

## Committee Overview

The United Nations Environment Programme (UNEP) is an agency that proposes environmental legislation and assists countries in implementing and enforcing these measures. Founded in 1972 at the UN Conference on the Human Environment in Stockholm, the UNEP is based in Nairobi, Kenya. The executive director is Achim Steiner, who is a United Nations Under Secretary-General, and has been serving since 2006. UNEP focuses on 7 priorities: Climate Change, Disasters and Conflicts, Ecosystem Management, Environmental Governance, Chemicals and Waste, Resource Efficiency, and Environment Under Review.

The UNEP includes 5 organizational divisions: Early Warning and Assessment, Environmental Policy Implementation, Technology, Industry, and Economics, Environmental Law and Conventions, and Communications and Public Information. UNEP has designated certain international years, for example, 2007 was Year of the Dolphin. The UNEP also supports certain organizations and ideals, such as Green Economy Initiative, which encourages countries to use cleaner technologies.

Under the UNEP, environmental issues are addressed at the international and regional level and environmental issues are brought to the attention of the international community. International agreements such as the Kyoto and Montreal Protocol were created with the help of the UNEP. In 2000, environmental sustainability was added as a Millennium Development Goal as a result of the UNEP's actions.<sup>1</sup>

Responsibilities of the UNEP are broad and wide-reaching. The UNEP has the power to create international law on environmental law, monitor the status of the environment and disseminating information, as well as developing regional programs for sustainability. The mission statement of the UNEP is, "To provide leadership and encourage partnership in caring for the

environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations."<sup>2</sup>

### Causes of Rising Sea Levels

In the past 130 years, the sea level has risen at a faster rate than in the past two millennia. This is attributed to the effects of climate change and the Greenhouse Effect. The Greenhouse Effect results from certain man-made gases, including CH<sub>4</sub> and CO<sub>2</sub>, and chemicals becoming trapped in the atmosphere which in turn reflect the sun's energy in the earth. Because the ocean covers 71% of the earth's surface area, the ocean absorbs most of this reflected energy. This additional energy heats up the ocean, causing it to expand in a process called thermal expansion. As a result of increased carbon emissions in the past two decades, the rate of the rising sea level has accelerated from an average of 1.7mm/yr to 3.2mm/yr.<sup>3</sup>

The Greenhouse Effect also affects glaciers and the ice caps. In glaciers and the polar ice caps, the winter snowfall replenishes the ice lost during the summer. However, the increase in global temperatures has led to greater amounts of ice melting than can be replenished, leading to a net loss of ice. Because ice has a high albedo effect, it reflects most of the light that hits it. With the melting of the polar ice caps, this effect is reduced, leading to even more ice melting, creating a deadly cycle. Even if the whole world were to cease all emissions of Greenhouse gases immediately, it would still take centuries for the existing greenhouse gases to be cleansed out of our atmosphere. At this point, it is no longer a question of whether sea level rise(SLR) can be stopped, but rather to what extent its effect can be reduced.

Melting ice sheets in Greenland and Antarctica also contribute to SLR. As these ice sheets melt, trickling water lubricates the ice sheets, causing them to slip into the ocean faster and break

into smaller pieces. The resulting increase in surface area causes the ice to melt faster than if it were in a single ice sheet.

### Consequences and Predictions

While predictions of rising sea levels are still tenuous, National Oceanic Atmospheric Agency (NOAA) has set a high height scenario of 6.6ft for 2100 and the US Army Engineer Corp. has set a high height scenario of 5ft.<sup>4</sup> The OECD recently released a report detailing the population and assets exposed both today and in 2070 assuming only a 20 in rise in sea levels. The top ten list when ranked by asset include Miami, Florida, Tokyo, Japan, Hong Kong, New Orleans, New York, Shanghai, and Virginia Beach. By 2070, rising sea levels threaten 150 million people and 35 trillion dollars' worth of property, or about 9% of global GDP in the 10 biggest port cities alone. Because scientists still do not completely understand the science behind ice flow and melt, glaciers effect on rising sea levels are considered the wild card in predicative science pertaining to sea level rise. Thermal Expansion is a relatively easy to predict because it has an almost direct correlation with the amount of carbon emitted. Recent data on glacier melts on the other hand, have suggested that glaciers in Greenland are melting at an alarmingly fast rate, making many estimates of Global Mean Sea Level (GMSL) for the next century appear increasingly conservative, with many scientists calling for even higher numbers.<sup>5</sup>

