Planting a Seed: How Knowledge, Education, and Cohesive Effort Can Aid the Environment

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I. Introduction

Humans are pushing the Earth beyond its limits. In 1992, the world’s most prominent scientists, known as the Union of Concerned Scientists (UCS), sent a letter to government leaders around the world.¹ This letter urged “people to take immediate action to stop the ever-increasing environmental degradation that threat[en]ed global life support systems on this planet.”² This was the scientists’ first warning to humanity. Now, 25 years later, these scientists have issued their second warning.³ Joined by 15,364 signatories from 184 countries, their message is clear: We are destroying the Earth and all its life, our only home.⁴

The environment is an important topic to the Human Rights Council (HRC). The HRC has affirmed numerous resolutions recognizing that a sustainable environment contributes to the full enjoyment of human rights.⁵ On the contrary, climate change hinders the enjoyment of a healthy environment while also having direct and indirect negative impact on numerous human rights, such as the right to life, right to an adequate standard of living, and the right to non-discrimination in the enjoyment of right.⁶ This was reaffirmed in 2017.⁷

It is imperative that scientists’ warnings be addressed or recognized. They warn that humans are “pushing Earth’s ecosystems beyond their capacities to support the web of life.”⁸ The UCS’s report is just the tip of the iceberg in terms of global scientists’ research on climate change.

³ Supra, note 1.
⁴ Id. at 1, 3.
⁸ Supra, note 1, at 1.
Many scientists join the consensus that climate change is a real issue requiring immediate attention. Additionally, it is vital to recognize human activity as the root of climate change, and to promote the exchange of knowledge between governments, scientists, human rights defenders, civil society, and other relevant stakeholders to begin true action on climate change.

II. The Current Environmental Status

“[H]umans [are] on a collision course with the natural world.”9 This was the stance scientists took in 1992 when researching the degradation of the environment. Though 25 years have passed, their position has not. Humans are still on a path to an unsustainable, irreversible environment, and the paced has only quickened.10 In the global scientists’ first report, there were seven critical issues stressed: (1) the atmosphere, (2) water resources, (3) oceans, (4) soil, (5) forests, (6) living species, and (7) population.11

First, the stratospheric ozone of the atmosphere is necessary to prevent ultra-violet radiation from reaching the Earth’s surface.12 Ultra-violet radiation is harmful to humans and many other life forms in the form of acid precipitation and air pollution.13 The depletion of the ozone weakens the protective barrier, and in doing so, exposes humans to the damaging effects of radiation. The burning of fossil fuels, the creation of greenhouse gas emissions, the lack of renewable energy, and the pollution of air and water sources all contribute to a degrading atmosphere.14

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9 Id.
10 Id.
11 Supra, note 2.
12 Id.
13 Id.
14 Id.
Second, although water is necessary for survival and is an enumerated human right, its exploitation has created serious water shortages around the world. Not only does water depletion affect water accessibility, it affects food production and other essential ecosystems like agricultural growth.\(^\text{15}\) Freshwater availability is shrinking.\(^\text{16}\) Social development, the growing population, and a lack of oversight also creates pollution in various bodies of water, which further restricts the already limited supply of water.\(^\text{17}\)

Third, the ocean is affected by a host of different environmental problems. Destructive pressure on the sea has created an unsustainable environment for the coastal regions of the ocean, where most fish are found.\(^\text{18}\) Fisheries are showing signs of collapse.\(^\text{19}\) Other bodies of water carry hazardous waste directly into the sea, affecting marine life and water quality.\(^\text{20}\) Moreover, ocean dead zones are more likely to crop up, equating to coral bleaching and loss of marine life.\(^\text{21}\) Not only does it affect biodiversity but also a country’s social development.

