

„Environment and Sustainability – Understand, Care, Act!”

2018 - 2020

School Exchange Partnerships

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Transport pollution

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Presented by Secondary School Ghimbav team



Environment pollution represents the contamination with materials that affect human health, the quality of life and the functioning of natural ecosystems. The main sources of pollution are: industry, transport, fires, some chores, vulcanic eruptions, etc.



Transport is a complex source of pollution. **Cars, trains, ships, airplanes** are a major source of pollution. However, the highest level of pollution comes from cars, primarily because the number of cars has increased a lot in the last years.

Regardless of the type of engine, vehicles pollute the air with carbon and nitrogen oxides, unburned hydrocarbons, sulfur oxides, aldehydes and many other substances.



A large vapor can generate 5000 tons of sulfuric dioxide per year. A British study revealed the fact that 15 commercial ships pollute more than all cars on the globe, in a year.



Sadly, most buses in Brasov are using fuel as a source of power. And what does it mean? It means **POLLUTION.**



Buses contribute to air and noise pollution so they are not environmentally – friendly.

Poorly maintained buses and old ones use a lot of fuel and emit carbon dioxide and other gases. Air pollution can damage our health causing problems such as: asthma, heart disease or eye irritation.

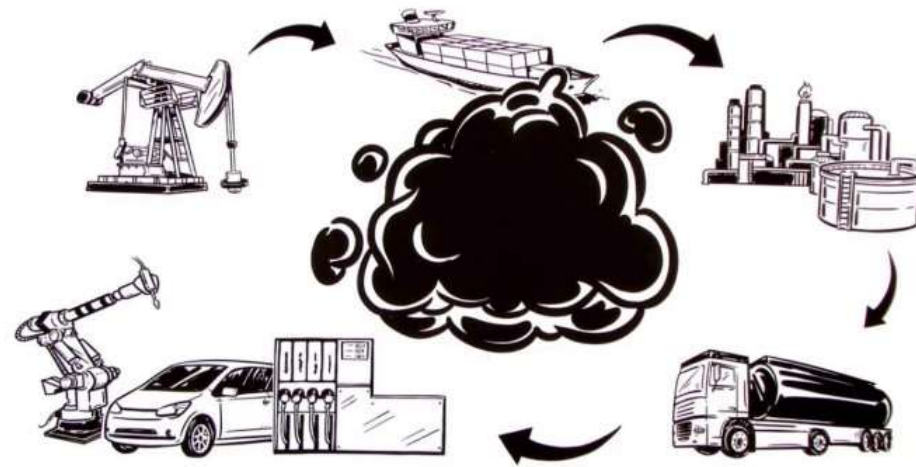


The best solution for this problem is using electricity instead of fuel as a source of power.

Romania is trying to be friendlier with the environment by introducing electric buses that are better for the environment because they don't pollute. Such buses can be seen in cities like Cluj or Brasov.



Greenhouse gases, generally called carbon dioxide emissions are the results of various activities that we undertake as a result of human development and progress. Because of this, means of transport are a worrying factor for both humanity and the environment.



The most important source of carbon dioxide in the atmosphere is caused by exhaust gases. It has been estimated that 80% of the carbon dioxide is produced in the first two minutes of engine operation and represents 11% of the total exhaust gas.

The CO₂ footprint for cars represents approximately 16% of the total CO₂ emissions+.



Diesel cars: Nitrogen oxides (NO_x) emissions (in g/km)