These numbers are only indicators of GMSL, and are not representative of sea level rise everywhere. In certain places like Iceland, the sea level is actually expected to decrease. As the glaciers in Greenland and Antarctica melt, their gravitational pull on the water lessens, redistributing most of the water to the tropics. Meanwhile, the sea level on the east coast of the US is expected to rise by more than 5ft.<sup>6</sup>

Rising sea levels also extend the reach of storm surges of hurricanes. Hurricanes produce storm surges as a result of their intense winds, raising the tide by up to 20 feet. If the sea level rises,

storm surges would have greater reach and more potential to reach farther inland. Superstorm Sandy caused so much damage in part due to higher sea levels. Such once-in-a-100-year storms may become the norm if sea levels continue to rise.

Perhaps one of the deadliest consequences of rising sea levels is that islands and low lying territories will be reclaimed by the ocean. Florida, for example, is a state composed mostly of porous limestone and the rising sea level has already begun to contaminate the water table. Levees, embankments of dirt, or other defenses would be useless, as the sea has already begun to seep in from underground, bypassing any type of coastal defense. By the end of the century, Florida could be just a few uninhabitable islands.<sup>7</sup> The main threat to these low-lying atolls is not that they will be covered up completely, although that may happen eventually. The primary threat is contamination to the water table, and increasingly deadly storms. Any arable land would be destroyed by the sea salt, making it economically unviable to live anymore.

### The Political Field

While scientists have been foretelling the consequences of climate change for decades now, countries have only recently begun taking action. These countries have formed a bloc in the UN called SIDS (Small Island Developing States). Although they consist mostly of small island countries in the Pacific and Caribbean, SIDS members will be the first nations to fall to the rising sea, and their governments have begun calling for international action. The prime minister of Antigua and Barbuda, a SIDS member state, said, "It is a recognized fact, but it is worth repeating that small island States contribute the least to the causes of climate change, yet we suffer the most from its effects. Small island States have expressed our profound disappointment at the lack of tangible action," to the 68<sup>th</sup> General Assembly of the UN.<sup>8</sup> However, not much can be done by SIDS members, as the primary emitters of greenhouse gases are located in the developed world: mostly China, U.S., and countries in Western Europe. Many members of SIDS and other countries

disproportionately affected by rising sea levels have called for the developing countries to pay or prepare reparations.

Many localities, such as Singapore, Shanghai, and New York have begun taking action as well. New York mayor Michael Bloomberg announced in 2013 an ambitious 20 billion dollar project to defend New York from the rising sea after Superstorm Sandy devastated the city.<sup>7</sup> However, generally speaking, there is little action being taken at the international level or at the national level to combat the rising sea levels. The one notable exception is the Netherlands. With most of the country below sea-level already, the Dutch have been holding the sea back for centuries. Fortified by a network of sluices and dikes called the Delta Works, Netherlands boasts the strongest sea defense in the world. Using innovative methods, such as floating houses, the “zandmotor”, and doubled sidewalks, the rest of the world has much to learn from the Dutch.<sup>10</sup>

### Potential Solutions

While the only possible long term solution to end the threat of rising sea levels is to cut back on greenhouse emissions, short term measures such as levees, flood plains, and innovative concepts such as floating cities offer a stop-gap solution. Short term measures such as these, when not combined with cutting greenhouse emissions.

Levee's are embankments of dirt that help hold back rising tides. However, levee's also allow water levels to slowly build up. This build-up increases the chances of a catastrophic flood if a levee fails. During Katrina, the levee system failed, devastating New Orleans with unhindered flooding. When a levee fails, it means either the water levels exceeded the levee's height, or that the dirt mound collapsed.

A levee system is a series of levee's, bulkheads, and floodplains. They work in conjunction to redirect storm surges away from major urban areas and usually onto floodplains, swaths of flat uninhabited land.<sup>11</sup> Levee systems require the creation of large amounts of coastal defenses designed

in conjunction which incurs large initial investment costs. In addition, if one part of a levee system fails, almost the entire weight of the flood will be inflicted upon one point.

