

# PERSPECTIVE

## *Environment*

*Environment is everything  
that is around us.*

*It can be living (biotic) or  
non-living (abiotic) things.*

*It includes physical,  
chemical and other natural forces.*



*Dux vol.3*

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# 01

## Policy

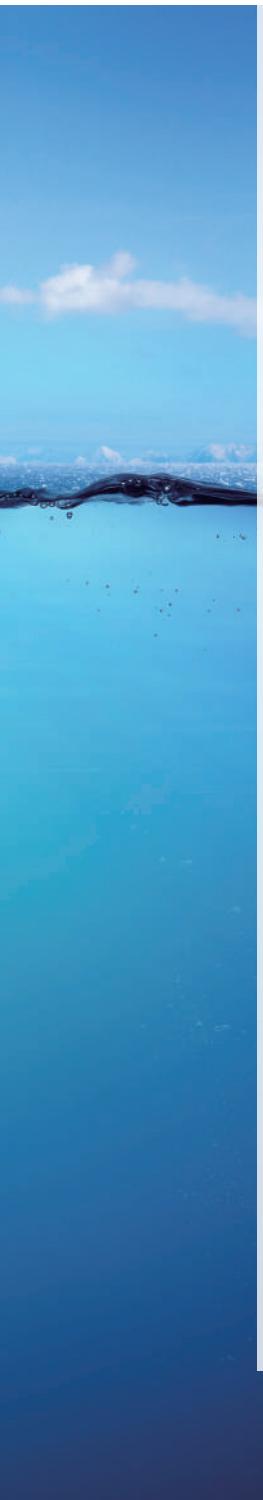




# An Alternative to the Green New Deal?

*By Kristin Cho  
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Global warming has already had overt negative impacts on our Earth. Glaciers have retreated, sea level has risen and extreme weather changes have happened. Scientists have a firm conviction that global temperatures will continue to increase, mostly due to human-caused activities. On June 11th, a new ambitious aspiration for the greenhouse gas emissions reduction called the “net-zero 2050 plan” was revealed by the May to amend the Climate Change Act of 2008 which was planned to cut 80% of emissions by 2050.

The purpose of this plan is to slow down the speed of global warming, and it will require solid regulations for a significant decrease in the usage of fossil fuels (for example, by putting a tax on carbon or creating a renewable energy standard). On the other hand, a great increase in the usage of renewable resources will be obligatory. We can say that the target year of 2050 is in the middle of what is necessary and what is realistically possible unlike when for the Green New Deal, 2030 seemed to be a short period of time to accomplish the goal. The IPCC (Intergovernmental Panel on Climate Change) claims that if global emissions are cut to net-zero, we can possibly sustain the warming below 1.5 degrees. If we can continue the net-zero until 2070, we may even be able to hope for no more than 2 degrees which is a great improvement.

It is certainly true that the Green New Deal has risen extremely quickly to prominence, however, there are many people strongly opposing this plan due to over-promising results and the language of the bill being exceedingly vague, unrealistic and flawed. Whereas the Green New Deal was criticized by many republicans as impractical and zany, the net-zero 2050 plan has a postponed deadline and some dedicated countries supporting the plan as well as getting involved. The initiative also does not go too far like the Green New Deal. This plan calls for achieving

carbon neutrality within a decade and supplying 100 percent of the country's electricity from clean energy resources while creating high-wage jobs for the people.

Equally, with the Green New Deal and the net-zero 2050 plan, these plans are just words and have not been properly carried out yet. What really matters is that these actions must be carried out.

"Standing by is not an option. Reaching net-zero by 2050 is an ambitious target, but it is crucial that we achieve it to ensure we protect our planet for future generations," May said in a statement.

Surely, a zero-carbon economy will not be suddenly be created within a day or two. However, the deadline is just over 30 years away for us to change our future. The UK, responsible for only 1.2% of the global emissions seems minute in comparison to countries like China or the US which together make up over 40% of the global emissions. Countries that have one of the highest percentages of global emissions should be first to start making drastic changes to avoid the most deadly consequences of global warming and also to encourage other countries to reduce global emissions. Countries like Finland and Norway committed to being carbon-neutral by 2035 and 2030, showing great zeal. Yet, countries that need to put in the most effort for change, like China and the US, seem to be irresponsible for the negative effects of the nations' actions having on the world as a whole.



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#### Citation

- <https://climate.nasa.gov/effects/>  
<https://www.gov.uk/government/news/pm-theresa-may-we-will-end-uk-contribution-to-climate-change-by-2050>  
<https://www.euractiv.com/section/climate-strategy-2050/news/uk-prime-minister-agrees-legally-binding-net-zero-emissions-target-for-2050/>  
<https://www.nytimes.com/2019/07/23/climate/democrats-climate-change.html?searchResultPosition=4>  
<https://www.nytimes.com/2019/02/21/us/politics/green-new-deal.html?action=click&module=RelatedLinks&pgtype=Article>  
<https://www.technologyreview.com/l/613691/climate-change-greenhouse-gas-energy-economy-uk/>  
[https://www.dw.com/en/netzero-by-2050-what-does-it-mean/a-48958487](https://www.dw.com/en/net-zero-by-2050-what-does-it-mean/a-48958487)
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# The Green New Deal, Explained

*By Jason Lee  
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The Intergovernmental Panel on Climate Change (IPCC), which is comprised of the world's best climatologists gather every few years to tell the world about our warming planet. They gathered in October of last year to share some new news about climate change. Until the 48th IPCC meeting the previous year (IPCC 48), climatologists have thought that it would be great if Earth didn't get

past 0.5 degrees (Celsius) hotter than it is now in the next few years, but as long as it didn't get more than 1 degree warmer than it is now, we would be fine. Well, at IPCC 48, the best climatologists in the world said that that was wrong, and that if we don't do something soon about it, we're going to pay for it.

To elaborate, at IPCC 48, climatologists



said that if the Earth got even half a degree hotter, many plants and animals would be in trouble, and if it got a degree warmer, there would be significant spikes in wildfires, mass migration, cost trillions of dollars and millions of lives, and cause irreversible damage to the Earth. However, there's also more bad news, at the rate that humanity's going, the Earth is going to get a lot hotter than just 1 more degree, and that will possibly make Earth entirely uninhabitable for the almost 8 billion people living on it right now by around the end of the century, or even sooner. Moreover, at this rate, millions will die even sooner, maybe in 20

years or so, due to climate change. That's very troubling news, as that means that at this rate, climate change's very severe effects will take place in many young people's lifetimes; including mine. Nobody had a plan for what to do about this, so a group of American activists made one and got a congresswoman and senator to turn it into a congressional resolution. That resolution is called the Green New Deal.

A fundamental fact about the Green New Deal is that it is not a bill or anything that congress can "pass." It is merely outlining what America, one of





the biggest countries with one of the most significant carbon footprints in the world, has to do to stop climate change. The Green New Deal is comprised of two main ideas: what America has to do to stop climate change, and how they'll protect the people that are harmed by what steps it takes to stop climate change (e.g., loss of jobs). Even though the Green New Deal is trying to save humanity from climate change, there has been much controversy and backlash regarding it, because of the things it says we have to sacrifice are what many don't want to get rid of. However, if so many aren't willing to sacrifice some things to save humanity, how can we survive?

In conclusion, though the things that we have to give up in order to stop climate change, at least according to the Green New Deal, are the things that many very much want to keep such as planes and gas cars, or are things that humans need such as meat, if humanity doesn't find substitutes for these things soon, it will lead to our demise. Many have rejected the Green New Deal and what it calls for, though, including many politicians. If so many are against it, is hope for humankind's survival

lost? Well, not quite. The Green New Deal is just a first step, and it is already causing people to change to a more environmentally sustainable living. If more individuals are more conscious about their carbon footprint and make better decisions for our environment, in the short term, it might not be convenient, but in the long term, Earth will remain a habitable planet for longer and millions if not billions will not die in the next several decades. So make smart environmental decisions, if you don't want to experience climate change's repercussions firsthand.

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#### Works Cited

Friedman, Lisa. "What Is the Green New Deal? A Climate Proposal, Explained." The New York Times, The New York Times, 21 Feb. 2019, [www.nytimes.com/2019/02/21/climate/green-new-deal-questions-answers.html](http://www.nytimes.com/2019/02/21/climate/green-new-deal-questions-answers.html).

Friedman, Lisa. "What Is the Green New Deal? A Climate Proposal, Explained." The New York Times, The New York Times, 21 Feb. 2019, [www.nytimes.com/2019/02/21/climate/green-new-deal-questions-answers.html](http://www.nytimes.com/2019/02/21/climate/green-new-deal-questions-answers.html).



02

# Pollution



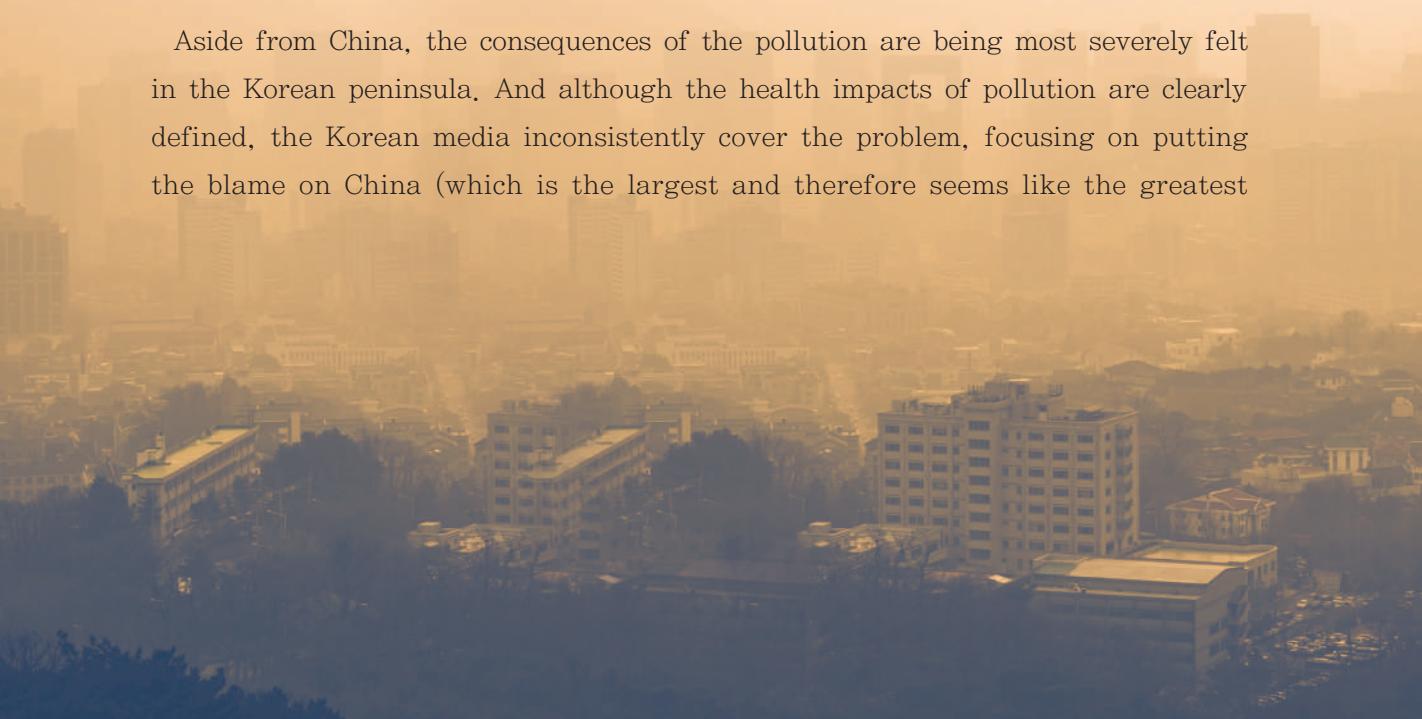


# Transboundary Pollution in East Asia

*By Seoyoon Eunie Choi  
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Currently, South Korea faces a dangerous environmental disaster: pollution blowing from China, Mongolia, and even Japan. The pollution commonly comes from the excessive burning of coal in China for heating during the winter, and yellow dust from the deserts of China and Mongolia blown across during the spring. The yellow dust that blows during the spring is not just comprised of sand, but is also comprised of soot and carcinogens (substances that can cause cancer) picked up during the journey across China and Japan's factories. Pollution moving beyond China, Mongolia, and Japan's borders like this is technically a violation of the United Nations Convention on Long-Range Transboundary Air Pollution, but because the pollution is both natural and man-made, it is difficult to establish the policy on the pollution blowing across boundaries. However, because the health issue is not being addressed due to the fact that a policy cannot be applied, the public health costs are becoming greater and greater as time goes by.

