, butterflies, moths, and bats, native plants serve as a source of nectar. Several creatures can find shelter there in safety. These plants produce native nuts, seeds, and fruits that provide vital nutrition for all kinds of wildlife (Audubon, 2017).



Figure 3: Pollination on plants.
(Irish Farmers Journal, n.d)

HOW TO PROCEED

The reduction of native plant populations in the UK and Ireland can be addressed in a number of ways. Protecting and restoring natural habitats is one strategy. Limiting urbanization, decreasing deforestation, and promoting sustainable agriculture methods are a few methods. Native plants must remain untouched. While native plants require minimal care and are well suited to the environment, altering the soil, reseeding, or over-fertilizing them would only disrupt their habitat. Promoting renewable energy sources and lowering greenhouse gas emissions can help lessen the consequences of climate change and the negative effects on local plant populations. Moreover, initiatives can be undertaken to encourage the use of native plants in gardening and landscaping, which can aid in the preservation of these species and raise awareness (“Biodiversity-What Can We Do?”, 2018).

“There’s lots we can do to reverse these declines, but the most important are to increase the protection plants receive, extend the habitat available to them, and to place their needs at the very heart of nature conservation,” said Kevin Walker, BSBI head of science and co-author of Plant Atlas 2020. “We also need to ensure that our land, water and soil are managed more sustainably so that plants, and the species which rely upon them for food and shelter, can thrive.”

APRIL 2023 COMMUNITY CLEANUP

**SUNDAY, APRIL 23 2023
CENTENNIAL PARK PICNIC AREA 6
ETOBICOKE, ON M9C 5N3
10:00 AM - 2:00 PM EST**



Perks of Attending!

- Win \$400 in prizes!
- Earn 6 volunteer hours!
- Meet like-minded people
- Support a local group
- Have FUN!



Thank you to our cleanup sponsors!



BUNCHA FARMERS



SCAN THE QR CODE ABOVE OR CLICK HERE TO SIGN UP FOR THE EVENT!

WELCOME TO OUR NEW HIRES!

Tanisha Patel
Sherry Sun
Tiffany Bishun
Chung Wah Kwan
Tarani Sarah Esparam
Amanda Liu
Ian Kim
Tommy He
Sadra Ghaderpanah
Uyanda Mntambo

Eugene Liu
Arundhati Roy
Allen Chen Liu
Shrilekha Venkat
Rachel Gao
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Nabeelah Zaman
Nyle Rafiq
Sophia Hoo

Zinat Bary
Arianna Yue
Steven Tang
Manaya Kohli
Mohit Bhabak
Mahima Bhat
Sanaa Poonawala
Kylie Ratnayake
Emily Yuan
Huda Kashif

Congratulations to all of our new members! We're thrilled to have you on the team!



THE WILLOW PROJECT

600 MILLION BARRELS OF OIL

293 METRIC TONS OF CO₂

30 YEARS OF PRODUCTION

DEVASTATING ALASKAN WILDERNESS



ACT NOW.
SIGN HERE TO MAKE A
DIFFERENCE.

THE WILLOW PROJECT

ConocoPhillips' 8 billion dollar oil-drilling initiative will reverse decades of climate change activism. The project is set to take place in Alaska's North Slope, covering a region of its National Petroleum Reserve (Puko, 2023). Although the project may improve local economy, certain Alaskan Natives express concerns for the welfare of their homes.

Under approval from the Biden-Harris administration, the project is set to begin by 2027. The decision recieved immense backlash; one petition to halt the project recieved over 4 million signatures (Floor, 2023). An estimated 600 million barrels of oil and 293 metric tons of greenhouse gases could be produced during its thirty-year tenure, devastating the planet and its people (Puko, 2023).

