DO I EAT TOO MUCH MEAT?

The impact of your meat consumption

Meat consumption is important and relevant because it affects our health, the environment, and ethics. Eating too much meat can lead to health problems like heart disease, obesity, and certain cancers. The production and consumption of meat also have environmental concerns, such as deforestation, greenhouse gas emissions, and water pollution.
Alternatives to traditional meat, like plant-based and lab-grown options, are emerging and can help reduce the negative impacts of meat production. It's important to know about meat consumption to make informed choices about what we eat. With the global demand for meat increasing, understanding the consequences of our choices is crucial for a sustainable and healthy future for both people and the planet.

Overview "'DO I EAT TOO MUCH MEAT?"

Main working question

Context
Everyday life
Health and care
Citizenship

Cognitive processes
analysing situations
processing information
reasoning
critical thinking

Target group (incl. necessary prior skills and competences)

Adult learners

health-conscious individuals, environmentally aware consumers, and people interested in ethical eating

Content
quantity and number
data and change
using digital skills

Dispositions
self-confidence
collaboration
math difficulties

Outcomes and results

analysing charts and diagrams

estimations and calculations on meat intake

reflection and overthinking of behaviour

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Main information

Content	data given in percentage, as decimal numbers comparing data reading, interpreting and analyzing diagrams and charts estimation and calculation personal meat consumption
Target group	Adult learners with basic numeric skills and certain skills in analyzing diagrams and charts. Adult learners willing to reflect, overthink and eventually change their eating habits.
Learning intention	What is the intention of adults to face this problem? – Numeracy for personal and private purposes – Numeracy to understand society
Duration	Approx. 2 lessons in class and one week for a self-experiment the learners do at home individually
Material and resources	presentations (e.g. powerpoint) to give an insight in… • recommended meat consumption (by WHO) • actual meat consumption in different countries • negative side effects of a high meat consumption in many countries
Group size	Range from 5 to 15 learners
Problem statement	The average meat intake per person is higher than recommended by the WHO in many countries of our world. Often, people are unconscious of the amount of meat they eat per week (as they tend not to "count" processed meat products) and of the negative effects that their high meat consumption has for our environment.
Working questions	Are the learners aware of the amount of their daily/weekly/monthly meat consumption? Do learners recognize the negative effects of a high meat consumption? Are the learners willing to overthink their eating habits and to try out alternative or adapted diet styles?
Learning outcomes and results	The students reflect on their eating habits and especially on the amount of their average meat intake. The students compare the average meat intake in different countries interpreting charts and diagrams. The students are willing to conduct a self-experiment.

Working plan

Time (lessons)	Description of content/activities	Material	Methodical and didactic information[1]
15 minutes	**Activation**: The learners are put in the situation by seeing facts, statistics and quotes concerning (global, national, personal) meat consumption. The teacher guides the learners through a reflective dialogue and discussion concerning the presented facts and charts: • What information do we get? • What does that information mean to you personally? • Do you eat meat? How often? What kind of meat? • Do you sometimes reflect on your meat consumption? • Would you like to change your meat consumption? Why (not)? • …	powerpoint slides (or similar) presenting facts, statistics and quotes on meat consumption (see appendix 1)	cognitive activating critical thinking reflection questioning
30 minutes	**Optional: Contrastive exercise** Learners split up in small groups and are given a diagram or chart that presents meat consumption in different countries or regions (e.g. Austria, EU average, United States, Nigeria). Every group analyses and interpretes the data and then works out a short (visualized) presentation that underlines the differences and similarities. Presentation of the group results followed by a discussion of the possible reasons for the differences in meat consumption.	diagrams and charts showing meat consumption in different countries (for a suggestion see appendix 2)	Collaborative learning critical thinking

[1] for description and explanation of kinds of tasks, HITs and other background information please consult the teacher's/user's guide

30 minutes +	**Background information** With the inclusion of pre-knowledge of the learners and according to their skills, the teacher… • gives a brief introduction to the impact of high meat consumption on the environment, health and animal welfare • explains the relationship between meat production, greenhouse gas emissions, rainforest deforestation, water consumption and climate change presents alternatives such as vegetarian and vegan diets and reduced meat consumption.	input by the teacher, accompanied by powerpoint slides (or similar) at the teacher's discretion	cognitive activation reflection critical thinking
one week (at home)	**Self-experiments** The learners are asked to conduce a self-experiment in which they eighter… • document their personal entire meat consumption of a week and finally reflect on it and, above all, put it in relation to the WHO recommendation or… • try to do without meat and processed meat for a whole week and write an experience diary about it. Experienced learners can use a digital tool to calculate their savings in CO2 emissions	optional: digital tool to calculate CO2 emissions (and savings in emissions), e.g. https://carbondebits.io/	reflection critical thinking
15 minutes	**Reflection and transfer** In a final reflection phase the students collect their personal experiences within the self-experiments and discuss on the lessons learnt. They did and do a profonde reflection on how they could adapt their own eating habits to achieve more sustainable meat consumption.	results from the self-experiments of the learners	reflection critical thinking collaborative learning

Suggestions for the teacher/user

The example presented here should be considered as exemplary and inspirational material presenting a guideline with a high range of possibilities of adapting those suggestions to a specific group of learners or an individual learner with his or her very personal requirements.