Aside from China, the consequences of the pollution are being most severely felt in the Korean peninsula. And although the health impacts of pollution are clearly defined, the Korean media inconsistently cover the problem, focusing on putting the blame on China (which is the largest and therefore seems like the greatest

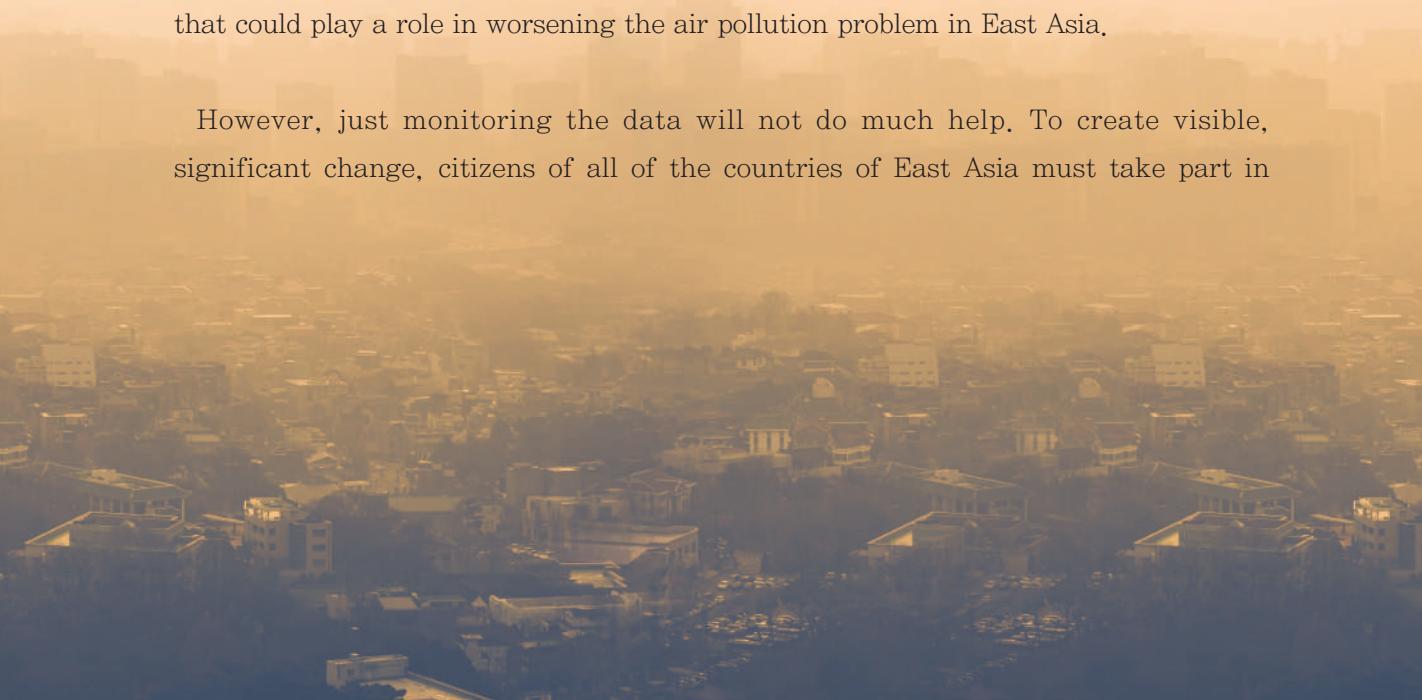


liability) and not elaborating further on the matter, even though the severity of the issue is undeniable.

Although the Korean media tend to put the blame for the costs of transboundary air pollution on China, because the problem is so urgent, all of the countries involved must cooperate to solve the problem of the regional pollution problem. Due to the fact that the problem is regional so the United Nations or any foreign government association cannot control what happens, only the countries that are involved have the ability to solve the issue, namely Korea, China, and Japan.

To solve the issue, those countries can take a few steps in the short term that will impact the long-term. The most practical solution to the problem is deepening the countries' cooperation, so negotiation and problem solving is key. To do this, individuals capable of making a change can advocate for and organize meetings and discussions. One example of a meeting that was already held was the Acid Deposition Monitoring Network in East Asia (EANET), which started as a small meeting in 1998 and has now expanded to 13 different East Asian countries in 2019. EANET is based in Niigata, Japan, and representatives discuss the installation of air pollution monitors to improve data collection and analysis there. It is important to monitor the air pollution to check for seasonal patterns, wind motions, and all of the other factors that could play a role in worsening the air pollution problem in East Asia.

However, just monitoring the data will not do much help. To create visible, significant change, citizens of all of the countries of East Asia must take part in



cleaning up the air. Some easy ways to do this are not riding a car, recycling, or picking up trash. One could also simply use less electricity by taking shorter, colder showers and not use air conditioning. It may seem like these methods have been said over and over again but to no avail. And to some extent, that is true, but that is not because the methods are ineffective. It is because not enough people decide to take the time to stop and do all of these things. Because life has become much too simple and easy for people to stop using the amenities they have already been given. So, the actions might seem like frivolous efforts. But each small action can provoke extraordinary change.

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#### Works Cited

- "EANET Acid Deposition Monitoring Network in East Asia." EANET Acid Deposition Monitoring Network in East Asia, [www.eanet.asia/](http://www.eanet.asia/).
- "Transboundary Air Pollution in Northeast Asia: The Political Economy of Yellow Dust, Particulate Matter, and PM2.5." KEI News, [keia.org/publication/transboundary-air-pollution-northeast-asia-political-economy-yellow-dust-particulate-mat](http://keia.org/publication/transboundary-air-pollution-northeast-asia-political-economy-yellow-dust-particulate-mat).
- "Transboundary Pollution." Clean Air Asia, [cleanairasia.org/node/7714/](http://cleanairasia.org/node/7714/).
- Un. "Smoke-Haze: A Transboundary Air Pollution Issue in Southeast Asia." UN Environment, [www.unenvironment.org/news-and-stories/blogpost/smoke-haze-transboundary-air-pollution-issue-southeast-asia](http://www.unenvironment.org/news-and-stories/blogpost/smoke-haze-transboundary-air-pollution-issue-southeast-asia).
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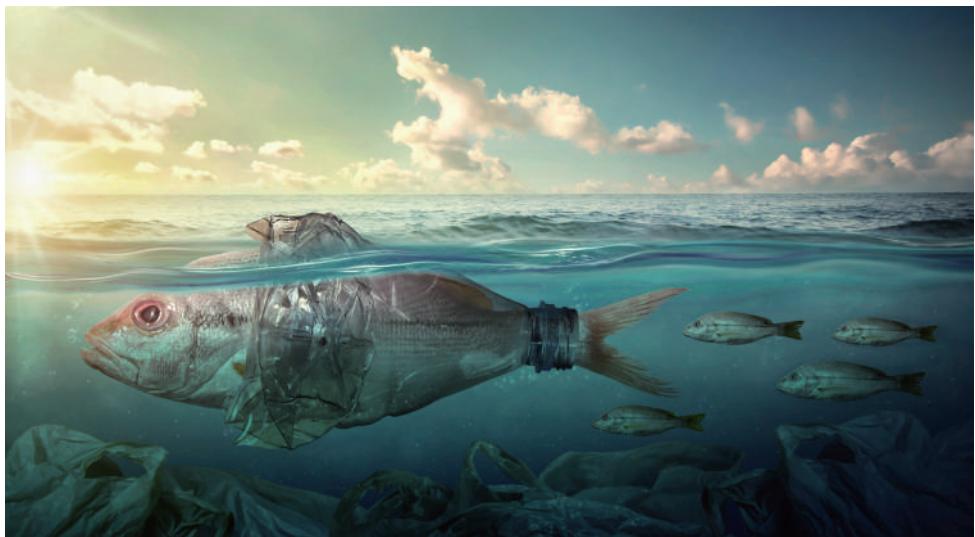
# Water Quality of Korean Rivers

*By Seoyoon Eunie Choi  
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A study completed in 2018 by the Portland State University discovered there are unsafe levels of pollution in South Korea's most populous and urbanized river, the Han.

The study was led by Heejun Chang, a geography professor at Portland State University's College of Liberal Arts and Sciences. Chang used data on water-quality trends in the Han River from the late 1990s to early 2017. The Han had accumulated pollutants from factories, farms, and sewer system waste over the course of almost





30 years. The water quality has improved slightly since 1990, but there are still pollutant levels in the rivers of urbanized regions of South Korea, like Seoul.

The factories in Seoul released pollution into the air but also produced solid pollutants that were deposited into the river along with the sewage and farm waste. This caused for there to be high concentrations of nitrogen, phosphorus, and chemical oxygen demand (the ability for water to consume oxygen while decomposing organic matter) in the water, which damaged the life in the water and also caused the health of the people who drank the water to deteriorate. Seoul has a water purification system called Arisu, which follows the World Health Organization's recommendation of conducting water quality inspections on 170 different indicators. However, once the citizens of Seoul started to become sick from drinking the water, the Han River water had to go through several more tests and purifications before it was deemed safe to drink.

Furthermore, in comparison to air pollution, water pollution can affect people more visibly. Air pollution is only noticeable by the telltale fog in the atmosphere or the dissection of the particles in the air. Water pollution, however, is visible to everyone who visits the rivers of South Korea. And

even though the water pollution is more visibly noticeable, the severity of the terrible state of the water is not well-known to the citizens of Seoul, along with the rest of the world.

The South Korean government addressed the water pollution issue in 2016 and installed wastewater treatment plants in the rivers. Nevertheless, the Portland State University study, which was completed and published in July of 2018, discovered that there were still severe levels of pollutants in the water even after 2 more years due to the constant growth of the economy calling for more and more industrialization, innovation, and transportation.

There are several ways to go about solving the water pollution situation for good, instead of just placing plants in the water and calling it a solution. The three most agreed-upon solution for water pollution are better watershed management practices and stream restoration practices, more effective land management, and growing



vegetation in protected areas along streams. Watershed management is when an area that separates bodies of water into rivers or seas is taken care of using natural resources. Stream restoration is a similar practice, but uses man-made and natural resources. Effective land management is when the land around the river is used to its full effect, mainly by planting vegetation, which leads to the last solution. All three were shown to have significant positive effects for the quality of the bodies of water, so they can all be used by the South Korean government to solve the water quality issue.

