Öko-Institut e.V.
Institut für angewandte Ökologie
Institute for Applied Ecology

Planetary Healthy Food, not tobacco

Concept of Planetary Health Diet

World No Tobacco Day 2023 Webinar, 25 May 2023, 3pm (CEST)

Margarethe Scheffler, Öko-Institut

Challenges

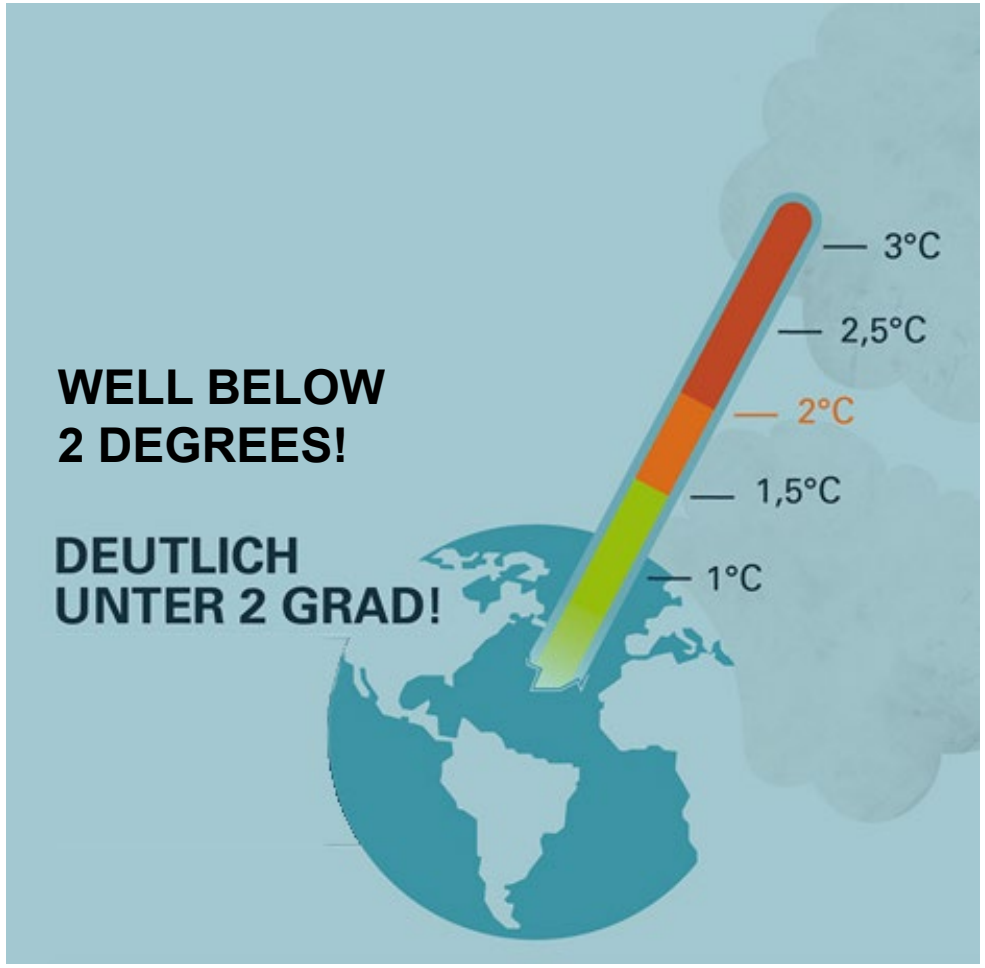
Feeding a growing population under changing climate conditions and saving the planet!