Storm surge barriers are gates usually located at harbor entrances that close during a storm, theoretically shielding a city from the worst of the storm flood. While they are considered the most effective method of protecting cities from storm surges, they are also incredibly expensive, costing billions of dollars. Construction of these storm surge barriers can also disrupt shipping in harbors, thereby lowering economic revenue.<sup>12</sup>

Another possible defense against rising sea levels and flooding is wetlands. With the development of condominiums and beachfronts, developers often bulldoze valuable wetlands and marshlands that served as a natural barrier against storm surges. Restoration of these wetlands will help mitigate storm surges as well as prevent erosion of soil. Wetlands are the most effective, cheap, and environmentally friendly. However, wetlands take up far more land than any of the other solutions, and would have to be placed on high-value real estate, such as beachfronts.<sup>13</sup>

Besides these conventional solutions, innovators and inventors are coming up with many other ideas. From waterproof membrane canopies, to floating structures such as houses and even entire cities are being envisaged. These new ideas bring forth the idea of not only sustainability, but also learning to adapt and live with these new changes.

Despite these defenses against the rising sea, some land will inevitably be lost. Florida, with its porous limestone, and low-lying atolls in the Pacific will eventually have their water tables flooded with salt water and become inhospitable to life. The only permanent solution is to cut down on greenhouse gas emissions. Dr. Benjamin H. Strauss, a scientist at Climate Central, said, "We have a closing window of time to prevent the worst by preparing for higher seas."<sup>14</sup> Not only must countries brace themselves for rising sea levels, but the international community must come together to pass reform and protocols for dealing with rising sea levels.

## Questions to Consider

How will your country be impacted by rising sea levels?

Is your country willing to cut-back on it's greenhouse emissions?

What are possible solutions to mitigate the consequences of rising sea levels?

How prepared is your country to face rising sea levels?

Should countries with the most carbon emissions pay reparations to countries disproportionately affected by climate change?

Should countries that are landlocked pay reimbursements to countries that do border the sea?

## List of Reference Sources

<http://www.oecd.org/env/cc/39721444.pdf> - OECD Report on most at risk cities for SLR as well as possible challenges for defending them.

<http://ocean.nationalgeographic.com/ocean/critical-issues-sea-level-rise/> - Summary of causes of SLR

<http://ngm.nationalgeographic.com/2013/09/rising-seas/folger-text> - Describes New York's struggle with Superstorm Sandy, as well as summarizes the difficulties and costs with defending cities in the future from SLR.

<http://news.nationalgeographic.com/news/2013/06/130612-sea-level-rise-new-york-bloomberg-sandy-climate-change-science/> - Gives summary of OECD

Report as well as New York's plan as a case study for the rest of the world.

<http://www.un.org/apps/news/story.asp?NewsID=46027#.U9KKL IdWSo> - Discusses SIDS and the conflict between developed countries and developing countries on who is responsible for SLR.

[http://www.nytimes.com/2012/11/08/nyregion/after-hurricane-sandy-debating-costly-sea-barriers-in-new-york-area.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2012/11/08/nyregion/after-hurricane-sandy-debating-costly-sea-barriers-in-new-york-area.html?pagewanted=all&_r=0) - More information on

storm surge barriers and their pro's and con's

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1. "UNEP Organization Profile", *UNEP*, Accessed October 1, 2014.
2. "The Voice of the Environment", *UNEP*, Accessed October 1, 2014
3. "Sea Level Rise", *National Geographic*, Accessed August 19, 2014.  
<http://ocean.nationalgeographic.com/ocean/critical-issues-sea-level-rise/>
4. Tim Folger, "Rising Seas", *National Geographic*, September 2013, Accessed August 19, 2014.  
<http://ngm.nationalgeographic.com/2013/09/rising-seas/folger-text>
5. Ibid.
6. Tim Folger, "New York's Sea Level Plan: Will it play in Miami?", *National Geographic*, June 12, 2013, Accessed August 19, 2014. <http://news.nationalgeographic.com/news/2013/06/130612-sea-level-rise-new-york-bloomberg-sandy-climate-change-science/>
7. Ibid.
8. United Nations News Centre, "Threatened by rising seas, small island nations appeal for more aid at UN", *United Nations*, September 25, 2013, Accessed August 19, 2014.  
<http://www.un.org/apps/news/story.asp?NewsID=46027#.UO55PIdWSp>
9. Clay Dillow "Building the Indestructible Metropolis", *Fortune*, June 25, 2013, Accessed August 19, 2014. <http://fortune.com/2013/06/25/building-the-indestructible-metropolis/>
10. Tim Folger, "Rising Seas", *National Geographic*, September 2013, Accessed August 19, 2014.  
<http://ngm.nationalgeographic.com/2013/09/rising-seas/folger-text>