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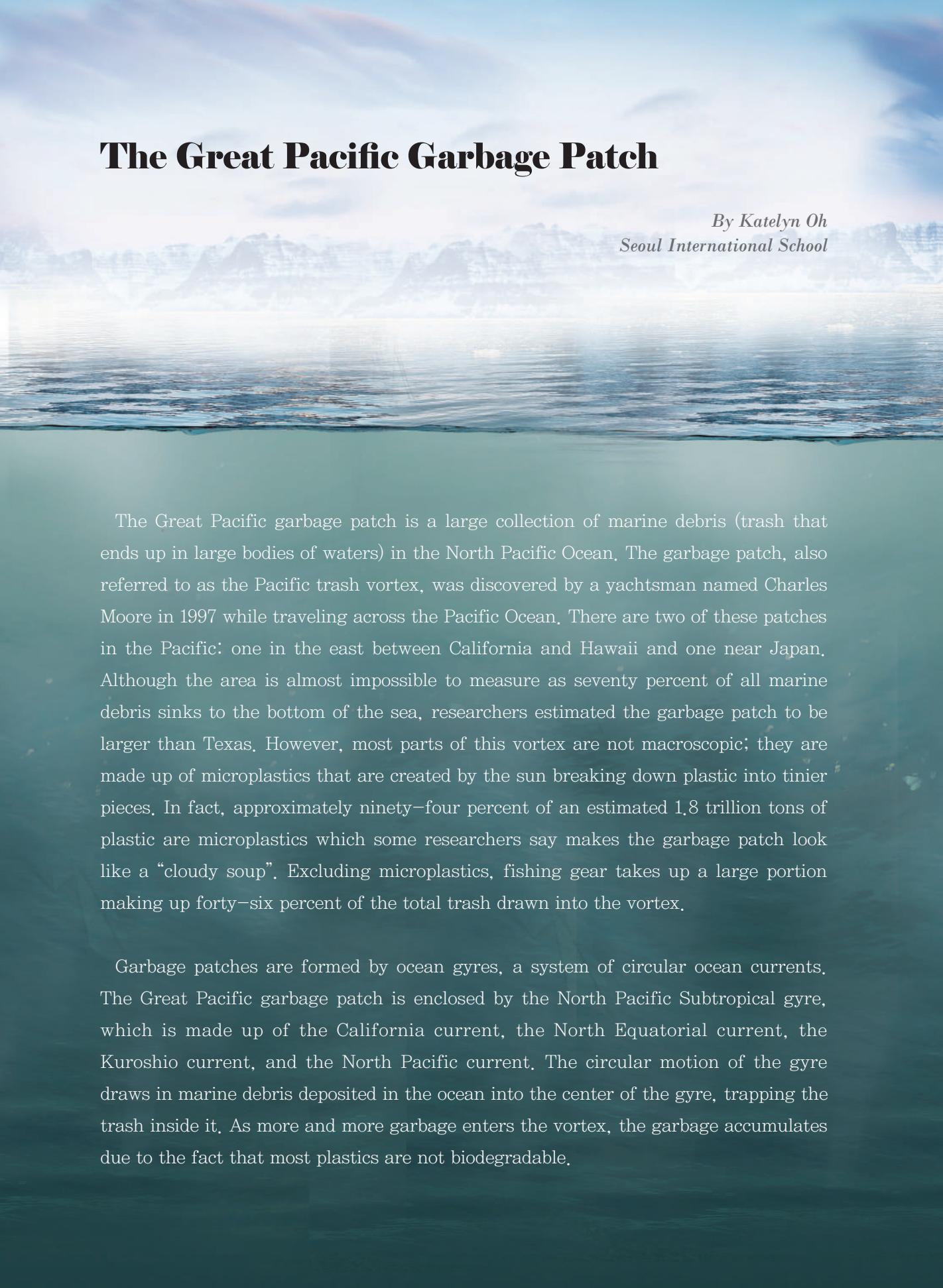
#### Works Cited

- Arisu Is – Arisu – Seoul's Tap Water, Arisu – The Office Of Waterworks Seoul Metropolitan Government, [arisu.seoul.go.kr/sudo\\_eng/sub/arisu/arisu01.jsp](http://arisu.seoul.go.kr/sudo_eng/sub/arisu/arisu01.jsp).
- "Land Use, Han River Basin, Seoul: Keeping Pace with Population Growth." Save The Water™, 11 June 2019, [savethewater.org/2018/07/31/lad-use-han-river-basin-seoul-keeping-pace-population-growth/](https://savethewater.org/2018/07/31/lad-use-han-river-basin-seoul-keeping-pace-population-growth/).
- Protection, Department of Environmental. DEEP: Watershed Management – Overview, [www.ct.gov/dep/cwp/view.asp?a=2719&q=325622&depNav\\_GID=1654](http://www.ct.gov/dep/cwp/view.asp?a=2719&q=325622&depNav_GID=1654).
- Rojas, Cristina. "Study Finds Room for Improvement in South Korea's Polluted River Basin." Phys.org, Phys.org, 12 July 2018, [phys.org/news/2018-07-room-south-korea-polluted.html](https://phys.org/news/2018-07-room-south-korea-polluted.html)
- 



# The Great Pacific Garbage Patch

*By Katelyn Oh  
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The Great Pacific garbage patch is a large collection of marine debris (trash that ends up in large bodies of waters) in the North Pacific Ocean. The garbage patch, also referred to as the Pacific trash vortex, was discovered by a yachtsman named Charles Moore in 1997 while traveling across the Pacific Ocean. There are two of these patches in the Pacific: one in the east between California and Hawaii and one near Japan. Although the area is almost impossible to measure as seventy percent of all marine debris sinks to the bottom of the sea, researchers estimated the garbage patch to be larger than Texas. However, most parts of this vortex are not macroscopic; they are made up of microplastics that are created by the sun breaking down plastic into tinier pieces. In fact, approximately ninety-four percent of an estimated 1.8 trillion tons of plastic are microplastics which some researchers say makes the garbage patch look like a “cloudy soup”. Excluding microplastics, fishing gear takes up a large portion making up forty-six percent of the total trash drawn into the vortex.

Garbage patches are formed by ocean gyres, a system of circular ocean currents. The Great Pacific garbage patch is enclosed by the North Pacific Subtropical gyre, which is made up of the California current, the North Equatorial current, the Kuroshio current, and the North Pacific current. The circular motion of the gyre draws in marine debris deposited in the ocean into the center of the gyre, trapping the trash inside it. As more and more garbage enters the vortex, the garbage accumulates due to the fact that most plastics are not biodegradable.



Also, marine creatures living in the gyre are already facing severe problems because of the huge amounts of marine debris. For example, sea turtles often mistake plastics bags for jelly, their favorite food, and seals as well as other marine mammals often drown in fishing nets entangled and unable to escape. Further, the layer of trash on the surface of the ocean blocks sunlight from reaching the seafloor which results in plankton and algae not receiving enough sunlight to survive. If the population of these species decreases, the whole food chain will have a problem and it could possibly lead to seafood being less available.

While the situation in the Great Pacific garbage patch is in great need of improvement, no countries are willing to take responsibility as it would be extremely expensive and difficult to achieve a favorable outcome. As a matter of fact, 67 ships are estimated to be able to clean up less than one percent of the ocean in a year. The idea of simply scooping up all the trash from the ocean is impractical since there are marine creatures living in the area and it would require advanced technology to collect only the garbage. Even if we were equipped with the technology, it is still almost impossible considering the size of the Great Pacific garbage patch. Despite the fact that it is unrealistic, organizations such as The Ocean Cleanup have decided to help recover the ocean by investing thirty-two million dollars into the its campaign, aiming to clean up the garbage in the Pacific Ocean.

Currently, the best solution for the public is to refrain from using normal plastic and instead, use biodegradable plastic wherever it is possible.

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#### Citing

[www.nationalgeographic.org/encyclopedia/great-pacific-garbage-patch/](http://www.nationalgeographic.org/encyclopedia/great-pacific-garbage-patch/)  
[www.theguardian.com/environment/2019/jun/23/great-pacific-garbage-patch-floating-plastic-trap-deployed-again](http://www.theguardian.com/environment/2019/jun/23/great-pacific-garbage-patch-floating-plastic-trap-deployed-again)  
[science.howstuffworks.com/environmental/earth/oceanography/great-pacific-garbage-patch.htm](http://science.howstuffworks.com/environmental/earth/oceanography/great-pacific-garbage-patch.htm)  
[theoceancleanup.com/great-pacific-garbage-patch/](http://theoceancleanup.com/great-pacific-garbage-patch/)

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# Plastic Pollution and the Environment

*By Grace Yongeun Song  
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More than 95 percent of the world's population is breathing polluted, unsafe air and the hardest hit areas are in Africa and Asia, a major study of global air pollution has found. Urban areas, which are home to a greater percentage of the world's population than ever before, are exposing hundreds of millions to air that is filled with pollution from automobiles and factories. In many rural areas, the burning of solid fuels like wood, charcoal and coal, is also a threat. According to the report, known as the State of Global Air and produced by the Health Effects Institute, indoor and outdoor forms of air pollution contributed to an estimated 6 million deaths worldwide in 2016—accounting for an increased risk of stroke, heart attack and lung cancer.

There are many noticeable factors that are responsible for the deteriorating environment: water pollution, thermal pollution, light pollution, air pollution, etc. Among these countless different types of pollution, there is one that holds the most accountability for the increasing pollution: Plastic pollution. The chemical structure of most plastics renders them resistant to many natural processes of degradation and





as a result they are slow to degrade. Together, these two factors have led to a high prominence of plastic pollution in the environment. Scientists are finding plastic pollution in every corner of the planet – from the top of the Pyrenees to the deepest ocean trench. It's littering rivers, lakes and oceans, killing wildlife, washing out of our clothes and making its way into our food and drinking water. In fact, there are even plastic islands in the sea, filled with trash and plastic that humans carelessly throw out. The Great Pacific garbage patch, also described as the Pacific trash vortex, is a gyre of marine debris particles in the north central Pacific Ocean.

In order to cease such detrimental effects from advancing any further, people have to start changing their daily life habits. Firstly, reducing plastic use is a crucial step to take in order to reduce plastic pollution. There are already signs of people beginning to follow such procedures. Starbucks, an American coffee company and coffeehouse chain, now only provide customers with paper straws instead of the green plastic straws which it previously used. By doing so, we have already reduced a great amount of plastic waste. Not only that, but some people even purchase portable and durable straws in order to avoid using plastic straws. Taking these small, yet effective steps can gradually improve the health of the environment, as well as reduce the pollution.

Among the many problems in the world today, climate change is one of the most eminent and threatening. Already, climate change is causing millions of deaths and it will continue to do so – unless people begin to understand the urgency of the problem and make changes to improve the climate's health. Otherwise, the ecosystem will continue to exacerbate and there will come a point in the future when humanity will be at peril.

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#### Works Cited Page

- Bradford, Alina. "Pollution Facts & Types of Pollution." LiveScience, Purch, 27 Feb. 2018, www.livescience.com/22728-pollution-facts.html.
- "Environmental Pollution." Environmental Pollution – an Overview | ScienceDirect Topics, www.sciencedirect.com/topics/earth-and-planetary-sciences/environmental-pollution.
- "When The Mermaids Cry: The Great Plastic Tide." Plastic Pollution, http://plastic-pollution.org/.

