



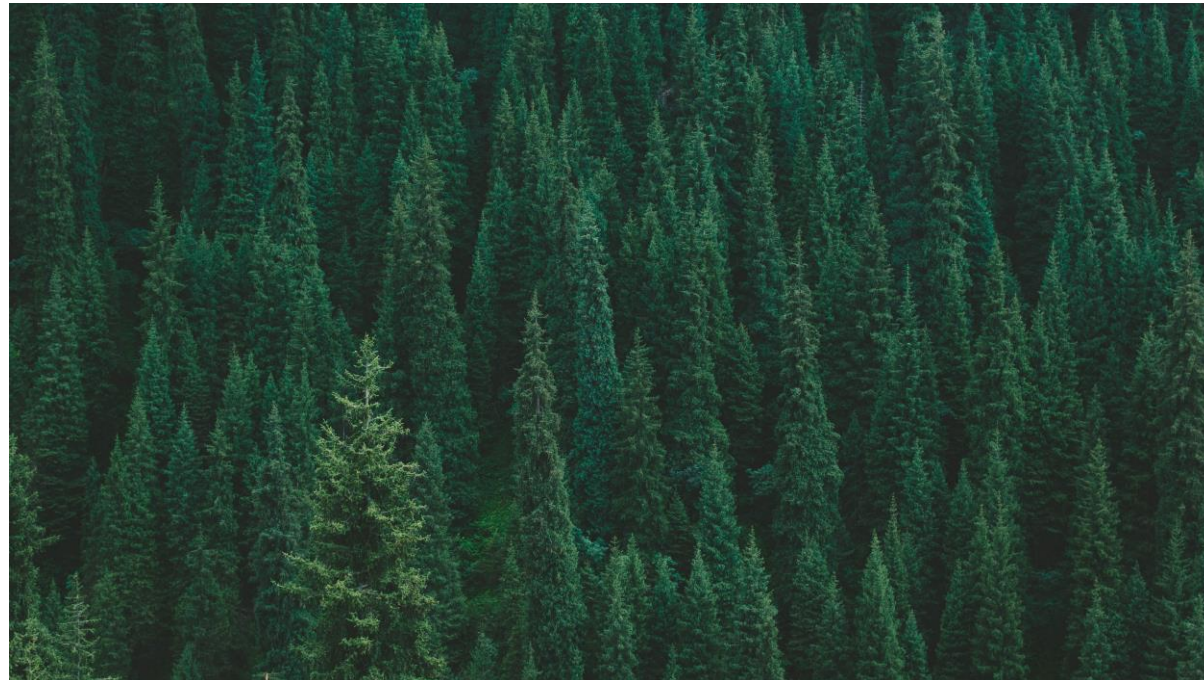
TREES

Amelia Rudnicka, Wiktoria Jachalska, Wiktor Gmys



Introduction

- Trees are way more important than we give them credit for. They have a wide variety of practical and commercial uses. They do not only furnish us with essentials such as oxygen and food, but they are also used in medicine, the construction sector and some of them are even made into tools we use on a daily basis.



The importance of trees

They absorb gases – SO_2 and CO_2 – which leads to reduction of a greenhouse effect.

By transpiration (evaporation) trees cool down the air.

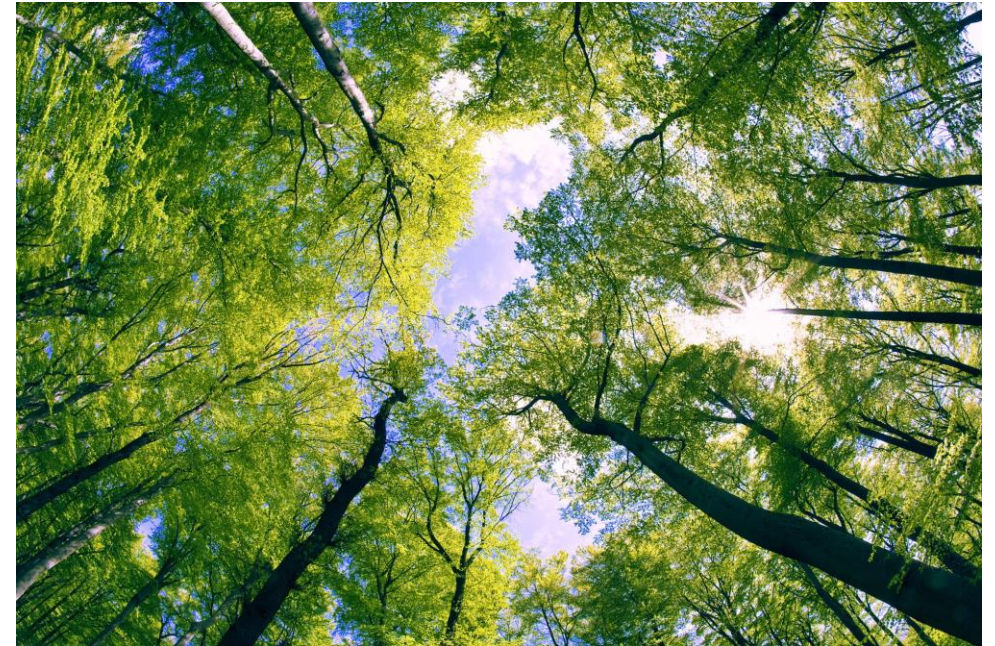
They produce oxygen – one acre produces 4 tons of oxygen – it is enough to meet the needs of 18 people