11. Sharol Nelson-Embry, "Are Wetlands Nature's Best Defense Against Sea Level Rise?", *Quest*, July 16, 2013, Accessed August 19, 2014.  
<http://science.kqed.org/quest/2013/07/16/wetlands-horizontal-levees-sea-level-rise/>
12. Mireya Navarro, "Weighing Sea Barriers as Protection for New York", *New York Times*, November 7, 2012, Accessed August 19, 2014.  
<http://www.nytimes.com/2012/11/08/nyregion/after-hurricane-sandy-debating-costly-sea-barriers-in-new-york-area.html?smid=pl-share>
13. Sharol Nelson-Embry, "Are Wetlands Nature's Best Defense Against Sea Level Rise?", *Quest*, July 16, 2013, Accessed August 19, 2014.  
<http://science.kqed.org/quest/2013/07/16/wetlands-horizontal-levees-sea-level-rise/>
14. Justin Gill, "Rising Sea Levels a Growing Threat to Coastal U.S.", *New York Times*, March 13, 2013, accessed September 30, 2014. <http://www.nytimes.com/2012/03/14/science/earth/study-rising-sea-levels-a-risk-to-coastal-states.html?module=Search&mabReward=relbias%3Ar>

## Bibliography

Bradly, Ryan. "Climate Change, Inc." *Fortune*. Last modified April 8, 2014. Accessed August 19, 2014. <http://fortune.com/2014/04/08/climate-change-inc/>.

Davenport, Coral. "Rising Sea's." *New York Times*. Accessed August 19, 2014.  
[http://www.nytimes.com/interactive/2014/03/27/world/climate-rising-seas.html?\\_r=0](http://www.nytimes.com/interactive/2014/03/27/world/climate-rising-seas.html?_r=0).

Dillow, Clay. "Building the Indestructible Metropolis." Fortune. Last modified June 25, 2013.

Accessed August 19, 2014. <http://fortune.com/2013/06/25/building-the-indestructible-metropolis/>.

Dubois, Shelley. "How Should Leaders Talk about Climate Change?" Fortune. Last modified

November 28, 2014. Accessed August 19, 2014. <http://fortune.com/2012/11/28/how-should-leaders-talk-about-climate-change/>.

Dumaine, Brian. "The Cost of Keeping Back the Sea." Fortune. Last modified November 20, 2012.

Accessed August 19, 2014. <http://fortune.com/2012/11/20/the-cost-of-keeping-back-the-sea/>.

Folger, Tim. "New York's Sea Level Plan: Will It Play in Miami." National Geographic. Last modified June 12, 2013. Accessed August 19, 2014.

<http://news.nationalgeographic.com/news/2013/06/130612-sea-level-rise-new-york-bloomberg-sandy-climate-change-science/>.

———. "Rising Sea's." National Geographic. Last modified September 2013. Accessed August 19, 2014. <http://ngm.nationalgeographic.com/2013/09/rising-seas/folger-text>.

Freedman, Andrew. "Typhoon Haiyan's Deadly Surge Noted in Warsaw Talks." Climate Central.

Last modified November 13, 2013. Accessed August 19, 2014.

[http://www.climatecentral.org/news/typhoon-haiyans-deadly-surge-noted-in-warsaw-](http://www.climatecentral.org/news/typhoon-haiyans-deadly-surge-noted-in-warsaw-16730) 16730.

Gillis, Justin. "Rising Sea Levels a Growing Threat to Coastal U.S." New York Times. Last modified

March 13, 2013. Accessed August 19, 2014.

[http://www.nytimes.com/2012/03/14/science/earth/study-rising-sea-levels-a-risk-to-coastal-](http://www.nytimes.com/2012/03/14/science/earth/study-rising-sea-levels-a-risk-to-coastal-states.html?_r=1&)  
states.html?\_r=1&.