Region covered by the Willow Project within the National Petroleum Reserve of Alaska. (Associated Press)





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BIBLIOGRAPHY

The Amazon Drought and Loss of Biodiversity

B, Liv. (2019, March 20) Everything you need to know about visiting the Amazon. Intrepid.
<https://www.intrepidtravel.com/adventures/amazon-travel-guide/>

C, Suzana. (2023, February 13) Invisible destruction: 38% of remaining Amazon forest already degraded. Mongabay.
<https://news.mongabay.com/2023/02/invisible-destruction-38-of-remaining-amazon-forest-already-degraded/>

O, John. (2022, October 30) Lula beats far-right President Bolsonaro to win Brazil election. NPR.
<https://www.npr.org/2022/10/30/1132561987/brazil-election-lula-da-silva>

P, Laura. (2023, January 27) 'A war of attrition': Humans and extreme drought damaging Amazon rainforest much more than thought, study suggests. CNN.
<https://www.cnn.com/2023/01/27/world/amazon-rainforest-damage-climate-intl/index.html>

R, Carol. (2018, August 9) NASA finds Amazon drought leaves long legacy of damage. NASA.
<https://climate.nasa.gov/news/2780/nasa-finds-amazon-drought-leaves-long-legacy-of-damage/>

T, Ashley. (2020, May 22) Biodiversity and the Amazon Rainforest. Greenpeace.
<https://www.greenpeace.org/usa/biodiversity-and-the-amazon-rainforest/>

"THE NUMBERS ARE DEVASTATING." (2022, November 8) The Amazon in crisis: Forest loss threatens the region and the planet. WWF.
<https://www.worldwildlife.org/stories/the-amazon-in-crisis-forest-loss-threatens-the-region-and-the-planet>

W, Jonathan. (2023, January 26) Human activity and drought 'degrading more than a third of Amazon rainforest'. The Guardian.
<https://www.theguardian.com/environment/2023/jan/26/human-activity-and-drought-degrading-more-than-a-third-of-amazon-rainforest>

W, Katy. (2023, January 1) Lula sworn in as Brazil president as predecessor Bolsonaro flies to US. BBC News.
<https://www.bbc.com/news/world-latin-america-64138739>

BIBLIOGRAPHY

Britain and Ireland's (U.K) Exponential Decline in Native Plants

Why Native Plants Matter. (2017, May 18). Audubon. <https://www.audubon.org/content/why-native-plants-matter>

Bennett, P. (2023, March 8). *Non-Native Plants Outnumber Native Plants in UK and Ireland, 20-Year Study Finds.* EcoWatch. <https://www.ecowatch.com/native-plants-uk-ireland-climate-change-agriculture.html>

Biodiversity - What Can We Do? | The Nature Trust of British Columbia. (2018). The Nature Trust of British Columbia. <https://www.naturetrust.bc.ca/conserving-land/what-can-we-do>

Elton, C. (2023, March 8). *"Heartbreaking": More than half of native plants are under threat in the UK and Ireland.* Euronews. <https://www.euronews.com/green/2023/03/08/heartbreaking-more-than-half-of-native-plants-are-under-threat-in-the-uk-and-ireland>

Horton, H. (2023, March 8). *Half of Britain and Ireland's native plants have declined over 20 years – study.* The Guardian. <https://www.theguardian.com/environment/2023/mar/08/half-of-britain-and-irelands-native-plants-have-declined-over-20-years-study>

What's so great about native plants? (2013). EMSWCD. <https://emswcd.org/native-plants/native-plant-benefits/>

The Willow Project

Associated Press. (2023a, March 13). An aerial photo provided by ConocoPhillips in 2019 shows an exploratory drilling camp at the proposed site of the Willow oil project on Alaska's North Slope. CBC. <https://www.cbc.ca/news/canada/british-columbia/willow-oil-alaska-project-approved-1.6777234>

Associated Press. (2023b, March 13). The site of the proposed Willow Project within the National Petroleum Reserve-Alaska. CBC. <https://www.cbc.ca/news/canada/british-columbia/willow-oil-alaska-project-approved-1.6777234>

Floor, S. (2023, February 28). Stop the Willow Project. Change.org. Retrieved March 18, 2023, from <https://www.change.org/p/stop-the-willow-project-90614d72-92eb-414f-a9cd-c608cf247bbe>

Nilsen, E. (2023, March 14). The Willow Project has been approved. Here's what to know about the controversial oil-drilling venture. CNN. <https://www.cnn.com/2023/03/14/politics/willow-project-oil-alaska-explained-climate/index.html>

Puko, T. (2023, March 17). What is Willow? How an Alaska oil project could impact the environment. Washington Post. <https://www.washingtonpost.com/climate-environment/2023/03/17/willow-project-alaska-oil-drilling-explained/>