SUSFOOD

Towards sustainable diets in Europe

Presentation of the SUSDIET Project

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The SUSDIET consortium was composed of 14 research teams from 8 European countries (**Finland, France, Germany, Italy, Norway, Spain, Sweden and UK**)

The approach was multi-disciplinary, encompassing researchers in **consumer studies, environmental sciences, economics, nutrition, and public health**

- INRA-ALISS – France
- Universita di Bologna – Italy
- Università Cattolica del Sacro Cuore – Italy
- CREDA-UPC-IRTA Barcelona – Spain
- LUKE – Finland
- Norwegian University of Life Sciences – Norway
- Swedish University of Agricultural Sciences – Sweden
- UMR NORT, INRA1260, France and MS-Nutrition Marseille, France
- UMR TSE-INRA, Toulouse – France
- INRA UMR Economie Publique Paris – France
- INRA UMR Gael Grenoble – France
- Thünen Institute – Germany
- SRUC – United Kingdom
- University of Oxford – United Kingdom

Initial motivations

A broad agreement that current consumption patterns in developed countries are unsustainable in the sense that they raise multi-dimensional problems:

• **Health**: relationships between food consumption and the prevalence of some chronic diseases clearly established

• **Environment**: the food sector contributes to climate change through high greenhouse gas emissions (GHGE)

• **Economic/Social**: strong disparities between social groups

FAO recommended to set up policies favoring the promotion of more **sustainable diets** allowing to improve environmental, health, economic and social impacts of food consumption

Objectives

(1) Generate new insights into the sustainability of current and alternative diets in Europe (health, environment, economic)

• Where do we stand as regards sustainable diets in Europe? Which are the environmental and health impacts of diets currently observed in different European countries?

• What impact on health, environment and consumer welfare may we expect from changes in dietary patterns? Which dietary changes to promote? Are they similar across Europe?

Objectives

(2) Better identify major barriers preventing consumers from making sustainable dietary choices

- To what extent do consumers take into account the sustainability issues in their decisions?
- To what extent are consumers ready (willing) to make (and pay more for) sustainable food choices?

Objectives

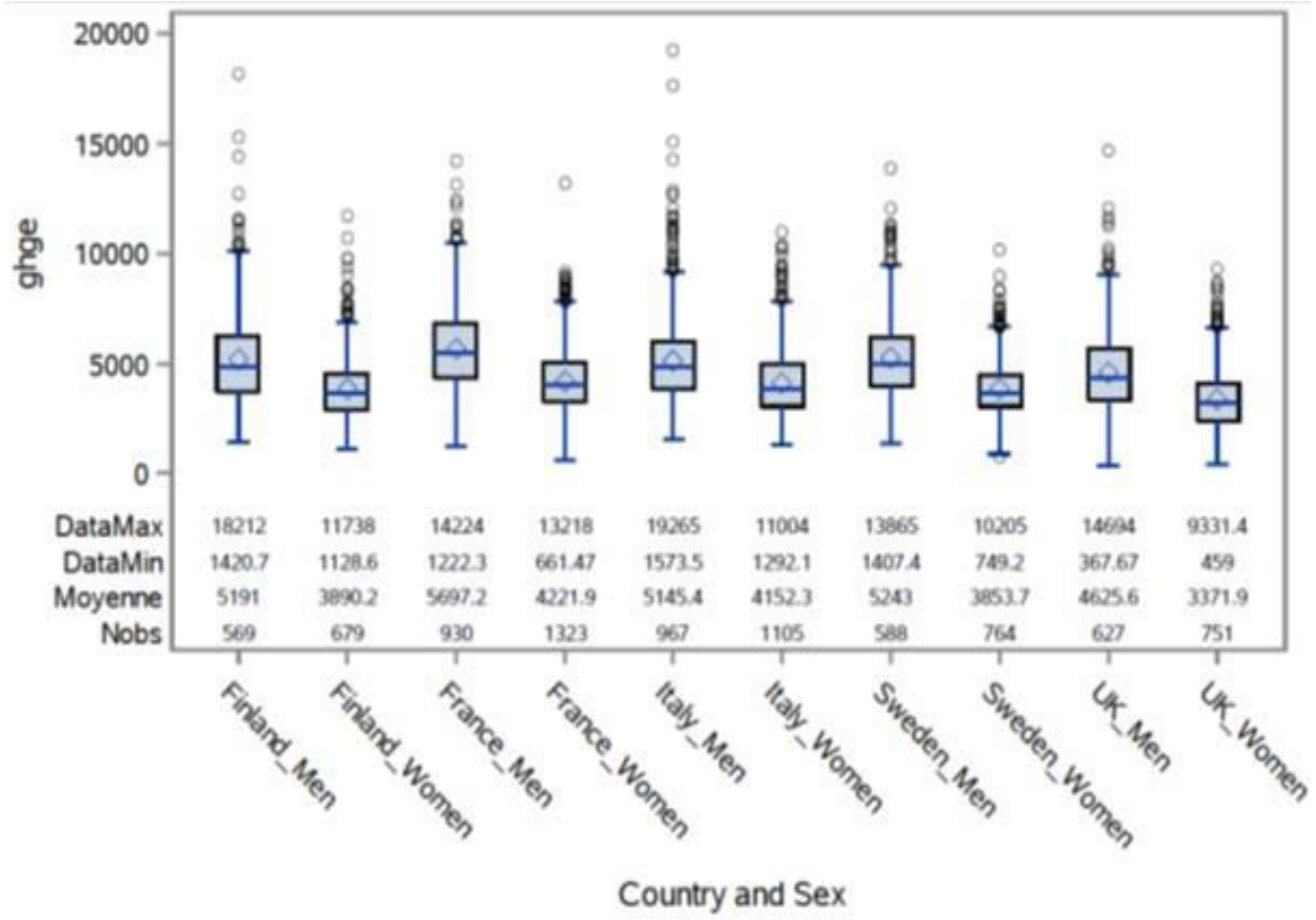
(3) Analyse to what extent policy instruments may influence consumers' decisions towards choosing more sustainable diets

