www.e-co-foot.eu

E-CO-FOOT CALCULATOR

WARM UP / CHECK UP

10-18 YEARS

Version 2 | Aug 2020

This material is part of a course on Ecological Footprint for students. The course consists of the following modules for two age groups:

You are here

Age group 1 10-13 years	Age group 2 14-18 years
Calculator	
General Introduction	General Introduction
Mini Hectare Workshop	Mini Hectare Workshop
Nutrition	Nutrition
Housing	A. Housing core B. Housing additional
Mobility	Mobility
Other Consumption	Other Consumption
Background information	

All the material can be downloaded for free at www.e-co-foot.eu in different languages.

calculator.e-co-foot.eu is an online tool that allows students to log their daily activities and trace the Ecological Footprint of their habits. Group functions for teachers make it suitable for a warm-up or later check-up-session.

elearning.e-co-foot.eu is an e-learning with selected content from the lectures. E-learning can be used for blended learning of this course, as homework or as training and competence check after in-class lectures.

IMPRINT

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Plattform Footprint, Austria www.footprint.at
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THE ECOLOGICAL FOOTPRINT – GUIDE TO USE OF CALCULATOR

TEACHING MATERIALS FOR AGE GROUP (10 – 18 YEARS)

The aim of the material is:

+ to give inspiration to include the online tool e-co-foot-calculator into the learning units

+ to have an in-depth discussion with the students what these learnings mean for their future

Introduction – what does this tool do?

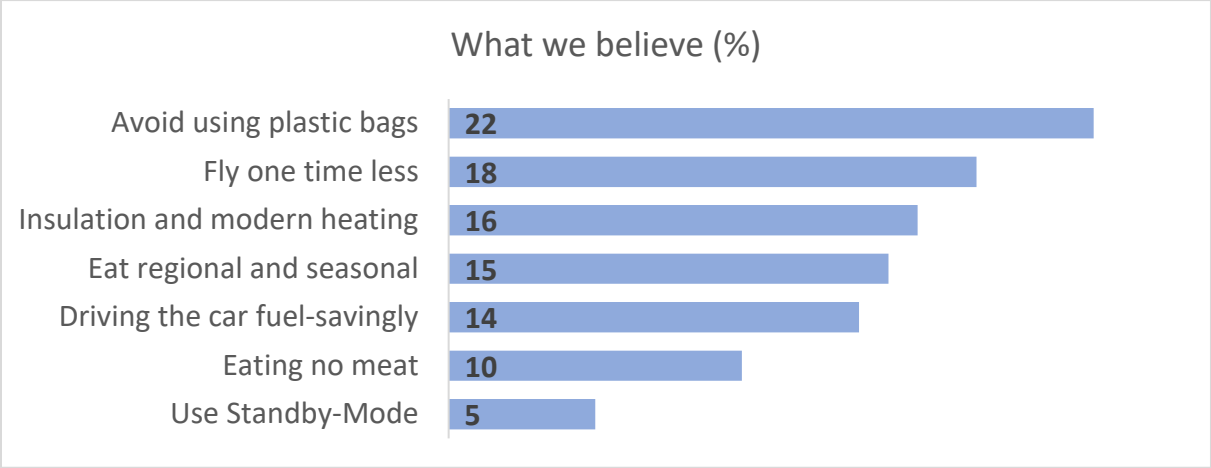
The e-co-foot-Footprint-Calculator is a new approach to measure the Ecological Footprint. It aims at youth and gathers information on a daily basis.

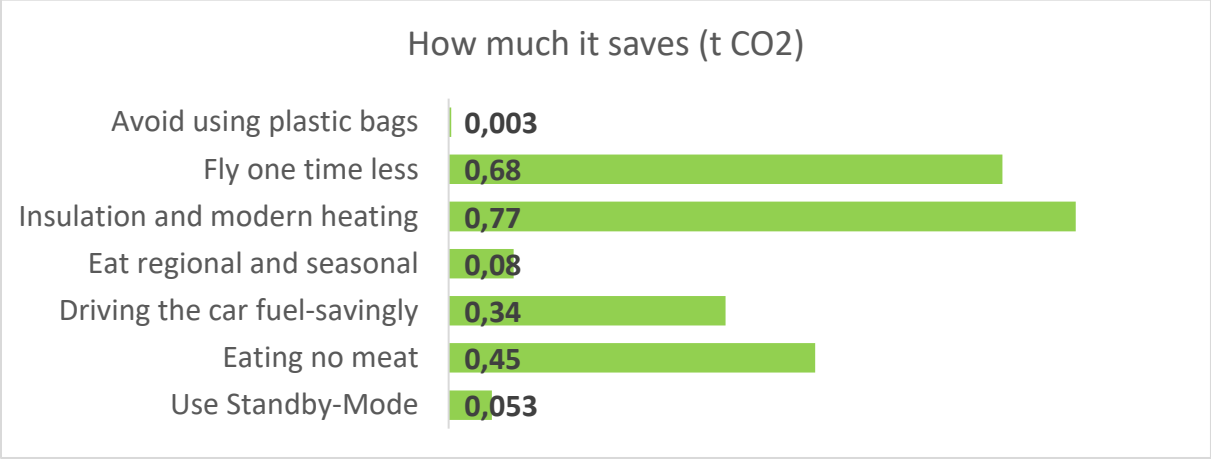
Normal Ecological Footprint Calculators work on a yearly basis and include a lot of facts that underage kids cannot influence on their own: housing, heating source, ownership of a family car etc.

