



Erasmus+



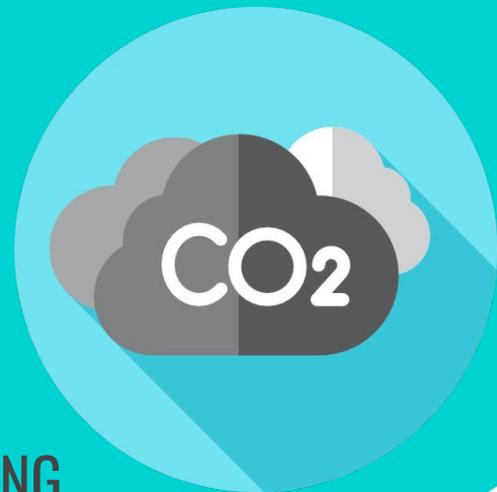
# Carbon Footprint



IES POLITÉCNICO  
"JESUS MARÍN"

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# *Definition*





# 1. DEFINITION



The carbon footprint is known as «the equivalent amount of greenhouse gases (GHG) emitted to atmosphere in a direct or indirect way when developing an activity».

It is measured in mass of CO<sub>2</sub> equivalent.

# *Environmental Impact Indicator*





## 2. ENVIRONMENTAL IMPACT INDICATOR

Equivalent of **100**  
tons of **CO<sub>2</sub>**:





## 2. ENVIRONMENTAL IMPACT INDICATOR



It's equal to **22**  
**passenger** cars  
driven in one year.



## 2. ENVIRONMENTAL IMPACT INDICATOR

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It's equal to **2,600**  
**tree seedlings** grown  
for **10 years**

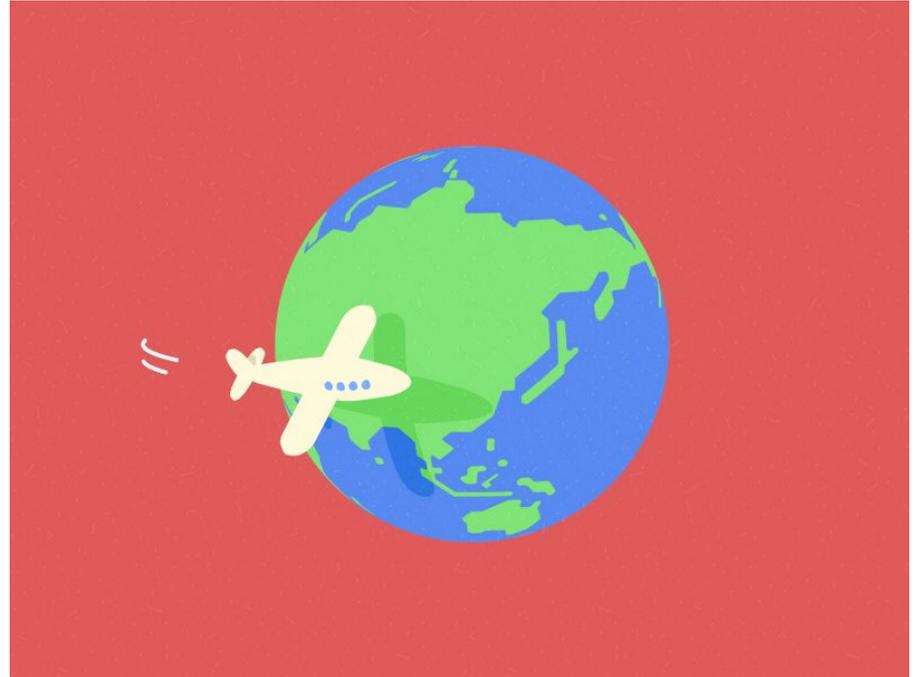
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## 2. ENVIRONMENTAL IMPACT INDICATOR

It's the equal to  
**11 round trips**  
**around the**  
**world** by one  
typical passenger  
car (traveling at  
the equator)





## 2. ENVIRONMENTAL IMPACT INDICATOR



We've been seen the  
equivalents of the  
emission of 100 tons of  
CO<sub>2</sub>,

but now it's time to see **what takes to reduce an emission of that size:**



## 2. ENVIRONMENTAL IMPACT INDICATOR

Replacing 150 less efficient refrigerators by **Energy Star** refrigerators.





## 2. ENVIRONMENTAL IMPACT INDICATOR



The energy savings in one year from replacing 1,300 standard light bulbs with compact fluorescent lamps.



