

<b>Forum:</b>	Environment and Sustainable Development
<b>Agenda:</b>	On measures to protect rainforests from deforestation due to increased invasive practice.
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## Introduction

Deforestation has been greatly accelerated by human activities since the 1960s, and this has been negatively affecting natural ecosystems, biodiversity and the climate. The UN's Food and Agriculture Organization estimates the annual rate of deforestation to be around 1.3 million km<sup>2</sup> per decade. Causes of deforestation can be direct and indirect. Among the direct causes, there are natural causes such as the hurricanes, fires, parasites and floods, while there are also human activities as agricultural expansion, cattle breeding, timber extraction, mining, oil extraction, dam construction, infrastructure development and invasive practices. Indirect causes include insufficient political actions and governance failure as inadequate land tenure system, corruption, wrong public reputation on forestry. And the political and socio-economic causes as the general population growth, technological development and climate changes.

All causes of deforestation that is related to human activity can be seen as invasive practices, and due to the acceleration of human activities, the impact of invasive practice on forestry emerges as a clear issue. According to the FAO (Food and Agriculture Organization of The UN), the top invasive practices that greatly accelerates deforestation are: Agricultural development, new constructions and urbanization. However, there difficulty has been faced in the majorities of the governments trying to keep a balance between development and environmental sustainability due to political reasons such as competition with other nations, specialization on industries that isn't sustainable and aims for economic growth.

Other specific types of invasive practices include but does not limit to:

- Cattle breeding
- Timber extraction
- Mining
- Oil extraction
- Dam construction
- Insufficient political actions

- Governance inadequate land tenure system
- Government corruption

There are many types of forests around the world, the three main types classified according to the latitude:

- Tropical – Forested landscapes in tropical regions.
- Temperate – Forests found in the moderated climates between what is identified as tropics and boreal regions in both the Northern and Southern hemisphere.
- Boreal forests (taiga) – Defined as forests growing in high altitude environments.

There has been multiply attempts by the United Nations to resolve deforestation due to human invasive activities and the most recent one is an agreement on the first-ever ‘UN Strategic Plan for Forests’, this was forged at a special session of the UN Forum on Forests held in January 2017 and it provides an ambitious vision and attempt to resolve deforestation for global forests in 2030. The plan was adopted by the UN Economic and Social Council on 20 April 2017, and respectively adopted by the UN General Assembly on 27 April 2017. The ‘UN Strategic Plan for Forests’ features a set of six Global Forest Goals twenty-six associated targets to be reached by 2030, it includes a target to increase forestry by 3% worldwide by 2030 and signifying an increase of 120 million hectares, an area that is almost twice as big as France. The general vision of the 2030 Agenda recognizes that real change requires immediate collective actions within and beyond the UN. Even though the ‘UN Strategic Plan for Forests’ has a universal vision, it is said that all acts are voluntary meaning that no one has to strictly follow the plan.

The effect of invasive practice being untreated leads to further deforestation and acceleration of it. And when further deforestation occurs, various devastating impacts will be seen as a result, these include the following:

- Loss of habitat – around 70% of land animals and plant species live in the forest, a loss in forestry will make their homes inhabitable and therefore causes severe threats to the land animals and plants.
- increased greenhouse gases – A average tree absorbs around 22kg of carbon dioxide and a mixture of other greenhouse gases, deforestation will result in a increased amount of greenhouse gas in the atmosphere leading to global warming.
- loss of biodiversity – By destroying the forests, human activities are endangering the entire ecosystems and creating natural imbalances due to the fact that the majorities of land animals and plants localize in

the forest.

- soil erosion – While trees help the land to retain water and topsoil, which provides the rich nutrients to sustain additional forest life, the decrease in forestry causes soil erosion leading to unsustainable agricultural practices. Today, 52% of the land used for food production is moderately or severely impacted by soil erosion, this can lead to the lack of healthy, nutritious soil and lead to low yields and food insecurity.
- destruction of homelands – Healthy forests support the livelihoods of around 1.6 billion people globally, where about one billion of them are among the world’s poorest. Destruction of forests will cause a devastating impact on the people who depend on the forests for survival (to hunt and gather raw products for their small-scale agriculture processes). This will also impact locals around the world to abandon “their” own homeland leading to a loss in cultural diversity.
- And more.

