



UNEP

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Land Acknowledgement

The staff at HCMUN XII acknowledges that we are situated on the traditional territories of many nations, including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee, and the Wendat peoples, and are now home to many diverse First Nations, Inuit, and Métis peoples. Toronto is covered by Treaty 13, signed with the Mississaugas of the Credit, and the Williams Treaties, signed with multiple Mississaugas and Chippewa bands.

As we prepare to attend and direct conferences such as HCMUN, we would like to take this opportunity to reflect on the continuous injustice that affects Indigenous and Inuit peoples. As we gather together, it is important to reflect on the discrimination and the lasting impact our government has had on Indigenous communities across Canada. We take this time to recognize those who continue to share their culture and push back against discrimination, for the good of future generations.

Equity Disclaimer

This is a disclaimer that the UNEP committee is a safe environment for civil discourse on relevant topics, such as those discussed in this background guide. The committee strongly disagrees with the use of inappropriate or derogatory language. The committee's purpose is to discuss relevant environmental issues, and to do so, it is crucial that the space be welcoming and inclusive of anyone who wants to join the conversation on these complex and important issues.

If you experience any discomfort with the topics scheduled for discussion, we strongly advise you to contact the Equite team for this conference. We take pride in ensuring this space is welcoming to new ideas and a kind environment for exploration and fun. Please notify the equity team if you find an issue that correlates to this equity disclaimer.

Tech Policy

At HCMUNXII, we are committed to creating a fair, focused, and academically honest environment for all delegates. To uphold these standards, delegates are expected to follow the conference's technology guidelines throughout their committee experience.

During committee sessions, technology may only be used during unmoderated caucuses. At these times, delegates are not permitted to access online research, external sources, or any materials beyond what they prepared before the conference. Technology is allowed strictly for the purpose of drafting resolutions and collaborating on written documents. To maintain transparency, all draft resolutions, working papers, and collaborative files must be shared in real time with the Dais. Any document not shared with the Dais may be considered invalid for committee use.

Outside of formal committee time, delegates are free to access technology and conduct research during lunch and scheduled breaks. However, the conference maintains a firm commitment to academic integrity. The use of any AI tools — including generative AI, automated writing tools, or AI-based research systems — is strictly prohibited throughout any point before or during the conference. Plagiarism of any kind is not tolerated, and all work presented in committee must be original and reflect the delegate's own preparation and analysis. Any violations of these expectations will be handled in accordance with HCMUNXII's academic policies.

These guidelines are designed to ensure that committee work remains equitable, that debate is grounded in authentic understanding, and that HCMUNXII upholds the highest standards of integrity and professionalism. Let this policy help guide delegates toward productive collaboration, meaningful diplomacy, and an enriching Model UN experience.

Letter From the Secretary General

Dear Delegates and Advisors,

It is our honour and privilege to invite you to the twelfth annual Havergal College Model United Nations Conference. Each year, HCMUN brings together passionate, curious, and globally minded students from across the region, delegates who are eager to question, collaborate, and imagine solutions to the world's most pressing challenges.

At its core, HCMUN is more than a one-day event. It is a space where young people can test ideas, challenge assumptions, and discover the power of diplomacy. Whether you are stepping into your very first committee or returning as an experienced delegate, we hope this conference offers you a chance to push your thinking, embrace unfamiliar perspectives, and develop the confidence to advocate for meaningful change.

Our team has worked hard to create engaging, dynamic committees that encourage creative problem-solving and meaningful dialogue. We invite you to participate with curiosity, empathy, and confidence — your voice will shape the experience of everyone in the room.

Thank you for joining us. We can't wait to see the diplomacy and passion you bring to HCMUN XII!

Sincerely,
Aurelia He and Marlowe Herman
Secretary Generals, HCMUNXII

A Letter From The Chair

Dear Delegates,

Welcome to HCMUN XII! My name is Abby, and I am so thrilled to be the Chair for this committee. Our Dais team is pleased to welcome you to the United Nations Environment Programme Committee. I am new to MUN this year and am excited to lead a committee like this alongside the directors. I have loved attending conferences such as SSUNS and SATEC MUN this year and look forward to many more! MUN is a valuable opportunity to develop critical thinking and broaden your perspective on global issues. The topics to be discussed by the committee require careful consideration and complex ideas. I, for one, can't wait to see what you all have to share!

In this committee, you will discuss issues that significantly impact the environment and, in turn, society as a whole. You will address these complex issues by collaborating with your peers and discussing potential resolutions with your country's values in mind. This background guide will help steer your research in the right direction. It is crucial that you dig deeper into your country's values and perspectives, not rely solely on this background guide. We hope you will review your government's policies and positions on these issues. By developing this knowledge, you can better speak to the complex problems the committee will discuss and how to resolve them.

I look forward to hearing your ideas, reading your position papers, and seeing the collaboration between peers that Model UN thrives on. We are so excited to see you at HCMUN XII! If you have any questions or concerns, please feel free to contact me at arollwagen@havergal.on.ca or any of the directors.

Sincerely,

Abby Rollwagen



Letter From the Dais

Dear Delegates,

My name is Jaleen Lin, and I'm honored to serve as one of your directors for HCMUN XII. I began Model United Nations in April of 2025, and it has been one of the most enjoyable parts of my high school experience. As an avid environmentalist, I've absolutely loved planning and developing this committee, and I hope you have just as enjoyable an experience participating.