Goldenberg, Suzanne. "Climate Change: Rising Sea Level to Submerge Louisiana Coastline by 2100,

Study Warns." Guardian. Last modified June 29, 2009. Accessed August 19, 2014.

[http://www.theguardian.com/environment/2009/jun/29/rising-sea-level-new-orleans.](http://www.theguardian.com/environment/2009/jun/29/rising-sea-level-new-orleans)

Hu, Aixue, Yangyang Xu, Claudia Tebaldi, Warren M. Washington, and Veerabhadran Ramanathan.

"Sea Level Rise Damage." Institute for Governance and Sustainable Development. Accessed August 18, 2014.

[http://www.igsd.org/news/documents/SLRcontextnote11April13207pmEDT5.pdf.](http://www.igsd.org/news/documents/SLRcontextnote11April13207pmEDT5.pdf)

Naravvo, Mireya. "Weighing Sea Barriers as Protection for New York." New York Times. Last

modified November 7, 2012. Accessed August 19, 2014.

[http://www.nytimes.com/2012/11/08/nyregion/after-hurricane-sandy-debating-costly-sea-](http://www.nytimes.com/2012/11/08/nyregion/after-hurricane-sandy-debating-costly-sea-barriers-in-new-york-area.html?pagewanted=all&_r=0)  
barriers-in-new-york-area.html?pagewanted=all&\_r=0.

Nelson-Embry, Sharol. "Are Wetland's Nature's Best Defense Against Sea Level Rise." Quest. Last modified July 16, 2013. Accessed August 19, 2014.

<http://science.kqed.org/quest/2013/07/16/wetlands-horizontal-levees-sea-level-rise/>.

Nicholls, Robert J. Working Party on Global and Structural Policies. N.p.: OECD, 2003.

Noyes, Katherine. "Big Data's Biggest Challenge: Climate Change." Fortune. Last modified June 23, 2014. Accessed August 19, 2014. <http://fortune.com/2014/06/23/big-data-climate-change-sea-levels/>.

"Sea Level Rise." National Geographic. Accessed August 19, 2014.

<http://ocean.nationalgeographic.com/ocean/critical-issues-sea-level-rise/>.

Stipp, David. "The Pentagon's Weather Nightmare (Fortune 2004)." Fortune. Last modified January 12, 2014. Accessed August 19, 2014. <http://fortune.com/2014/01/12/the-pentagons-weather-nightmare-fortune-2004/>.

"Threatened by Rising Seas, Small Island Nations Appeal for More Aid at Un." United Nations News Centre. Last modified September 25, 2013. Accessed August 19, 2014.

<http://www.un.org/apps/news/story.asp?NewsID=46027#>.

UNEP (2008), Vital Water Graphics - An Overview of the State of the World's Fresh and Marine Waters. 2nd Edition. UNEP, Nairobi, Kenya. ISBN: 92-807-2236-0

UNEP. "Organization Profile." UNEP. Accessed October 1, 2014.

<http://www.unep.org/PDF/UNEPOrganizationProfile.pdf>

UNEP. "The Voice of the Environment." UNEP. Accessed October 1, 2014.

<http://unep.org/about/>

### Introduction: Causes of Deforestation

According to National Geographic, deforestation is the act of "clearing Earth's forests on a massive scale, often resulting in damage to the quality of the land." Although this is not the exact dictionary definition, the phrase accurately captures some of the most pertinent negative effects of deforestation: the loss of diverse wildlife and ecosystems. Although deforestation can be caused by natural occurrences, like wildfires, commercial and human necessity are the true divestitures of rain forests. As of now, forests cover about 30% of the planet's area, but that percentage is rapidly decreasing.

In order to effectively debate this issue, it is imperative to understand both the origins and methods of deforestation. Currently, the biggest cause for deforestation is agriculture. Some wealthy farmers clear expanses of land to open more area for crops and animals, while other poorer farmers will clear a few acres in order to provide for their families, a process known as subsistence farming. Many subsistence farmers use the technique of "slash and burn" where existing trees are cut down and burned as a method to clear land.

However, this land used by subsistence farmers is only habitable for a few years, until it is time to repeat the process, continuing the cycle of clearing acres of once forested land. Another cause of deforestation is logging, the process of felling trees and preparing the timber. Loggers will build roads to access deep and isolated rainforests, causing the decimation of acres of land. Overall, the United Nations Framework Convention on Climate Change predicts that subsistence farming accounts for 48% of deforestation, commercial agriculture is responsible for 32%, logging for 14%, and fuel wood removals hold 5% of deforestation.