Protecting the rainforest is essential for humanity at a fundamental level even when not considering the consequences that it will lead to mentioned above. Of course, the rainforests provide vivid beauty and bring great diversity to the plants and animals, but fundamentally, the excess amounts of carbon dioxide absorbance and oxygen release stabilize the Earth’s climate. Furthermore, rainforests help maintain the world’s water cycle by adding water to the atmosphere through a process called transpiration which creates clouds.

After all, the environment committee has the responsibility to serve as part of the solution for deforestation to maintain and stabilize the whole planet.

## Key Terms

**Deforestation** – the action of clearing a wide area of trees, caused by various reasons natural and human activities. The rapid technological and economic growth increases the rate of deforestation around the world. According to the FAO (Food and Agriculture Organization of The UN), the top invasive practices that greatly accelerate deforestation are: Agricultural development, new constructions and urbanization.

**Invasive practice** – Human activities that impact the natural environment, this may be both direct and indirect: direct including urbanization and indirect including government corruption.

**Agricultural development** – The main invasive practice that accelerates deforestation. As the population grows, the demand for food increase, over half of the space made from deforestation is used to make land for agricultural development.

**Urbanization** – the process of making an area more city-like, countries pursue this strategy to create more job opportunities, making higher incomes and create greater collaboration and innovation opportunities. Another main reasoning of invasive practice that accelerates deforestation.

**Ozone layer destruction** – A layer in the earth's stratosphere located in the altitude of around 10km. It contains a high concentration of ozone which absorbs ultraviolet radiation from the sunlight. It may be destructed through the increasing level of greenhouse gases.

**Greenhouse gases** – Gases that contributes to greenhouse effect by absorbing infrared radiation. Examples of these are water vapor (H<sub>2</sub>O), carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O).

**Greenhouse effect** – The natural process that warms the earth's surface due to not reflected radiation being re-radiated by greenhouse gases. The increasing amount of greenhouse gases increasing greenhouse effect, which causes the acceleration of global warming

**Globalization** – The process of which businesses or other organizations develop international influence and cooperation to start operating at an international scale. This increases the amounts of invasive practice such as increasing tourism and modernization.

## **General Overview**

Generally speaking, LEDCs are the main victims of the consequences of deforestation due to invasive practices while these practices generally happens in, or are initiated by MEDCs. MEDCs commonly struggle with finding a balance between maintaining a competitive economical growth and establishing a sustainable development.

There are multiple measures that countries may help prevent and regulate invasive practices, enforcement of laws and government intervention in the market may be very useful ways that governments can regulate and protect the forest. There are existing organizations such as the FSC to help governments

to regulate existing firms. However, the governments need to be aware that when regulations and laws are enforced, firms may lose competitiveness internationally and be insecure financially, especially when primary sector productions are the specialty of the nation. In fact, this is the reason behind why many governments leave this issue unsolved while recognizing that it is a great problem.

MEDCs in this case usually rises the taxation and increases on subsidy for firms due to their financial capability of doing so. LEDCs are not going to be able to take this route as they don't have the same amounts of financial capability. They can consider looking into FDI (Foreign Direct Investment)'s successful cases such as the ones in Turkey, and should be extremely careful as this might put local firms at a disadvantage.

#### Asian Nations

The continent of Asia covers 29.4% of the total land area and has a population of roughly 4.8 billion accounting for about 60% of the world population. The main factors that contributes to the raise of invasive practices are population size, growth and economic development in Asia; as these factors increases land pressure, which accelerates deforestation. China in specific is on top of the issue of deforestation as the forest area presented a gradual increase, however, it isn't evenly distributed and activities such as massive greenhouse gas emission that may contribute to a long term indirect effect of deforestation.

#### European Nations

European Nations are generally doing moderately in terms of keeping their forestry. With many countries ranked top in terms of climate index, and organizations such as The EU (European Union) and EEA (European Environment Agency) has been very successful in contributing to how European countries are coping with the balance between economical growth and sustainable development.