03

# Fashion & Beauty





# Beauty Hazard:

## How the Cosmetics Industry Has Become An Unlikely Enemy in the Global War Against Climate Change

By Rachel Lee  
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When most people begin their skincare or makeup routine, they rarely stop to think about how the ecological footprint their products leave on Earth. Shopping at Sephora for a new lipstick or eyeliner, it's more common to evaluate the color of the product rather than thinking about the plastic packaging and its impact on the environment. But the truth is, the makeup industry is responsible for a ludicrous amount of environmental waste, causing emissions.

To combat this issue, many beauty influencers have begun a trend of no waste routines, in which they try to minimize the amount of plastic packaging their beauty or skincare products use. Plastic packaging accounts for over 80% of trash found on beaches, and keeping in mind the gravity of the global warming crisis on our planet, increasing use of recycling and minimizing waste is essential to preserving the environment. A popular example is a shampoo bar wrapped in recyclable paper as an alternative to bulky, non-ecofriendly shampoo bottles.

In fact, Meghan Campbell from Lush, a



leading company in the skincare industry, stated, “One of these little bars is actually the equivalent of three medium sized bottles.” Furthermore, popular media platforms such as Buzzfeed have published video series on zero waste lifestyle not only in the realm of beauty and skincare but also cooking and grocery shopping.

Although it may seem inconsequential to use beauty products packaged in plastic or glass, myriad animals and plants suffer from how long it takes to break down the material; in fact, Elizabeth Bennett from Refinery29 wrote, “Face wipes take over 100 years to biodegrade, and make up 93% of the material in the fatbergs clogging up our sewers. Glitter, essentially just tiny microplastics, is ending up in our oceans and killing wildlife, and we’ve seen the tragic image of the seahorse clutching a Q-tip often enough to know that cotton buds are not eco-friendly.” Though it may feel difficult to drastically switch up your beauty routine, a small change in what you put on your face may end up saving countless lives in the long run.

It’s a lot easier to brush aside the imminent issue of environmental conservation when the waste comes from products we use every day such as cosmetic items, rather than oil reserves or large factories, but it’s important to be aware that our daily habits can make us perpetrators in the climate change phenomenon. Ultimately, it’s up to you to decide if making a small change in your daily beauty routine is worth helping save the world… quite literally.

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#### Works Cited

- Bennett, Elizabeth. “Here’s What Happened.” I Tried To Make My Entire Beauty Routine Plastic-Free, Refinery29, 20 July 2018, [www.refinery29.com/en-us/plastic-free-beauty-products](http://www.refinery29.com/en-us/plastic-free-beauty-products).  
Facebook Watch, We Need This by ATTN, 9 June 2018, [en-gb.facebook.com/attn/videos/shampoo-bars/214240399077833/](https://en-gb.facebook.com/attn/videos/shampoo-bars/214240399077833/).
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# How Bracelets Are Promoting Ocean Cleanup

*By Katherine Lee  
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“By purchasing one bracelet, you will remove one pound of trash from the ocean and coastlines.” This is what 4Ocean, a Florida-based company, claims to its customers. With the sales of its versatile bracelet and other sustainable renditions of popular everyday products, 4Ocean uses the money to remove trash polluting the ocean. The brand idea was first put into motion when two friends, Alex Schulze and Andrew Cooper took a celebratory surf trip to Bali. Instead of being welcomed by the clean shores and water like they had expected, they were faced with the staggering amount of plastic on the beach and in the ocean. When they noticed local fishermen also complaining about the amount of plastic in the sea, Schulze and Cooper became determined to try and create a solution.

Founded in 2017, 4Ocean has since made its mark across social media networks and online platforms such as Instagram and YouTube as a fun, fresh take on cleaning up the environment.

Along with the countless photos of online influencers and celebrities sporting the bracelet on their profiles, it’s appealing to many people when they learn that the bracelet cord is 100% post-consumer recycled, recovered from a plastic bottle, and that the beads come from recycled glass. 4Ocean also has a huge online presence with the environment-related posts it regularly shares to its 1.8 million followers on Instagram.

With the help of customers around the world and the rising awareness of environmental issues, 4Ocean has removed around 4.7 million pounds of trash from the ocean so far. There have been cleanups in 27 countries so far by 4Ocean. 4Ocean is operating out of multiple countries and employs more than 150 people around the globe to help carry out its mission.

With each bracelet sold, the founders of 4Ocean hope to remind people to be conscious of the impact of their purchases. There are still many plastic

products used by millions of people every day, but hopefully many of those people will at least think about the products that they use and the building impact of it on the environment. The bracelet serves as a clever way to remind people that there is a growing range of sustainable options, and that people can contribute by replacing single-use plastic objects with reusable ones.

4Ocean has been very successful in its two years of business, and it isn't planning on slowing down anytime soon. The founders, Alex Schulze and Andrew Cooper, look forward to expanding the company even more and inspiring people to help make a difference in ocean pollution.

*Katherine Lee  
Seoul International School*



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Works Cited

- Jr., Tom Huddleston. "These 20-Something Surfers Started a Company That's Pulled 1 Million Pounds of Garbage out of the Ocean ." CNBC, CNBC, 7 Sept. 2018, [www.cnbc.com/2018/09/07/4oceans-cleaned-up-1-million-pounds-of-ocean-garbage.html](http://www.cnbc.com/2018/09/07/4oceans-cleaned-up-1-million-pounds-of-ocean-garbage.html).
- "One Ocean, One Mission." 4ocean Is Actively Cleaning Our Oceans and Coastlines, [4ocean.com/](http://4ocean.com/).

# 04

## Important Figures





# Greta Thunberg

*By Kristin Cho  
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Swedish climate activist Greta Thunberg, at the age of sixteen, is sending out a loud and crystal clear message to the rest of the world about the extreme severity of climate change happening right now. Thunberg seemed like a lonely figure when she staged the first “skolstrejk för klimatet” (school strike for climate change) outside of the Swedish parliament on August 20th, 2018. Her classmates rejected her request

to join, her parents tried to discourage her, passersby expressed pity at the sight of the invisible girl. However, Thunberg posted a photo of the strike for climate change on Instagram and Twitter and millions of people started to gain enormous interest in Thunberg and her purpose of the school strike.

The strike for climate change was inspired by students from the Parkland





school in Florida, who walked out of classes in order to protest against the US gun laws that caused the mass shooting in their school. Then, last summer in 2018, Thunberg became anguished when heatwaves and wildfires spread across Sweden as well as the record of heatwave in northern Europe. Day one was August 20th, 2018; that's how it began. "I painted the sign on a piece of wood and, for the flyers, wrote down some facts I thought everyone should know. And then I took my bike to the parliament and just sat there," she reminisces. Some politicians, school officials and adults have denounced Thunberg and

the protests she started, calling them a misuse of class time and that she should actually be using her time wisely to study to become a climate scientist to "change" such problems. Thunberg made a witty response to such remarks, "That may well be the case. But then again, political leaders have wasted 30 years of inaction. And that is slightly worse."

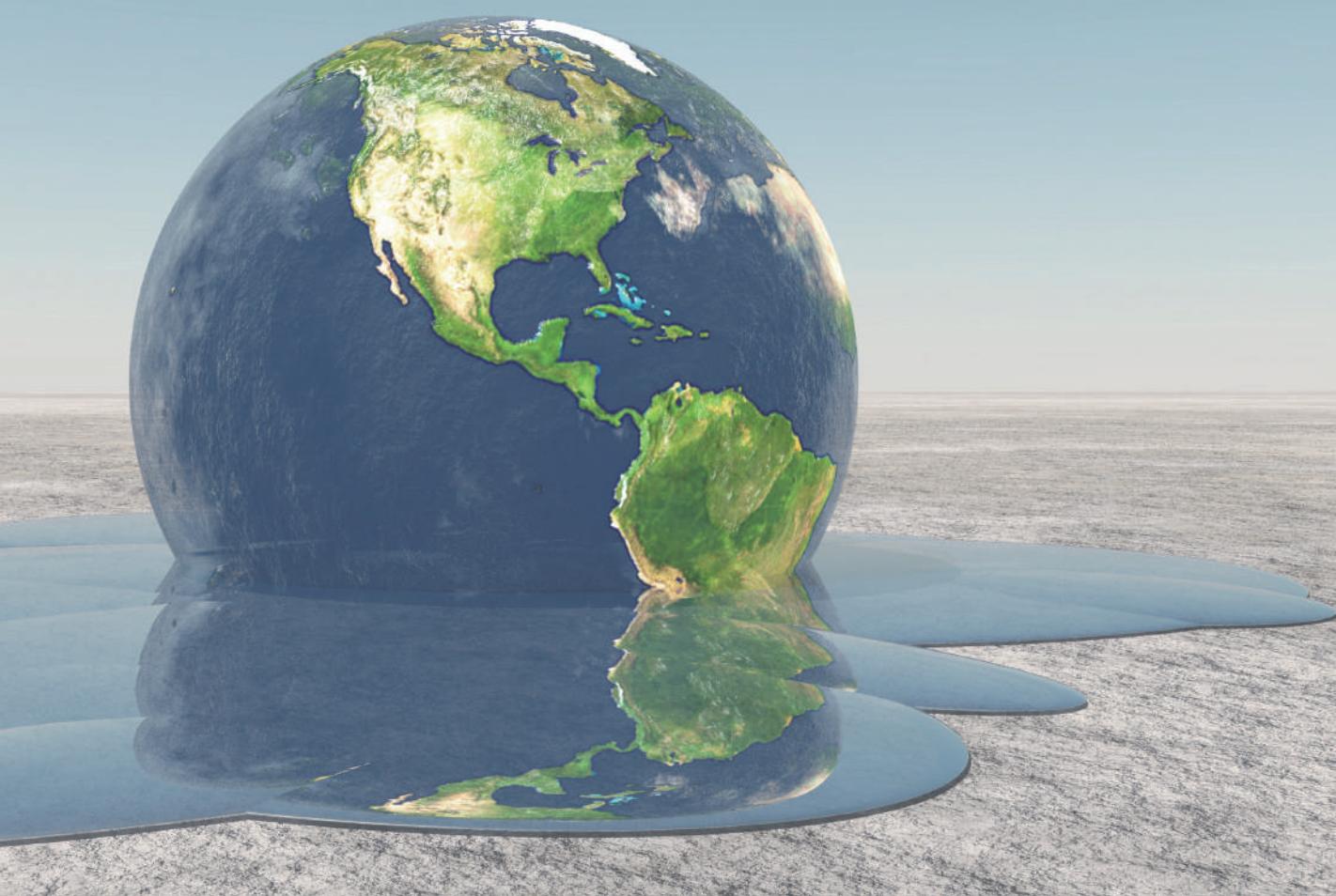
"We already have all the facts … , all we have to do is wake up and change" Greta Thunberg said during her TED talk in TEDxStockholm. Thunberg's message is clear on how people, especially adults who do have the power to do so, must try to solve this existential crisis right

now. Stop ruining future generations' days to come and take action. Action is what is necessary. We all know what must be done – we must stop the emissions of greenhouse gases, yet the economy is totally dependent on burning fossil fuels. Although we may not have the solutions at this very moment to solve all these problems, we must start to treat this crisis as a crisis, and start to act.