The innovation of this calculator is to show, that the choices we take every day can lower the Ecological Footprint.

The values are global square meters (gm^2) and are based on the best available information and expert judgment.

You can't manage, if you don't measure – is a leading principle that should guide our environmental actions. Below a survey, which measures people believe are saving the most CO_2.





The study above (source: Frank Bilstein/A.T. Kerney/Deutsche Umweltagentur) shows that we are very bad as guessing the materiality and the impact of individual measures. Therefore it is important to calculate the Ecological Footprint of our daily activities, in order to find out which of them have a big impact and can be changed easily, and which of them have no or little impact.

Handling of tool

A step-to-step manual for the calculator is available for download. It shows how each of the functionalities that are described in this document work, and in which menu they can be found in the tool.

Teacher preparation BEFOREHAND

- If you do are not familiar with the concept of the Ecological Footprint, please read teaching material of information of **GENERAL INTRODUCTION** and if needed **BACKGROUND INFORMATION ON THE FOOTPRINT CONCEPT**.

- Register your teacher's account at calculator.e-co-foot.eu

- Login as teacher
- Try one daily log yourself. You find shared daily logs – take a look at them, too
- Create a group for the school class

IN CLASS Warm up unit

DAILY LOGS
In the computer class with your student – working in groups or each student uses a computer separately.

- If possible show a beamed image of the calculator
- Register as student (the correct e-mail-address is best so they can use the "Forgot password"-function. However, it is possible to use fake e-mails, if they do not have an e-mail address or if they are having privacy-concerns)
- Login as student after confirmation
- The students have to "request access" to join your group
- Show the students some shared daily logs to give them a first orientation
- Give the students a clear naming scheme for the daily logs, so you find them for comparison
- Create a daily log - think/discuss on the following questions:
  - think of the whole day from getting up till going to bed
  - think of everything you do – everyday habits – taking a shower, preparing a meal
  - commuting to activities e.g. to school, to shopping, to sports
  - everything is important

Finding the categories to log is not very intuitive for smaller students at the beginning, as they are categorized to cover a lot of activities, so try a common log first, in order to teach the students how to log their activities. E.g. meals are not include like "hamburger" – but "small meal with meat".

- Let them finish the daily log on their own
- While the students create their daily log, you can add the students into your group.

- When everybody has finished the daily log, go to evaluation, open quick evaluation of the daily logs that they have just created.

ANALYSIS

Now let's have a look at the result.

Group results

Open the group results, add the students daily logs and compare.

Hints:

- Ranking is not meant to distinguish between good and bad.
- Everybody will have circumstances sometimes are unchangeable. (e.g. commuting to school)
- The analysis shall lead to improvement measures
- Let students guess what changes they can make to get a smaller Footprint

Individual results

These are not that meaningful for only one day.

- Give them homework to log for several days
- You can only focus on one category (food, mobility, housing, consumption) in preparation or follow-up for each unit dedicated to this category.

Let us go on with **LEARNING UNIT 1 – GENERAL INTRODUCTION**!

IN CLASS check-up

As you go along, encourage your students repeatedly to make daily logs.

DAILY LOGS

- Prior to a Learning unit, give your students the homework to focus on one category (nutrition / mobility / housing / other consumption or
- Make them log several days as a whole to see if any differences appear

ANALYSIS
Group results

- Open the group results, add the students daily logs and compare.
- Discuss the results in class
- Include the results into the learning units

IN CLASS in-depth unit – Wrap-up and Discussion

You can come back after each unit or right by the end of all of them.

DAILY LOGS

- Let the students log in again (eg. Use function “Forgot password?”)
- Duplicate a daily log already saved
- Give the students a clear naming scheme for the daily logs, so you find them for comparison
- Let them edit the logs to optimize according to the things they learned in class

ANALYSIS

Individual results

- Make them compare two daily logs
- Discuss the results and let them interpret their findings

YEARLY SCHEDULE

Advisable after you taught the General information: Overshoot day

- Let the students make a log of a typical day and “special days” like weekend or holiday
- Let the students compose a whole year taking a typical year as “Base daily” and adding the special days
- Let them include all the daily logs they create during the course
- Let them evaluate the yearly schedule
- Discuss the results and let them interpret their findings

FOLLOW UP DISCUSSION

- Do they understand what it means, when the overshoot day is earlier than December 31st?
    - Earth Overshoot Day marks the date when humanity's demand for ecological resources and services in a given year exceeds what Earth can regenerate in that year.
    - We maintain this deficit by liquidating stocks of ecological resources and accumulating waste, primarily carbon dioxide in the atmosphere.
    - This deficit accumulates over time and leads to the climate crisis and ecological depletion and human disaster

- What individual changes can be made by each student – today?
    - change of diet: less meat and dairy products
    - change of consumption habits: less products with longer life span

- What individual changes can be made by each student – later in life?
    - Choose small, well insulated home with good public transport
    - Don't fly for business and for holiday
    - Get into politics

- What obstacles they can think of keep us from living a life on a small Footprint?
    - Habits and family traditions
    - Advertising
    - Mindset of perpetual economic growth

- What societal changes need to be made to stay within the planetary boundaries?
    - Committing to Paris Climate agreement and Sustainable Development Goals
    - Policy changes towards Green energy and Degrowth
    - Make it easier for individuals to live a life with a smaller Ecological Footprint
    - National strategies to reduce the Grey Footprint