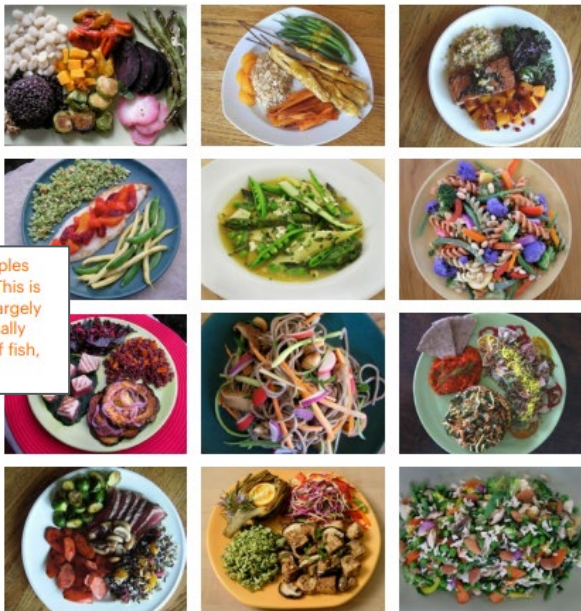




Even moderate changes in diets can cause environmental benefits

Senior scientist, D.sc, Merja Saarinen, Luke

Planetary health diets



The plates below are examples of a planetary health diet. This is a flexitarian diet, which is largely plant-based but can optionally include modest amounts of fish, meat and dairy foods.

Change in Finland

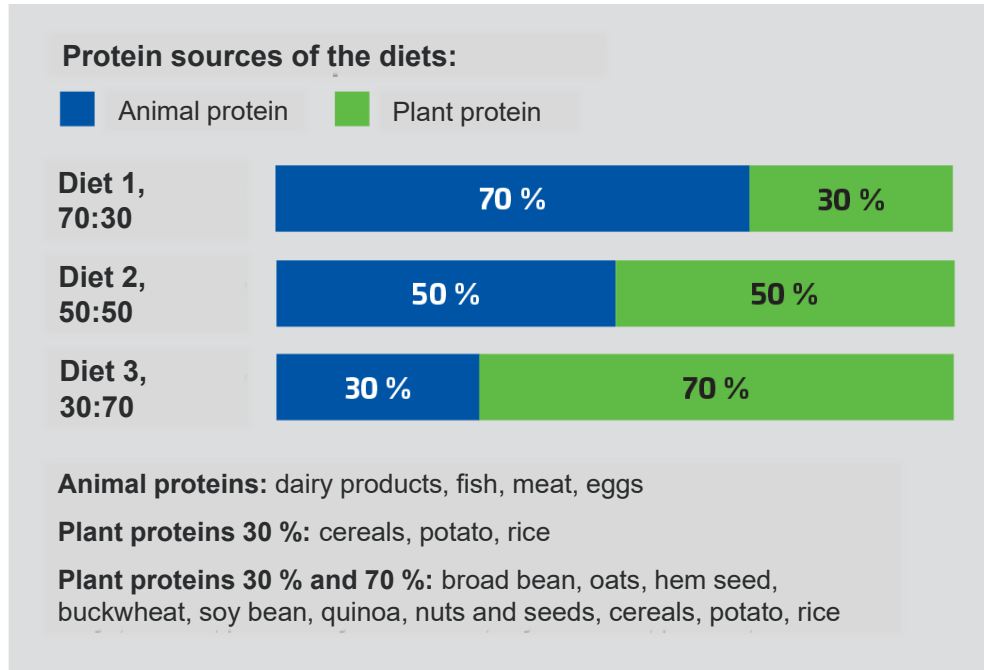
How does the change affect climate impacts of diet?

- **Intervention**
 - **Health and nutrition**
 - **The climate impact**

Although the planetary health diet, which is based on health considerations, is consistent with many traditional eating patterns, it does not imply that the global population should eat exactly the same food, nor does it prescribe an exact diet. Instead, the planetary health diet outlines empirical food groups and ranges of food intakes, which combined in a diet, would optimize human health. Local interpretation and adaptation of the universally-applicable planetary health diet is necessary and should reflect the culture, geography and demography of the population and individuals.