At the age of 12, Thunberg gave up meat and stopped taking airplanes or any flights, in order to lessen her impact on rapid climate change. In January, Thunberg traveled by train to attend the World Economic Forum in Davos, Switzerland. And she will be sailing across the Atlantic by a yacht, leaving from Britain to attend U.N. climate summits in New York in September and Santiago and Chile, in December. Such small changes are also capable for us, and great individuals like Thunberg are giving us a great example to follow. Yes, laws to be implemented will take time and such things are out of hands for students like us, but we have to raise the awareness and start small actions to get anywhere. We, have to save our future.



*Kristin Cho  
Havergal College*



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#### Citations

- [https://www.ted.com/talks/greta\\_thunberg\\_the\\_disarming\\_case\\_to\\_act\\_right\\_now\\_on\\_climate#t-213561](https://www.ted.com/talks/greta_thunberg_the_disarming_case_to_act_right_now_on_climate#t-213561)  
<https://www.nytimes.com/2019/03/12/opinion/climate-change-children-greta-thunberg.html?searchResultPosition=5>  
<https://www.theguardian.com/world/2019/mar/11/greta-thunberg-schoolgirl-climate-change-warrior-some-people-can-let-things-go-i-cant>  
<https://www.theguardian.com/culture/2019/jul/21/greta-thunberg-you-ask-the-questions-see-us-as-a-threat>  
<https://www.newyorker.com/news/our-columnists/the-fifteen-year-old-climate-activist-who-is-demanding-a-new-kind-of-politics>  
<https://www.independent.co.uk/environment/climate-change-greta-thunberg-ipbes-report-environment-government-emergency-a8902826.html>
-

# Biography of Heidi Cullen

*By Nancy Koo  
Seoul International School*

Heidi Cullen, 44, has been a leading climate expert for years. Cullen says she's motivated by an "urgent desire to communicate the message that action we take today in terms of curbing greenhouse gas emissions and preparing for climate change risks will make a difference to us now and to future generations." And she's helping other scientists get the message out as well. "If scientists fail to communicate the significant risks associated with burning fossil fuels, we'll never achieve the policy action needed to prevent a worst-case scenario," says Cullen.

Born in Staten Island, New York, Cullen received a bachelor's degree in industrial engineering and operations research from Columbia University, followed by a doctorate in climatology and ocean-atmosphere dynamics from the Lamont-Doherty Earth



Observatory, also at Columbia. Subsequent to her educational experiences, Cullen worked at the National Center for Atmospheric Research (NCAR). While there, she was given a fellowship from the National Oceanic and Atmospheric Administration (NOAA) to return to Columbia University, where she worked at the university's International Research Institute for Climate and Society. The fellowship allowed her to contribute to a project which looked at the effect of climate on water resources in Brazil and Paraguay.

After her fellowship, Cullen joined The Weather Channel, becoming their initial expert on climate change topics. In October 2006 she previewed her 30-minute program, *The Climate Code*. In April of the following year, along with a broadband program, *The Climate Code* would change to an hour format, and be retitled *Forecast Earth*; Cullen was part of the creation process of both shows. In November 2008, NBC, the parent company of The Weather Channel, canceled the program. After leaving The Weather Channel, Cullen became the chief climatologist for the not-for-profit organization, Climate Central, where she issues reports on climate topics. In addition to her



responsibilities at Climate Central, she lectures at nearby Princeton University and is a senior research fellow at Penn's Wharton Risk Management and Decision Processes Center. In 2010 she authored the book, *The Weather of the Future*, which gives one perspective of what different locations might look like in the year 2050 based upon current climate modeling theories. She also

had the capacity of chief science advisor for the Showtime series, *The Years of Living Dangerously*. She is also currently a member of the Science Advisory Board for NOAA and sits on the Council of the American Meteorological Society.

Many people similar to Heidi Cullen have sparked small but impactful



changes in the environment and improved the situation of the world. Everyone can act in a manner that leads to refine the earth, the only planet capable of allowing humans to thrive.

*Nancy Koo  
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#### Works Cited

- BookBrowse. "Heidi Cullen Author Information." BookBrowse.com, [www.bookbrowse.com/biographies/index.cfm/author\\_number/x5319/heidi-cullen](http://www.bookbrowse.com/biographies/index.cfm/author_number/x5319/heidi-cullen).
- Cullen, Heidi. "Heidi Cullen Life and Biography." Heidi Cullen Biography, Birth Date, Birth Place and Pictures, [www/browsebiography.com/bio-heidi\\_cullen.html](http://www/browsebiography.com/bio-heidi_cullen.html).
- "Heidi Cullen." Wikipedia, Wikimedia Foundation, 22 Jan. 2019, [en.wikipedia.org/wiki/Heidi\\_Cullen](https://en.wikipedia.org/wiki/Heidi_Cullen).
- "Heidi Cullen, Ph.D. Chief Science Advisor, Years Of Living Dangerously." The Years Project, [theyearsproject.com/science-advisor/heidi-cullen-ph-d/](http://theyearsproject.com/science-advisor/heidi-cullen-ph-d/).
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05

# Climate Change





# Alarming Rate of Melting in Greenland

*By Katelyn Oh  
Seoul International School*



Greenland has lost 4976 gigatons of its ice since 1972. The speed of melting has increased drastically over a few decades and researchers say that the ice is melting four times faster than it was in 2003, about eighty percent faster. This is due to the melting of the extensive ice sheet

in the southwest of Greenland. Previously, the melt was predominantly focused on Greenland's southeast and northwest regions which are mostly occupied by icebergs and glaciers. Greenland's ice sheets are large enough to cover three times the area of Texas, and some areas are estimated to be up to two miles deep. Considering the size of the ice, the melting is expected to have a devastating impact on the environment and even humanity. In fact, Greenland has started to lose approximately 280 billion tons of ice per year, enough to cover New York and Florida and drown Washington, DC.

Every year, Greenland goes through a natural weather phenomenon called the North

Atlantic Oscillation. The process involves a negative phase and a positive phase. In the negative phase, parts of the ice sheet melt due to slightly warmer weather while in the positive phase, the ice freezes back into its normal state as the temperature drops again. The process itself does no long-term damage, but when the negative phase of the North Atlantic Oscillation overlaps with Greenland's summer which is getting increasingly warmer as a result of global warming, the ice sheet melts at a much faster pace. This results to a loss of countless tons of ice, and the situation is predicted to aggravate in the future.

Over the past few years, scientists have figured that Greenland's ice melt is one of the major reasons behind sea-level rise since 1993. Melting glaciers are known to play the largest part when it comes to rising sea levels, and Greenland's icebergs and glaciers are also partially responsible for it. However, researchers predict that an ice







sheet in the southwest will become one of the main factors of sea-level rise in the future. This discovery was completely unexpected as the large ice sheets in Greenland were believed to be more resistant to the warming in contrast to the glaciers. Greenland's ice sheets are capable of raising sea levels by seven meters, and it would put millions of people at risk of possible floods and many other disasters. In fact, even a ten-centimeter rise would significantly affect humanity. So, it would obviously be hard to imagine the devastation that several additional meters of sea-level would bring about. And that is the possibility we face in a few decades if the ice sheets across the globe, including Greenland, continue to melt at the same pace.

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Citing

- [www.livescience.com/64546-greenland-ice-sheet-melting-faster.html](http://www.livescience.com/64546-greenland-ice-sheet-melting-faster.html)  
[www.nationalgeographic.com/environment/2019/01/greenland-ice-melting-four-times-faster-than-thought-raising-sea-level/](http://www.nationalgeographic.com/environment/2019/01/greenland-ice-melting-four-times-faster-than-thought-raising-sea-level/)  
[www.vox.com/energy-and-environment/2018/12/8/18129132/greenland-ice-melt-sea-level-climate-change](http://www.vox.com/energy-and-environment/2018/12/8/18129132/greenland-ice-melt-sea-level-climate-change)  
[www.washingtonpost.com/climate-environment/2019/04/22/ice-loss-greenland-has-grown-by-factor-six-since-scientists-find/?noredirect=on&utm\\_term=.c681570c2ef4](http://www.washingtonpost.com/climate-environment/2019/04/22/ice-loss-greenland-has-grown-by-factor-six-since-scientists-find/?noredirect=on&utm_term=.c681570c2ef4)
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# The Approaching Tangibility of Climate Change

*By Thomas Yonghee Song  
Seoul International School*

Recent studies have produced rigid proof that the Earth's climate is changing in an unsustainable manner, veering far off from its usual fluctuation patterns caused by natural factors. It is becoming painfully clear that mankind's continuous exploitation of resources, massive carbon emissions, and agricultural activities are responsible for the drastic anomalies in the global climate. Scientists worldwide emphasize the imminent collapse of ecosystems and large-scale catastrophes, urging leaders of nations to enact eco-friendly practices in order to halt and eventually reverse the harms. Yet, a surprisingly large population remains indifferent to this issue at hand, neglecting their duty to contribute to a cause against the current and upcoming environmental decay; the current problems are mostly intangible and fail to impact a wide demographic.

Currently, the biggest environmental issues lie among failing biospheres

and habitat destruction, such as the massive plastic contamination of marine life and the melting of polar ice caps



and permafrost. Specifically, a lot of attention is allocated to melting bodies of ice because it can lead to rising sea levels and release of ancient bacteria and viruses that are dormant at the moment. However, some people choose to dismiss these phenomena as “myths” simply because they don’t influence these people’s current state of life: the problems aren’t tangible. Earth is coming

dangerously close to a point in which these problems will become personal to more or less everyone.

The U.N. Intergovernmental Panel on Climate Change (IPCC) released a report which examined the major sources of greenhouse gas emissions among human activity. Listed as the third most active, human land use for agricultural and



forestry accounted for approximately 23 percent of total human-caused greenhouse gas emissions.

Not only do we avidly deforest massive amounts of land in places such as the Amazon and Indonesia, but we also employ irresponsible practices on farming lands through the use of pesticides and fertilizers. Furthermore, the large amount of livestock that are bred and raised to satiate the food consumption of populations produce significant amounts of methane, a type of greenhouse gas. Meanwhile, climate change in the form of droughts, erosion, extreme weather, and degrading soil devastate farmlands, turning arable lands into deserts.

Thus, as Jennifer Tabola, director for global climate strategy at the Nature Conservancy states, “We have a choice: do we balance the needs of human development and nature, or do we sleepwalk into a future of failing farmlands, eroding soil, collapsing ecosystems and dwindling food resources?” A great dilemma arises because either choice has massive payoffs to consider.

By attempting to make amends to the status quo by reducing livestock and farmland or preserving masses of land for afforestation, we harshly cut the food source, forcing people to drastically change their diets and food intake. On the other hand, by choosing to solidify current agricultural practices for the satisfaction of food consumers, the environment gets placed in, as ironic as the name is, a positive feedback loop. Climate changes will continue to progress, and render farmlands useless, which will add on to the detriment done to the environment because farmlands are essential carbon sinks. Yet, farmers will continue to establish new farms on available land. Eventually, desertification will occur at an exponential rate, cutting off the remaining food sources available for human populations.

The choice of a conversion to sustainable practices is logically seen as more



appealing because the initial payoff sets the planet on a course toward recovery. However, many continue to stick to the latter because it means that we can continue to enjoy the food supply that we currently have access to. Just like the melting polar ice caps, the environmental choice and the corresponding payoff is not appealing because of a tendency to neglect intangible problems. While both choices do result in a harsh decrease in food supply at some point, whether it be voluntary or involuntary, the latter appears more reasonable than the former because this problem won't be dealt with until later in the future.