## 2. ENVIRONMENTAL IMPACT INDICATOR

**56 tons of waste  
being recycled  
instead of going  
to a landfill.**



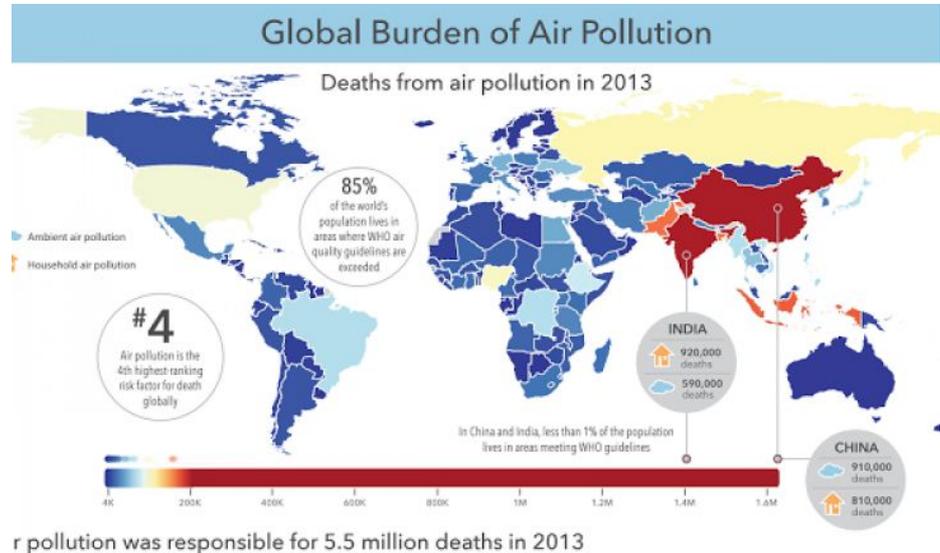
# *Kyoto Protocol*





# 3. KYOTO PROTOCOL

The **Kyoto protocol** is an international agreement. It was created with the need to **protect and conserve** our planet, in the face of the **continuous damage** done by the human race.





# 3. KYOTO PROTOCOL

To do this, we have established **some objectives** that we must meet in the future, in order to **contribute to the sustainable development of the planet.**

Kyoto Protocol participation map



Green = Countries that have signed and ratified the treaty

Grey = Countries that have not yet decided

Red = No intention to ratify at this stage.



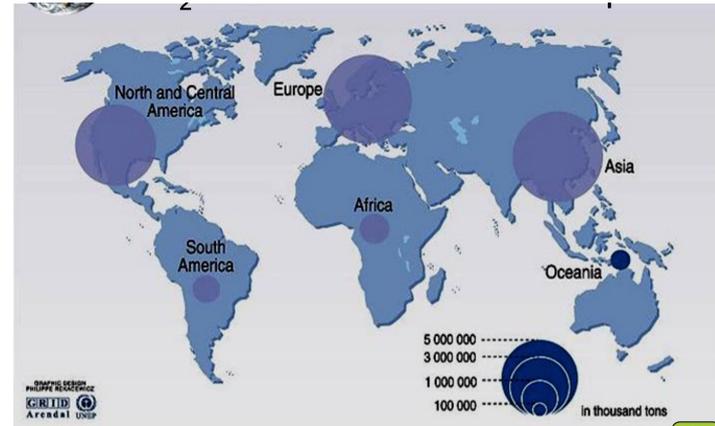
# 3. KYOTO PROTOCOL

**Minimizing impacts** on developing countries by establishing an adaptation fund for **climate change.**

Sustainable forest management practices, **forestation and reforestation.**

Promotion of **energy efficiency** in economic sectors.