Main Restriction:

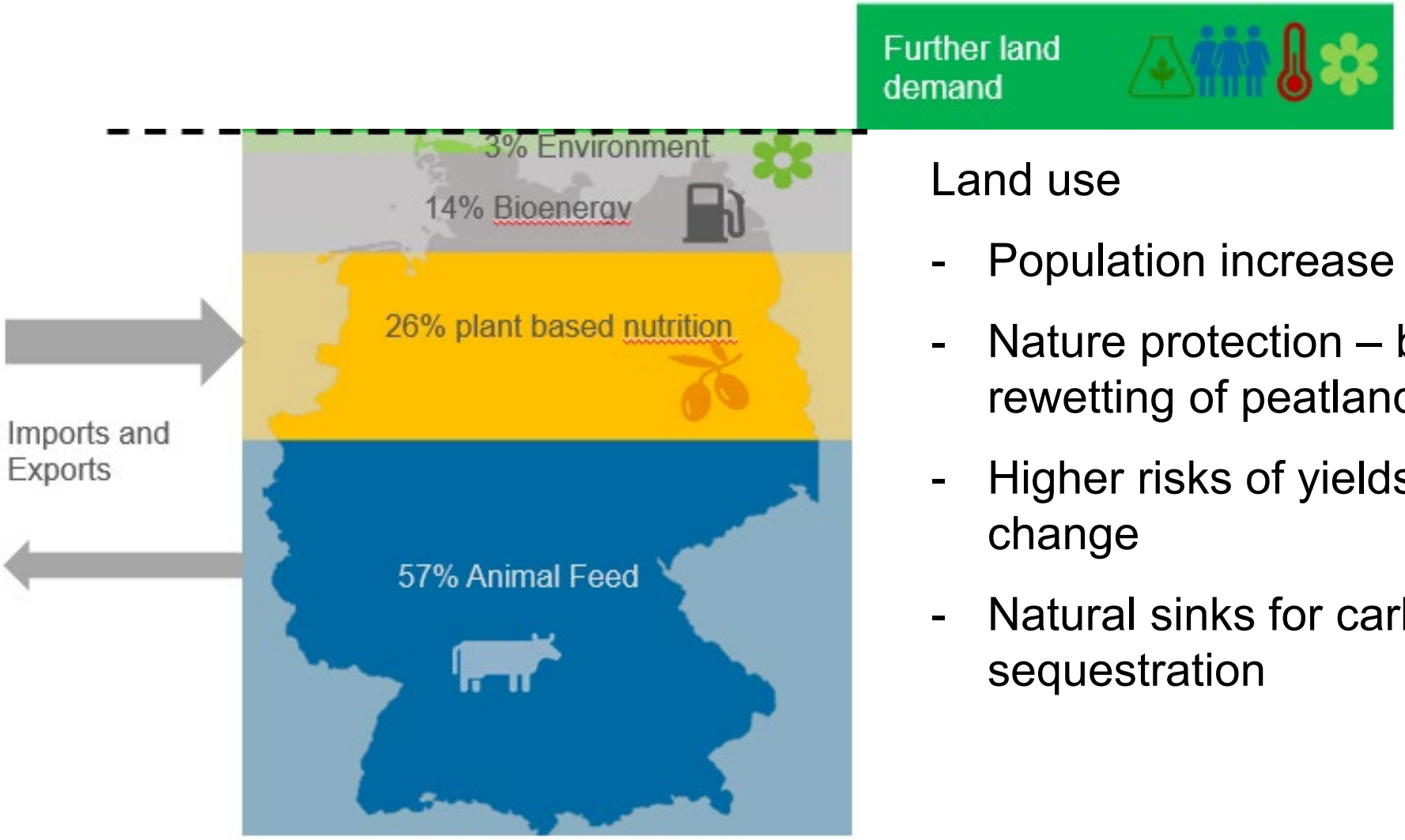
- Land use area

Main Problems

- GHG Emissions
- Biodiversity losses



Land use area needed – Example of Germany



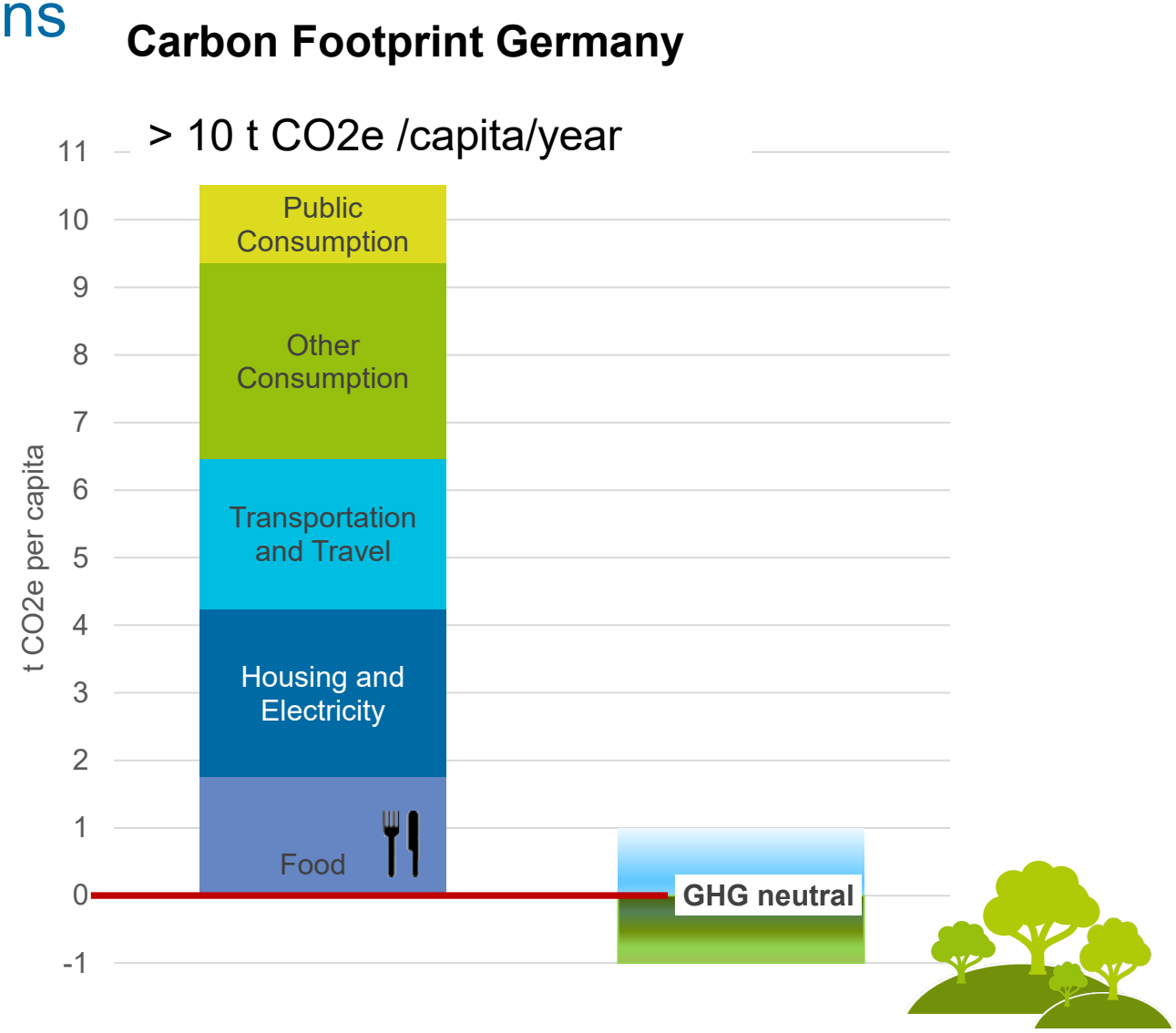
Land use

- Population increase
- Nature protection – biodiversity area, rewetting of peatland
- Higher risks of yields due to climate change
- Natural sinks for carbon sequestration