Whether you're a beginner or seasoned delegate, you stand in a position to influence the direction of this committee. I look forward to a weekend of fruitful debate, and I wish you all the best in your preparations.

Sincerely,
Jaleen Lin
Director, United Nations Environmental Programme
Havergal College Model United Nations 2026
jlin@havergal.on.ca

Dear Delegates,

My name is Rachael Zhou and I am privileged to serve as the other director for HCMUN XII. Model United Nations has been an integral part of my high school journey ever since I started MUN in September 2024. Since then, I have had the opportunity to attend numerous conferences, including Princeton Model United Nations 2025, and also staffed OxfordMUN Canada. As a student aspiring to study biology in university, the environment has always been an important part of my life and it has been my greatest pleasure to assist in preparing for a great UNEP committee at HCMUN XII.

I look forward to seeing the solutions to these pressing environmental issues and hope you all are able to count UNEP at HCMUN XII as an informative and enjoyable experience. Good luck!

Sincerely,
Rachael Zhou
Director, United Nations Environmental Programme
Havergal College Model United Nations 2026
rzhou@havergal.on.ca

Introduction to the United Nations Environmental Program

The United Nations Environmental Programme brings together all 193 United Nations Member States to address three key environmental issues, known as the triple planetary crisis: pollution, climate change, and biodiversity loss. Founded in 1972 through the passing of UN Resolution 2997 XXVII, the UNEP allows the world to come together to solve issues relating to climate, natural disasters, and sustainability.¹

As a member of the UN Sustainable Development Group (UNSDG), the UNEP is committed to helping the world achieve the 17 Sustainable Development Goals.² The UNEP plays a crucial role in monitoring six of the goals (6, 8, 12, 14, 15, and 17). Through publishing reports such as the Global Environment Outlook and the Emissions Gap Report, the UNEP aids governments by providing scientific research to influence policies.³

The current state of the environment has been a topic only recently emphasized; environmental issues first received major attention when, in 1968, UN Secretary-General U Thant published a report entitled “Activities of United Nations Organizations and Programmes Relevant to the Human Environment”, warning of a dire environmental outlook based on trends at the time. The United Nations Conference on the Human Environment was then convened in Stockholm, Sweden, in 1972 to address this issue and brought environmental issues into the global spotlight for the first time, leading to the formation of the UNEP.⁴ Since then, the UNEP has helped negotiate fifteen multilateral agreements, including the Montreal Protocol, the Convention on Biological Diversity, the Stockholm Convention on Persistent Organic Pollutions, and the Minamata Convention on Mercury.⁵

Environmental issues continue to necessitate urgency, with increasing natural disasters, endangered species, and rising global temperatures. In a world where environmental issues are

¹ “Frequently Asked Questions,” UN Environment Programme, n.d., <https://www.unep.org/who-we-are/frequently-asked-questions#:~:text=When%20was%20UNEP%20founded%3F>.

² “Who We Are,” United Nations Sustainable Development Group, n.d., <https://unsdg.un.org/about/who-we-are>.

³ UN Environment Programme, “Frequently Asked Questions.”

⁴ “UNEP: 50 Years of Environmental Milestones,” UN Environment Programme, 2022, <https://www.unep.org/environmental-moments-unep50-timeline>.

⁵ Catherine Early, “UNEP at 50: What has the world’s ‘environmental conscience’ achieved?,” Dialogue Earth, June 1, 2022, <https://dialogue.earth/en/pollution/unep-at-50-what-has-the-worlds-environmental-conscience-achieved/>.

rapidly gaining importance, the UNEP represents hope for a world where multilateral cooperation can be used to achieve a better future for our planet.⁶

⁶ Inger Anderson, “Why the UN Environment Assembly is essential to a safer, more resilient planet,” UN Environment Programme, 9 December 2025, <https://www.unep.org/news-and-stories/opinion/why-un-environment-assembly-essential-safer-more-resilient-planet>.

Topic A: Greenwashing

Introduction:

Greenwashing refers to misleading claims by corporations that exaggerate the level of sustainability they achieve or falsely advertise a product as environmentally friendly.⁷

For the first time, the 2015 Paris Agreement set out clear goals for the future of combating climate change in order to reach its central target of less than 2 degrees Celsius over pre-industrial levels. These included goals on the protection of carbon sinks, adaptation to climate change, minimizing damages caused by climate change, and public awareness.⁸ However, greenwashing remains a massive obstacle to this. Companies have increasingly promised net zero greenhouse gas (GHG) emissions since the adoption of the Paris Agreement, but have rarely delivered on these promises. Thus, the transparency and integrity of these claims are severely damaged and blocks effective solutions for the urgent climate crisis.⁹

Manifestations of greenwashing include but are not limited to:

- Spreading false information regarding a company's contribution towards net zero
- Being intentionally vague regarding a company's environmental impact
- Using misleading labels such as "green", "sustainable", and "eco-friendly" that have no standard definitions
- Emphasizing the sustainability of one aspect of a product or service while ignoring other company activities¹⁰

Greenwashing sabotages real efforts to combat the climate crisis, undermining consumer and investor confidence in supporting companies that are truly addressing environmental issues. Thus, it is necessary to address this urgent issue in order to proceed with climate goals necessary to ensure the safety and sustainability of our planet.

⁷ "Greenwashing: the deceptive tactics behind environmental claims." United Nations, n.d., <https://www.un.org/en/climatechange/science/climate-issues/greenwashing>

⁸ "Key Aspects of the Paris Agreement." UN Framework Convention on Climate Change, n.d., <https://unfccc.int/most-requested/key-aspects-of-the-paris-agreement>

⁹ United Nations, "Greenwashing."