**CO<sub>2</sub> emissions from industrial process**

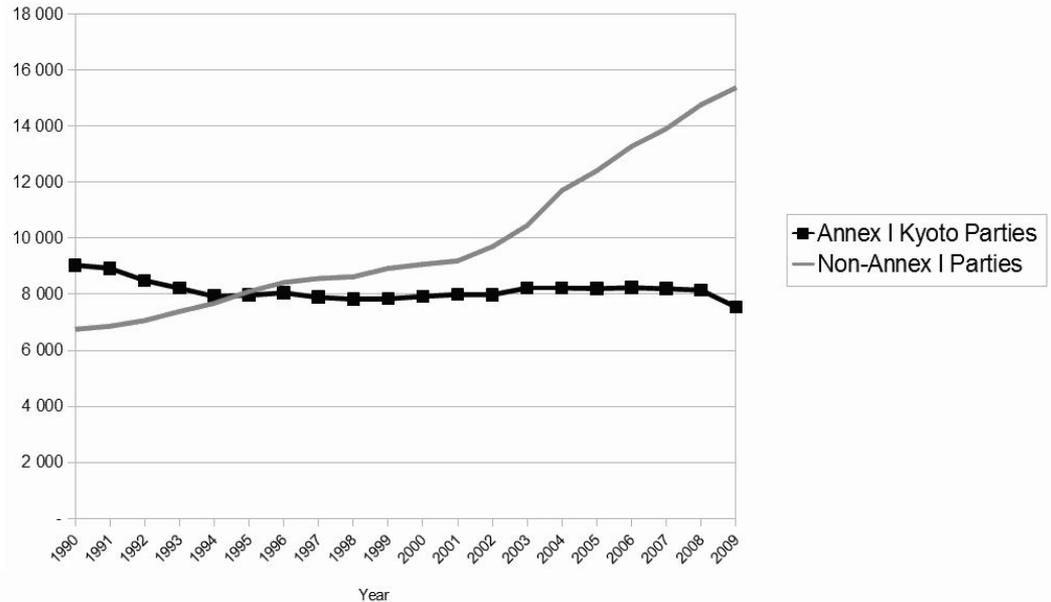




# 3. KYOTO PROTOCOL

The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the **European community** for **reducing CO<sub>2</sub>, SOX, NOX and CH<sub>4</sub> (GHG) emissions** by **22,6%** compared to the year 1990.

Annual carbon dioxide emissions from fuel combustion between 1990-2009 for the Kyoto Annex I and non-Annex I Parties



*Consequences of Global  
Environmental  
Warming*





## 4. CONSEQUENCES OF GLOBAL ENVIRONMENTAL WARMING

**Rising sea level**



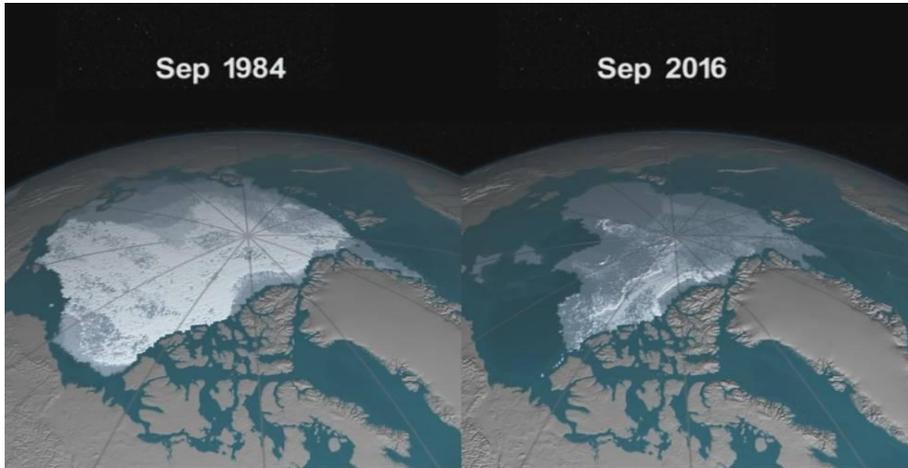
**Increase the global temperature**





## 4. CONSEQUENCES OF GLOBAL ENVIRONMENTAL WARMING

**Ice sheets decrease around the world**



**Ocean gets warmer**





## 4. CONSEQUENCES OF GLOBAL ENVIRONMENTAL WARMING

The previous consequences generate problems like:

**Endangered species**



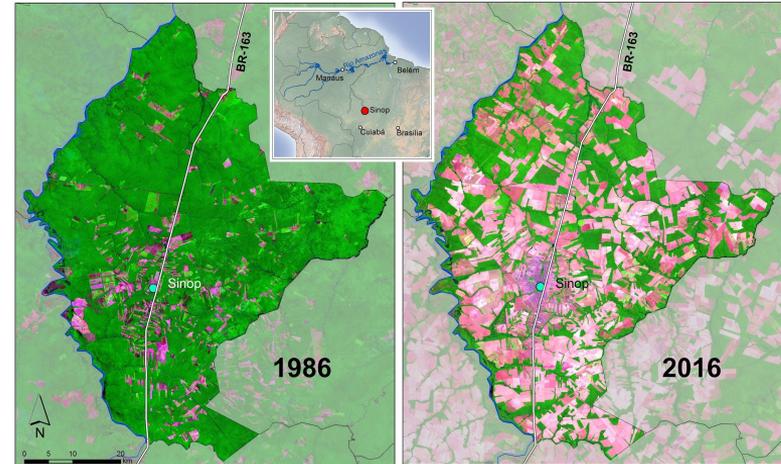


## 4. CONSEQUENCES OF GLOBAL ENVIRONMENTAL WARMING

**Agricultural problems**



**Decrease of raw materials**





## 4. CONSEQUENCES OF GLOBAL ENVIRONMENTAL WARMING

### Pollution increase





## 4. CONSEQUENCES OF GLOBAL ENVIRONMENTAL WARMING

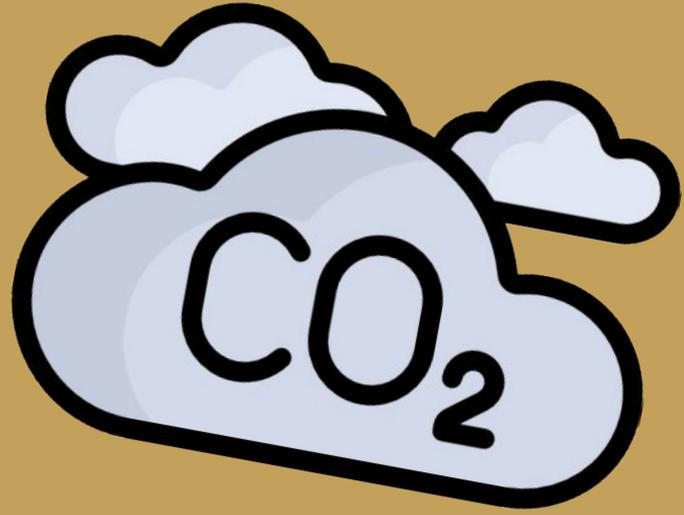


**Extreme weather events**

events

Extreme weather

*Comparison of CO<sub>2</sub>  
emissions*





## 5. COMPARISON OF CO<sub>2</sub> EMISSIONS



**Ferrari: 270,07 g/km of CO<sub>2</sub>**



**Citroën: 103,03 g/km of CO<sub>2</sub>**

Here we got the CO<sub>2</sub> (g/km) emissions of two different marks.



*Did you know that livestock generates more greenhouse gases than all the world's traffic?*



**The 14,5% of the emission of Greenhouse gases worldwide comes directly from the ganadery**



**The 8,6% of the emission of Greenhouse gases worldwide comes from the traffic**

# *Differents Calculator*





## 6. CALCULATORS

-You can calculate your carbon footprint in different activities that you do every day.

-For this there are different calculators that we can find for free on the internet

Here we are going to show you two

<https://www.carbonfootprint.com/calculator.aspx>

<http://www.footprintcalculator.org/>





# 6. CALCULATORS

Welcome House Flights Car Motorbike Bus & Rail Secondary Results



Welcome to the web's leading carbon footprint calculator

First, please tell us where you live: [\[why?\]](#)

Country:

Carbon footprint calculations are typically based on annual emissions from the previous 12 months.

If you would like to calculate your carbon footprint for a different period use the calendar boxes below (optional):

from   to  

Next, select the appropriate tab above to calculate the part of your lifestyle you are most interested in, e.g. your flights.

Or, visit each of the tabs above to calculate your full carbon footprint.

Following your calculation, you can offset / neutralise your emissions through one of our climate-friendly projects.

House >



# 6. CALCULATORS

Welcome House Flights **Car** Motorbike Bus & Rail Secondary Results



## Car carbon footprint calculator

You can enter details for up to 2 cars

Mileage:  km

Choose vehicle:

Or enter efficiency:  L/100km petrol

Calculate & Add To Footprint

**Total Car Footprint = 0.00 tonnes of CO2e** [Offset Now](#)

< Flights

Motorbike >



# 6. CALCULATORS

<http://www.footprintcalculator.org/>

RESULTS

Your personal Earth Overshoot Day is:

**07 Jun** ⓘ

If everyone lived like you, we would need

**2.3 Earths** ⓘ



Why can't I get my Footprint score within the means of one planet? ⓘ

[See Details](#)

SHARE:

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RESULTS

### By Land Type



- Built-Up Land
- Forest Products
- Cropland
- Grazing Land
- Fishing Grounds
- Carbon Footprint

