

**Forum: Special Conference on sustainable cities**

**Issue: Creating and protecting urban green lungs to establish a healthy environment in cities**

**Student Officer: Alessandro Filippo Fazio**

**Position: Deputy President**

---

## **INTRODUCTION**

In an era where more and more technological advancements, inventions of ways to make cars as ecofriendly as possible and discoveries to reduce carbon dioxide emissions are being made, it is of utmost importance to save the environment. Therefore, it needs to be taken into consideration, that through factories and fuel-powered automobiles the environment is being damaged on a very high level. Exhaust emissions contribute to global warming, pollution of the air and the environment, but also illnesses which may occur in densely populated cities or metropolises. Forests are being cut and even burned down, in order to locate factories at their place, destroying the natural habitats of diverse animal and plant species. This leads to the eradication of aforementioned living beings.

Plants are necessary and essential to life, since through the process of photosynthesis they are able to convert carbon dioxide to the vital oxygen, forming a symbiotic relationship between plants and living organisms. The so called “green lungs”, such as forests, are the earths lungs, because they absorb carbon dioxide found in the atmosphere. Protecting the earths lungs and maintaining green areas is crucial, if we wish to prevent further damage to the environment and reduce global warming.

Many non-governmental organizations (NGO's), groups of individuals but also governments have taken the severity of the case into consideration and acknowledged the fact that the precious and vital environment needs to be saved and protected, thus countless tree planting projects, reforestation projects and preservation projects have taken place in numerous countries in the world with great success.

In this study guide, you may find useful information, interesting facts, severe cases of pollution and possible solutions to this specific issue, however you should not limit your research to this study guide, but instead you are encouraged to broaden your knowledge on the topic through thorough research, in order to contribute to a fruitful debate.

## DEFINITION OF KEY-TERMS

### Green Lungs

Forests are often referred to as green lungs, since they can convert carbon dioxide to oxygen. As a big oxygen producer, green lungs can improve the purity of polluted air, lower temperatures, reduce the amount of smog in the air and lower the formation of ozone, providing fresh and clean air to all living beings.

### Urban Green Lungs

Urban Green lungs are usually located in urban areas, namely cities, towns and other settlements, which consist of green areas, parks or small forests. They function as an oxygen generator, by converting carbon-dioxide to oxygen and are thus vital for almost all flora and fauna species and of course human beings.

### Agricultural Deforestation

The term “Agricultural Deforestation” does not differ much from the term “Deforestation”. Using both terms, one may refer to intended loss of expanses covered with plants. Surfaces with cut down trees, bushes and further plants, can then be used for diverse purposes, such as constructing buildings, factories, etc. It must be kept in consideration, however, that deforested land can permanently not be cultivated.

### Animal agriculture

Animal agriculture refers to the method and process of breeding animals, in order to maximize livestock.

### Pollution

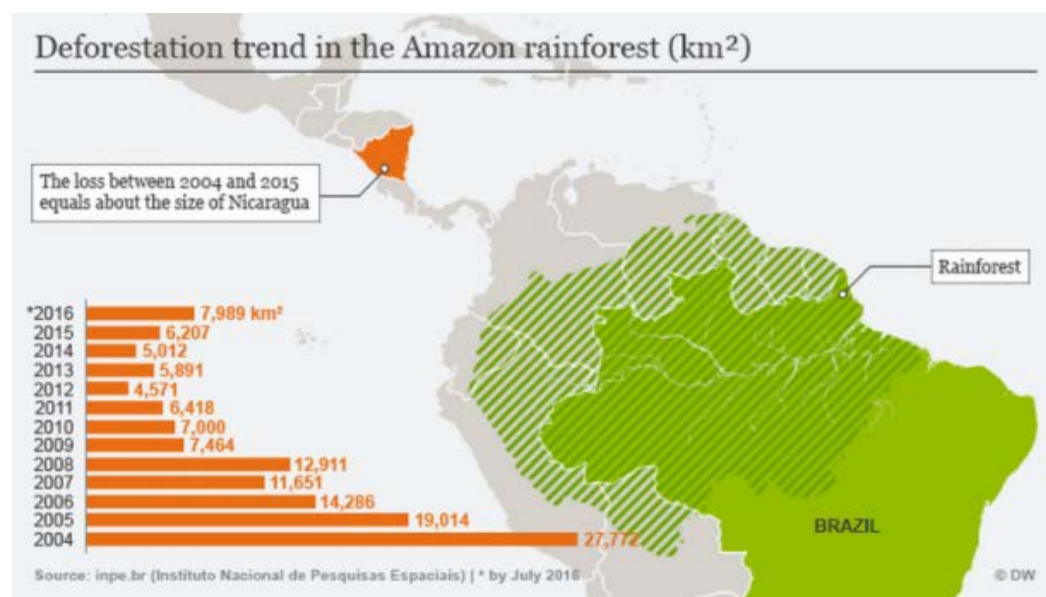
Pollution defines all agents which have a negative impact and effect on the environment as a whole. Such agents include, but are not limited to, substances harmful to the wellbeing of humans and the correct function of the ecosystem.