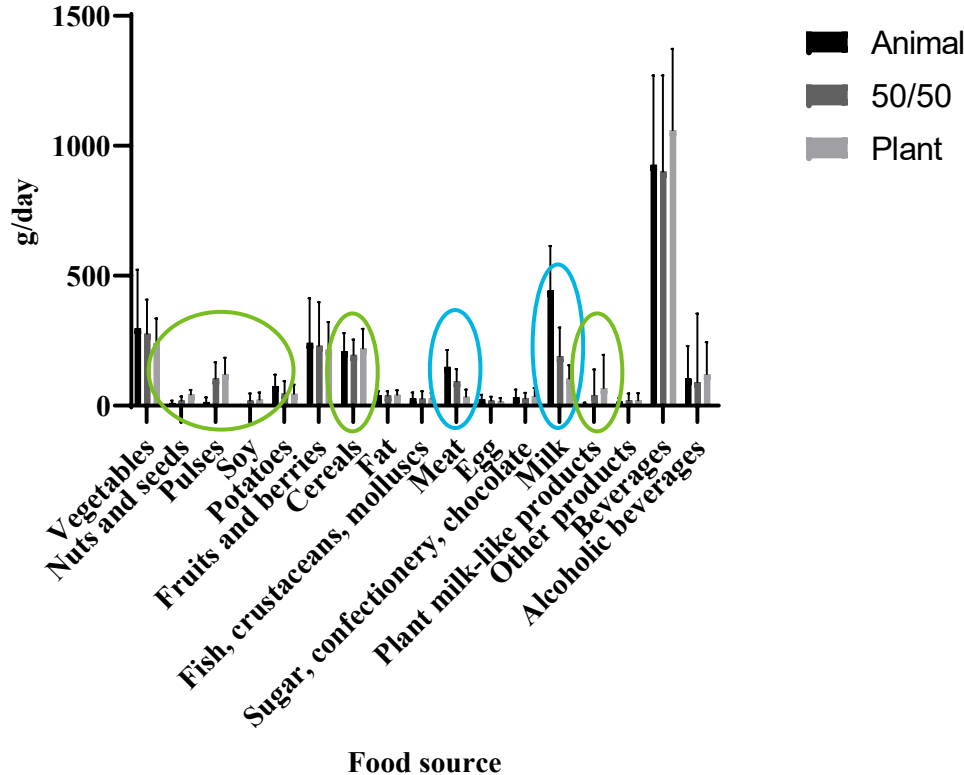
Source: EAT-Lancet report

The intervention diets



- Realised diets
- Guided food choices
- Change in proteins
- Animal proteins
 - Diet 2 about -30%
 - Diet 3 about -60%
- Little flexibility in diets
 - e.g. adaptation to own energy needs