### By Consumption Category



Food Shelter Mobility Goods Services



**4** Your Ecological Footprint ⓘ  
(global hectares or gha) ⓘ

**6.5** Your Carbon Footprint  
(CO2 emissions in tonnes per year)

**57** Your Carbon Footprint  
(% of your total Ecological Footprint)

[Explore Solutions](#)

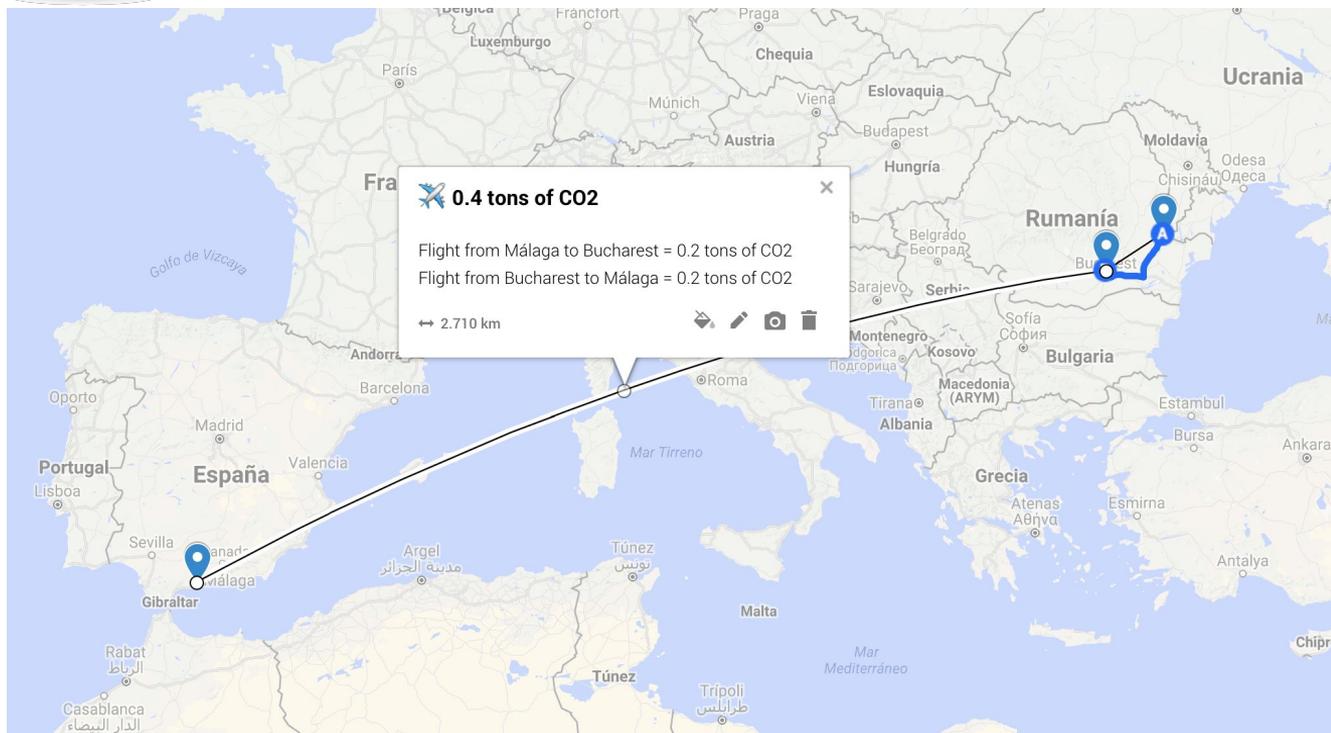
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*Our trip to Galati*