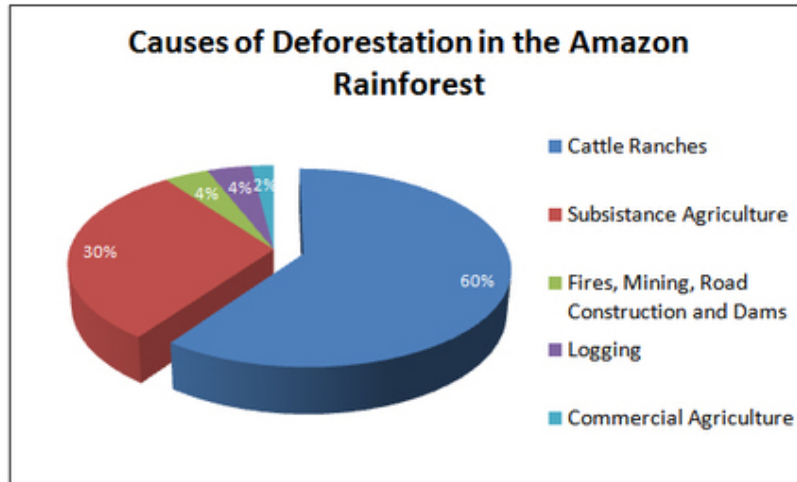
## BACKGROUND INFORMATION

### The Amazon Rainforest

Forests and green lands all around the world vanish at an alarming rate. The cause of that is not limited to deforestation through burning or cutting down trees and other plant species, in order to construct buildings, roads and further infrastructure, but poor preservation and absent protection of the ecosystem and environment, play also a significant role. Moreover, agriculture contributes to deforestation on a high level, since fields with different food-crops are being cultivated, often in places where a forest or green area used to be located. Animal agriculture also leads to destruction of green lands and the forest.

The earth's biggest Green Lung is the Amazon Rainforest. It is home to a variety of many animal and plant species. The Amazon Rainforest's most important job is converting carbon dioxide to oxygen through photosynthesis, in order to ensure the correct function of the ecosystem. Here, more than 20 percent of the world's oxygen is being produced. International companies, however, have a different stance, than supporting the idea of protecting this important forest. Experts estimate, that instead of harvesting the cut down timber, but harvesting renewable resources, such as fruits or vegetables, landowners would benefit more, which means that the environment would not be harmed on a scale, like it is being harmed at this point.





### New York City Central Park

The Central Park is located in Manhattan, New York City. It was created in year 1857 and is about 843 acres big. Being home to about 400 plant species, this manmade park is very significant, because its massive extent is covered by nearly 20.000 trees. As a result, this urban forest, acts as an air purifier and lowers temperatures in and around the park and prevents temperatures from rising. Likewise, the trees store the harmful carbon dioxide contained in the air with the outcome being cleaner air.