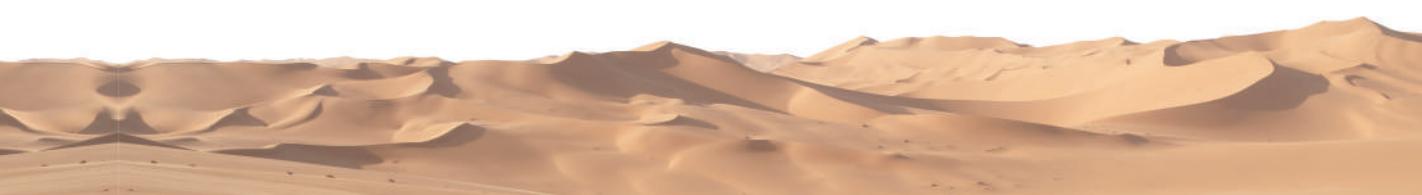
Scientists state that we have a decade before much of Earth's land becomes inarable. As a result, problems that will impact not faraway ecosystems, but our homes, are approaching at an alarming rate. Therefore, it becomes increasingly demanding for people to face this issue regardless of how meaningless it may seem at the moment. Because sooner or later, the seemingly intangible problems will become very much tangible in every aspect of our lives.

*Thomas Yonghee Song  
Seoul International School*

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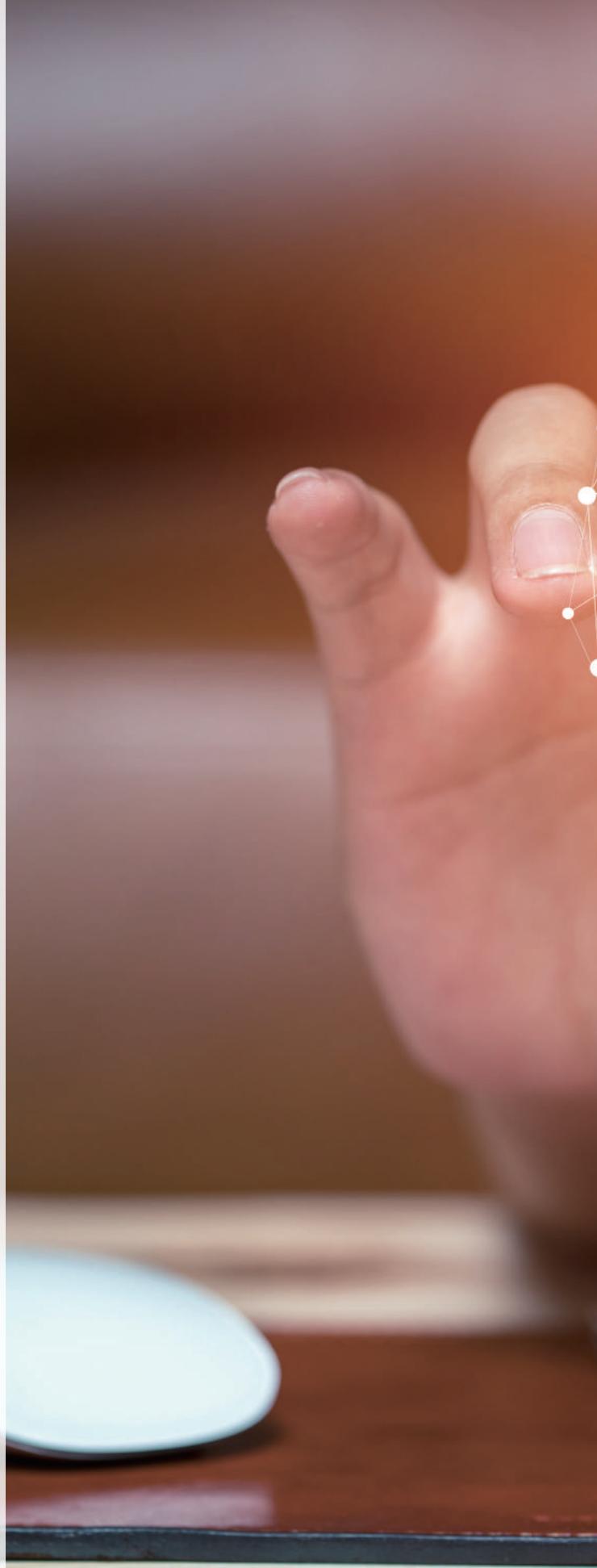
#### Works Cited

- "Agriculture and Climate Change." European Environment Agency, 16 Dec. 2016, [www.eea.europa.eu/signals/signals-2015/articles/agriculture-and-climate-change](http://www.eea.europa.eu/signals/signals-2015/articles/agriculture-and-climate-change).
- Henderson, Ben, and Jussi Lankoski. "Evaluating the Environmental Impact of Agricultural Policies." OECD Instance, OECD, 13 May 2019, [www.oecd-ilibrary.org/agriculture-and-food/evaluating-the-environmental-impact-of-agricultural-policies\\_add0f27c-en](http://www.oecd-ilibrary.org/agriculture-and-food/evaluating-the-environmental-impact-of-agricultural-policies_add0f27c-en).
- Wanza, Serah N. "What Is the Environmental Impact of Agriculture?" WorldAtlas, 11 May 2018, [www.worldatlas.com/articles/what-is-the-environmental-impact-of-agriculture.html](http://www.worldatlas.com/articles/what-is-the-environmental-impact-of-agriculture.html).
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# 06

# Opinion





# How Will Our Earth Die

By Sean Koo  
Seoul International School

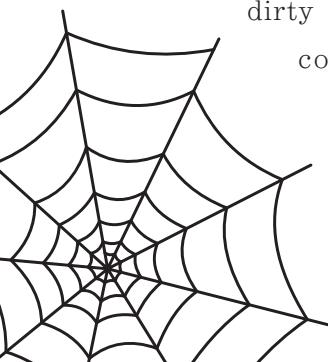
Over the past years, many news articles and interviews have made claims that our Earth is dying. Many have discussed this issue of how the Earth will be burned down by the sun or destroyed by global warming. But how is it actually going to die? The most likely answer I found was with the absence of insects. Yes. Spiders, worms, and butterflies. Without these creatures, our Earth will die.

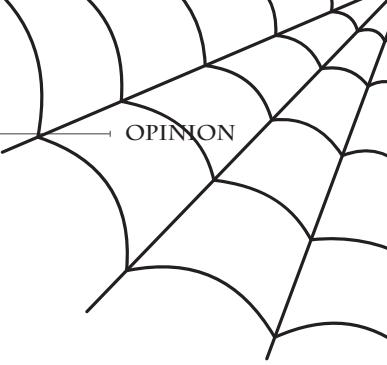
The first reason why the Earth will die if we kill most bugs is because of other bugs. One of the most commonly found insects in our household is a spider. Many people may kill one because of Arachnophobia (the fear of spiders). However, according to expressco.uk, these little insects may help your household. For instance,

spiders eat other bugs. Common dirty household pets such as cockroaches, bed bugs, mosquitoes, and other bugs. Catching

these bugs helps prevent diseases from spreading to humans. Critters are dangerous to humans and most are transported by bugs. Without spiders, overpopulation of bugs may kill the earth.

The second reason why the Earth will die if we don't have bugs is because of our food supply. To make a healthy cabbage, you need water, sun, and worms. Although some bugs may be harmful to the growing of plants, bugs such as worms, braconid wasps, and many more. Without these bugs, healthy cabbages would become unhealthy cabbages. People may eat crops that have a growth spurt through scientific needs. However, these injections may be bad since they kill bugs meaning they may damage the plants also by the "bug killing" juices. According to Goggy Davidowitz, a professor in the departments of entomology and ecology and evolutionary biology at the University of Arizona, said that without





these bugs, our crops, honey, and silk would be gone. Without crops, meat that we eat and many other things will die eventually us humans.

The last reason why the Earth will die if we don't have any bugs is that the natural cycle will fall. According to scienceabc.com, without these bugs, natural cycles will fall apart. Although we humans don't eat animals that much, some animals, such as the anteater, eat bugs. If the bugs died, then so will these "insectivores" whose predators would die. Then the humans, the top of the food chain, would have nothing left to eat and would die since all the animals and vegetables would be dead.

Without bugs, our Earth would die. The main three reasons are over-population of bugs, crop devastation, and the fall of the natural cycle. So before trying to kill all the bugs, please think again and kill only the necessary ones.

*Sean Koo  
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Citation:

Osborne, Simon. "Scientists Reveal You Should NEVER, EVER Squish a Spider... and THIS Is the Reason Why." Express.co.uk, Express.co.uk, 16 Mar. 2017, [www.express.co.uk/news/uk/779681/Scientists-spiders-eat-tonnes-insects-bugs-creepy-crawlies](http://www.express.co.uk/news/uk/779681/Scientists-spiders-eat-tonnes-insects-bugs-creepy-crawlies).

Lunawat, Dev. "Will Life Flourish On Earth If All Insects Vanished From The Planet, Or Would It Lead Something More Disastrous?" Science ABC, Science ABC, 13 July 2019, [www.scienceabc.com/nature/animals/what-would-happen-if-all-insects-vanished-from-the-planet.html](http://www.scienceabc.com/nature/animals/what-would-happen-if-all-insects-vanished-from-the-planet.html).

"What Would Happen If All Earth's Insects Vanished?" The Science Explorer, [thescienceexplorer.com/nature/what-would-happen-if-all-earth-s-insects-vanished](http://thescienceexplorer.com/nature/what-would-happen-if-all-earth-s-insects-vanished).

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# The One sided story of Climate Change

*By Andrew Ohn  
Fessenden school*



Before I begin the analysis on my critique of climate change alarmists, I must first illustrate the time-graph of climate change. Because change is constant, the climate is always becoming colder or hotter. Earth's 4.6 billion years of history shows that a dynamic climate is nature's work—the Pleistocene Ice Age, which was the most recent glacial freezing, commenced 2.5 million years ago and ended 11,000 years ago. We are currently in the Anthropocene Age, which is an era of natural warming in anticipation of another ice age. Indeed,