Source: Öko-Institut, based on destatis

Greenhouse Gas (GHG) Emissions

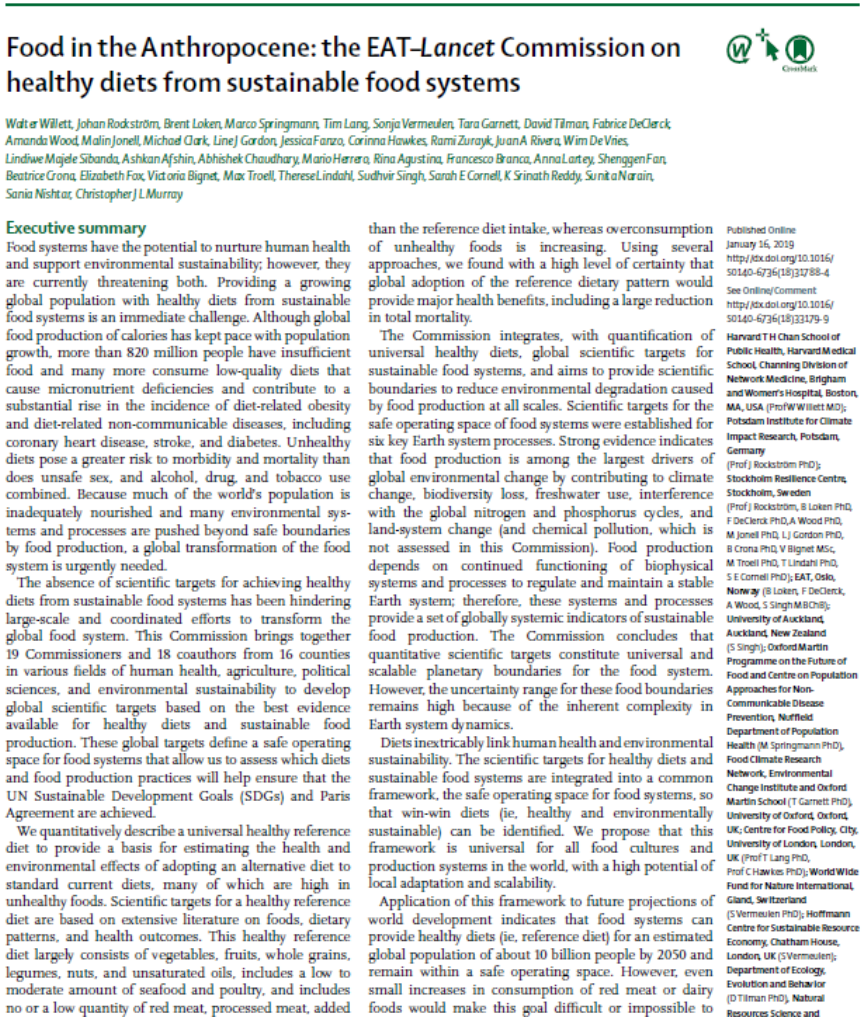
- GHG Neutrality until 2050 = Zero Emissions
- Residual emissions from agriculture, industry, waste remain
- Compensation of residual emissions by natural or technical sinks (e.g. direct air capture) necessary



Source: https://uba.co2-rechner.de/en_GB/

Planetary Health Diet

- EAT LANCET KOMMISSION: 37 scientists from 16 countries and different disciplines e.g climate research, nutrition scientists
- Developing a sustainable and healthy dietary recommendation for a growing world population
- Consideration of planetary boundaries (water, land, biodiversity, climate, nitrogen and phosphorus)
- 2500 kcal per person per day
- Report published 2019



The Lancet Commissions

Food in the Anthropocene: the EAT–*Lancet* Commission on healthy diets from sustainable food systems