Fourth, soil has decreased in productivity due to the increased practice of unsustainable agriculture and excessive animal husbandry.\(^\text{22}\) This has created an extreme land abandonment issue. Due to this, more than 10% of the earth’s vegetated surface has been degraded. For many parts of the world, the per capita food production is decreasing.\(^\text{23}\)

Fifth, the most common issue for forests is deforestation, the clearing of a forest or trees for a non-forest use.\(^\text{24}\) Tropical rain forests and temperate dry forests are being cleared at a rapid

\(^{15}\) Id.
\(^{16}\) Supra, note 1 at 1.
\(^{17}\) Supra, note 2 at 1.
\(^{18}\) Id.
\(^{19}\) Id.
\(^{20}\) Id.
\(^{21}\) Supra, note 1 at 1.
\(^{22}\) Id.
\(^{23}\) Id.
pace. The rate of deforestation promises that several critical forest types will disappear within years.\textsuperscript{25} Additionally, the disappearance of forests brings the loss of many other plants and animal species.\textsuperscript{26} The loss of plant and animal species then creates an imbalance in the ecological processes and dynamics in the regions affected.\textsuperscript{27}

Sixth, with a heavily impacted ecosystem comes a loss of biodiversity. Several species are now extinct due to a shift in the ecosystem caused by climate change. In many cases, a loss of a species is a permanent loss. Not only are entire species lost, the benefits it provides are lost as well, like medicinal.\textsuperscript{28} Furthermore, the loss of a species creates an unnatural imbalance in the ecosystem, ergo affecting biodiversity and human rights. Much of the damage caused by a loss of species is large-scale and long-lasting.\textsuperscript{29} Altering the interdependent web of life may create unpredictable, widespread adverse reactions in the environment.\textsuperscript{30} Because information on biodiversity is still being explored, much of the effects are not completely understood.\textsuperscript{31}

Seventh, the Earth is fast approaching its limits. The ability to provide food has a limit. The ability to sustain damage has a limit. The ability to provide for population growth has a limit. At the rate now, unrestrained population growth is overwhelming Earth’s ability to provide for the entire population. The increase in population has a domino effect: the need for food, water, shelter, infrastructure, and many other necessary aspects for an adequate standard of life increases, thereby demanding more on the environment.

\textsuperscript{25} \textit{Supra}, note 2, at 1.
\textsuperscript{26} \textit{Id.}
\textsuperscript{27} \textit{Supra}, note 1, at 3.
\textsuperscript{28} \textit{Id.}
\textsuperscript{29} \textit{Id.}
\textsuperscript{30} \textit{Id.}
\textsuperscript{31} \textit{Id.}
III. How Human Rights are Affected

A. The Human Right to Life

The Universal Declaration of Human Rights states that “Everyone has the right to life[.]” The right to life is just that: the human right to live, meaning that no one— including the government— has a privilege to end a person’s life. This right is absolute. However, the right to life is explicity linked to many others; such as the right to water, health, food, and so on; as life is dependent on innumerable factors. The Special Rapporteur has stated that these rights, in turn, are dependent on the Earth’s ecosystem, more specifically, the ecosystem’s biodiversity. Consequently, because the full enjoyment of human rights is contingent on biodiversity, the degradation of it equals the degradation of human’s right to life and other rights affected.

B. What is Biodiversity

The Special Rapporteur acknowledges that with the coexistence of humans and the millions of species for billions of years, it is no surprise that human life is ultimately linked to biodiversity. In the Special Rapporteur’s report, biodiversity is defined as “the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species and of ecosystems.” Biodiversity is not limited to the millions of species that naturally inhabit the Earth, but also its genetic variations.

So why is biodiversity important to the environment? In essence, biodiversity is the environment. Everyone in the world is dependent on biodiversity as it provides food, water, disease

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33 Supra, note 6 at ¶ 5.
34 Id. at ¶ 10.
35 Id. at ¶ 9.
36 Id.
management, climate regulation, spiritual fulfilment, and aesthetic enjoyment. The basic pillars of survival: food, water, and shelter, are all reliant on biodiversity.

C. International Stance on Human Rights and the Environment

International law has also recognized that biodiversity is an important aspect of human well-being. Absent a healthy ecosystem, it would be virtually impossible, or severely compromising, to sustain an environmentally stable Earth, that of which directly corresponds to the exercise of human rights. The HRC and other human rights bodies have also recognized that the full enjoyment of human rights is dependent on a healthy and sustainable environment.