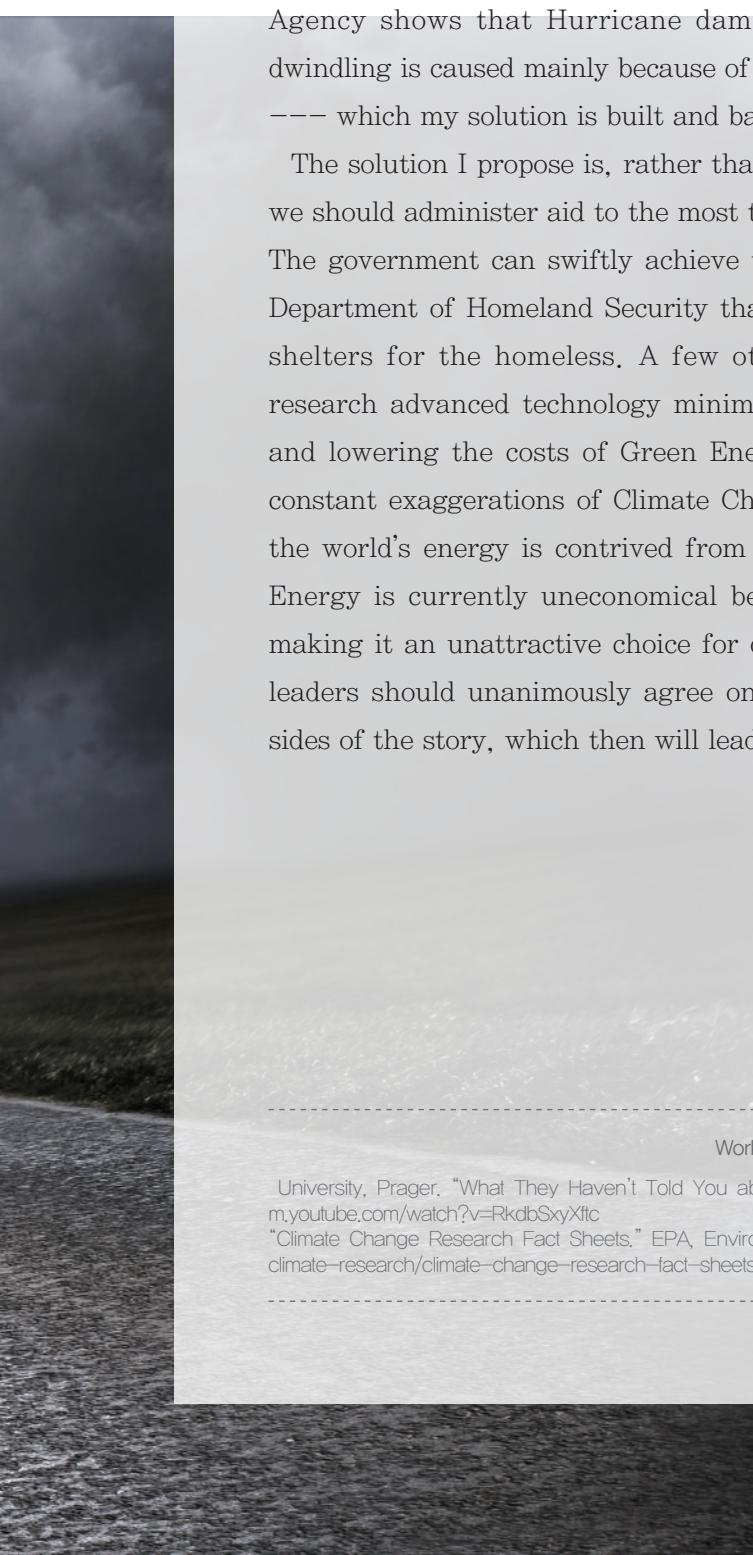
humans are fueling the era's purpose to an extent, but irreversible damage will never transpire---especially in 18 months as some socialist politicians (such as Alexandria Ocasio-Cortez) have stated numerous times. It is even more incomprehensible and baffling that the same individuals are saying the world as we know it, will end in 12 years.

As a persistent user of Instagram, specifically in 2019, I have noticed an abrupt spike of individuals reposting in reference to how if we do not recycle, our world's extinction is due in a decade. In the modern world, social media has the uttermost influence, primarily when covering social issues. Therefore distorted facts are harming humanity by giving misleading precedence. First, the reposters of these deceitful posts are controlled by their emotions alternately to statistics and facts. The reposters' emotions are swayed because the posts almost always come with a photo-shopped video of an animal casualty precipitated by climate change. Watching powerless animals die is undoubtedly heartbreaking and brings out a human's bleeding heart, but nonetheless, it is naive to take preference of empathy over reality. This gullibility creates a misinformed populace that is willing

to prioritize Climate Change even by embracing Marxist-Leninist values of bewildering high taxes or even possibly to the extreme of getting rid of the free market system. Politicians are proposing all of this absurdity to simply generate money for a "green new deal" that will likely be a hindrance fiscally, to society. Instead of draining our economy to "save our planet," we should incentivize colossal corporations to clean up our world by possibly giving out grants or slight tax exemptions.

In essence, the purpose of Climate Change advocates is to spread "awareness of the monstrous threats of global warming." Alarmists feel righteous when telling others the world will cease in 12 years and they have to save it. I personally feel that their pessimistic attitude towards Climate Change is concerningly one-sided and does not cover the complete story---and I will explain precisely why. Foremost, alarmists love to point out how the Arctic Sea Ice is melting rapidly, but they exclude and forget to represent the progress of the Antarctic Sea Ice, which is gradually expanding. Another statistic alarmists tend to ignore is how the rise in sea level is not accelerating. A study by Chinese Scientists on January 2014





named “Global and Planetary Change” reveals that the rate of Sea Level rising is in fact diminishing. Furthermore, Alarmists indicate natural disasters as a sign of Climate Change. However, a Statistic by the Environmental Protection Agency shows that Hurricane damage is declining from the 1900s. The dwindling is caused mainly because of modernized and enhanced infrastructure — which my solution is built and based upon.

The solution I propose is, rather than allocating taxes for a “green new deal” we should administer aid to the most threatened by Global Warming: the poor. The government can swiftly achieve this by establishing a branch under the Department of Homeland Security that focuses on renovating and developing shelters for the homeless. A few other roles of this branch should be to research advanced technology minimizing the damage of Natural Disasters, and lowering the costs of Green Energy. Despite Annual Climate Summits, constant exaggerations of Climate Change, and Apocalypse dates, only 1% of the world’s energy is contrived from Wind and Solar. This is because Green Energy is currently uneconomical because of its cost and limits, therefore making it an unattractive choice for developing nations. In conclusion, world leaders should unanimously agree on an effective—policy after hearing both sides of the story, which then will lead to pragmatic Globalism.

*Andrew Ohn*  
Fessenden school

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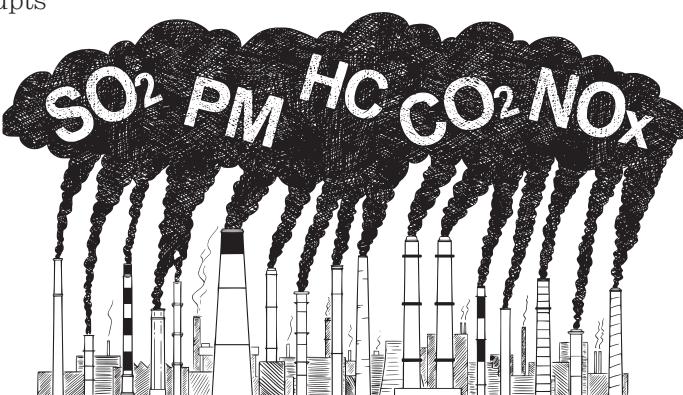
#### Works Cited

- University, Prager. “What They Haven’t Told You about Climate Change.” YouTube, YouTube, 27 July 2015, [m.youtube.com/watch?v=RkdbSxyXtc](https://www.youtube.com/watch?v=RkdbSxyXtc)
- “Climate Change Research Fact Sheets.” EPA, Environmental Protection Agency, 19 Apr. 2019, [www.epa.gov/climate-research/climate-change-research-fact-sheets](http://www.epa.gov/climate-research/climate-change-research-fact-sheets)
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# How air pollution impact human & environment

By Eric Yoon  
Thornhill Secondary School

These day's air pollution is one of the most serious environmental problem of the current time all over the world especially in the large cities because of the huge level of industrialization. Clean air is a very important part of our life and it improves our life quality. However, if the air quality get worse, it will have a lot of negative impacts for us and the environment. First of all, what is air pollution? Air pollution is a mixture of particles and gases that reach harmful concentrations both outside and indoors. It's effects can range from higher disease risks to rising temperatures (global warming). Soot, smoke, mold, pollen, methane, and carbon dioxide are just a few examples of common pollutants. . For air pollution there are 2 kinds of causes. There are human causes of air pollution and natural causes of air pollution. First, human causes of air pollution. Most air pollution is caused by humans. Human activity is a major cause of air pollution. We pollute the air every day in our life. Humans cause of air pollution with the use of power plants, cars and chemicals. Also, methane gas is formed in landfills, due to the burning of multiple types of fuel. In this process, it emits a lot of green house gases. Second, natural cause of air pollution. The natural causes aren't as serious as human causes but they still contribute to air pollution. The most typical natural phenomenons that pollute the air are forest fires, eruptions of volcanoes ( when the volcano erupts toxic gases are emitted) and dispersal of pollen and sandy wind. Air pollution impact human health and the environment. Air pollution has a great impact on human health because it can damage multiple organs and functions



of the human body. Specifically, it damages the lungs and heart. This can cause serious diseases such as lung cancer, respiratory infections and heart diseases. They are all very serious diseases that can lead to death. In fact, according to WHO (World Health Organization), around 7 million people die each year because of air pollution. Not only does air pollution impact human health it also impacts the environment. First, global warming. Global warming is the rising of average temperatures on. It is because the earth absorbs the solar radiation and re-radiates the heat out of earth. But the greenhouse gases cover the atmosphere, so the heat can't go through. That is why the average temperature increases over time. Second, acid rain. It is mainly caused by sulfur dioxide and nitrogen oxides emitted by industrial activities such as coal combustion, and these gases are washed down in the rain and affect the environment. Acid rain mostly damages marine ecosystems. The final environmental impact of air pollution is that it damages the ozone layer. The ozone layer is a layer that protects us from harmful rays from the sun. However, because of methane gas or prion gas in the atmosphere, the ozone layer becomes thinner. As the ozone layer gets thinner it radiates harmful rays back to the earth and causes a lot of problems. Such as the uv rays affecting crops. Those are just a few examples of how air pollution impacts human health and the environment. If we don't want to face the negative consequence of air pollution we all need to worry and take this situation seriously. Every person has a reason to be concerned about air pollution, and we all need to be part of the solution. We all need to put our heads together and find out the solution to reduce air pollution for the better life in the future and for the next generation.

Eric Yoon  
Thornhill Secondary School

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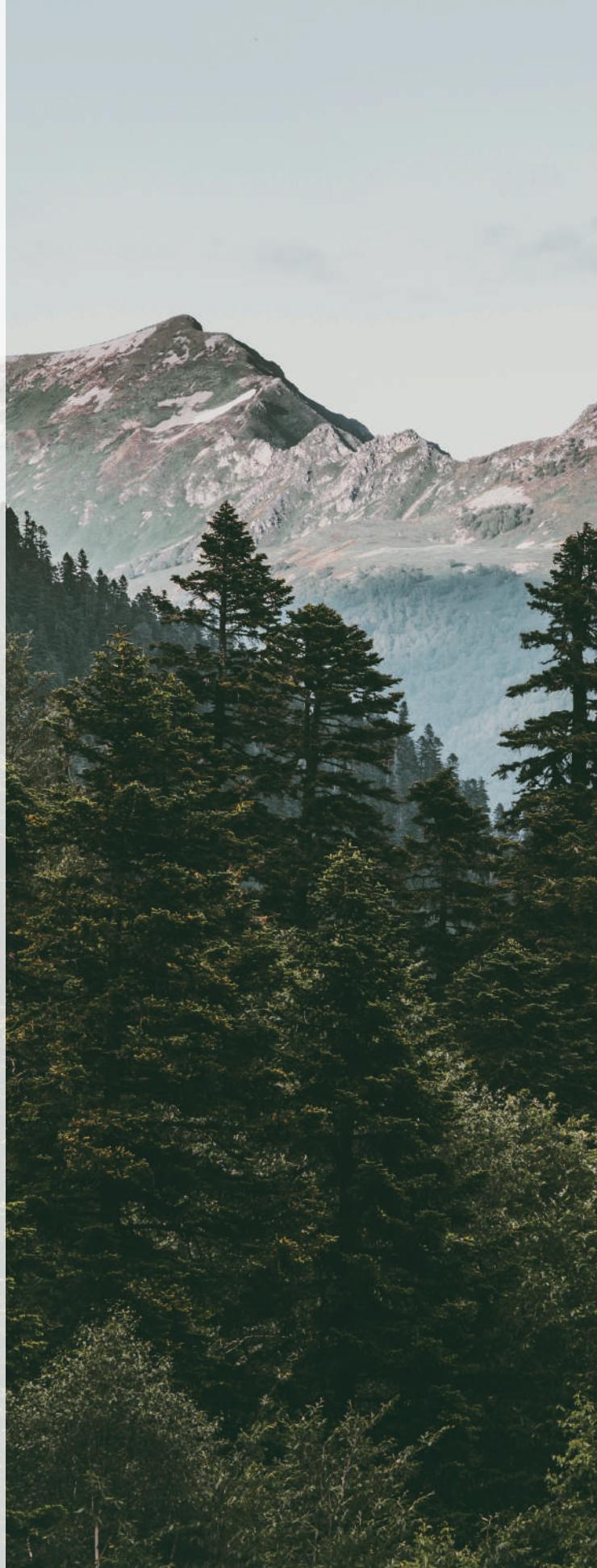
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<https://www.canada.ca/en/health-canada/services/air-quality/health-effects-indoor-air-pollution.html>