Walter Willett, Johan Rockström, Brent Loken, Marco Springmann, Tim Lang, Sonja Vermeulen, Tara Garnett, David Tilman, Fabrice DeClerck, Amanda Wood, Malin Jonell, Michael Clark, Line J Gordon, Jessica Fanzo, Corinna Hawkes, Rami Zurayk, Juan A Rivera, Wim De Vries, Lindiwe Majele Sibanda, Ashkan Afshin, Abhishek Chaudhary, Mario Herrero, Rina Agustina, Francesco Branca, Anna Lartey, Shenggen Fan, Beatrice Crona, Elizabeth Fox, Victoria Bignet, Max Troell, Therese Lindahl, Sudhvir Singh, Sarah E Cornell, K Srinath Reddy, Sunita Narain, Sania Nishtar, Christopher J L Murray

Executive summary

Food systems have the potential to nurture human health and support environmental sustainability; however, they are currently threatening both. Providing a growing global population with healthy diets from sustainable food systems is an immediate challenge. Although global food production of calories has kept pace with population growth, more than 820 million people have insufficient food and many more consume low-quality diets that cause micronutrient deficiencies and contribute to a substantial rise in the incidence of diet-related obesity and diet-related non-communicable diseases, including coronary heart disease, stroke, and diabetes. Unhealthy diets pose a greater risk to morbidity and mortality than does unsafe sex, and alcohol, drug, and tobacco use combined. Because much of the world's population is inadequately nourished and many environmental systems and processes are pushed beyond safe boundaries by food production, a global transformation of the food system is urgently needed.

The absence of scientific targets for achieving healthy diets from sustainable food systems has been hindering large-scale and coordinated efforts to transform the global food system. This Commission brings together 19 Commissioners and 18 coauthors from 16 counties in various fields of human health, agriculture, political sciences, and environmental sustainability to develop global scientific targets based on the best evidence available for healthy diets and sustainable food production. These global targets define a safe operating space for food systems that allow us to assess which diets and food production practices will help ensure that the UN Sustainable Development Goals (SDGs) and Paris Agreement are achieved.

We quantitatively describe a universal healthy reference diet to provide a basis for estimating the health and environmental effects of adopting an alternative diet to standard current diets, many of which are high in unhealthy foods. Scientific targets for a healthy reference diet are based on extensive literature on foods, dietary patterns, and health outcomes. This healthy reference diet largely consists of vegetables, fruits, whole grains, legumes, nuts, and unsaturated oils, includes a low to moderate amount of seafood and poultry, and includes no or a low quantity of red meat, processed meat, added than the reference diet intake, whereas overconsumption of unhealthy foods is increasing. Using several approaches, we found with a high level of certainty that global adoption of the reference dietary pattern would provide major health benefits, including a large reduction in total mortality.

The Commission integrates, with quantification of universal healthy diets, global scientific targets for sustainable food systems, and aims to provide scientific boundaries to reduce environmental degradation caused by food production at all scales. Scientific targets for the safe operating space of food systems were established for six key Earth system processes. Strong evidence indicates that food production is among the largest drivers of global environmental change by contributing to climate change, biodiversity loss, freshwater use, interference with the global nitrogen and phosphorus cycles, and land-system change (and chemical pollution, which is not assessed in this Commission). Food production depends on continued functioning of biophysical systems and processes to regulate and maintain a stable Earth system; therefore, these systems and processes provide a set of globally systemic indicators of sustainable food production. The Commission concludes that quantitative scientific targets constitute universal and scalable planetary boundaries for the food system. However, the uncertainty range for these food boundaries remains high because of the inherent complexity in Earth system dynamics.

Diets inextricably link human health and environmental sustainability. The scientific targets for healthy diets and sustainable food systems are integrated into a common framework, the safe operating space for food systems, so that win-win diets (ie, healthy and environmentally sustainable) can be identified. We propose that this framework is universal for all food cultures and production systems in the world, with a high potential of local adaptation and scalability.