¹⁰ Ibid.

Defining greenwashing and related terms

Greenwashing is a problem in itself, as companies feel comfortable misleading consumers, but it also contributes to broader issues. First, greenwashing significantly distorts sustainable markets. By making deceptive claims, the corporation leads the public to believe it is doing more for the environment than it is, which, in turn, can deter consumers from seeking companies that actively work to be as sustainable as possible.

In 2014-2015, the auto company Volkswagen was found to have installed software in diesel engines that detected when they were being emission tested, in an effort to sell the vehicles in the United States¹¹. After a later investigation revealed cheating on emissions tests, the company had to recall all cars with that engine. The company recalled approximately 36,000 vehicles, resulting in one of the worst greenwashing scandals to date.

History/Context:

The term “greenwashing” was coined in the 1980s, initially referring to minor misleading environmental marketing/manufacturing by corporations.¹² The issue has expanded over the years into areas such as reporting, financial markets, and national climate change pledges. Brands would use vague language when marketing products – for example, saying their product is “eco-friendly” or “made with natural ingredients.” Although the brand may not have been lying, it's like marketing a wooden hairbrush as being eco-friendly because it's made of wood, even when the company could be sourcing wood from illegal logging corporations.

Another example of how brands use vague language to their advantage is Apple's release of the iPhone 12, which included no earbuds or a block charger in the box, which generated high levels of e-waste. In reality, Apple produces e-waste by planned obsolescence – creating devices that are designed to have short life spans, and are single-use(creating new iPhones every year).

Current Situations:

¹¹ Russell Hotten, “Volkswagen: The scandal explained”, BBC, 10 December 2015
<https://www.bbc.com/news/business-34324772>

¹² “The History of Greenwashing and its Modern Evolution”, The Climate Club
<https://www.theclimateclub.co/sustainabilityblog/the-history-of-greenwashing-aApple's-release-of-the-iphone-12-which-included-no-earbuds-or-a-block-charger-in-the-boxiPhonesnd-its-modern-evolution>

Greenwashing has come a long way since the term was first created. Brands have become increasingly daring in misleading consumers.¹³ Many companies have been found guilty of falsely claiming to be sustainable or eco-friendly. For example, IKEA established itself as the world's most sustainable furniture store and in recent years, IKEA had highlighted its work with forest managers to source wood, reducing its environmental impact through sustainable sourcing.¹⁴ The brand was later found to have been sourcing wood from illegal logging companies in Eastern European countries such as Ukraine and Romania.¹⁵ The store has recently been linked to deforestation in Romania and to the deconstruction of ancient forests across Eastern Europe.¹⁶

Tech companies such as Apple have also had their fair share of greenwashing scandals. In August of 2025, an injunction against the brand by German courts marked progress made by governments against this global issue.¹⁷ Given Apple's track record on greenwashing scandals, the brand marketed its newest watches as the “first ever CO₂-neutral product.” The Frankfurt am Main Regional Court found that Apple misled consumers by claiming the product was more sustainable than it was, prompting Apple to stop marketing the watches as carbon-neutral. This is one of the few major government interventions on greenwashing; the government has not established a legal framework to prevent brands from misleading consumers.

In addition, words such as “sustainable”, “green”, and “environmentally friendly” often have misleading connotations.¹⁸ Several claims involving deceptive branding using these words have had negative impacts on consumers, such as TIER’s misleading advertisement of their scooters claiming to be “environmentally friendly” . The Advertising Standards Authority (ASA) ruled that environmentally friendly was an absolute claim and was therefore misleading since

¹³ “IKEA furniture destroys some of Europe’s last remaining ancient forests,” Greenpeace International, April 10, 2024,

<https://www.greenpeace.org/international/press-release/66349/ikea-furniture-destroys-some-of-europes-last-remaining-ancient-forests/>.

¹⁴ “Watch how IKEA works with forest management”, IKEA Singapore, 2020

<https://www.youtube.com/watch?v=rbyz5MfxkAc>.

¹⁵ Deena Robinson, “10 Companies Called Out For Greenwashing,” July 17, 2022,

<https://earth.org/greenwashing-companies-corporations/>.

¹⁶ Alex Shaw, “IKEA blamed for Romanian forest destruction,” Mongabay, April 25, 2024,

<https://news.mongabay.com/2024/04/ikea-blamed-for-romanian-forest-destruction/>.

¹⁷ “German court orders Apple to throw out carbon neutrality claims,” International Comparative Legal Guides, August 27, 2025,

<https://iclg.com/news/22990-german-court-orders-apple-to-throw-out-carbon-neutrality-claims#:~:text=A%20German%20federal%20court%20has,as%20a%20carbon%20neutral%20product>.

¹⁸ Jack Ormesher and Sophie Tuson, “Greenwashing: what do you need to know?”, The Law Society. August 3, 2023, <https://www.lawsociety.org.uk/topics/climate-change/greenwashing-what-do-you-need-to-know>.

TIER could not provide evidence that the scooter was completely environmentally friendly throughout its lifetime.¹⁹ On top of that, terms such as “net zero” and “carbon neutral” could be potentially misleading due to companies omitting key information regarding their carbon footprint.²⁰ Thus, it is necessary to establish definitions that are clear and hold businesses accountable for their environmental impact, ensuring that efforts to meet environmental goals are authentic and effective.