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07

# What is defores- tation?





# What is deforestation?

By Andrew Nam  
Seoul International School

## Science

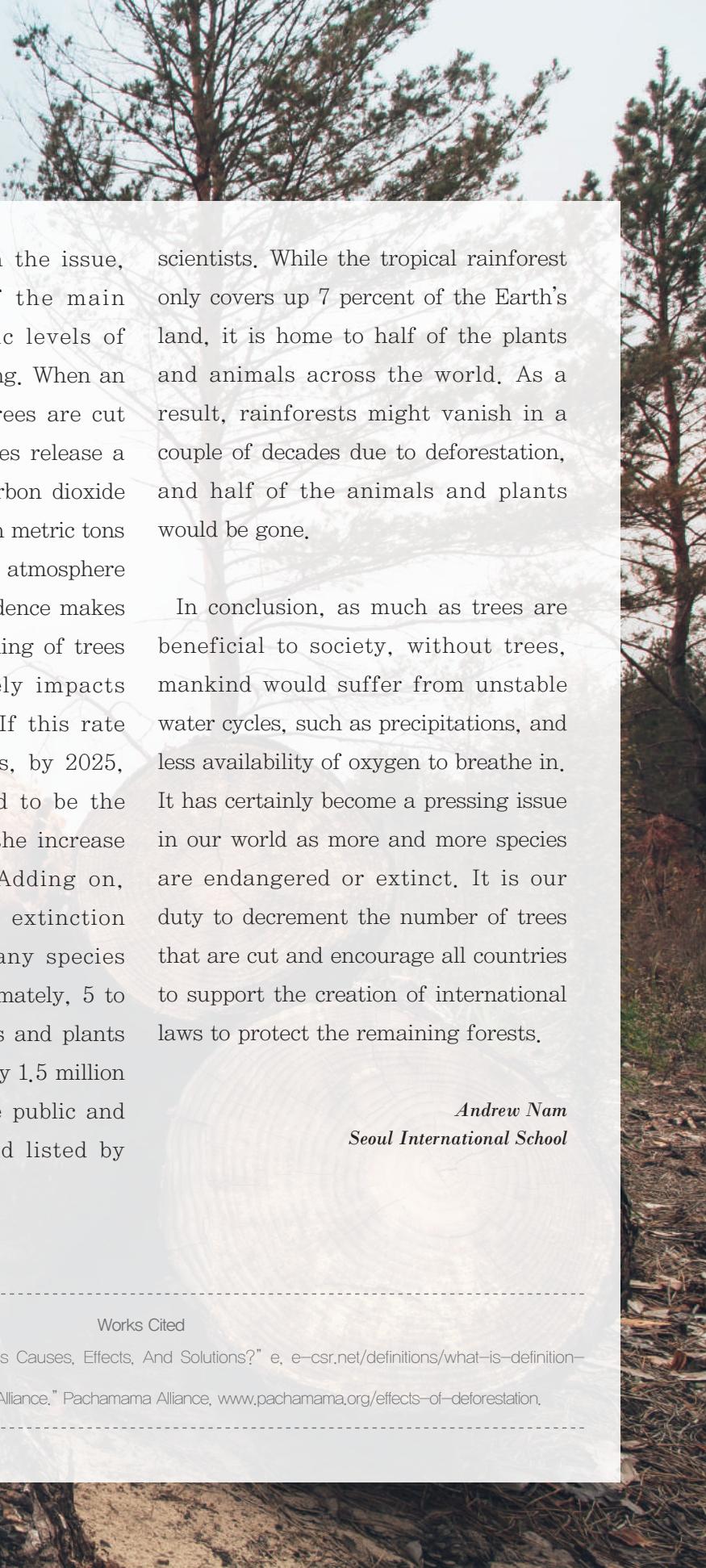
Deforestation has become an alerting issue for the past decade. More and more trees and wildlife are decreasing in number because of humans who cut down trees recklessly. As much as trees can be useful in our daily lives, such as providing us with paper and furniture, there are also downsides to this practice. In places like the Amazon rainforest, where it is known to be the largest rainforest in the world, over 20 percent of the rainforest is gone due to deforestation. While places like the Amazon rainforest should be abundant with wildlife and trees, instead, the number of trees is decreasing rapidly. Deforestation is the cutting down of trees in a large area or the destruction of forests by people.

There are several causes behind this catastrophic event. One of the major reasons for deforestation is agriculture. Many tropical regions have poor nutrient soil. This is because most of the nutrients are found in the

vegetation of the soil instead of the soil itself. Therefore these farmers practice a farming method known to the public as the “slash and burn”. This procedure first cuts down the trees and then burn the soil beneath the trunk so that the nutrients in the soil could prosper. However, the “slash and burn” method is not a reliable system because this can only be sustainable if the population density does not surpass 4 people per kilometer of land. If the slash and burn process repeats itself for over 2 years, the soil becomes depleted, meaning that the land in that area becomes infertile. These farmers would leave the abandon the region and would find a better land to harvest trees. This is similar to how a nomadic person would live since they move out of their land if they run out of resources to find a better land. These farmers would leave the land the region and would find a better land to harvest trees, similar to what a nomadic person would do; move from one place to another for better land and resources.



To further elaborate on the issue, deforestation is one of the main reasons why atmospheric levels of carbon dioxide are escalating. When an innumerable amount of trees are cut and burnt, forests and trees release a considerable amount of carbon dioxide emissions. Around 1.6 billion metric tons of carbon dioxide enters the atmosphere on a yearly basis. This evidence makes it clear that both the burning of trees and vegetation negatively impacts the world's atmosphere. If this rate of deforestation continues, by 2025, deforestation is projected to be the reason for 15 percent of the increase in global temperature. Adding on, deforestation causes the extinction and endangerment of many species around the globe. Approximately, 5 to 80 million kinds of animals and plants make up the Earth, but only 1.5 million of them are known to the public and have been discovered and listed by



scientists. While the tropical rainforest only covers up 7 percent of the Earth's land, it is home to half of the plants and animals across the world. As a result, rainforests might vanish in a couple of decades due to deforestation, and half of the animals and plants would be gone.

In conclusion, as much as trees are beneficial to society, without trees, mankind would suffer from unstable water cycles, such as precipitations, and less availability of oxygen to breathe in. It has certainly become a pressing issue in our world as more and more species are endangered or extinct. It is our duty to decrement the number of trees that are cut and encourage all countries to support the creation of international laws to protect the remaining forests.

*Andrew Nam  
Seoul International School*

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#### Works Cited

- "Deforestation – What Is It? What Are Its Causes, Effects, And Solutions?" e, e-csr.net/definitions/what-is-definition-deforestation-causes-effects/.  
"Effects of Deforestation: The Pachamama Alliance." Pachamama Alliance, www.pachamama.org/effects-of-deforestation.
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# 08

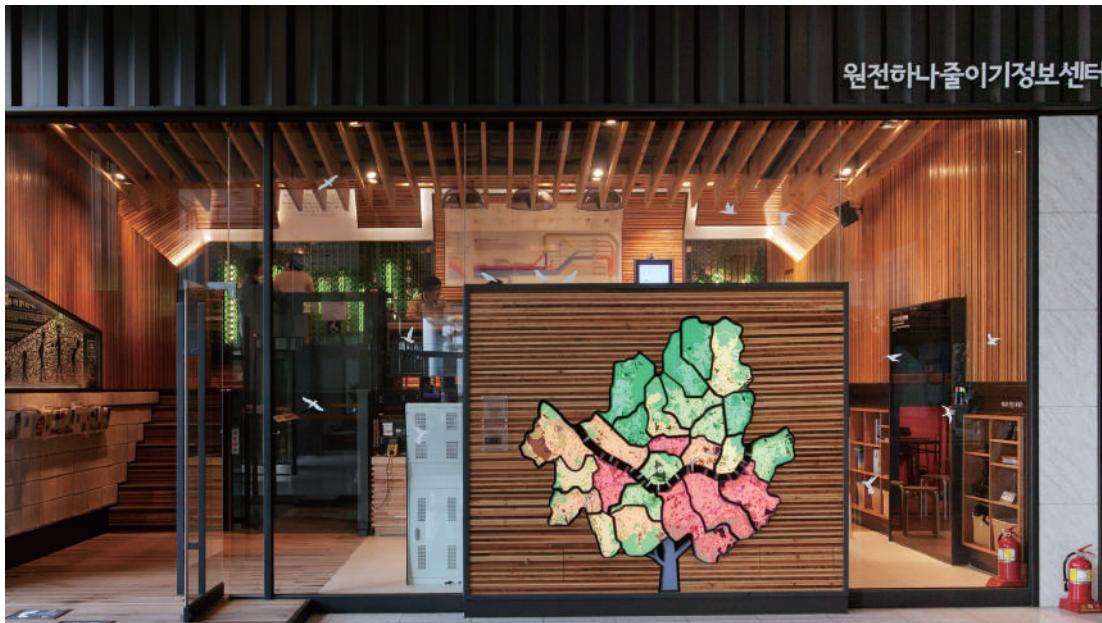
# Volunteer Trip





# 원전 하나 줄이기 - Reducing Waste

By Grace Yongeun Song



Plastic pollution is exacerbating each year and it has shown detrimental effects on the environment. There is so much plastic pollution in the world that there are even islands of trash floating around in the ocean. Humans consume an incredible amount of plastic without even realizing it – from plastic Ziploc bags to large plastic containers. South Korea is currently ranked as the country with one

of the most plastic waste. Countries like Germany have already made efforts to reduce trash by abandoning single-use containers or wrappers, and replacing them with reusable containers. One of the most popular campaigns to reduce trash that has gained a lot of popularity is the making of useful things such as bags and clothes hangers using trash. This perspective of creating unique and



attractive goods, while still helping the environment has gained lots of interests. At the service center, we created cup holders by using old socks; the process of making the cup holders was very simple: cut the socks into equally sized rectangular shapes, attach the pieces onto a wooden fixture, and weave the pieces as instructed. I was able to reduce waste by reusing my old socks and making something useful, which I would otherwise have thrown out. The service taught me a lot about pollution and the small efforts I can make to alleviate the environment.

*Grace Yongeun Song*

## 관악산아 놀자(관악산 환경정화 활동) - Gwanaksan

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