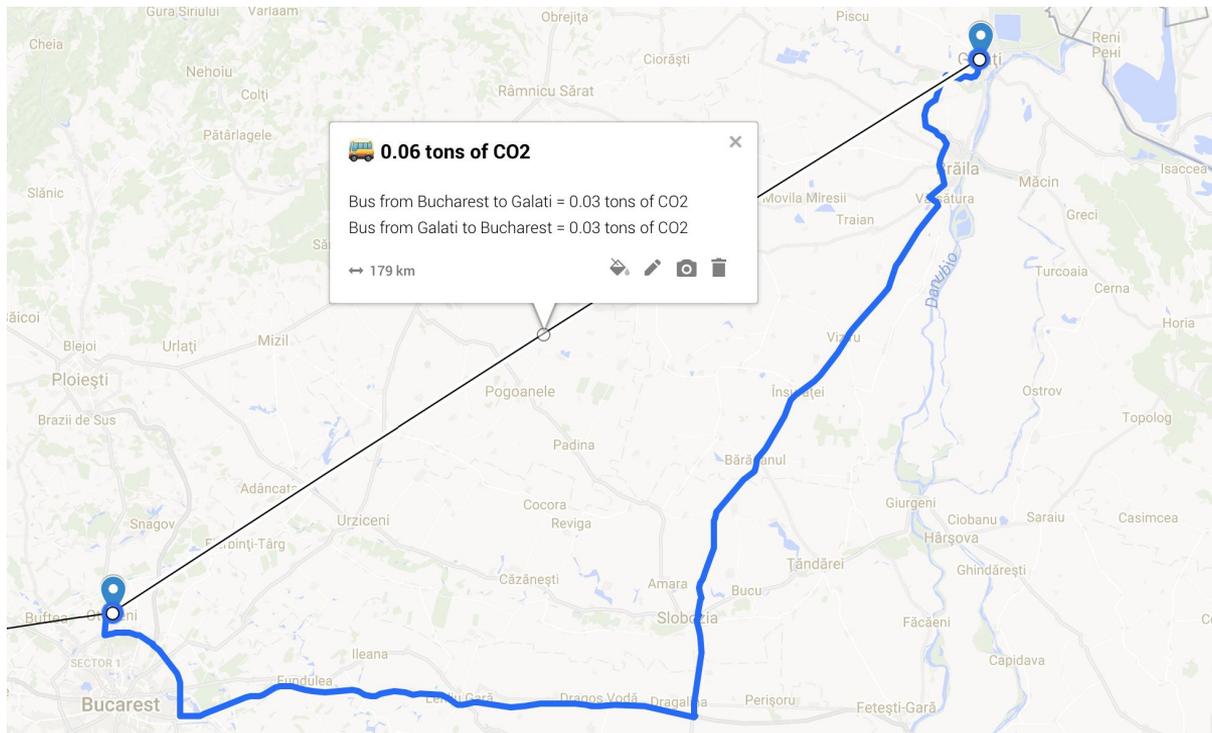
# 7. OUR TRIP TO GALATI





## 7. OUR TRIP TO GALATI

**TOTAL  
EMISSIONS**  
=  
**0.46 tons of  
CO<sub>2</sub>**



*CO<sub>2</sub> emissions when  
you go to work*





# TONS OF CO<sub>2</sub> SPENT WHEN YOU GO TO WORK



- *All of those tons are made by one interval of 100km*
- *If we walk to our jobs we don't produce any CO<sub>2</sub>.*



# TONS OF CO<sub>2</sub> SPENT WHEN YOU GO TO WORK

The displacement of each person to work may vary depending on the method of transport used:



Travel by car: 0,02 tons of CO<sub>2</sub>



Travel by bus: 0,01 tons of CO<sub>2</sub>



# TONS OF CO<sub>2</sub> SPENT WHEN YOU GO TO WORK



Travel by Motorbike: 0,01 tons of CO<sub>2</sub>



Travel by Train: 0,005 tons of CO<sub>2</sub>

*Amount of CO<sub>2</sub>  
emitted in food  
imports*





# AMOUNT OF CO<sub>2</sub> EMITTED IN FOOD IMPORTS

More than **29 million tons of food** were imported, which meant the emission of almost **5 million tons of CO<sub>2</sub>**, while imports continue to increase despite the great threat stand for by climate change. Industrial agriculture is one of the sectors that contributes the most to global warming, although it is not usually taken into account.





# AMOUNT OF CO<sub>2</sub> EMITTED IN FOOD IMPORTS

The most transported foods are cereals and feed, coffee and spices, fish and seafood and fruits and vegetables; They have traveled more than **5,000 kilometers** to reach our plates

The principal origin of the food imported is Europe and imports from Central and South America continue to grow and already account for 39% of the total.





## AMOUNT OF CO<sub>2</sub> EMITTED IN FOOD IMPORTS



In Spain the food imports generate big amounts of CO<sub>2</sub> because it goes through different means of transports, security controls, ... Even in many cases the same products that are exported abroad are imported from other countries.



## Did you know which tree consumes more CO<sub>2</sub> in the world?



Aleppo pine is the tree with the most CO<sub>2</sub> absorption in the world. Originally from the Mediterranean, but already seen in Western Asia, Europe and Africa. Reaches 25 meters and **they can absorb 50 tons of CO<sub>2</sub> per year**

*Thanks for your attention!!*