Establishing legal frameworks to protect consumers

As greenwashing has become a prevalent issue in today's society, it is increasingly important to establish legal frameworks. With the rise in social media use and limited research on products, consumers should expect transparency when making purchases. The concept of greenwashing has had a significant environmental impact by slowing progress and promoting unsustainable sourcing for the company's benefit.

Brands have faced injunctions and lawsuits for deceptive marketing. The lack of a legal framework means brands face little consequence for their marketing and are more likely to repeat it. Thus, it is important to establish legal frameworks and find solutions that are effective in protecting consumers from false advertising and also protecting corporations who are genuinely attempting to contribute to the Paris Agreement targets from being distrusted by consumers due to other greenwashing scandals.

History/Context:

The most significant action taken in response to greenwashing is the 2015 Paris Agreement.²¹ Countries presented a united front against climate change, setting increasingly ambitious goals to achieve net-zero greenhouse gas emissions. Because the agreement applies to countries rather than individual brands, little has been done to identify greenwashing in everyday marketing. The UN Secretary-General has made several speeches that addressed greenwashing and has stated there is no time for greenwashing.²² The most infamous scandals involving

¹⁹ “ASA Ruling on TIER Operations Ltd”, Advertising Standards Authority, April 6, 2022, <https://www.asa.org.uk/rulings/tier-operations-ltd-a21-1118832-tier-operations-ltd.html>.

²⁰ Ormesher and Tuson, “Greenwashing”.

²¹ “The Paris Agreement,” United Nations Framework Convention on Climate Change, n.d., <https://unfccc.int/process-and-meetings/the-paris-agreement>.

²² United Nations, “Greenwashing.”

greenwashing, such as the Volkswagen and IKEA deforestation scandals, have made headlines worldwide, prompting standing acts or bills to reprimand greenwashing and the corporations that use it.

Current Situation:

In the absence of government action, the public has made several attempts to make its point. In July of 2025, H&M marketed its new launch as eco-friendly; in reality, the brand was no better than the rest of the fast-fashion industry. In light of this, a New York resident Plaintiff, Chelsea Commodore, filed a lawsuit against the company for false advertising.²³ She added that it would take several years for H&M to recycle all the clothes sold in a single day.

This helped shed light on the many environmental issues related to fast fashion and the fashion industry in general. Without solid legislation to address greenwashing, little could be done to mitigate the environmental impacts of the ever-growing fast fashion industry.

Conclusion:

As stated in both subtopics 1 and 2, the effects of greenwashing have a great impact on the environment. Greenwashing has been one of the most public environmental issues for centuries, as it stands in the forefront of our media. The harm that it can cause is undeniable; by undermining legitimate efforts towards combatting the climate crisis and public trust in corporations that genuinely are committed to pursuing the goals outlined by the Paris Agreements, greenwashing stands as a huge obstacle to future environmental security. Without a legal framework that deters greenwashing in marketing, meaningful change may be unachievable.

²³ “H&M is Being Sued For “Misleading” Sustainability Marketing. What Does This Mean for the Future of Greenwashing?”, Sustainable Fashion Forum, August 17, 2022, <https://www.thesustainablefashionforum.com/pages/hm-is-being-sued-for-misleading-sustainability-marketing-what-does-this-mean-for-the-future-of-greenwashing>.

Guiding Questions:

1. How can transparency be ensured when individuals purchase products or services?
2. How could individuals distinguish between genuine corporate sustainability efforts and greenwashing?
3. What role does the government play in supporting this distinction?
4. What is the exact definition of terms such as “greenwashing”? How can verifiable metrics, definitions for terms like "sustainable," "net zero," or "circular" be developed?
5. How would the government highlight the effects of greenwashing on the environment?
6. Is there a need to enforce a legal framework upon greenwashing?
7. How will corporations be held accountable for past and present occurrences of greenwashing?
8. What role do NGOs, activists, and investigative journalism play in exposing greenwashing, and how can their work be better supported?

Topic B: Light pollution

Introduction:

Topic B explores the global impacts of light pollution and how to balance the drawbacks with urbanization and industrialization. This committee will work together to explore different solutions for mitigating the effects of light pollution without compromising continued technological advancements around the globe. Delegates will have the opportunity to analyze the interrelationship between public and private infrastructure, wildlife, and the environment.

Light pollution refers to the brightening of the night sky caused by street lights and other artificial sources that disrupts natural cycles and inhibits the observation of stars and planets.²⁴ Light pollution is an unwarranted consequence of urban development and industrialization. In many urban areas, the night sky is now hundreds of times brighter than before industrialization, disrupting migration, hunting and the health of both individual organisms and entire ecosystems.

Timeline:

1800-1870s:

Beginning in the 1800s, urban areas started to introduce public street lighting. Initially with gas lamps, the transition to electric lighting continued throughout the mid/late 1800s and transformed the night scene of cities.²⁵

1893:

In 1893, Edison's basic lamp patent expired, allowing new competition to flood in, marking the beginning of rapid advancements in electric lighting technology.

20th century:

As urban areas expanded, so did the need for light and electricity. Lighting became much more common in both residential and commercial establishments, setting the stage for future advancement and increased usage.²⁶

1930:

Light pollution began to harm the Vatican Observatory, located in Rome at the time. The observatory was moved 25km away to Castel Gandolfo in attempts to avoid skyglow and light pollution from the city.

²⁴ "Oxford Languages," Oxford Languages (Oxford University Press, 2025), <https://languages.oup.com/google-dictionary-en/>.