Despite this, human rights laws do not require that the environment remain untouched by humans. Although existing for billions of years, the present environment is dependent on economic and social development. For example, with rampant deforestation, governments have had to step in and create human-managed ecosystems. The important balance of development and environment rests on a distinction between exploitation and sustainable use. Although social development is necessary to maintain an adequate standard of living, development must be balanced in order to protect, restore, and promote a sustainable environment while also reversing degradation and biodiversity loss.

It goes without saying that the right to life impacts all people. While the impact of climate change on the environment is indiscriminate and felt globally, there are countless instances where environmental disasters are suffered most acutely by the poorest and most vulnerable of society.
The most vulnerable are often in positions of less power, scarce resources, and precarious living conditions, which further marginalizes the minority populace. Without addressing these human rights concerns, humanity would be pushing the envelope of Earth’s limits.

**IV. Human Activities’ Effect on the Environment**

The United Nations’ (UN) report from the Intergovernmental Panel on Climate Change is virtually certain that human activity is a cause of climate change.\(^4^2\) Developed nations are found to be the largest historical contributor.\(^4^3\) Human activity includes driving cars, burning fossil fuels, water pollution, dumping hazardous waste, excessive agriculture, deforestation, species extinction, overpopulation, and many more. This raises a resource sustainability problem; while some effects are necessary or inevitable, the rate of adverse impact on environmental resources far surpasses the level at which it should be replenished. If left uncontrolled, UCS warns a mass extinction event will cause “many current life forms [to] be annihilated or at least committed to extinction by the end of this century.”\(^4^4\)

There are many misconceptions concerning the environment and climate change. For example, the term “global warming,” which is one effect of climate change, has been used as an incorrect interchangeable term for “climate change.” While the Earth is getting warmer due to the increased heat trapped in the atmosphere, that is not the only effect; it has caused extreme temperatures where some places are hotter than usual, whereas others are subjected to intense rain and snowstorms.\(^4^5\)

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\(^{43}\) *Supra*, note 2, at 6.

\(^{44}\) *Supra*, note 1, at 1.

A truth that must be recognized is that humans are the leading cause of climate change. Opponents have argued that, in the past climate change has occurred in many instances, even before manmade CO₂ emissions. However, this falsely presumes humans do not have a responsibility in climate change for the fact it happens naturally.

As stated before, global scientists find that out of the eight problems cited, humans have only made one meaningful change: the reduction of ozone depletion. The emission rate of halogen source gases has lessened substantially compared to 1992. In doing so, the stratospheric ozone layer has stabilized due to human acknowledgement and effort. Global leaders have collectively recognized and addressed the issue by adopting the UN Montreal Protocol, which stated countries must be “[m]indful of their obligation under that Convention to take appropriate measures to protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer.” This global effort was the beginning of a change. However, this one change out of eight is not enough to save the Earth.

V. How Knowledge, Education and Collective Effort Can Aid the Environment

The HRC and global scientists acknowledge education as one of the keys to ending climate change. Education is not only limited to the school system, but also extends to educating civil society on relevant human rights issues, including the environment. Facilitating the spread of knowledge not only engages civil society in caring and understanding the environment, it also

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46 Supra, note 9.
48 Supra, note 1, at 1.
49 Id.
50 Id.
51 Id.
fosters opinions and discourse needed in climate change decision-making and behaviors. Governments need to become an open, indiscriminate source of reliable information for civil society.

Many countries around the world have adopted various approaches for educating civil society. Methods range from changing civil society’s mindset, starting education at a young age, implementing of governmental-level laws, and stressing the need for collective effort. The following countries are just a few examples of these.