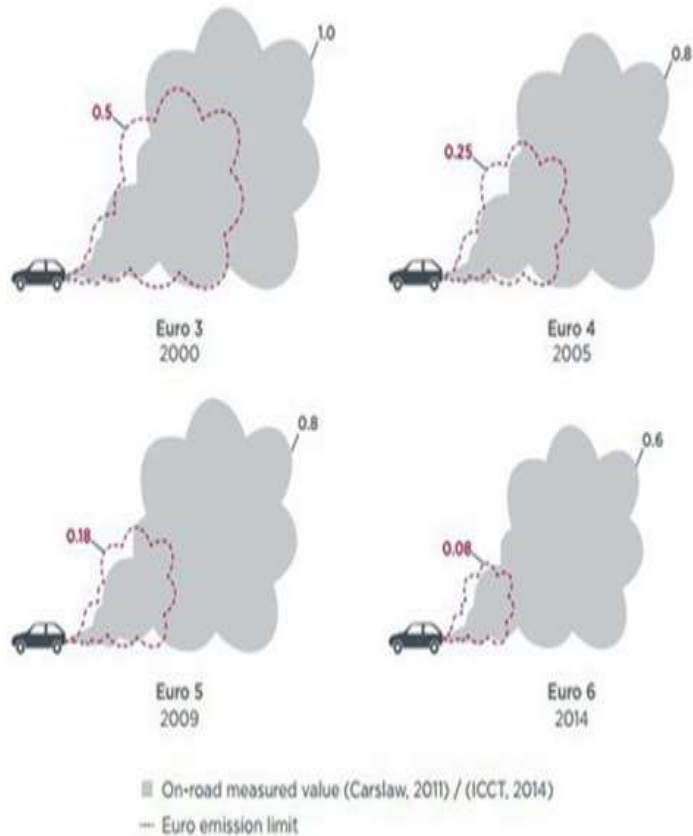
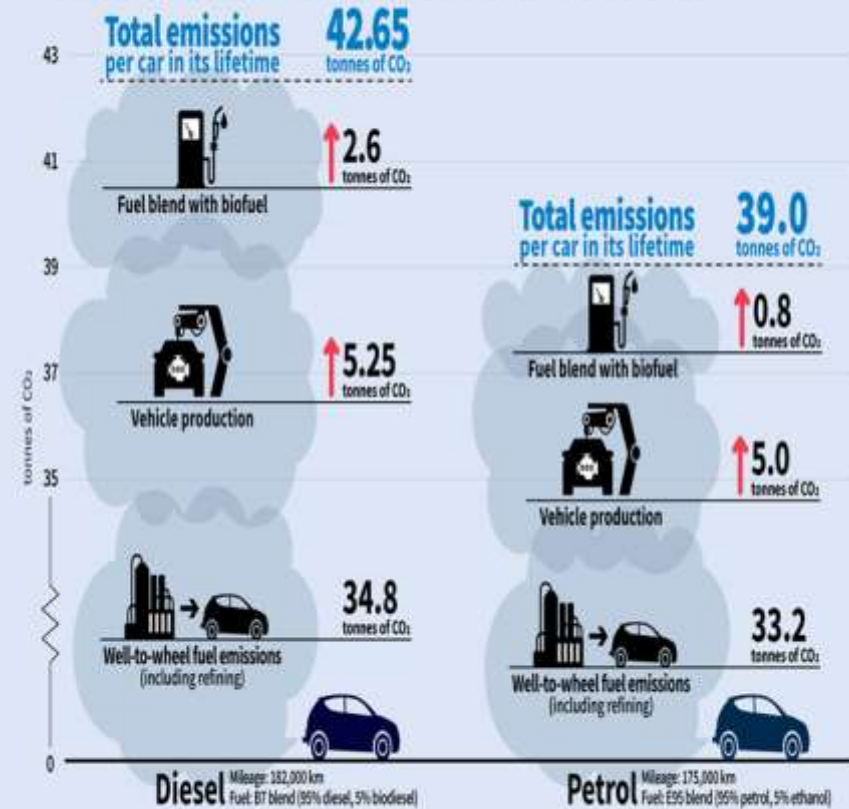