Application of this framework to future projections of world development indicates that food systems can provide healthy diets (ie, reference diet) for an estimated global population of about 10 billion people by 2050 and remain within a safe operating space. However, even small increases in consumption of red meat or dairy foods would make this goal difficult or impossible to

Published Online January 16, 2019 http://dx.doi.org/10.1016/S0140-6736(18)31788-4

See Online/Comment http://dx.doi.org/10.1016/S0140-6736(18)33179-9

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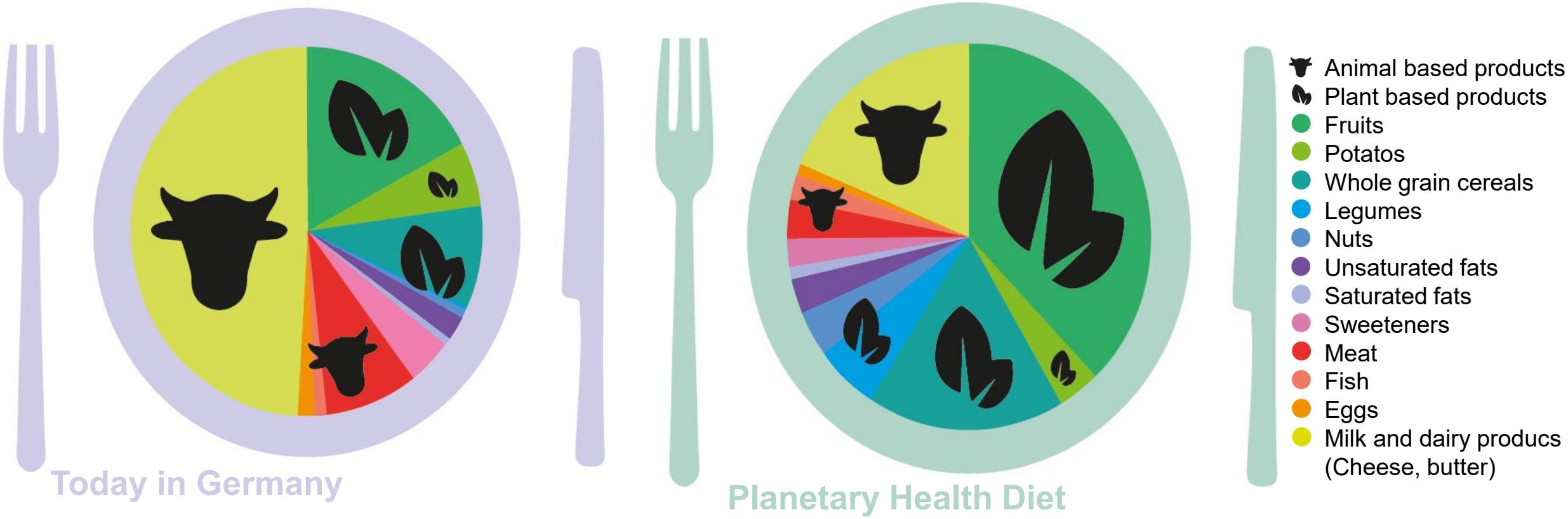
Source: https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)31788-4/fulltext

Planetary Health Diet as a solution? – Case study for Germany

- Drastically reduce animal products (milk and meat)
- Much more vegetables, pulses, nuts