²⁵ "A Short History of Electric Lighting - Colite Technologies," Colite Technologies, November 22, 2021, <https://colitetechnologies.com/blog/a-short-history-of-electric-lighting/>.

²⁶ "The History of Light Pollution: When Did It Begin?," Coohom.com, 2023, https://www.coohom.com/article/the-history-of-light-pollution-when-did-it-begin?hl=en_021.

1945 - onward:

Post World War 2, technological advancements began to pick up pace and led to more lights that lasted longer and were brighter.

1960 - 1970:

Scientists and astronomers began formally documenting skyglow as a harmful environmental impairment to astronomical observation. Skyglow refers to the brightening of the night sky due to artificial lights, creating a hazy, glowing dome over populated areas that drowns out starlight. This directly causes the loss of visibility of stars in the night sky above populated areas such as cities.²⁷

1961:

The increasing amounts of light pollution and skyglow from Rome began to heavily impact spatial observations at the Vatican observatory in Castel Gandolfo despite being 25km away.²⁸

1985:

The Vatican Observatory fully abandoned Castel Gandolfo as an observation site due to the growing harmful effects of light pollution.²⁹

2016:

The World Atlas of Night Sky Brightness, a computer-generated map based on thousands of satellite photos showed glaringly obvious effects of light pollution. Only the most remote areas on earth: Siberia, the Sahara and The Amazon were in complete darkness.³⁰

2011 - 2022:

A research study by Citizen Science tracked the brightness of the night sky and concluded that the night sky had increased in brightness by nearly 9.6% annually.³¹

²⁷ “Skyglow | Wwww.FrederictonAstronomy.ca,” Frederictonastronomy.ca, 2026, <http://frederictonastronomy.ca/content/skyglow>.

²⁸ Robert Trembley, “History of Light Pollution,” Vatican Observatory, March 17, 2015, <https://www.vaticanobservatory.org/sacred-space-astronomy/history-of-light-pollution/>.

²⁹ “Light Pollution - Vatican Observatory,” Vatican Observatory, July 28, 2025, <https://www.vaticanobservatory.org/light-pollution/>.

³⁰ National Geographic Society, “Light Pollution,” education.nationalgeographic.org (National Geographic, July 15, 2022), <https://education.nationalgeographic.org/resource/light-pollution/>.

³¹ Christopher C. M. Kyba et al., “Citizen Scientists Report Global Rapid Reductions in the Visibility of Stars from 2011 to 2022,” *Science* 379, no. 6629 (January 20, 2023): 265–68, <https://doi.org/10.1126/science.abq7781>.

Effects of Light Pollution on Living Organisms

For billions of years, Earth has had a predictable rhythm of day and night. Organisms have used natural sunlight in their development long before artificial lighting was invented. The circadian rhythm refers to the biological clock observed in most living organisms that repeats roughly every 24 hours. This clock syncs internal functions with the external environment and the day/night cycle.

Light pollution is actively disrupting this synchronization by tricking the body into believing that the day is lasting longer than it actually is. This causes the suppression of melatonin production at night and alters the circadian rhythm.³² The circadian clock system is integrated into many different bodily systems, making the disruption of the circadian rhythm a major cause for concern. The disruption can cause vast effects from decrease in growth hormones, unstable reproductive systems, and vulnerable immune systems.³³

Hunting:

For many predators, the dark of night is used as a form of cover to hunt prey, a strategic technique honed over millions of years to leverage the night sky. As light pollution worsens, the night sky has become hundreds of times brighter than years prior, especially near cities. This trend has reduced the effectiveness of the night sky as cover and predators that relied on it to hunt their prey have been majorly impacted. This has started to shift the careful balance between predators and prey.

Light pollution increases the visibility that prey have in the night, reducing the effectiveness of predator hunting. For some predators, this reduction in hunting success can be detrimental as many predators rely on precise timing and conditions to effectively hunt. In order to navigate around this issue, some predators have begun to avoid brightly lit areas entirely and hunt exclusively on darker grounds; however, this comes at the expense of crucial hunting areas.

A study on the effect of artificial nightlight on predator–prey dynamics of an apex carnivore show that cougars have shifted to making most of their prey kills in the darkest areas possible in the sea of light pollution.³⁴ This shift reduces the amount of primal hunting grounds that the cougar has to hunt prey.

³² Amador Menéndez-Velázquez, Dolores Morales, and Ana Belén García-Delgado, “Light Pollution and Circadian Misalignment: A Healthy, Blue-Free, White Light-Emitting Diode to Avoid Chronodisruption,” *International Journal of Environmental Research and Public Health* 19, no. 3 (February 7, 2022), <https://doi.org/10.3390/ijerph19031849>.

³³ Kathryn M. Emmer et al., “Effects of Light at Night on Laboratory Animals and Research Outcomes,” *Behavioral Neuroscience* 132, no. 4 (August 2018): 302–14, <https://doi.org/10.1037/bne0000252>.

³⁴ Mark A. Ditmer et al., “Artificial Nightlight Alters the Predator–Prey Dynamics of an Apex Carnivore,” *Ecography* 44, no. 2 (October 18, 2020), <https://doi.org/10.1111/ecog.05251>.

Navigation:

The increase of artificial light in the night sky has also caused many negative consequences for navigation at night. The most prevalent example being that of sea turtle hatchlings.³⁵ When sea turtles hatch from their eggs, they are orientated by the contrast of light between that of the open horizon and the land behind the shore. They instinctively head towards the brightest light source which would naturally be the horizon due to the reflection of the moon and starlight off the water.³⁶ However, as city lights have gotten brighter, sea turtles turn toward the shore instead of the sea, leaving them vulnerable to predators and dehydration.