Trees have a unique ability to prevent temperature fluctuations.

They are creating environments for animals. They give them security, water and food.

Proximity to green areas increases value of real estates, they beautify architecture and enable people to recharge their batteries faster.

Plants prevent climate change and clean the air



Community value

Parks and playgrounds are lined with trees that create a peaceful, aesthetically pleasing environment. They let us gather together, meet new people through, for example, our hobbies- additional activities that we take upon ourselves and practice out in the open. They make the time spent outside more valuable and healthier for us by increasing air quality. They have proven to have a significant impact on our mental health as well. They bring natural elements and wildlife into urban settings, which triggers the release of endorphins- happiness hormone.

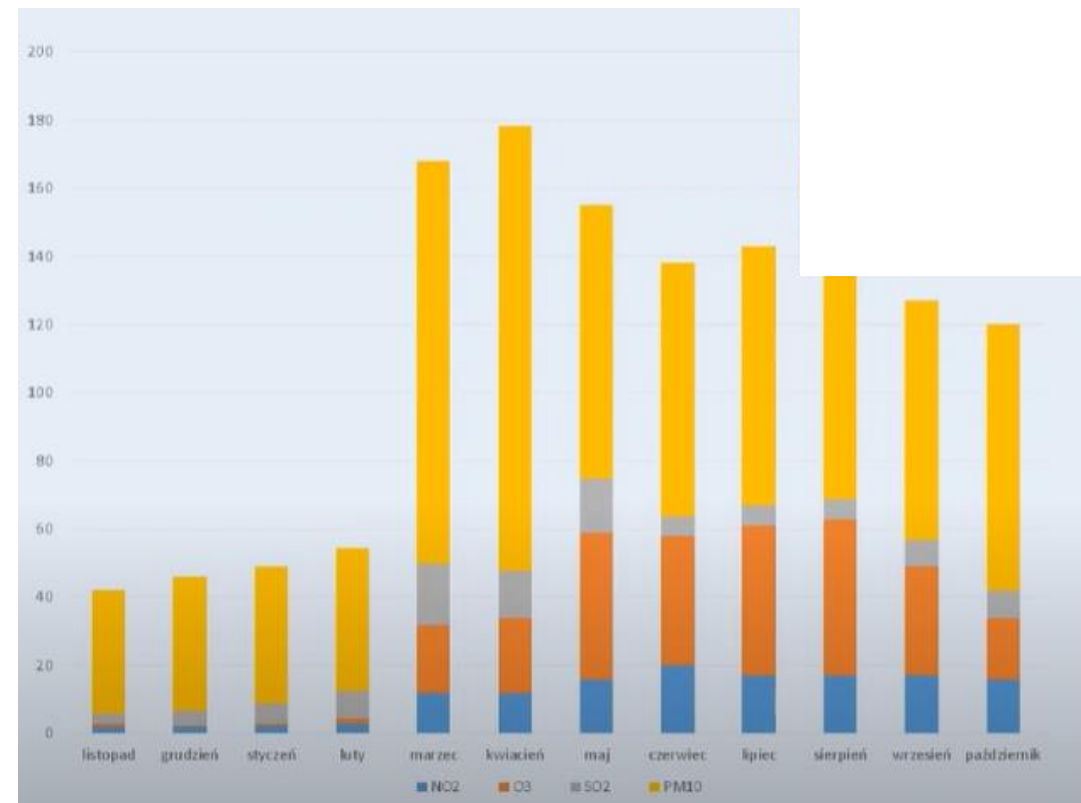


When does the air get cleaned?

Firstly, when it rains – dusts (mostly PM₁₀) are washed into the ground.

Secondly, by trees. They are a weapon that fights smog.

Researchers from Beijing proved that municipal greenery reduced pollution by 1261,4 in the centre of the city only. It was mostly solid materials as PM₁₀ and gases as CO₂.





Which pollutants do trees purify the air from?