#### Latin American Nations

Severe deforestation in the Amazon is the biggest deforestation front in the world. As a rainforest that crosses 8 countries, this is a severe issue for all Latin American Countries. WWF – World Wildlife Fund, the biggest ecological organization existing estimates that the green area in Amazon will drop 27% by 2030 if the current rate of deforestation continues. This will also disrupt the aboriginals that relies on

the Amazon forest to survive leading to a loss in cultural diversity. Activities that causes deforestation in South American include: illegal mining, palm oil production and other agricultural production.

Illegal mining may cause devastating results as illegal mining doesn't follow the global procedures and have little to non environmental friendly procedures. Palm oil production requires the cut down of massive amounts of palm trees, while there is nothing wrong with the product, but the act of cutting down palm tree is what really causes the problem, because palm trees' roots soak up a huge amount of water, without them the local forestry cannot survive as the soil is destroyed. Finally, as the majorities of countries in South America depends on raw materials such as logs, coffee, sugar, bananas to support their GDP, and this leads to a large scaled deforestation which may hurt themselves in the near future.

#### African Nations

The Congo Basin forest span six countries covering an area of some 301 million ha, considering the rate of forest fragmentation due to roadside farming and logging, the WWF simulates that an estimated of 30% of the forest will disappear by 2030. In West and Central African nations, deforestation has already caused areas to transform into savanna grasslands or degraded savannas.

#### Haiti

Haiti, known as the poorest country in the western hemisphere suffers from severe deforestation, fewer than 100000 acres of forest remains while the country was 3/4 covered in forestry just around 200 years ago. In Haiti's case, deforestation is a challenging issue to solve as the country is continuously hit with natural disasters and political turmoil.

The main cause of deforestation in Haiti is charcoal production, and the rate of charcoal production is going through a dramatic increase as the country depends on it as the main source of energy and income.

Another on-going problem that contributes greatly to deforestation is tenure security, which refers to the legal right a person has over a piece of land, meaning Haiti is too privatized. After the earthquake in 2011, the situation got worse as many documents are misplaced, therefore it made the government hard to differentiate between legitimate owners and "opportunistic possessors". This directly contributed to deforestation as the government was not able to provide security for the farmers and people were stealing raw materials trying to make money out of it.

Severe deforestation may lead to the rise in sea level due to climate change, and Haiti is estimated to be one of the first countries to go below sea level as it is a very small island country.

## Nigeria

Ever since 2005, Nigeria has had the highest rate of deforestation in the world according to the FAO (Food and Agriculture Organization of the United Nations). It has lost over 50% of its primary forests and an increasing trend can still be seen from the current speed of deforestation.

In Nigeria, deforestation is mainly due to logging, timber export, subsistence agriculture and the collection of wood for fuel. Among the process of clearing forests, there are little to non action done in terms of simultaneously replanting some vegetation as it is said to “have no economic or social reasons”.

The current status of the forest in Nigeria in some way is allowed by the government as the State Department of Forestry have not implemented any forest management policies in efforts to decrease the rate of deforestation ever since the 1970s.

## Costa Rica

Since the 1950s, approximately 20000 acres are deforested annual. Till today, 80% of the forests of Costa Rica have disappeared, and it has been suffering as one of the countries with the largest deforestation rates.

The main cause of deforestation in Costa Rica is cattle ranching for beef production. Since the 1950s, around 60% of Costa Rica has been cleared to make room for cattle ranching. The problem has worsened in the 1960s when the United States offered Costa Rican cattle ranchers millions of dollars in loans to produce beef.

While cattle ranching is the primary cause of deforestation in Costa Rica, a few international logging companies has stepped in to Costa Rica to exploit them, and they require access roads to transport the timber to “maximize the income”. Another issue that greatly contributed to the problem is banana plantations, which around 130000 acres of forest cleared out for bananas.

## Parties involved

FSC (Forest Stewardship Council) – A organization founded by over 26 countries in 2006, with the aim to promote environmentally appropriate, socially beneficial and economically viable management of the world's forests.