Consumption of food ingredients

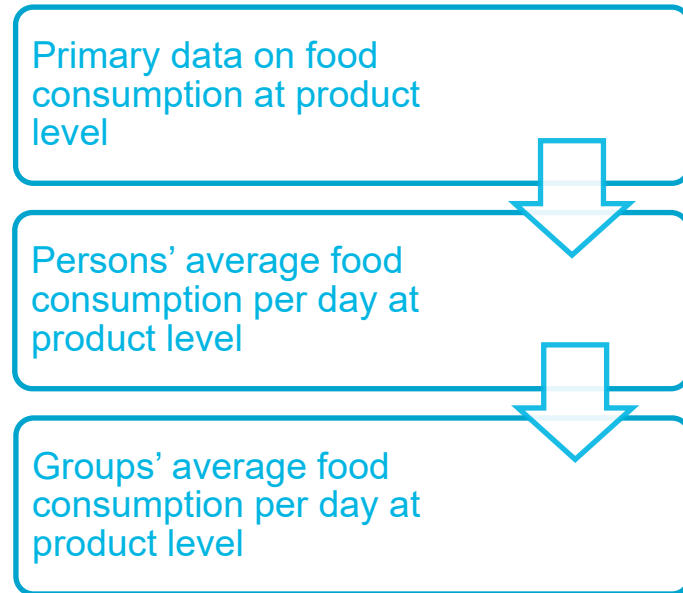


➤ Consumption of meat and dairy decreased as planned

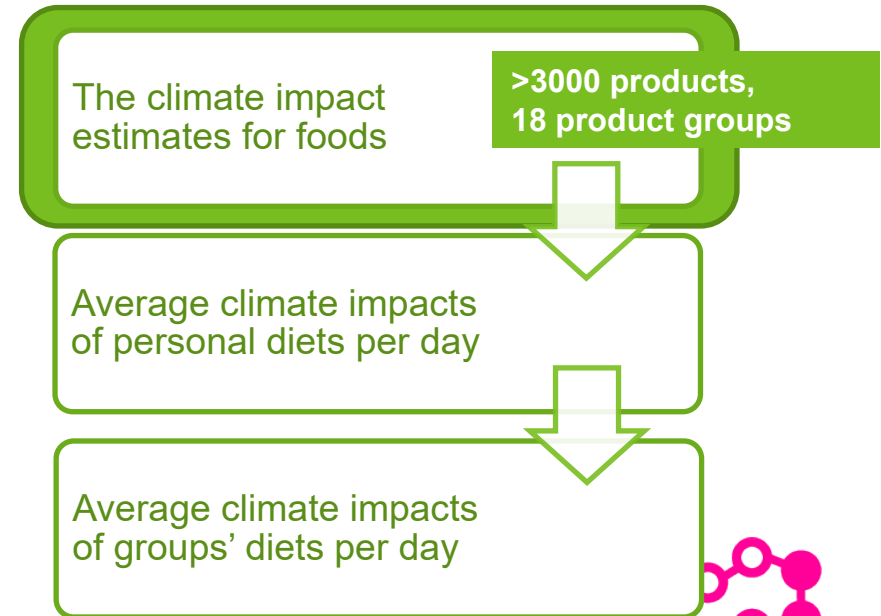
➤ Consumption of plant-based protein sources and plant milk-like products increased as planned

The climate impact assessment

Average diets of intervention groups:

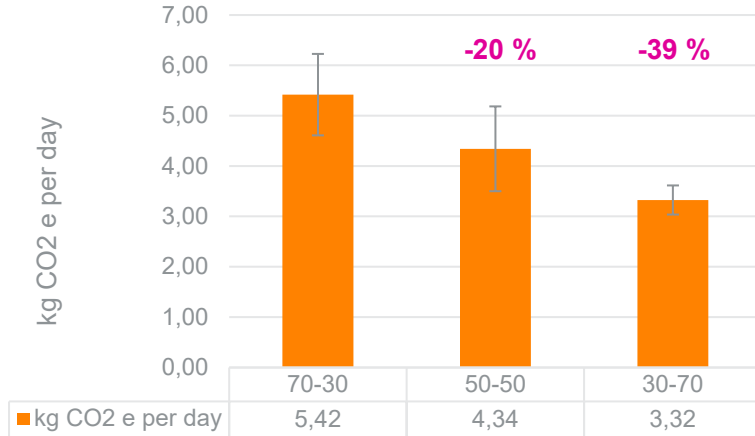


The climate impact of the diets:

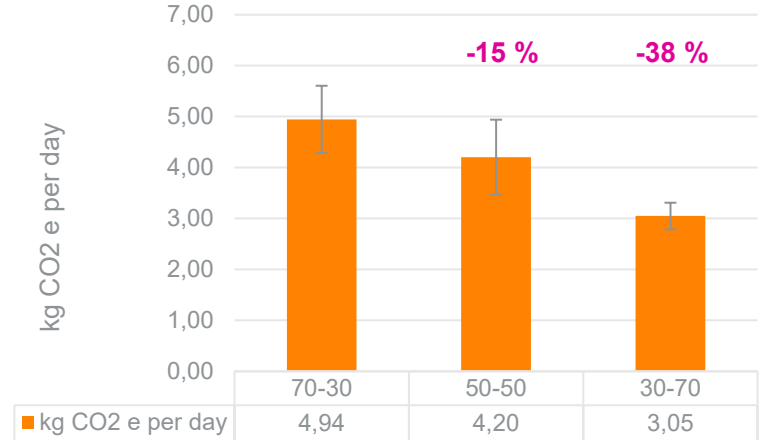


The climate impacts of the intervention diets

An average climate impact of the diets of intervention groups, kg CO₂ e per day



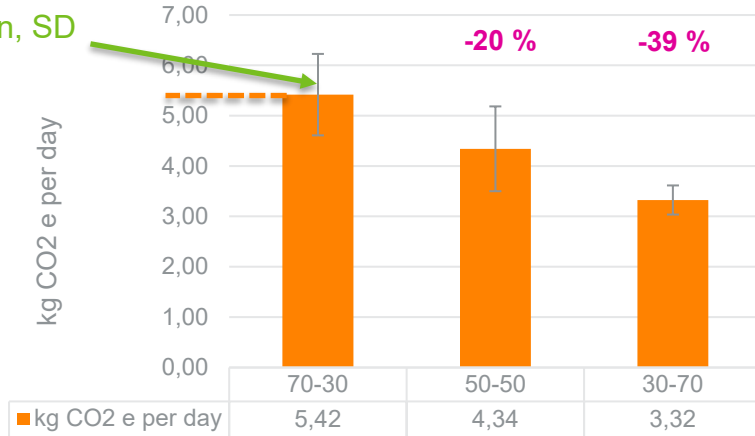
An average climate impact of the energy adjusted diets of intervention groups (2 000 kcal), kg CO₂ e per day



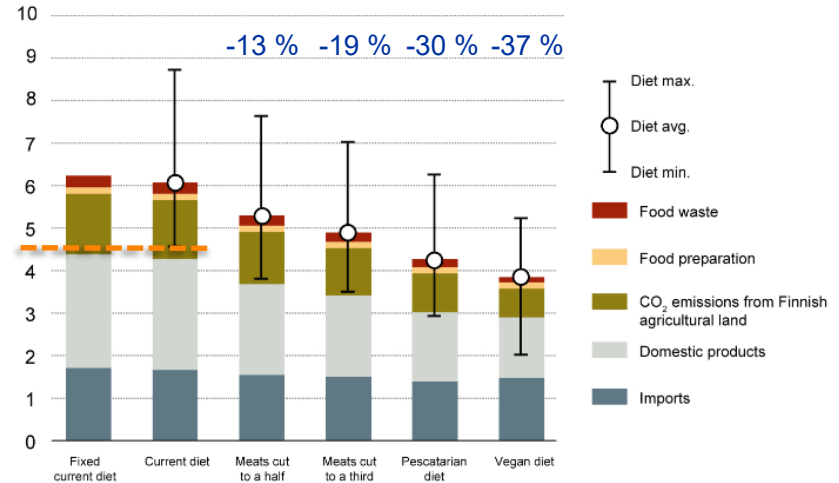
The climate impacts of the intervention diets

An average climate impact of the diets of intervention groups, kg CO₂-ekv per päivä

Variation, SD



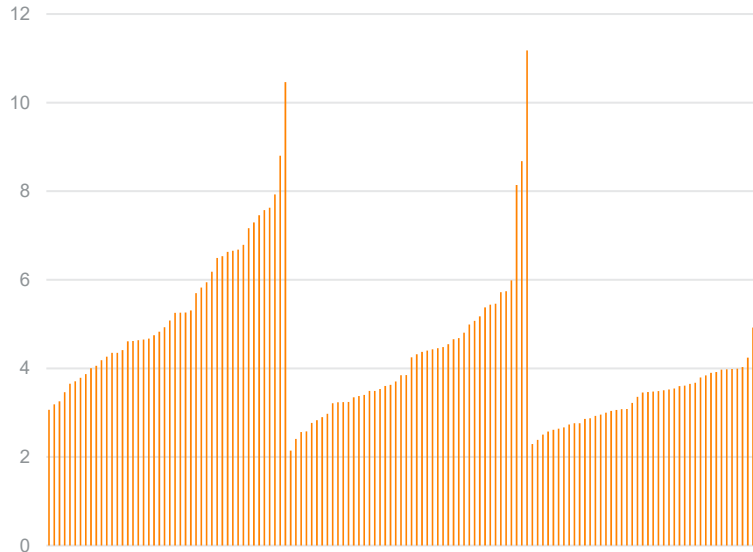
- The result (more or less) supports the findings from previous modelled Finnish study



Source: Saarinen et al. 2019

The internal variation of the climate impact of diet in the intervention groups was very large