Light pollution has also begun disorientating different migratory animals. Migratory birds often use the stars and moon for navigation cues but overly bright cities have begun to overpower these cues. Light trapping refers to the phenomenon of birds encircling a lit area often until exhaustion.³⁷ In addition, each year millions of birds die due to fatal collisions, often directly caused by artificial lighting in cities. To combat this, some bird species have opted to avoid brightly lit areas on their migration paths, however, this often comes at the expense of prime feeding grounds.³⁸

Though often overlooked, the migration of insects has also been heavily impacted by light pollution.³⁹ Similarly to birds, insects rely on the stars and moon for navigational cues, often facing the same challenges birds face when having these cues interrupted. Insects too encircle artificial light sources, getting trapped in an endless cycle then dying from exhaustion or becoming easy prey for predators.

A recent study by the Butterfly Conservation and the UK Centre for Ecology and Hydrology has found a 52% decrease in moth caterpillars in lit hedgerows and a 43% decrease on lit grass verges compared to those which were unlit.⁴⁰ Globally, insect populations have been on a decline and although this decline is not due to one singular cause, a brighter night sky is associated with the decline. The main concern comes from the fact that insects are often at the base of many food chains and food webs, making their health a crucial part of the entire system. Over time, the added up casualties of insects have resulted in cascading effects that negatively impact the rest of the ecosystem.

³⁵ Travis Longcore and Catherine Rich, "Ecological Light Pollution," *Frontiers in Ecology and the Environment* 2, no. 4 (May 1, 2004): 191–98, [https://doi.org/10.1890/1540-9295\(2004\)002\[0191:elp\]2.0.co;2](https://doi.org/10.1890/1540-9295(2004)002[0191:elp]2.0.co;2).

³⁶ K Lohmann and C Lohmann, "Orientation and Open-Sea Navigation in Sea Turtles," *Journal of Experimental Biology* 199, no. 1 (January 1, 1996): 73–81, <https://doi.org/10.1242/jeb.199.1.73>.

³⁷ Valerie Fellows, "Threats to Birds: Collisions - Nighttime Lighting | U.S. Fish & Wildlife Service," FWS.gov, May 4, 2023, <https://www.fws.gov/story/threats-birds-collisions-nighttime-lighting>.

³⁸ "Bring Back the Night: How Light Pollution Disrupts Wildlife," *The Fur-Bearers*, August 14, 2025, <https://thefurbearers.com/blog/bring-back-the-night-how-light-pollution-disrupts-wildlife/>.

³⁹ Damian Carrington, "Light Pollution Is Key 'Bringer of Insect Apocalypse,'" *the Guardian* (The Guardian, November 22, 2019), <https://www.theguardian.com/environment/2019/nov/22/light-pollution-insect-apocalypse>.

⁴⁰ "Streetlights Reduce Moth Populations," *butterfly-conservation.org*, August 26, 2021, <https://butterfly-conservation.org/news-and-blog/streetlights-reduce-moth-populations>.

Balancing the Impacts of Light Pollution With Increasing Industrialization and Urbanization

Industrialization and urbanization are the key factors that drive society forward, however, these processes also heavily contribute to light pollution. To find a way to balance the impacts of light pollution with the continued technological advancements and need for lighting around the world, delegates will need to put immense effort into creating regulatory frameworks and designs. Mismanaged light is prevalent throughout both developing and developed nations, one of the main contributing factors to light pollution. By preventing further developments of light pollution ensures the protection of ecosystems.

Light Pollution Prevention Act:

In 2013, South Korea introduced the ‘Light Pollution Prevention Act’. The act aimed to protect human health, the right to sleep, ecosystems and the natural light of the environment.

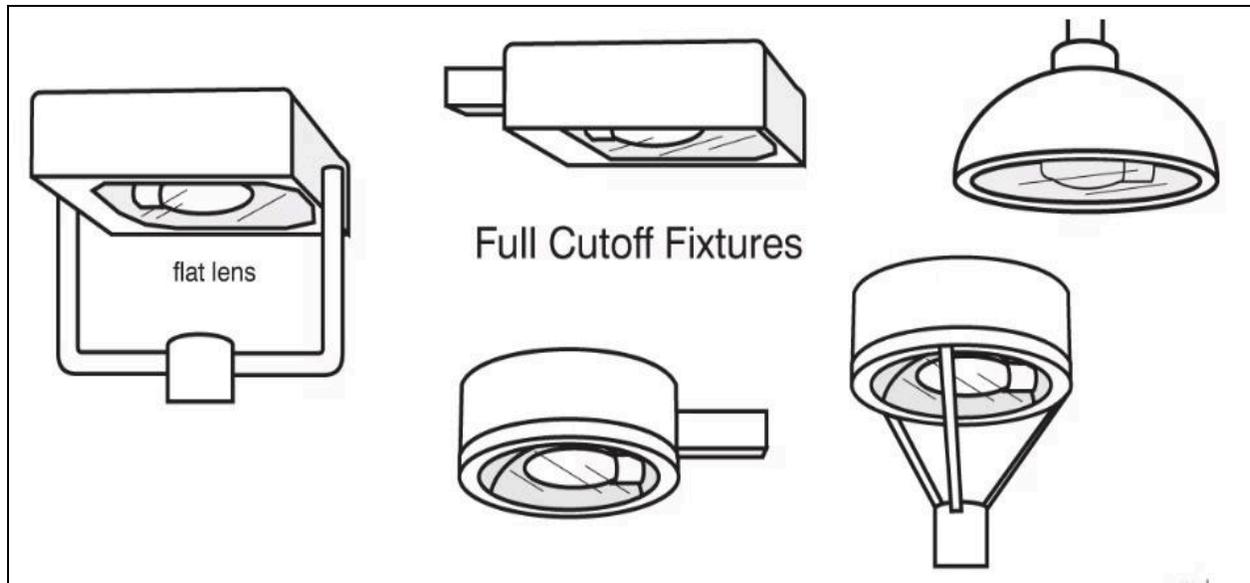
The introduction of a light emission standard classified areas into different environmental zones. These zones (Z1-Z4) created different standards of artificial light based on the individual brightness of the area to ensure effective implementation of the act. Fines were imposed for noncompliance, and both national and regional plans were developed to ensure the different levels of government worked together to mitigate the effects of light pollution.⁴¹