A. Sweden’s Governmental Approach to Policy and Engaging Civil Society

Sweden is one of the better examples of a successful top-down approach to climate change. It is a leader in environmental change action, ranking fifth on the Environmental Performance Index (EPI) in the world.\(^*\) It is the first country to establish an Environmental Protection Agency in 1967.\(^*\) In 1972, it hosted the first UN conference to center on international environment issues and policies.\(^*\) It was one of first nations to sign and ratify the international climate change treaty, Kyoto protocol, in 1998 and 2002.\(^*\) The Stockholm Convention, a global treaty towards phasing out production and use of persistent organic pollutants, was largely a Swedish initiative.\(^*\) These are some of the most notable examples of Sweden’s governmental actions regarding climate change. However, not only does Sweden’s government take progressive action, it is also noted for engaging civil society through public awareness.\(^*\)

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\(^*\) Yale Center for Environmental Law & Policy, *Environmental Performance Index*, https://epi.envirocenter.yale.edu/sites/default/files/2018-swe.pdf; EPI ranks 180 countries on ten categories regarding the environment.


\(^*\) Sweden Institute, *Sweden Tackles Climate Change*, https://sweden.se/nature/sweden-tackles-climate-change/.

\(^*\) Id.

Sweden uses a combination of citizen engagement, high ambition levels, and international solidarity. The public is acutely aware of and concerned with environmental issues. A Eurobarometer survey found that 26% of Swedes consider environmental and climate change as a main concern as compared to 6% at the European Union (EU) level.60 Sweden also recognizes that scientific research has become more uniform in its message about climate change, (i.e. human activity as the main cause).61 Thus the government is continuing to use this information as it sets domestic goals for future climate issues.

The government also encourages civil society engagement by offering tax reliefs for power-intensive industries in exchange for creating energy plans and taking steps to reduce energy use. This is an example of the government working together with civil society, like private companies, to combat environmental issues. Public funds are also available for local climate change investments.62

Sweden also encourages climate change education. For households, the government supplies information on how to save energy, which is widely available. Each municipality (290 in Sweden) has an energy adviser to whom people can turn to for help and guidance.63 In addition, a research institute was created by the Swedish government in 1989, the Stockholm Environmental Institute (SEI).64 SEI sets out to accomplish sustainable development by bridging science and policy. It has been essential in developing local and global environmental policy issues.65

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60 European Commission, Public Opinion, http://ec.europa.eu/COMMFrontOffice/publicopinion/index.cfm; Standard Eurobarometer surveys are a series of public opinion surveys conducted regularly on behalf of European commission since 1974. The survey covers wide variety of topical issues relating to EU.
61 Id.
62 Id.
63 Id.
64 Id.
65 Supra, note 59.
B. United States of America’s (USA) Push for Climate Education in Schools

The topic of climate change is prevalent in USA news, often heard in the media at least once a week. Though climate change issues have existed for decades, for many USA Americans (Americans) it is considered a relatively new and controversial science that has only been introduced in higher education, media coverage, and political opinions, many of which school-age children are not normally privy to.66 Despite the controversy, a national survey conducted by Yale University shows that the majority of Americans (70%) agree that climate change is happening.67 Consequently, it is not surprising that the majority of Americans believe children should be taught about global warming in school. Roughly 36% of Americans “Strongly agree,” while 41% “Somewhat agree.”68

The introduction of climate change to the classroom would provide the basic knowledge of what climate change is and the science behind it.69 This thereby encourages students to be engaged with issues, become concerned with the environment in general, and equip them with the tools needed to work in the respective fields by conducting research and contributing solutions.

A large part of climate change education would also explain the cause of climate change, (i.e. human activity). Explaining the cause of climate change gives students the opportunity to understand humans’ role in the environment, which helps each student realize their individualized ability to help or hurt the environment. However, the information used in climate change education varies. About 75% of high school teachers talk about climate change, but only 30% tell students

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68 Id.

69 Supra, note 56.
that humans are partly to blame, while 10% deny any human activity role. Yet, it has already been established by numerous scientists that human activity is the primary change for climate change. Spreading misinformation not only is detrimental in a general education aspect, it undermines the students’ ability to create lasting change. Teacher misinformation was mainly due to no formal training on the topic and outdated science textbooks. Teachers would then have to rely on news, past classes they have taken in high education, or just work with the outdated information presented to them. The world is rapidly changing, the environment included, however climate change education tools are not updated and readily accessible to rectify misinformation.