Source: Greenpeace 2022, based on Scheffler, Wiegmann 2022

Advantages of the dietary change at a glance – Case study for Germany

TODAY

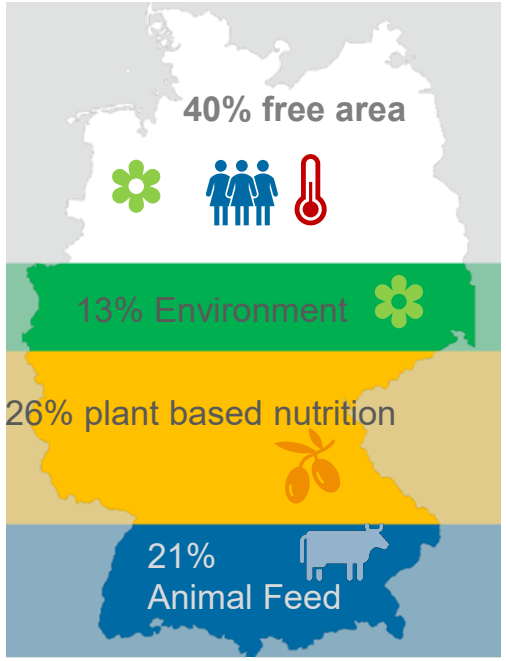
Nutrition for 8.5 people per hectare

+ environmental targets

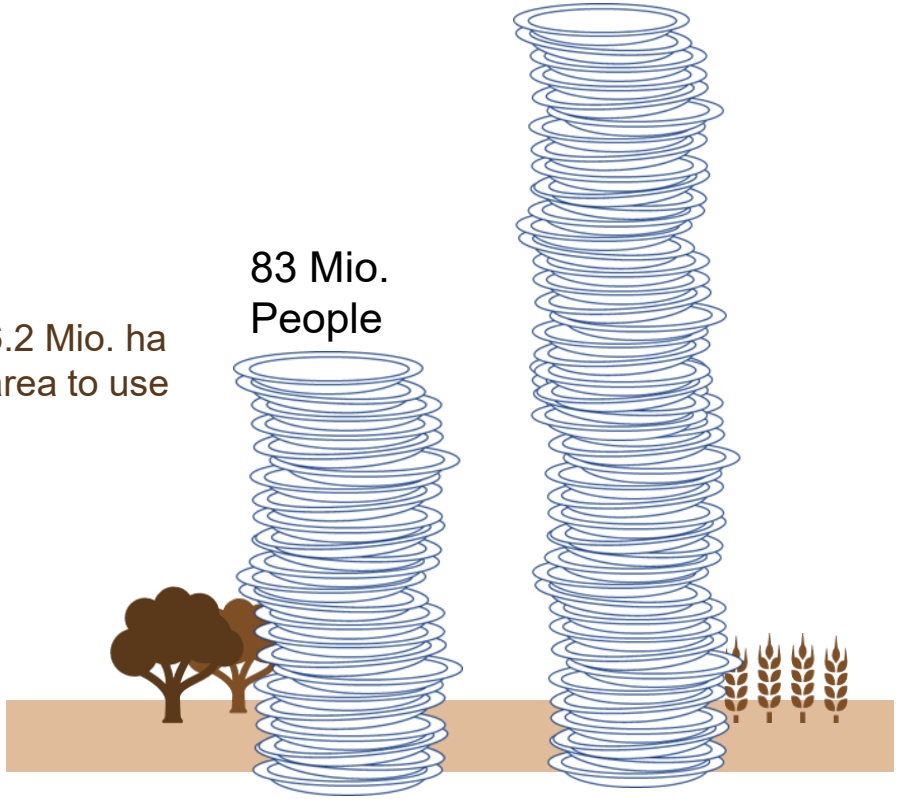
PLANETARY HEALTH DIET

Nutrition for 11.3 people per hectare

PLANETARY HEALTH DIET



6.2 Mio. ha area to use



Afforestation

Nearly THG-neutral agriculture

Food for Export

Additional food for 70 Mio. People

Source: Öko-Institut 2022

Conclusion

Benefits of a change in diet for climate and nature are evident

but not yet reflected in political action

- same taxes for animal based and plant based products
- Plant based substitutes still more expensive than animal products

…there is hope!!!

- Meat consumption per capita decreased from 61 kg in 2018 to 52 kg in 2022 in Germany
- German Society for Nutrition revises its dietary recommendations
- A citizens' council on the topic of “nutrition in transition: **between private concern and state tasks**” will be established

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Thank you for your interest!

Any Questions?

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