In concrete terms, the example "Do I eat too much meat?" could be adapted these ways:

- Individualization and differentiation: The example can be varied in difficulty depending on the choice of diagrams and representations to be worked on. Thus, learners with less mature numeric skills in this area can choose simple diagrams, while advanced learners work on more complex content (including averages, decimals, comparative values). Mutual exchange then makes the individual contents accessible to all.
- Learning setting: The teacher needs to make sure that this topic does not affect any learner in the group in any sensitive or unpleasant way. For example, religious and cultural eating habits must have general acceptance and tolerance throughout the group, and any eating disorders that may be present within the group should not be brought into focus by the choice of this topic.

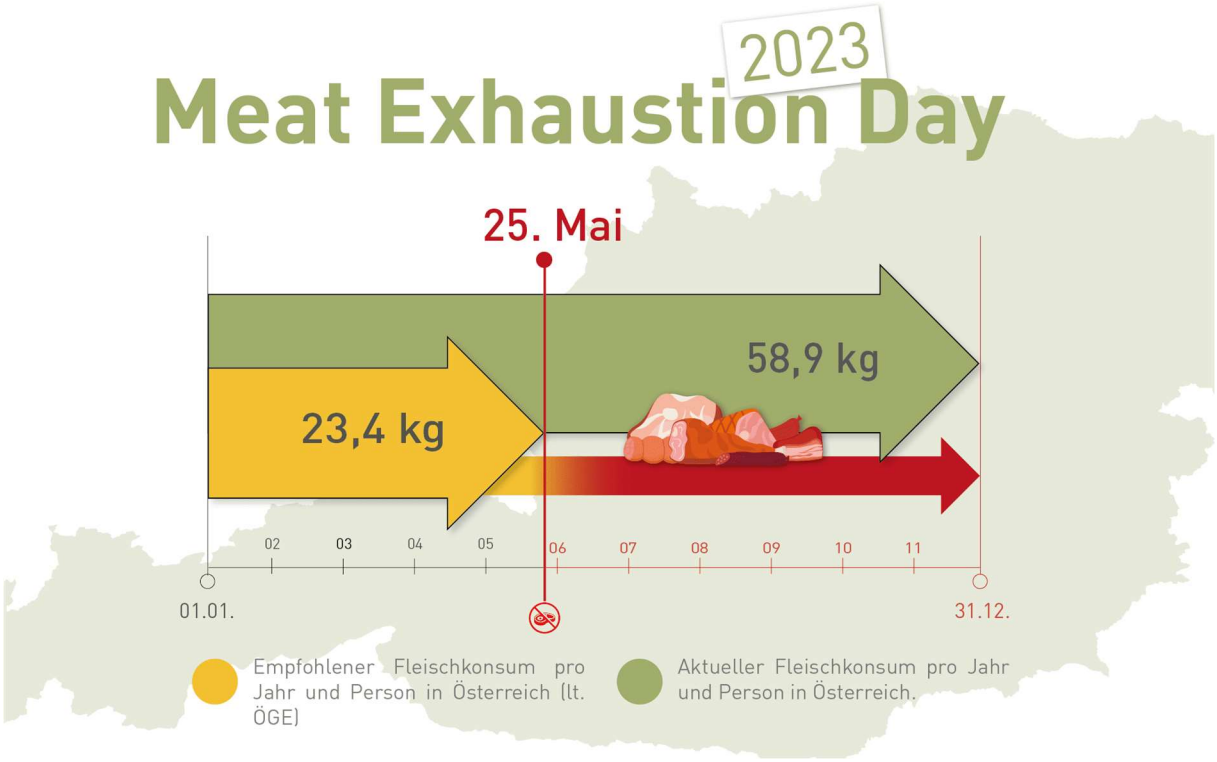
Our educational activities aim at numeracy skills being not only memorized, but first of all being practiced and functionally used by the learners in daily life or/and vocational situations. It is therefore recommended to implement the idea of HITS[2] (higher impacts of teaching skills) as far and often as possible: ...

- ... work with concrete and authentic material that learners will recognize from everyday life situations. For this example, it is recommended to use very actual charts and diagrams – of countries that meet the biographical background of the learners.
- ... ask the learners questions and let them raise questions themselves. It can be crucial to discuss numeracy themes, contexts and numbers.
- ... think of possible ways of transfer. Concerning this example, the long period of one week to do the self-experiment is crucial to help the students reflect on and overthink their eating habits thoroughly.