Torrance Barrens Dark Sky Preserve:

A different approach to the issue entirely was implemented by Canada in 1999. Canada created the Torrance Barrens Dark Sky Preserve in Muskoka, Ontario as a “conservation reserve.” Unlike traditional parks or campsites, the area is without structures, shelter, running water, cell service, Wi-Fi, or other amenities.⁴² This ensures the minimal human footprint on the reserve, allowing the area to remain in a natural, protected state. This reserve is an example of how beyond regulatory frameworks in the city, there are ways to preserve land and mitigate the harmful effects of light pollution.

⁴¹ “Statutes of the Republic of Korea,” Klri.re.kr, 2016, https://elaw.klri.re.kr/eng_mobile/viewer.do?hseq=39814&type=part&key=39.

⁴² “Bring Back the Night: How Light Pollution Disrupts Wildlife,” The Fur-Bearers, August 14, 2025, <https://thefurbearers.com/blog/bring-back-the-night-how-light-pollution-disrupts-wildlife/>.



Full Cutoff Fixtures for Lights used in Torrance Barrens Dark Sky Preserve⁴³

Past UN Action:

No binding international treaty, resolution or agreements are in place specifically targeting light pollution, the United Nations have been mainly responding to this issue through advocacy and coordination initiatives. Starting in 2020, one significant initiative is the "Dark and Quiet Skies" workshop series organized by the United Nations Office for Outer Space Affairs (UNOOSA) which brings together scientists and professionals from around the world for discussions around protecting the astronomical environment from light pollution and radio interference. In addition, other programs such as the "Global Ocean Artificial Light at Night Network (GOALANN)," is launched in 2024 as an "Ocean Decade Action." This program is determined to investigate and mitigate the impact of artificial light on marine ecosystems.

These programs mentioned above all build a foundation for future policy making, yet the tangible impacts of the current workshops and awareness programs are limited. The current strategies are often fragmented, voluntary responses that cannot enforce standards or coordinate global action. Alongside the lack of binding agreements between nations, there is a lack of effort to turn the research findings into mandatory policy. This current system has not touched upon the transboundary nature of light pollution, leading to very different legislation within different nations while light pollution becomes more and more of an emergent issue hindering the sustainability of all on Earth.

⁴³ The Torrance Barrens Conservation Area and Dark Sky Reserve, Full Cutoff Fixtures for Lights, accessed January 3, 2026, <https://www.torrancebarrens.com/light-pollution>.

Guiding Questions

1. How could protecting human health, preserving ecosystems, and safeguarding astronomical research be balanced?
2. To what extent are legal frameworks effective and necessary in regulating light pollution? How could legal framework be developed?
3. Is the most effective path forward through a strict regulatory framework or through incentivizing a global market for technologies that minimize light pollution?
4. How could the future policies be set given that different nations contribute differently to light pollution?
5. How can animals affected by light pollution around the world be equally protected, especially in areas where it contradicts with economic development?

Work Cited

- agrossia1. "UN/SKAO Workshop on Dark and Quiet Skies for Science and Society 2025." Unoosa.org, 2025.
<https://www.unoosa.org/oosa/en/ourwork/psa/schedule/2025/UN-SKAO-dark-and-quiet-skies-2025.html>.
- butterfly-conservation.org. "Streetlights Reduce Moth Populations," August 26, 2021.
<https://butterfly-conservation.org/news-and-blog/streetlights-reduce-moth-populations>.
- Carrington, Damian. "Light Pollution Is Key 'Bringer of Insect Apocalypse.'" *the Guardian*. The Guardian, November 22, 2019.
<https://www.theguardian.com/environment/2019/nov/22/light-pollution-insect-apocalypse>.
- Colite Technologies. "A Short History of Electric Lighting - Colite Technologies," November 22, 2021. <https://colitetechnologies.com/blog/a-short-history-of-electric-lighting/>.
- Coohom.com. "The History of Light Pollution: When Did It Begin?," 2023.
https://www.coohom.com/article/the-history-of-light-pollution-when-did-it-begin?hl=en_021.
- DarkSky. "Light Pollution Harms Wildlife and Ecosystems." DarkSky International, November 13, 2023.
<https://darksky.org/resources/what-is-light-pollution/effects/wildlife-ecosystems/>.
- Ditmer, Mark A., David C. Stoner, Clinton D. Francis, Jesse R. Barber, James D. Forester, David M. Choate, Kirsten E. Ironside, et al. "Artificial Nightlight Alters the Predator–Prey Dynamics of an Apex Carnivore." *Ecography* 44, no. 2 (October 18, 2020).
<https://doi.org/10.1111/ecog.05251>.
- Emmer, Kathryn M., Kathryn L. G. Russart, William H. Walker, Randy J. Nelson, and A. Courtney DeVries. "Effects of Light at Night on Laboratory Animals and Research Outcomes." *Behavioral Neuroscience* 132, no. 4 (August 2018): 302–14.
<https://doi.org/10.1037/bne0000252>.
- Fellows, Valerie. "Threats to Birds: Collisions - Nighttime Lighting | U.S. Fish & Wildlife Service." FWS.gov, May 4, 2023.
<https://www.fws.gov/story/threats-birds-collisions-nighttime-lighting>.