NYDF (New York Declaration on Forests) – A voluntary and non-binding international declaration to take action on halt global deforestation. The declaration was endorsed in the United Nations Climate Summit in September 2014. In 2019, the list of NYDF supporters has grown to over 200 endorsers, including: national governments, sub-national governments, multi-national companies, groups representing indigenous communities and non-governmental organizations.

### **Timeline of Events**

1500s – Deforestation accelerated due to growth in population and technology, but was existed long before, all around the globe, the indigenous people used extensive pieces of land for agriculture.

Early 1900s – over 90% of forest land in Indiana was destroyed to create farmland. However, around the 1930s, many farmers gave up their farm due to the Great Depression, which gave a chance for the forest to grow back.

1950s – Colonization, typically the British impacted colonized countries greatly for multiply reasons such as timber exports and other agricultural purposes. An example is Thailand, whereas its forest coverage dropped from 61% to 34% between 1945 to 1975.

Early 2000s – South America started experiencing an increased rate of deforestation, the loss of forest annually rose up to a humongous number of around 11000000 acres.

2004 – 2006 – Various environmental groups started calling out for a urgent action to slow deforestation.

2005 – South America suffered from the largest loss of forests at around 4.3 million hectares, the rate only increased after this stage.



2006-2007 – APP (Asia Pulp and Paper), the biggest paper production company was dissociated by FSC (Forest Stewardship Council) due to the involvement in destructive forestry practices which conflicted the FSC mission.

2008-2011 – The world experienced a decline in deforestation.

2012 – Deforestation increased by 28% after the few years of decline.

2014 – NYDF (New York Declaration on Forests) was endorsed at the United Nations Climate Summit in September, 2014.

2014-2018 – Deforestation around the world increased by an average of 25%. However, it is notable that the overall rate of deforestation has decreased by around 50% for the past 25 years.

## **UN Involvement, Relevant Resolutions, Treaties and Events**

The first-ever UN strategic plan for forests was forged at a special session of the UN Forum on Forests in January 2017. This resolution recalls a previously passed resolution – 2015/33 of 22 July 2015, in which it decided that “the United Nations Forum on Forests should develop a concise strategic plan for the period 2017-2030 to serve as a strategic framework to enhance the coherence of and guide and focus the work of the international arrangement on forests and its components”. This has provided an ambitious vision for forests around the world from 2017 to 2030. The plan was initiated and developed by the UN Economic and Social Council on 20 April 2017, and adopted by the UN General Assembly on 27 April 2017.

## **Possible Solutions**

Deforestation is becoming a much more difficult issue to solve due to the temptation that every country has to advance its own GDP and the growth in global population, however, there are still measures that can be undertaken to slow down the process of deforestation.

Agricultural practice is by far the number one invasive practice and still increasing practice, that causes deforestation of the forestry. Food as a basic need for all living beings, it is impossible to stop this act, therefore, strategies to create a more efficient yield from the land that mankind has cleared out now, should be invested. These investments may include: GM crops (genetic modified crops) and manmade meat.

However, each country has its own stances on GMOs therefore delegates should be careful when presenting such resolution.

Education is always a well long term solution for issues revolving around human practices. Establishing higher education in rural areas and building the mindset of forestry protection into the current educational system may in the long term resolve the issue of deforestation. However, when presenting this resolution, delegates should be aware that not all nations all capable of coping with this, especially LEDCs may not have the economical status to support this plan.

The promotion of forest tourism may decrease the rate of deforestation dramatically, as tourists desire to see a well maintained and bio-diverse environment. This plan is significantly helpful for LEDCs as there are many positive side-effects that comes with the establishment of a well organized tourist destination such as enhancement in social safety, increase in GDP and creating more job opportunities. Delegates should keep in mind that the establishment of tourism is very difficult without a big amount of financial support, especially for LEDCs, which may be self-contradicting.

Government regulation may also lead to a brighter future in terms of deforestation. For instance, the existence of emission tax lately has greatly decreased the amount of greenhouse gases emitted annually. Other than taxation, governments can also further promote and enforce organizations such as the FSC (Forest Stewardship Council) and their certifications. Delegates going forward with this plan should keep in mind that government regulation is also a very sensitive topic and may lead to political issues with other delegations.

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