- CO₂
- Sulfur oxides
- Nitrogen oxides
- Ozone
- They work like filters – dusts as PM₁₀ and PM_{2,5} settle on them.
 - 1 ha of forest catches 8 kg dusts hanging in the air in an hour
 - 100 grown-up trees remove 460 kg impurities per year
- They immobilize heavy metals taken from the soil.



SMOG

What is it?

- It is a kind of visible air pollution that is composed of nitrogen oxides, sulphur oxides, ozone, smoke and other particulates.
- It is similar to fog.

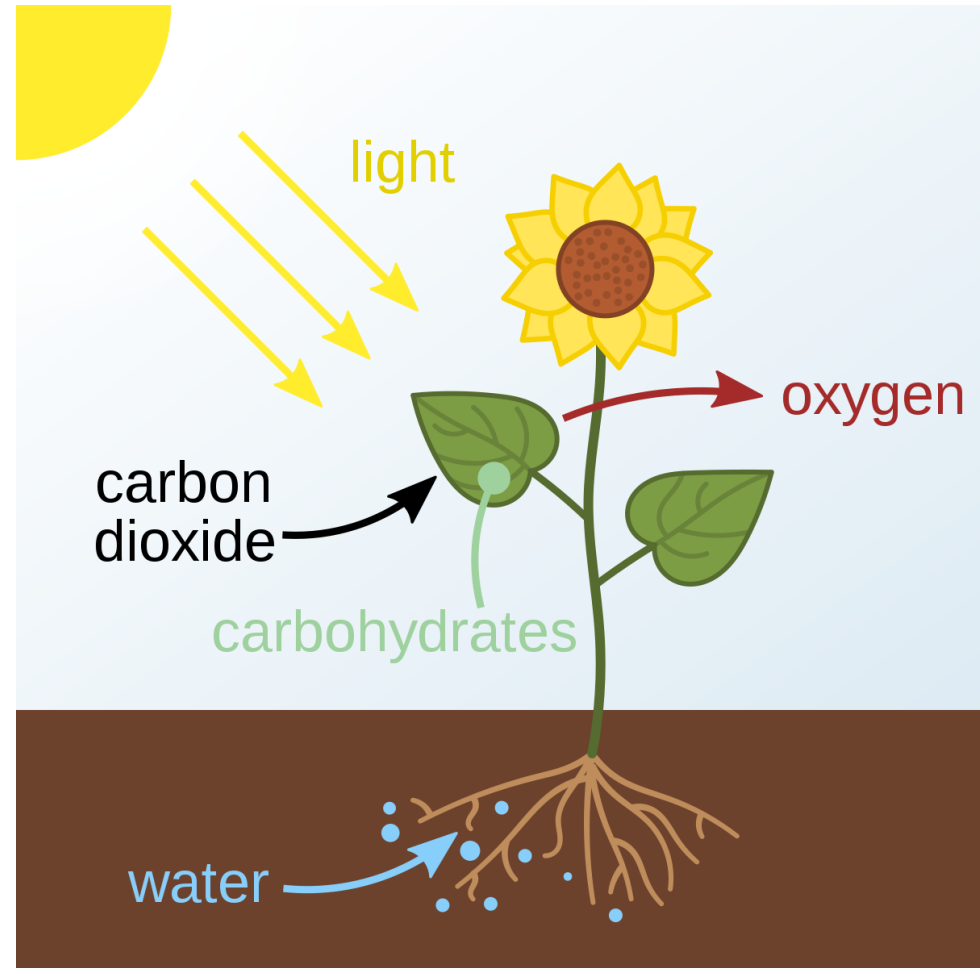
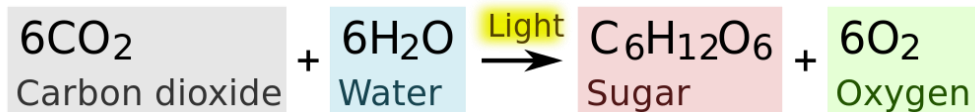
When does the problem worsen?

- Smog occurs mostly from autumn till the end of winter – heating season



Photosynthesis – our ticket for a better tomorrow

- The process of converting light energy to chemical energy
- Plants absorb CO₂, light and water to produce oxygen and sugar, which means that they purify the air and produce food for every species on our planet.
- Overall equation:



The Amazon rainforest – Lungs of Earth

- The Amazon Rainforest is the largest rainforest in the world comprising about 40 percent of the total area of Brazil. The Amazon Rainforest is the world's richest and most-varied biological reservoir, containing several million species of insects, plants, birds, and other forms of life, many still unrecorded by science.





Which trees are best
at purifying the air?



London plane



Australian pine/ black pine



Ginkgo



Small-leaved lime



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Ash



Norway maple



Norway spruce





Thank you