### Benefits of Green Lungs in Urban Areas

Trees are of significant help, when it comes to cleaning the air as naturally and “clean” as possible. In countries like China for example, the air pollution is very high, which can lead to health issues and the pollution of the environment in general. Smog, a combination of fog and smoke, such as exhaust fumes emitted by factories or vehicles, also threatens organisms on a high level. In such countries, with high percentages of air pollution, urban green lungs could maintain purity of the air, since city centers are usually the most polluted areas of a nation. Moreover, it has been scientifically proven, that trees can influence thermal comfort, purify air, lower the amount of smog in the atmosphere and lower the formation of ozone, too, by providing shade and transpiring moisture. Further aspects are that forests in urban areas can help saving energy. The so called “urban heat island effect”, which basically results from heated up spots like parking lots, buildings constructed from metal, etc., contributes to the increase of global warming, meaning that urban areas are then warmer. Eucalyptus trees for example, can in fact, contribute to lowering temperatures and providing coolness. Furthermore, parks in urban areas have been proven to bring certain health benefits with them. An example

would be, that such park can reduce stress and help people being calmer. Keeping all these facts in mind, it becomes apparent that the protection of such green areas is highly important, and the correct preservation of green lungs is of utmost importance.

## **MAJOR COUNTRIES AND ORGANIZATIONS INVOLVED**

### Poland

The concept with the name 'The Green Lungs of Poland' came into life in the year 1983. The idea behind this concept was, to provide better living conditions for the generations to come, therefore five years later an agreement was signed by the polish government which would ensure sustainable development and at the same time the protection of nature and the environment.

### United States of America (USA)

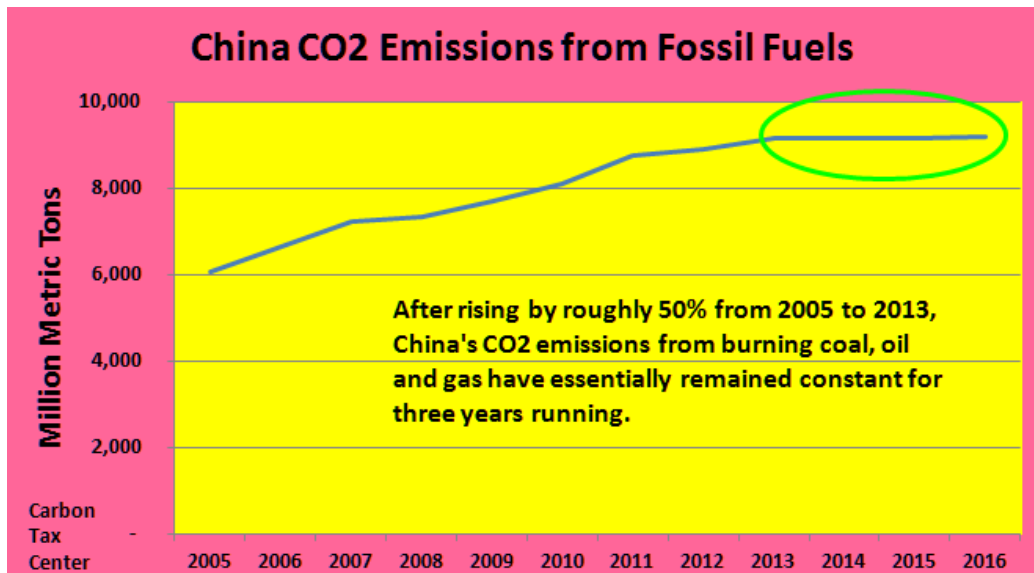
The United States of America have taken significant steps and measures, in order to protect urban green lungs and forests. Already in the early 20<sup>th</sup> century, conservation, protection and preservation of forests and green lands in America, was an action considered very important. Gifford Pinchot, who served five years as the first Chief of the United States Forest Service, raised attention around conservation of natural resources. Thirty years later, the US government brought a framework to life, with the result being the plantation of 2.2 billion seedlings. With the Forest and Rangeland Renewable Resources Planning Act of 1974, short RPA, the United States Forest Service can have a clear and detailed overview of the development of forests and forest resources in urban areas, but not only, across the USA. The United States Forest Service is required to introduce a plan every five and ten years, through which development and protection of forests can be achieved through more effective and efficient ways, leaving enough space for new and improved concepts and ideas.

### Ethiopia

Ethiopia being among the Less Economically Developed Countries (LEDCs), realized the importance of preservation of forests rather late, since the government was inattentive and preoccupied concerning this issue. Focusing more on conservation, the Ethiopian government has proposed measures, with the aim to protect forests in the region. During a workshop held by the Environmental Economics Policy Forum for Ethiopia (EEPFE) in December 2012, the effectiveness of converting carbon dioxide to oxygen done by trees was brought to attention.