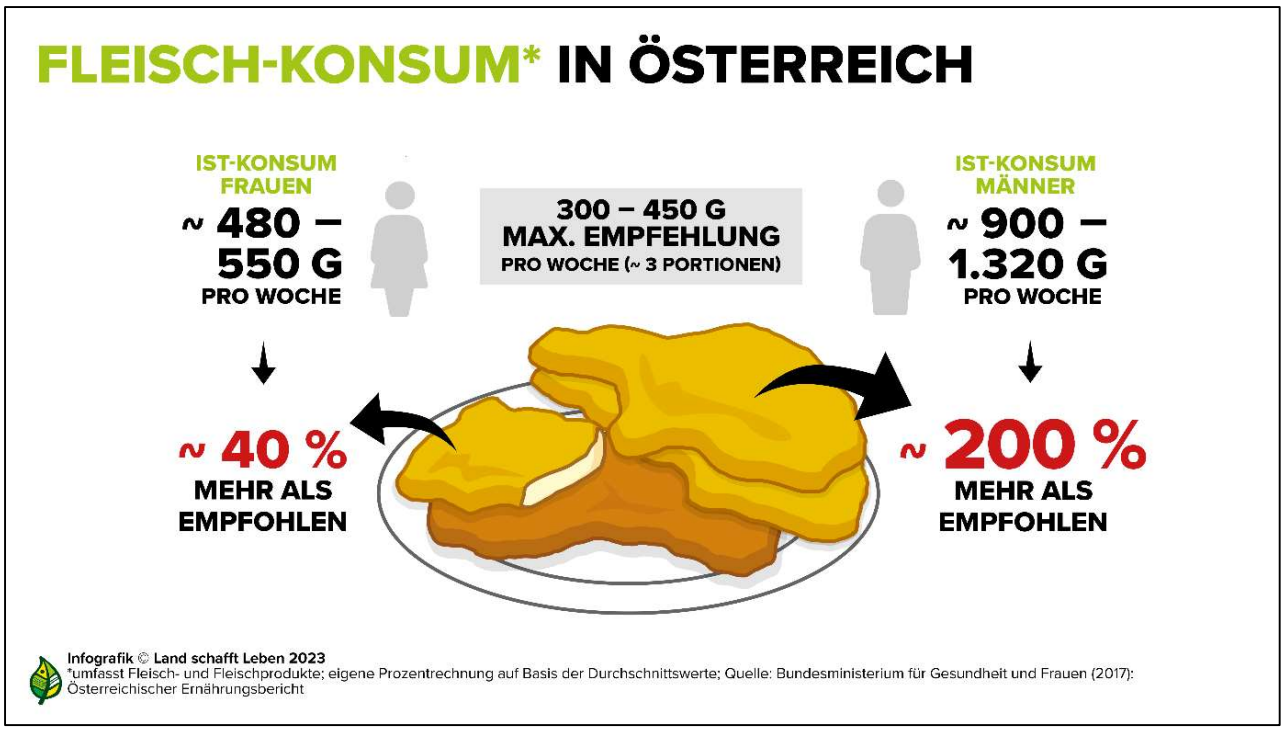
[2] For general information and explanation on HITS please see the teacher's/user's guide

Appendix 1

Facts, statistics and quotes for activation



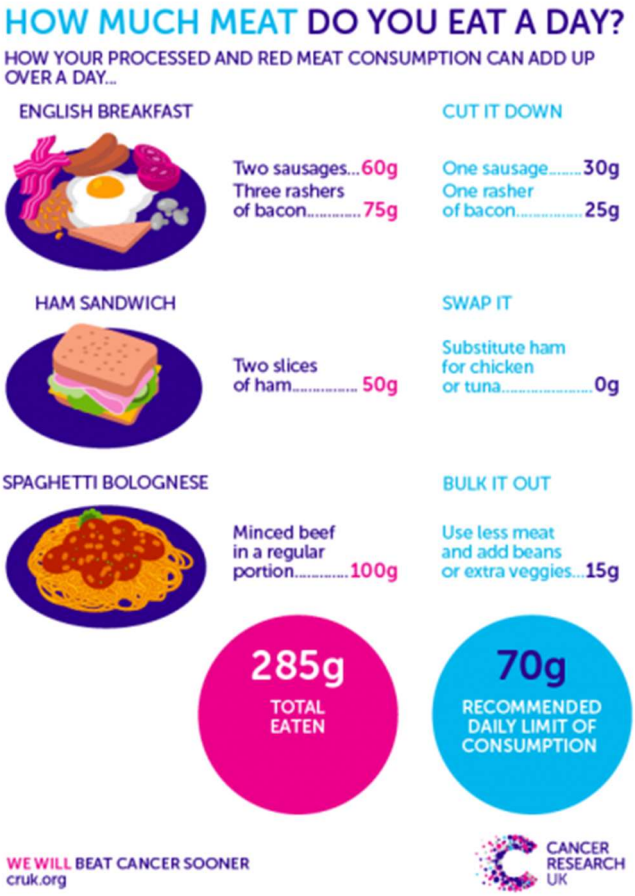
Source: Fleischkonsum in Österreich: Die empfohlene Jahresration ist bereits jetzt verputzt - VIER PFOTEN in Österreich - Tierschutz. Weltweit. (vier-pfoten.at) [30.06.2023]