The true causes of deforestation arise from an inadequate balance of wealth in many developing nations, in which the impoverished are forced to clear the Earth's natural beauty in order to provide for their families and survive. Another equally significant cause of deforestation stems from population growth and globalization. The rapidly increasing world population demands that more forested land be used to farm and feed this population. In addition, the expansion of humans causes forested land to be seen as an area for urban development, rather than a natural and invaluable environment.

Thus a United Nations member must decide whether the importance of the natural and ecological health of rainforests directly outweigh the economic and physical health who farm for necessity.

#### Basic History and Committee Relevance

Globally, deforestation started thousands of years ago to suit grazing and crop-growing needs. When the industrial era swept the world, global deforestation rates began to increase sharply. This need for commercial use of land and urban development caused a disregard for the environment. By the 1870s, about half of eastern North America was deforested. From that point on, the Food and Agriculture Organization (FAO) has predicted that the rate of deforestation would be 1.3 million square kilometers per decade, which includes a great part of primary forest (forest that was left untouched).

Humid and moist forests carry some of the greatest wildlife and biodiversity. Unfortunately, 8 million square kilometers (3.1 million square miles) have been deforested in such places as the Amazons in Brazil and West Africa. A 17- year study in the Amazons demonstrated that the rates of deforestation were increasing

startlingly and only exacerbated the situation when a drought occurred, allowing for forest fires. Although the highest rates of deforestation are occurring in the tropics, it should be noted that dry forests are much easier to clear and are shrinking rapidly as a result.

With regards to United Nations action towards the issue of deforestation, an agenda was submitted by the United Nations Environmental Programme (UNEP), in which certain solutions were outlined to combat deforestation. For example, the UNEP sought to create forestry education programs, conduct research to preserve wildlife, and encouraging sustainable development.<sup>i</sup>

### Consequences and Predictions

If deforestation continues at the current rate, National Geographic predicts that in a hundred years the world's rainforests could be decimated. With the loss of these trees, the world will be entirely different with varied and widespread effects of deforestation. To begin, deforestation adversely affects global warming by allowing an increased amount of greenhouse gases into the atmosphere. According to the World Resources Institute, deforestation causes between 12% and 17% of greenhouse gas emissions. In general, trees go through a process known as "carbon sequestration," in which carbon dioxide is absorbed by the trees for their own survival. However, when there is a lack of trees, there is extra carbon dioxide that is being released, instead of utilized by the trees. The rainforests of South America hold 20% of the world's oxygen and is disappearing at 4 hectares per decade.<sup>ii</sup>

Another effect of deforestation is soil erosion and, therefore, flooding. An important aspect of forests is that their leaves act as a canopy to keep the soil moist. However, without trees, the soil starts to become dry, with increased exposure to the sun, which is called desertification. This causes a once prolific rainforest to become a desert, which drastically changes the climate. In addition, the lack of trees and dry soil cannot hold and diverge the water and it becomes easier for rainwater to flood the area. Since the trees can no longer evaporate rainwater, the water cycle is interrupted, causing a change in climate.<sup>iii</sup>

According to the World Wildlife Fund (WWF), 80% of the world's wildlife lives in tropical rainforests. Due to the deforestation in these rainforests, numerous unique species are becoming extinct

because of a lack of habitat and protection. Not only is the rainforest a habitat for different animals, but it is also a mode of survival for families who collect forest products, such as rubber, for a living.<sup>iv</sup>

One of the most affected areas of deforestation is in Brazil's Amazonian rainforests. Brazil holds about 3.5 million square kilometers of tropical forests, amounting to 30% of the world's total. These areas are known as "Amazonia."<sup>v</sup> According to the University of Michigan, The Amazonia has been marked as the "single richest region of the tropical biome." There are 2,000 known species of fish in the Amazon basin, much more than those found in any part of the world.<sup>vi</sup> Unfortunately, in the last 50 years, Brazil has lost 17% of its forestry, according to WWF.