## China

With China being the biggest greenhouse gas emitter in the world, the country contributes to global warming and the destruction of the environment, not only nationally, but in other countries as well. After the year 2000, China started emitting more and more carbon dioxide in the air. In the early 2000's the carbon dioxide emissions reached 4000 metric tons. According to scientific research, China was the biggest co2 emitter in the year 2006, concluding that for 26 percent of the global emissions, the country is held to account. In year 2016, factories located in the nation and the vehicles in the Chinese cities, emitted more than nine hundred million metric tons of carbon dioxide.



## Earth Day Network

Earth Day Network is the world's biggest organization, which aims to informing the public by providing education and raising attention all around the world concerning the protection and conservation of the environment. Starting in 1970 with 20 million people, it now has reached almost 1 billion people, and just about 192 countries are participating each year in the activities of this organization. Through the Canopy Project, the organization achieved to plant a few hundred million trees, in more than 30 countries, in urban areas like towns and other settlements. A further project was the

National Civic Education Program (NCEP), where students, in collaboration with their teachers, attempted to resolve certain environmental related apprehensions, with great success. Since then, more than 20 projects have been organized.

### One Tree Planted

This nonprofit organizations' aim is to plant one tree for every dollar donated to this group. Having started in year 2014 with just a few people, the organization is now globally active. The charity wants to raise awareness and sensitize the public of how important it is to protect the environment and help reforesting deforested areas, in order to combat global warming. It provides businesses, companies and individuals with a way to help out the environment and protect biodiversity. It is estimated, that by the end of year 2019 the organization will have planted more than 4 million trees worldwide.

### We Forest

This organization strongly supports combatting global warming, with means, such as, but not limited to, planting trees. Its goal is to clean the air from the harmful agent carbon dioxide, which contributes to the rise of temperatures globally. We Forest collaborates with local organizations, Non-governmental Organizations and communities all around the world in order to plan and realize effective and high levelled reforesting projects. Not only do they have the support of scientists, through which they are able to plan beneficial reforestation and foresting projects in order to provide help and protection to the environment and at the same time purify the air, but they also restore damaged woods and forests. The organization has been active in countries like Brazil, Paraguay, Ethiopia, Madagascar, Senegal, the Philippines, Sri Lanka and India, and has planted 22,272,009 trees.

### Greenpeace

Known for their engagement in raising public awareness concerning environmental issues, starting global campaigns to reduce, or even stop global warming, Greenpeace actively sees the protection and preservation of forests as a top priority, while having successfully created and started many different projects and campaigns. According to the organization, more than 80 percent of long living forests on earth have already been destroyed and degraded. The non-governmental organization is committing itself to putting an end to deforestation and protect and preserve forests, and the biodiversity in them, in the future.

## TIMELINE OF EVENTS

DATE	DESCRIPTION OF EVENT
1970	First earth day
1974	Forest and Rangeland Renewable Resources Planning Act
1992	Creation of United Nations Framework Convention on Climate Change
2011	proclaimed by the United Nations as the "International Year of the Forest"
2012	workshop held by the Environmental Economics Policy Forum for Ethiopia (EEPFE)
2017	Adoption of resolution A/71/L.63, United Nations Strategic Plan for Forests 2017-2030

## RELEVANT UN RESOLUTIONS, TREATIES AND EVENTS

### United Nations Strategic Plan for Forests 2017-2030 A/71/L.63

This resolution adopted by the General Assembly on 27<sup>th</sup> April 2017 consists of a framework aimed at halting deforestation and forest degradation. It was created during a special United Nations Forum on Forests session, held in January 2017. The plan is



made up of six Global Forest Goals, however countries are not obliged to meet the plans requirements. A further goal of the United Nations Strategic Plan for Forests is to reforest certain deforested areas, and thus increasing the earths tree covered surface. This document was followed by another resolution with the same name, document A/71/L.63, and the United Nations Forest Instrument, document A/71/L.64.