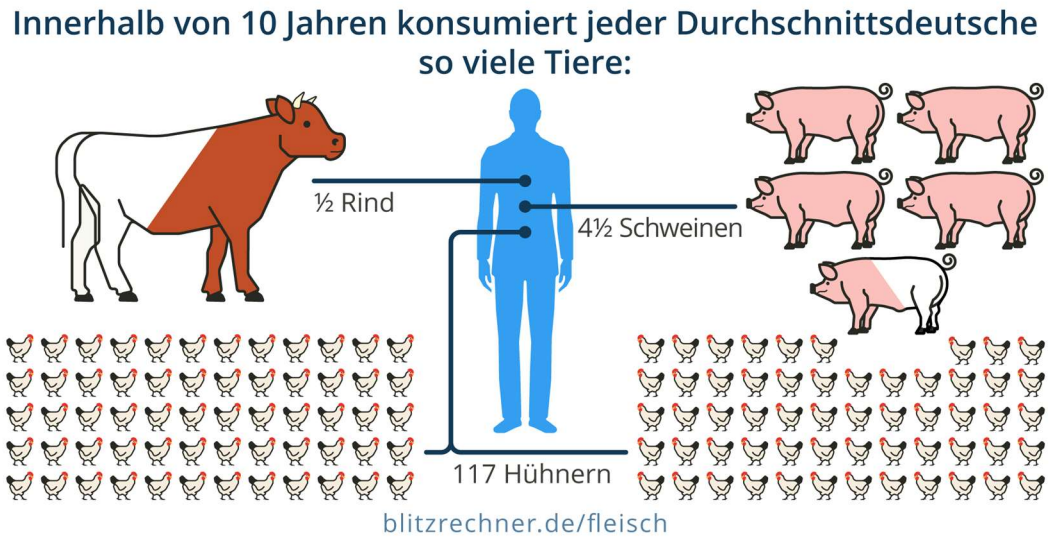
Source: https://www.landschafftleben.at/hintergrunde/gesundheit-ernaehrung/Infografiken_Food-Trends_Fleischkonsum%20%28c%29%20Land%20schafft%20Leben%202022.png [30.06.2023]

Cultured meat from the lab, plant-based burger patties or proteins from insects - all these alternatives share the same goal: to reduce the consumption of meat. But is meat consumption actually reducing in the individual countries of Europe? Here is an overview.

Source : Less is more? Per capita meat consumption in Europe - MPULSE [30.06.2023]



