



Your CO₂- Calculator

Pedagogical material to
complement the CO₂
Calculator: project ideas and
work suggestions

Foreword – Däin CO₂-Rechner

Today, climate change is no longer questioned by science, but how can global warming be stopped and, if necessary, reversed? It is a complex problem, although the goal is supposedly simple: reducing the CO₂ footprint.

All living things release carbon dioxide into the atmosphere. Plants need it to live. Everyday activities, from surfing the internet to a burger to a cup of coffee, similarly release greenhouse gases. However, these gases can store a lot more heat than the atmosphere normally does. The result is a greenhouse effect where the planet's temperature rises. This increase in the global temperature can lead to ecosystems failing, species dying out, and an increase in extreme weather events in the form of storms, floods and droughts.

However, the less CO₂ and other greenhouse gases that are released into the atmosphere, the easier it will be for the climate to stabilise itself. Thus it is possible to aspire to CO₂ neutrality and to avert climate change.

The stimuli and ideas for project work in lessons presented below are intended to enable learners to inform themselves about this subject, to research facts and to form an opinion about the extent to which they are affected and which actions are appropriate, in their opinion.

The booklet is intended as educational support material for the online tool.

The calculator was developed by the klimAktiv organisation and adapted to the Luxembourgish context in collaboration with the Nohaltegkeetsrot (High Council for Sustainable Development). Calculating a personal CO₂ footprint is based on questions which are answered in the following categories: lifestyle, travel, living and electricity. There are exercises in the booklet for each of the categories, which can be used to gain a deeper understanding of the subjects.

Däin CO₂-Rechner:



III. Food

III.1. Organic produce and regionalism vs. globalisation

Survey and research

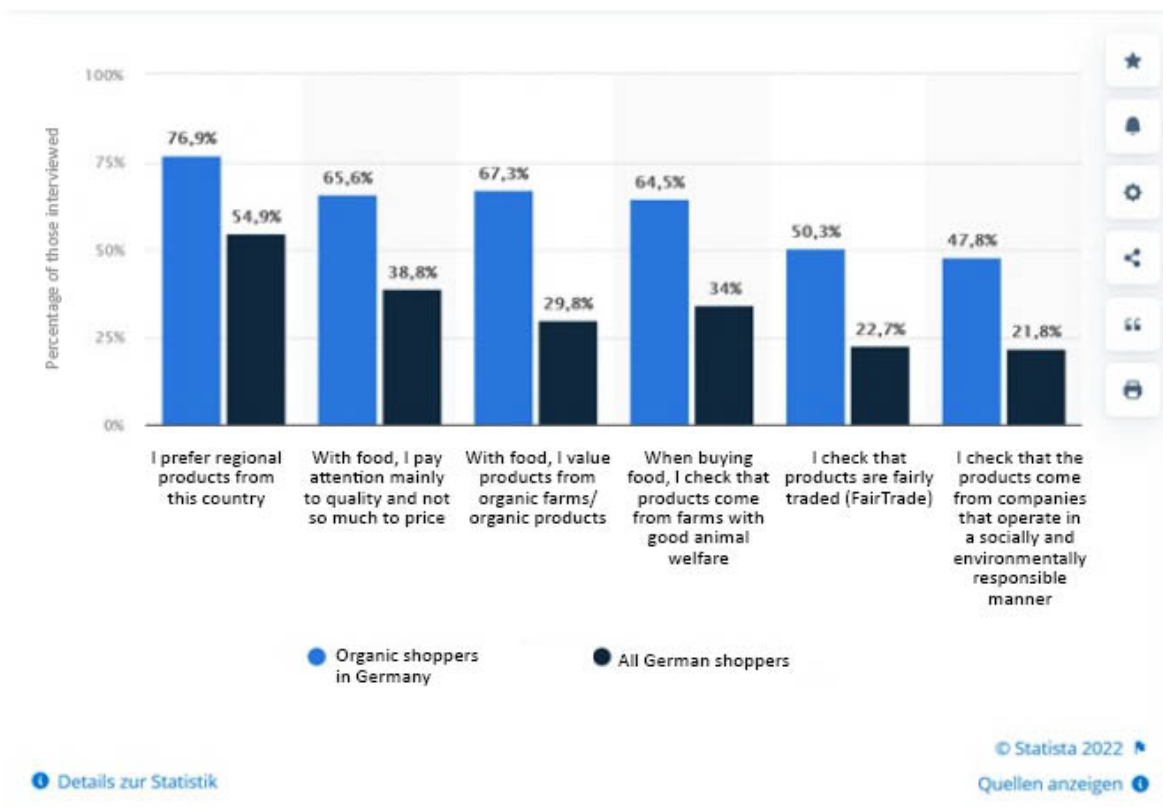
The teacher gives the class the statistics shown below. In pairs, the students evaluate the statistics. Possible questions are:

- What strikes you about the graphic?
- How can you perhaps explain the differences between the overall population and the organic shoppers?

After this, using an online tool with the class, statistics are gathered using similar questions reflecting the world the young people live in and their consumer behaviour (e.g. questions about what they eat in school). The class evaluates these statistics for themselves. After this, the survey is given out to other classes.

Evaluation: The results can be presented in the class and discussed, or published via a QR code displayed in the school.

Share of shoppers in organic shops in Germany by purchasing behaviour for food, compared with the population in 2021



Suggestion for an extended discussion or a written exploration:

ConsommActeur/ConsomActor: What is the meaning of this term? Do you think that consumer behaviour influences food production?

III.2. Good chocolate?

Research

The class is challenged to research the course of production, from the cocoa plant to the chocolate bar, in small groups. In their work, the groups focus on:

- Conventional chocolate products;
- Organic chocolate products;
- FairTrade chocolate products.

Each group uses its own drawings or a photo-collage to illustrate the social and ecological effects of the manufacture of their product. Alternatively, a short explanatory video can also be created, using cut-out animation (max. 2–3 minutes). There are tutorials on this online.

III.3. At the supermarket

Role-play and creative task

Phase 1: The class works in small groups to come up with criteria and arguments that are important to them when shopping.

Phase 2: The class is divided into two groups: one half of the class wants to sell organic and fair-traded products. The other half are consumers. The sales side try to convince the consumers about their product.

What were the problems? What (new) arguments came up?

Phase 3: The class jointly develops an advert for fair-traded chocolate. What are they trying to convey to the consumer? And how? What approach would they take in an advertising poster? What approach for a TV advert or an advert on social media?

III.4. Eating meat: *Meatless Monday*?

Research

The class conducts online research into the term *Meatless Monday*:

- What is *Meatless Monday*? Where does the idea come from?
- What is the aim of it?
- How long has the initiative been running?
- Where do you find *Meatless Monday*? What are the experiences from it?
- Are there other models?

The research can take a deeper dive using the following questions:

- What are the arguments raised, and by whom? (Author, politician, homepage, newspaper?) The arguments can be collected in a list with arguments for and against.

- Are there any reader comments on the articles? What arguments are understandable, and which are not?

Closing discussion: What do the students think about this initiative?



Possible action: record a week's canteen menus to analyse meat consumption at school.

III.5. "Anti-Gaspi": combating food waste

Placemat

Phase 1: The students take part in the following quiz and then discuss what was new for them or what surprised them.



<https://www.geo.de/natur/nachhaltigkeit/23255-quiz-quiz-was-wissen-sie-ueber-lebensmittelverschwendung> (last accessed on: 02.09.2024)



Phase 2: The students gather suggestions about sustainable food using a placemat. The template below can be used for this (DIN A1 or A2): What can we do differently? At home? At our school? Me personally? In politics?

The class is divided into groups of four: Each group is given a placemat (see template) and 15–20 minutes' time to fill it in. The students each write an idea down in the space they have in front of them. Then the placemat is turned around, so that they have a new question in front of them. The placemat can be rotated several times, so that the individual answers can be supplemented with further ideas.

At the end of the specified time, the individual groups present their results.



Possible action: The ideas that have come up for *At our school?* are collected. Two or three of the suggestions are chosen by the class, discussed, supplemented and worded formally. Afterwards, they are circulated verbally or in writing to the student council and/or to the school management. What practical steps would need to be taken to implement these proposals?

**What can
we do
differently?**

At our school?

At home?

Me personally?

In politics?

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