### United Nations Framework Convention on Climate Change

The United Nations Framework Convention on Climate Change, short UNFCCC, is a legally non-binding treaty which was negotiated during the summit of the United Nations Conference on Environment and Development (UNCED) in year 1992 in Rio de Janeiro. This treaty's aim is to keep greenhouse gasses in the earth's atmosphere to a level, which would not harm the humans. Since this treaty is legally non-binding countries do not have to abide and implement specific laws relating to this treaty, meaning that factories can emit as much amounts of greenhouse gasses as they desire, since they cannot be fined in any way. The treaty, however, provides a framework through which, in accordance with certain protocols concerning the subject, precise limitations can be set, which would restrict factories of emitting more greenhouse gasses than they are allowed.

### Global Forest Goals

The six Global Forest Goals, which the United Nations Strategic Plan for Forests established in year 2017 includes, set by the United Nations are the first ever attempt to reduce forest degradation and deforestation from the United Nations itself. With the first goal drawing attention to sustainable forest management, the aim is to help with the regeneration process of degraded forests all around the world and raising public awareness through addressing the issue of climate change and the severity of the case. Global Forest Goal two being the economic benefit from correct forest management, aims at improving the living standards of forest depending people. Moving on to the third goal, the United Nations wants to increase the amount of protected forests worldwide, providing enough preservation and protection to the woodlands. Adding to that, through Global Forest Goal five and six, the inclusion of government set frameworks aims to be increased and cooperation, coordination and coherence between the United Nations System, responsible forest protection organizations in each affected country and governments strengthened. These goals are expected to be achieved by the year 2030.

## PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

Throughout recent history many nations, non-governmental organizations (NGO's) and organizations formed by individuals have taken significant steps to solve this issue. Ranging from raising public awareness to providing free of charge education to the public and starting campaigns, groups of individuals and organizations have attempted planting trees in urban areas, or reforesting old and damaged forests, with great success. This, nevertheless, is still not enough to protect, preserve and conserve the earth's precious green lungs. Immediate action from the side of the governments is also of utmost importance, since the government of a country, can for example restrict factories from emitting more than a specified amount of greenhouse gasses. With diverse treaties, legislations and protocols being signed, ratified and internationally adopted, governments have tried to tackle such matters together, since the result of only one nation protecting its environment can simply not put an end to global warming and climate change once and for all. Therefore, many municipalities have decided to reforest green lands and plant forests in urban areas, while being helped by national and international organizations. The results and achievements do pay off, but on the other hand, international companies continue deforesting important green lungs, in order to make financial profit out of timber, and even the land where the trees used to be living.

## POSSIBLE SOLUTIONS

Finding solutions to such a crucial issue is easier said than done, however improving and maintaining development of the current situation is of utmost importance, since it affects every single one of us. Such an issue requires systematic planning, and also thinking outside of the box, for the life quality of present and future generations depends of this specific matter. Not only do we need to find a way to create green lungs in urban areas, but we are obligated to protect and conserve them, too. Keeping in mind, that trees contribute to lowering local ambient temperatures in cities, lessen smog and the formation of ozone, and most importantly clean the air, immediate action must be taken. Furthermore, it is worth taking into consideration, that besides forests providing positive aspects to the ecosystem, they also act as a stress relief and as recreational places for humans. A possible solution might be to plant more trees or other plant species in areas where a few, or no trees at all exist, but this cannot always be done with ease. Adding to that, another possible solution might be to conserve and

protect already existing urban green lungs, however it needs to be thought of how exactly this can be accomplished. On the other hand, for a forest located in an urban area, sufficient space and watering for the plants is needed. In densely populated cities or even metropolises this could lead to difficulties and inevitable obstacles on the way of tackling this issue effectively. Moreover, any given nations government can pass and implement laws, through which the amount of carbon dioxide emissions in the country, or in any specific region of a country, can be reduced, resulting in less air pollution and lower temperatures globally. In order to plant trees, reforest, establish laws and frameworks and take further measures which can help and improve this critical situation, funding and the backing of potential financiers is also important. Such financing, however, should not be something considered a one-off payment, but should rather be present in the distant future, too. Lastly, through raising awareness more people and larger groups can be reached, which means that said actions can be in fact very effective. As it becomes apparent, a way needs to be found and figured out, which covers any and all aspects relating to this topic extensively and expansively. Concluding, a considerable and large-scaled amount of scientific research must be done in this sector, in order to plan the creation, development and construction of urban green lungs as good und as skillful as possible.