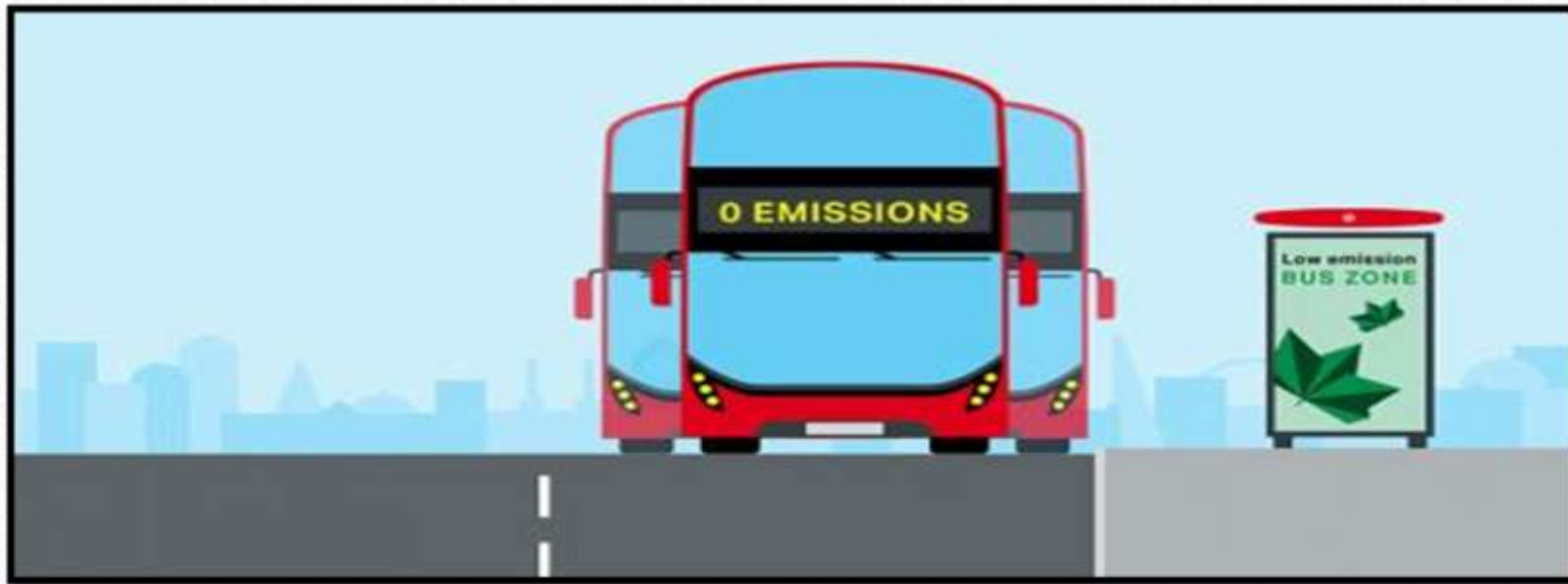
Figure 2. NO_x emission limits for diesel cars in the EU were lowered by 85% between 2000 (Euro 3) and 2014 (Euro 6). But over that period on-road emission levels decreased only about 40%.

Diesel worse for the climate than petrol

Lifecycle CO₂ emissions from diesel and petrol cars



We hope that sooner than later, all the public means of transport will be environmentally-friendly so pollution level will be reduced.



How to reduce your carbon footprint ?

- pick the least-polluting, most efficient vehicle that meets your needs.
- taking public transportation instead of driving.
- try minimizing your carbon emissions by traveling by train or other public transportation .



ECOLOGICAL MEANS OF TRANSPORT

The Bike



The bicycle offers a healthy alternative to stop pollution from over-using vehicles. You can use your own bicycle or a public bicycle which is available for anyone for a period of time. When you don't need it you return it at the docks. Docks are special bike racks.

The Hoverboard



A self-balancing scooter (or a hoverboard) is a personal means of transport with two motorized wheels connected with some pads on which their rider places the feet.



The Dycicle

A dycile is a vehicle with two parallel wheels, side by side. It has one common pade, unlike the hoverboard.



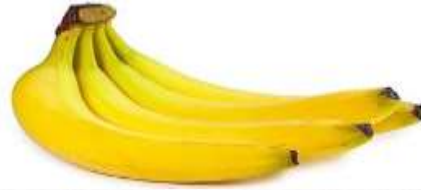
All these means of transport are environmentally friendly.

Using them we can keep our planet healthy place and show respect towards plants, animals and ourselves.

What's the carbon footprint for ... cycling a mile?

- Cycling usually means low-carbon **BUT** it depends on what you eat.
- Energy when cycling comes from the food you eat.

- bananas – 65g CO₂



- cereals with milk – 90 g CO₂



- bacon – 200g CO₂



**EAT HEALTHY, STAY HEALTHY, CYCLE AND
REDUCE THE CARBON FOOTPRINT!**

Which vehicles pollute the most?

- Buses – 55,927 t CO₂ per year.
- Trains – 70 grams per passenger
- Electric trains – 50 grams of CO₂ per passenger,
- Cars – approximately 2.8 tonnes
- Airplanes – around four metric tons of CO₂.

Reduce the footprint of CO₂

- Use of cars:
 - euro 5/6
 - Hybrid
 - Electrical
- Alternative means of transport:
 - Bikes
 - Electric public transport
 - You do it (walk,run)
- Planting trees
- Multiplying green areas in cities by expanding parks
- Planting gardens on the roof of blocks
- Optimize home deliveries (When getting home deliveries or shopping online, consider asking to have all your packages sent in one shipment)



Erasmus+

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