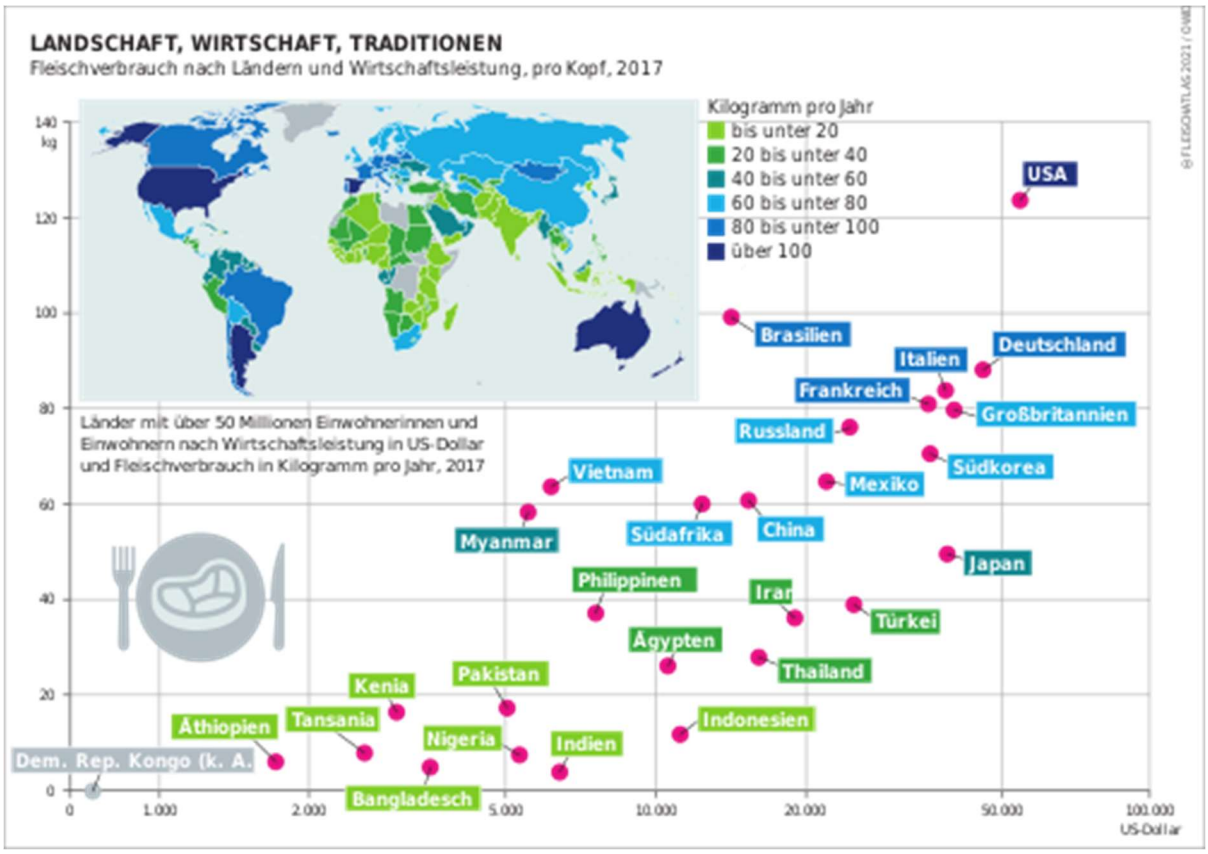
Source: https://carleton.ca/chaimcentre/2017/1875/ [30.06.2023]



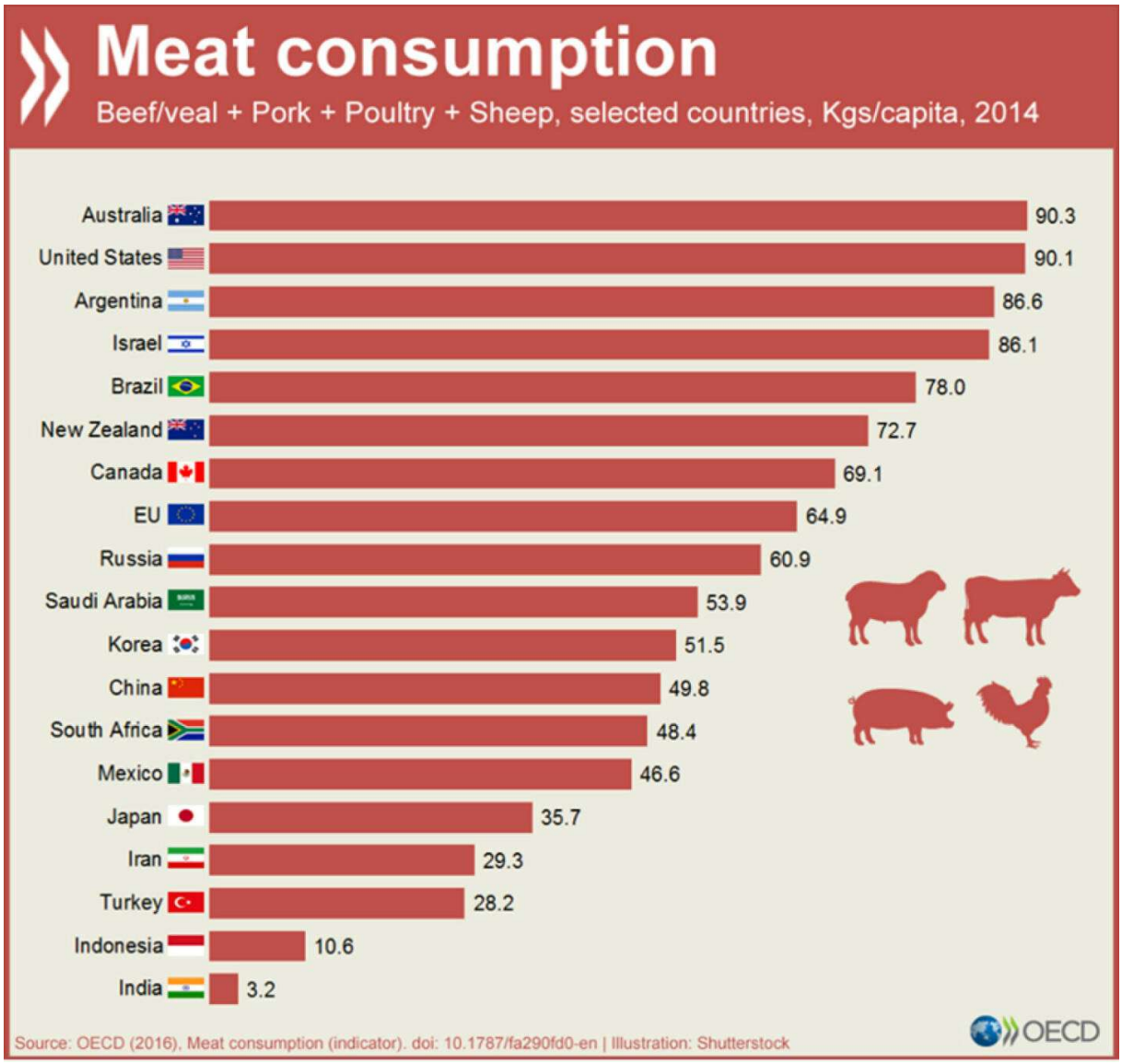
Source : Fleischrechner: Auswirkung von Fleischkonsum auf Klima, Umwelt & Mensch (blitzrechner.de) [30.06.2023]