## BIBLIOGRAPHY

Jazeera, Al. "Lungs of the Earth." Al Jazeera Interactives, [interactive.aljazeera.com/aje/2016/lungs-of-the-earth/index.html](http://interactive.aljazeera.com/aje/2016/lungs-of-the-earth/index.html).

Gould, Skye, and Dave Mosher. "The Best - and Worst - Countries for Air Pollution and Electricity Use." World Economic Forum, [www.weforum.org/agenda/2017/02/the-best-and-worst-countries-for-air-pollution-and-electricity-use](http://www.weforum.org/agenda/2017/02/the-best-and-worst-countries-for-air-pollution-and-electricity-use).

Deutsche Welle. "Forest SOS: Earth's Green Lungs Disappear: DW: 01.08.2018." DW.COM, [www.dw.com/en/forest-sos-earths-green-lungs-disappear/a-44908586](http://www.dw.com/en/forest-sos-earths-green-lungs-disappear/a-44908586).

"The Green Lungs of Poland." Wrota Podlasia, [www.wrotapodlasia.pl/en/Environment/The-Green-Lungs-of-Poland/](http://www.wrotapodlasia.pl/en/Environment/The-Green-Lungs-of-Poland/).

“Mongabay.com.” Mongabay.com Is Considered a Leading Source of Information on Tropical Forests by Some of the World's Top Ecologists and Conservationists., [rainforests.mongabay.com/08define.htm](http://rainforests.mongabay.com/08define.htm).

“Central Park Plant Census.” WTTW Chicago, 22 Mar. 2019, [interactive.wttw.com/urbannature/central-park-plant-census#!/](http://interactive.wttw.com/urbannature/central-park-plant-census#!/).

Facts and Information on the Amazon Rainforest, [www.rain-tree.com/facts.htm](http://www.rain-tree.com/facts.htm).

One Tree Planted. “About Us.” One Tree Planted, [onetreepanted.org/pages/about-us](http://onetreepanted.org/pages/about-us).

Ataklt, Tsehay. “Ethiopian Communities Work Together to Conserve Forests.” EfD, 28 Nov. 2013, [efdinitiative.org/our-work/policy-interactions/ethiopian-communities-work-together- conserve-forests](http://efdinitiative.org/our-work/policy-interactions/ethiopian-communities-work-together- conserve-forests).

“No Forest Convention but Ten Tree Treaties.” GLOBAL CONVENTIONS RELATED TO FORESTS - Unasylva 206, [www.fao.org/3/y1237e/y1237e03.htm](http://www.fao.org/3/y1237e/y1237e03.htm).

“United Nations Framework Convention on Climate Change.” ScienceDaily, ScienceDaily, [www.sciencedaily.com/terms/united\\_nations\\_framework\\_convention\\_on\\_climate\\_change.htm](http://www.sciencedaily.com/terms/united_nations_framework_convention_on_climate_change.htm).

“Why It Matters.” WeForest, 24 Jan. 2019, [www.weforest.org/page/why-it-matters#challenge](http://www.weforest.org/page/why-it-matters#challenge).

“UN ADOPTS STRATEGIC PLAN FOR FORESTS.” ForestFinest Consulting, [www.forestfinestconsulting.com/un-adopts-strategic-plan-for-forests/](http://www.forestfinestconsulting.com/un-adopts-strategic-plan-for-forests/).

“Greenpeace Campaigns: What We Do.” Greenpeace UK, [www.greenpeace.org.uk/what-we-do/](http://www.greenpeace.org.uk/what-we-do/).

## **BIBLIOGRAPHY FOR IMAGES**

“Causes.” Home, [deforestationamazonia.weebly.com/causes.html](http://deforestationamazonia.weebly.com/causes.html).

Deutsche Welle. “Drought, Forest Loss Cause Vicious Circle in Amazon: DW: 13.03.2017.” DW.COM, [www.dw.com/en/drought-forest-loss-cause-vicious-circle-in-amazon/a-37882115](http://www.dw.com/en/drought-forest-loss-cause-vicious-circle-in-amazon/a-37882115).

“Home.” Carbon Tax Center, [www.carbontax.org/what-about-china/](http://www.carbontax.org/what-about-china/).