A climate change curriculum is not officially mandated by the USA government, consequently there is no uniform understanding of it and no guidelines for approaches in schools. Because there is no uniform approach, students and teachers are not on the same page regarding climate change issues. If they were, inaccurate information would not be as prevalent, especially if a higher body were able to verify the information. Fortunately, citizens and politicians are recognizing the need for climate change education, even various governmental bodies are putting individual efforts towards climate change education. National Aeronautics and Space Administration, Public Broadcasting Service, and Environmental Protection Agency all have resources available for teachers to utilize in the classroom setting. However, it is not enough. Though climate change is a common topic in the media and political platforms, communicating

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70 Id.
71 Supra, note 45.
72 Id.
73 Id.
74 Id.
the science behind it is critically lacking. By educating early, students then become more active and empathetic citizens in the conversation about climate change.

Non-governmental agencies are also working towards climate change education. A nationwide non-profit organization called “Alliance for Climate Education” (ACE) is moving the USA in a positive step towards climate change education. The non-profit conducts climate change education in high schools across the country. The organization provides educators with innovative learning tools to educate students, such as videos, interactive trivia and lesson plans. The program was studied by Yale, George Mason University and Stanford researchers. They found that students who participated in ACE’s programs were more informed and involved in climate change issues, and also exhibited short and long-term positive behaviors such as using reusable items. Education and cohesive effort encourages a knowledgeable and involved society. Without them, civil society cannot meaningfully engage in the conversation about climate change.

C. A Japanese Village’s Radical, Society-Created Recycling Program

According to the 2018 EPI, Japan was ranked first in the Asian region for its performance on high-priority environmental issues, ranking 20 overall. A notable example of its performance is exemplified through a small town named “Kamikatsu” that is widely known for its nearly “zero-waste” initiative. “Zero-waste” is a mission to eliminate waste through reducing, reusing, recycling, and composting trash. Residents sort, wash, and transport their own trash to the town’s

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76 Id.


sorting center, which is then double-checked by staff. The sorting system began with educating residents on just nine categories, but now has slowly expanded to 45 categories over the years.\(^{80}\) Although tedious, “zero-waste” has become second-nature as the program had been implemented since 2003.\(^{81}\)

Kamikatsu hopes to become completely “zero-waste” by 2020. As of now, about 80% of its trash is recycled, reused, or composted.\(^{82}\) The founder of “Zero Waste Academy” (ZWA) explains that “zero-waste” is not a goal, but a mindset that is meant to engage people.\(^{83}\) He states that, “Zero waste is not only about recycling, it’s about changing the entire system of consumption[.].”\(^{84}\) Likewise, ZWA spreads “zero-waste” awareness through discussions with Japanese manufacturers, festivals, workshops, presentations and other events.\(^{85}\) Kamikatsu has become so renowned for their “zero waste” efforts that it has received delegations from municipalities and environmental organizations in at least 10 countries, and has also become a popular tourist attraction.\(^{86}\)

VI. Recommendations

Human Rights Advocates (HRA) urges the Council to:

1. Specifically request that the Special Rapporteur:

   a. Examine the cohesive effort towards education, knowledge and the environment by addressing civil society and their perspective, and

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\(^{80}\) Id.


\(^{82}\) *Supra*, note 92.

\(^{83}\) Id.

\(^{84}\) Id.

\(^{85}\) Id.

b. Consider ways to enable the information exchange between global leaders, scientists, human rights defenders and other relevant stakeholders with the goal of creating a unified framework to tackle climate change and promote cohesive decision-making in reducing negative environmental impact.

HRA urges States to:

1. Pay special attention to the world scientists’ research and recommendations regarding human activities’ effect on the world and progress that has been made.

2. Educate and involve civil society in the conversation about humans’ activity and its environmental impact, heed attention to civil society’s opinions and concerns regarding climate change, ensure their participation in environmental decision-making, and provide accurate and complete information on this topic.