Appendix 2

Comparing meat consumption in different countries



Source: Fleischkonsum – Wikipedia [30.06.2023]

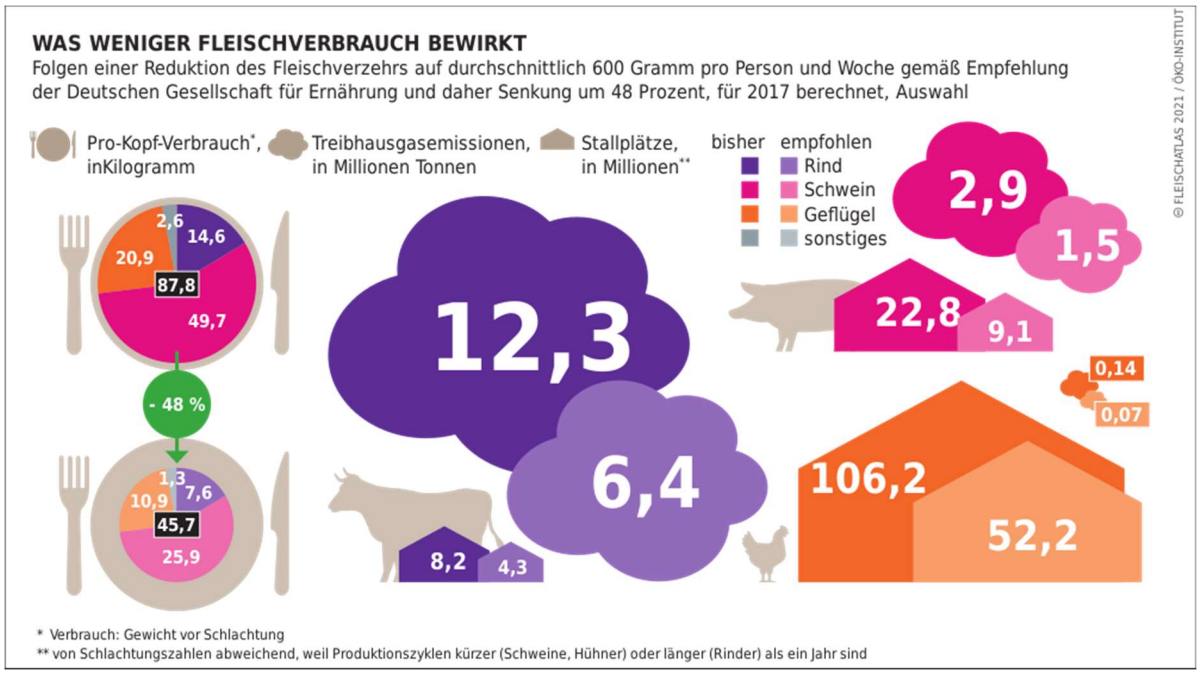


Source: Fleischkonsum in ausgewählten Ländern. Mehr Details unter http://data.oecd.org/agroutput/meat-consumption.htm Bild 46527 // OECD-Statistiken, Q1 2016 (photaq.com) [30.06.2023]