Average climate impacts of personal diets,
kg CO₂ e per day

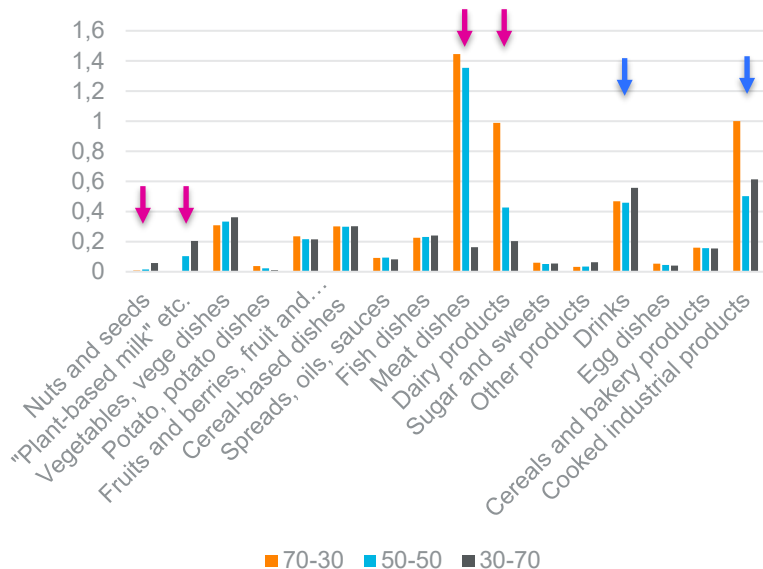


- There were climate-friendly diets in all intervention groups
- The lowest and the highest climate impact were in group 2
- Analysis of reasons is still ongoing

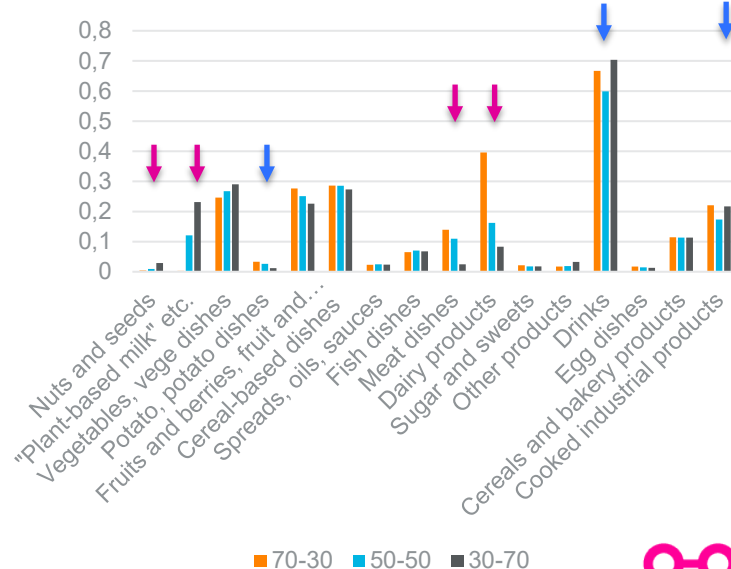
Kg CO ₂ e/day	5,42	4,34	3,32
SD	1,62	1,68	0,58
Max	10,46	11,18	4,92
Min	3,07	2,14	2,29

Product group perspective

The climate impact of product groups, kg CO2 e per day



Daily consumption of product groups, kg per day

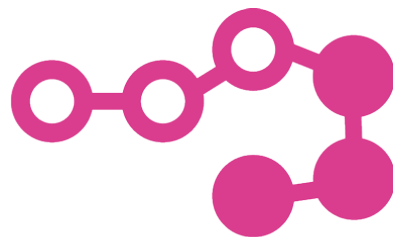


Highlights

- There were real, statistically significant differences between the climate impacts of the intervention groups
- When meat and milk protein is replaced by plant-based proteins, the climate impact is “nicely reduced”
- In the context of Finnish diet, climate benefits are achieved to a reasonable extent already through moderate changes, which are also well tolerated and become health benefits.

- The variation within the group is surprisingly large, the reasons for which still need to be investigated more carefully
- In further research, the results should be considered more in detail in relation to nutritional results





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Thank you!

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