When Brazil finally realized the problems of deforestation on its rainforests, Brazil started to implement forest protection laws. Ever since the implementation, the rate of deforestation has fluctuated. Nevertheless, Brazil has made some progress. According to the BBC, in 2009, the Brazilian government promised to reduce deforestation by 80% by 2020.<sup>vii</sup> Although it has not reached this goal, Brazil has improved tremendously. The country was able to cut its deforestation by 50% between 2000 and 2012 (from 40,000 square km to 20,000 square km). However, there was still a net loss of an area of 1.5 million square km of rainforest.<sup>viii</sup>

### Scientific Controversy

Recently, there has been debate on the resiliency of biodiversity. Many scientists say that tropical rainforests are some of the richest in wildlife and the destruction of rainforests will result in extinction of such species, if deforestation continues at this rate. Nonetheless, some argue that this idea of mass extinction is exaggerated. A Smithsonian scholar, Dr. Joseph Wright, defends that deforestation is ameliorated when subsistence farmers start to move to the city to find real jobs, flowing with the concept of urbanization. He theorizes that once the greatest cause of deforestation has left to the city, secondary forests (forests reviving after human disturbance) will grow on abandoned farmland and, therefore, provide itself as a habitat for endangered species.<sup>ix</sup> Those who disagree with Dr. Wright believe that although some farmers will leave, other corporations and loggers still pose a greater threat to the rainforests with their advanced machinery. In

addition, dissenters of Dr. Wright's theory say that the average age of secondary forests, in places like the Amazon, is only 6 to 7 years old, which is far below the standard of original rainforests.<sup>x</sup>

### Potential Solutions

Due to the difficulty of proposing legislation that would wholly outlaw deforestation, delegates must create creative and more effective proposals. One potential solution would be to plant younger trees in the place of the older ones that were cut. This would replenish the soil and the ecosystem and satisfy extractive companies, without completely leaving the forest at a disadvantage. However, wildlife would be put at a disadvantage as it takes a long time for a young tree to grow, but these species would need a habitat immediately. Another solution would be to write regulations that restrict the rampant and blatant clear-cutting of trees. Delegates are strongly encouraged to think from both sides of the argument. They must think of both the environment and the small subsistence farmers when making and proposing legislation.

### Conclusion

The concept of deforestation is very controversial, both politically and scientifically. It is quite evident that deforestation has a resounding adverse effect on those who depend on the rainforests for survival. For example, the Amazons have lost hundreds of unique species and pandas in China have struggled to survive without of bamboo trees.

In general, farmers are the greatest cause of deforestation and perceive the rainforests as an area to grow food to provide for their families. Nonetheless, the true roots of the deforestation problem are much larger than farmers. Many believe that deforestation is a by-product of increased globalization, urban development, and the strive to become a "western and developed country." In addition, in countries with corrupt officials, deforestation is only exacerbated when such officials willingly allow the illegal deforestation through bribes. It is very important to think of a creative solution that benefits both sides of the argument. The United Nations was based upon the morals of peace and justice and this can only be achieved with holistic thinking and accurate statistics. As Environmental Committee members, it is imperative that research be conducted on this topic to have a solid foundation of the issue, and therefore, have a strengthened and concise argument.

## Questions to Consider

- 1) What is your standpoint in the scientific controversy of deforestation?
- 2) Why do you think that some countries find it more difficult to prevent clear cutting of rainforests than others?
- 3) In your opinion, what would be the most effective solution from the potential solutions passage? Why?
- 4) Which country needs to most improve its deforestation conditions? Why?
- 5) How would you enforce solutions?
- 6) How can you help the rainforests AND prevent poverty of numerous of subsistence farmers?
- 7) Why does globalization play such a huge role in deforestation?
- 8) Is it possible to find a true account of a subsistence farmer to learn his/her perspective?
- 9) Are there any politicians that believe that deforestation is a good thing and should be continued for the sake of the economic health of the country?
- 10) How does your country specifically feel about deforestation: is it reliant on it or willing to stop?

## Further Research

[www.unep.org](http://www.unep.org) - Website detailing this committee

<http://www.nrdc.org/energy/forestsnotfuel/> - Comprehensive website on deforestation facts and statistics

<http://www.economist.com/news/international/21613327-new-ideas-what-speeds-up-deforestation-and-what-slows-it-down-clearing-trees> - This article in the Economist is very informational and talks about the causes of deforestation.