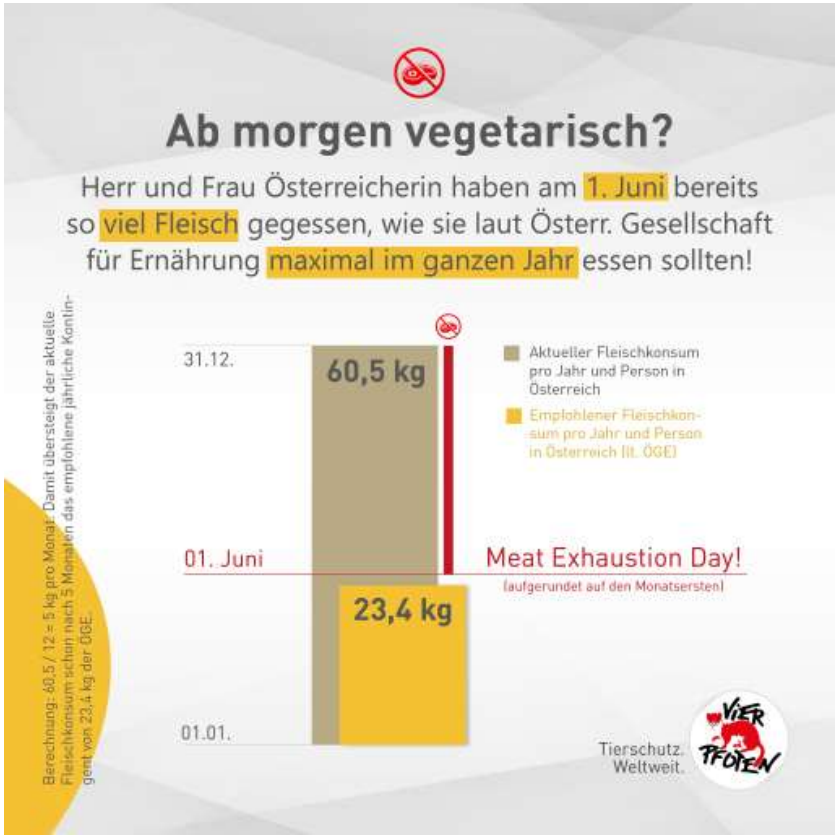
Appendix 3

presentation elements to accompany background information

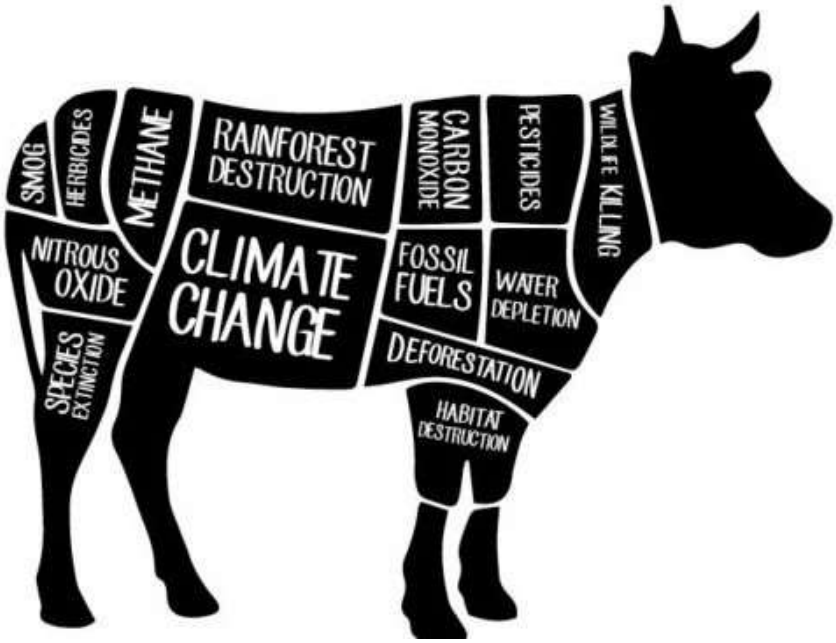
Source: Fleischkonsum in Deutschland: Mehrheit akzeptiert höhere Preise für mehr Tierwohl (stuttgarter-zeitung.de) [30.06.2023]