- Frederictonastronomy.ca. "Skyglow | Www.FrederictonAstronomy.ca," 2026.
<http://frederictonastronomy.ca/content/skyglow>.
- GOALANN. "Home - GOALANN," December 4, 2023. <https://goalann.org/>.
- Greenpeace International. "IKEA Furniture Destroys Some of Europe's Last Remaining Ancient Forests." Greenpeace International, April 10, 2024.
<https://www.greenpeace.org/international/press-release/66349/ikea-furniture-destroys-some-of-europes-last-remaining-ancient-forests/>.
- Hotten, Russell. "Volkswagen: The Scandal Explained." *BBC News*, December 10, 2015.
<https://www.bbc.com/news/business-34324772>.
- ICLG. "The UK's Gender Pay Gap Remains Stubbornly Persistent." *Gambling 2019 | Laws and Regulations | Singapore | ICLG 1*, no. 1 (July 31, 2025).
<https://iclg.com/practice-areas/gambling-laws-and-regulations/singapore>.
- IKEA Singapore. "Watch How IKEA Works with Forest Management." *IKEA Singapore*, 2020.
<https://www.youtube.com/watch?v=rbyz5MfxkAc>.
- Klri.re.kr. "Statutes of the Republic of Korea," 2016.
https://elaw.klri.re.kr/eng_mobile/viewer.do?hseq=39814&type=part&key=39.
- Kyba, Christopher C. M., Yiğit Öner Altıntaş, Constance E. Walker, and Mark Newhouse. "Citizen Scientists Report Global Rapid Reductions in the Visibility of Stars from 2011 to 2022." *Science* 379, no. 6629 (January 20, 2023): 265–68.
<https://doi.org/10.1126/science.abq7781>.
- Lohmann, K, and C Lohmann. "Orientation and Open-Sea Navigation in Sea Turtles." *Journal of Experimental Biology* 199, no. 1 (January 1, 1996): 73–81.
<https://doi.org/10.1242/jeb.199.1.73>.
- Longcore, Travis, and Catherine Rich. "Ecological Light Pollution." *Frontiers in Ecology and the Environment* 2, no. 4 (May 1, 2004): 191–98.
[https://doi.org/10.1890/1540-9295\(2004\)002\[0191:elp\]2.0.co;2](https://doi.org/10.1890/1540-9295(2004)002[0191:elp]2.0.co;2).
- Menéndez-Velázquez, Amador, Dolores Morales, and Ana Belén García-Delgado. "Light Pollution and Circadian Misalignment: A Healthy, Blue-Free, White Light-Emitting Diode to Avoid Chronodisruption." *International Journal of Environmental Research and Public Health* 19, no. 3 (February 7, 2022). <https://doi.org/10.3390/ijerph19031849>.

- National Geographic Society. "Light Pollution." education.nationalgeographic.org. National Geographic, July 15, 2022.
<https://education.nationalgeographic.org/resource/light-pollution/>.
- Oxford Languages. "Oxford Languages." Oxford University Press, 2025.
<https://languages.oup.com/google-dictionary-en/>.
- Shaw, Alex. "IKEA Blamed for Romanian Forest Destruction." Mongabay Environmental News, April 25, 2024.
<https://news.mongabay.com/2024/04/ikea-blamed-for-romanian-forest-destruction/>.
- The Fur-Bearers. "Bring Back the Night: How Light Pollution Disrupts Wildlife," August 14, 2025.
<https://thefurbearers.com/blog/bring-back-the-night-how-light-pollution-disrupts-wildlife/>.
- The Torrance Barrens Conservation Area and Dark Sky Reserve. *Full Cutoff Fixtures for Lights*. Accessed January 3, 2026. <https://www.torrancebarrens.com/light-pollution>.
- Torrancebarrens. "Muskoka's Torrance Barrens Reserve," n.d. <https://www.torrancebarrens.com/>.
- Trembley, Robert. "History of Light Pollution." Vatican Observatory, March 17, 2015.
<https://www.vaticanobservatory.org/sacred-space-astronomy/history-of-light-pollution/>.
- UNFCCC. "The Paris Agreement." United Nations Climate Change, 2025.
<https://unfccc.int/process-and-meetings/the-paris-agreement>.
- United Nations. "Greenwashing – the Deceptive Tactics behind Environmental Claims." United Nations, 2025.
<https://www.un.org/en/climatechange/science/climate-issues/greenwashing>.
- Vatican Observatory. "Light Pollution - Vatican Observatory," July 28, 2025.
<https://www.vaticanobservatory.org/light-pollution/>.
- World Migratory Bird Day. "World Migratory Bird Day," n.d.
<https://www.migratorybirdday.org/>.