<http://www.sciencedaily.com/articles/d/deforestation.htm> - Gives a few statistics on deforestation that are worth noting

<http://www.scientificamerican.com/article/deforestation-and-global-warming/> - Scientific point of view on deforestation

## Bibliography

"Brazil Deforestation." Huffington Post. January 1, 2013. Accessed August 22, 2014. <http://www.huffingtonpost.com/news/brazil-deforestation/>.

"Brazil Says Amazon Deforestation Rose 28% in a Year." BBC News. November 15, 2013. Accessed August 22, 2014. <http://www.bbc.com/news/world-latin-america-24950487>.

"Deforestation." World Wildlife Fund. Accessed August 22, 2014.  
[http://wwf.panda.org/about\\_our\\_earth/about\\_forests/deforestation/](http://wwf.panda.org/about_our_earth/about_forests/deforestation/).

"Deforestation: Compromises of a Growing World." Conserve-Energy-Future. January 1, 2015. Accessed August 22, 2014. <http://www.conserve-energy-future.com/causes-effects-solutions-of-deforestation.php>.

"Deforestation." National Geographic. Accessed August 22, 2014.  
<http://environment.nationalgeographic.com/environment/global-warming/deforestation-overview/>.

"Deforestation." World Wildlife Fund. Accessed August 22, 2014.  
<http://www.worldwildlife.org/threats/deforestation>.

"Combating Deforestation." United Nations Environment Programme. Accessed August 22, 2014.  
<http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=52&ArticleID=59&l=en>.

"Effects of Deforestation." The Pachamama Alliance. Accessed August 22, 2014.  
<http://www.pachamama.org/effects-of-deforestation>.

"Environment." United Nations Global Issues. Accessed August 22, 2014.  
<http://www.un.org/en/globalissues/environment/>.

Laurence, William. "Reality Check for Deforestation Debate." BBC News. January 27, 2009. Accessed August 22, 2014. <http://news.bbc.co.uk/2/hi/science/nature/7848200.stm>.

Pimm, Stuart. "Deforestation." Encyclopedia Britannica. April 27, 2014. Accessed August 22, 2014.  
<http://www.britannica.com/EBchecked/topic/155854/deforestation/306437>

"The Rain Forest in Rio's Backyard." National Geographic. Accessed August 22, 2014.  
<http://environment.nationalgeographic.com/environment/habitats/rio-rain-forest/#page=3>.

Szalay, Jessie. "Deforestation: Facts, Causes & Effects." Live Science. March 6, 2013. Accessed August 22, 2014. <http://www.livescience.com/27692-deforestation.html>.

UNFCCC (2007). "[Investment and financial flows to address climate change](#)". *unfccc.int*. UNFCCC. p. 81.

University of Michigan. "Global Deforestation." January 1, 2010. Accessed August 22, 2014. <http://www.globalchange.umich.edu/globalchange2/current/lectures/deforest.html>

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<sup>i</sup> "Combating Deforestation." United Nations Environment Programme. Accessed August 22, 2014. <http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=52&ArticleID=59&I=en>

<sup>ii</sup> "Effects of Deforestation." The Pachamama Alliance. Accessed August 22, 2014. <http://www.pachamama.org/effects-of-deforestation>.

<sup>iii</sup> "Deforestation." World Wildlife Fund. Accessed August 22, 2014. [http://wwf.panda.org/about\\_our\\_earth/about\\_forests/deforestation/](http://wwf.panda.org/about_our_earth/about_forests/deforestation/).

<sup>iv</sup> Ibid.

<sup>v</sup> University of Michigan. "Global Deforestation." January 1, 2010. Accessed August 22, 2014. <http://www.globalchange.umich.edu/globalchange2/current/lectures/deforest.html>.

<sup>vi</sup> Ibid.

<sup>vii</sup> "Brazil Says Amazon Deforestation Rose 28% in a Year." BBC News. November 15, 2013. Accessed August 22, 2014. <http://www.bbc.com/news/world-latin-america-24950487>.

<sup>viii</sup> Ibid.

<sup>ix</sup> Laurence, William. "Reality Check for Deforestation Debate." BBC News. January 27, 2009. Accessed August 22, 2014. <http://news.bbc.co.uk/2/hi/science/nature/7848200.stm>.

<sup>x</sup> Ibid.