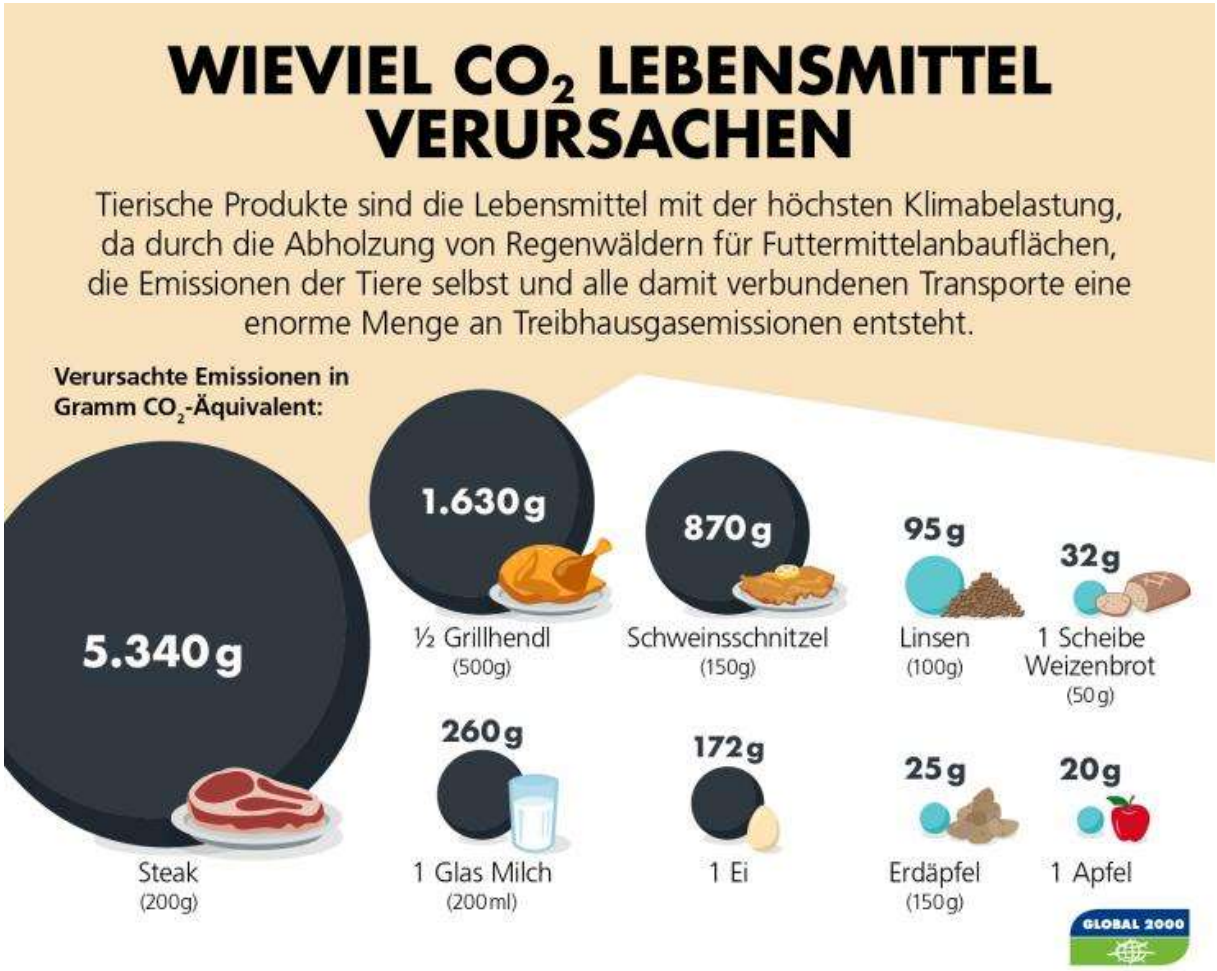
Source : https://www.wikiwand.com/de/Fleischkonsum_in_Deutschland [30.06.2023]



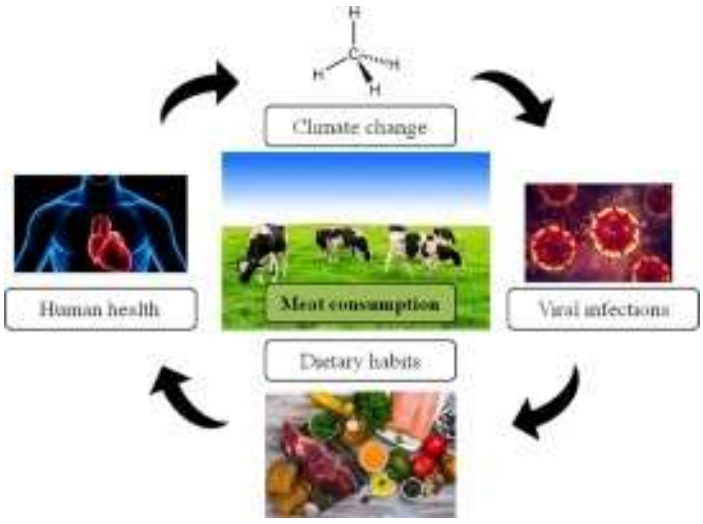
Source : Klima-Glossar: Fleischkonsum (apa.at) [30.06.2023]



Source: I am a meat fanatic, and this is my plea on how reduced meat consumption partly alleviates the biggest problems of the 21st century – Socio Hub (socio-hub.com) [30.06.2023]



Source: Fleischkonsum in Österreich | GLOBAL 2000 [30.06.2023]



Source: 1-s2.0-S0963996920303665-ga1.jpg (272×200) (els-cdn.com) [30.06.2023]

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