Two main public policies were considered:

- Policies supporting better choices through **information campaigns and food labelling**

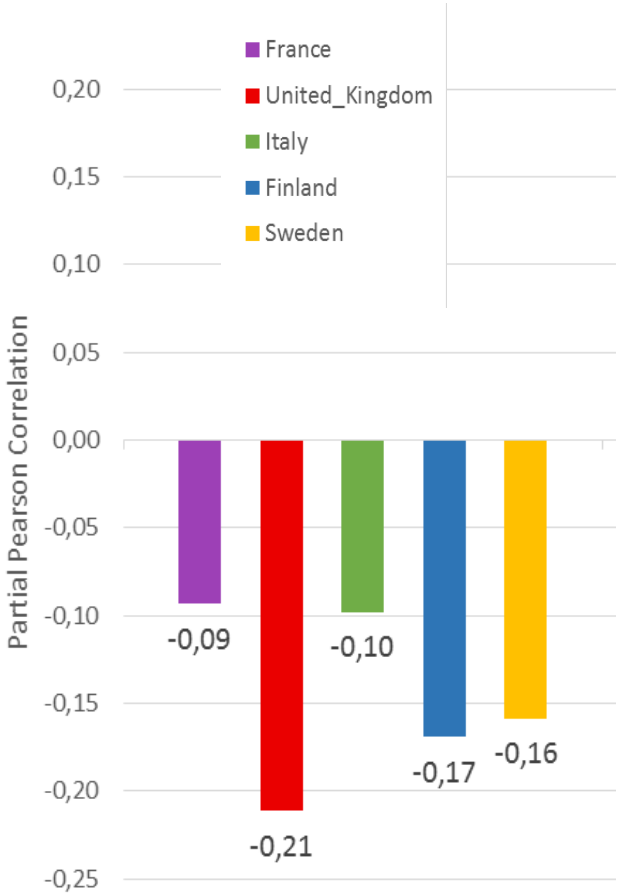
- Policies aiming at changing the market environment, mainly through **fiscal policies**

Green-House Gas Emissions associated to individual diets (CO2 eq.Kg/day)



- Mean CO2e: 4.6-5.7 kg/cap/day for men, 3.4-4.2 kg/cap/day for women
- Wide within-population heterogeneity

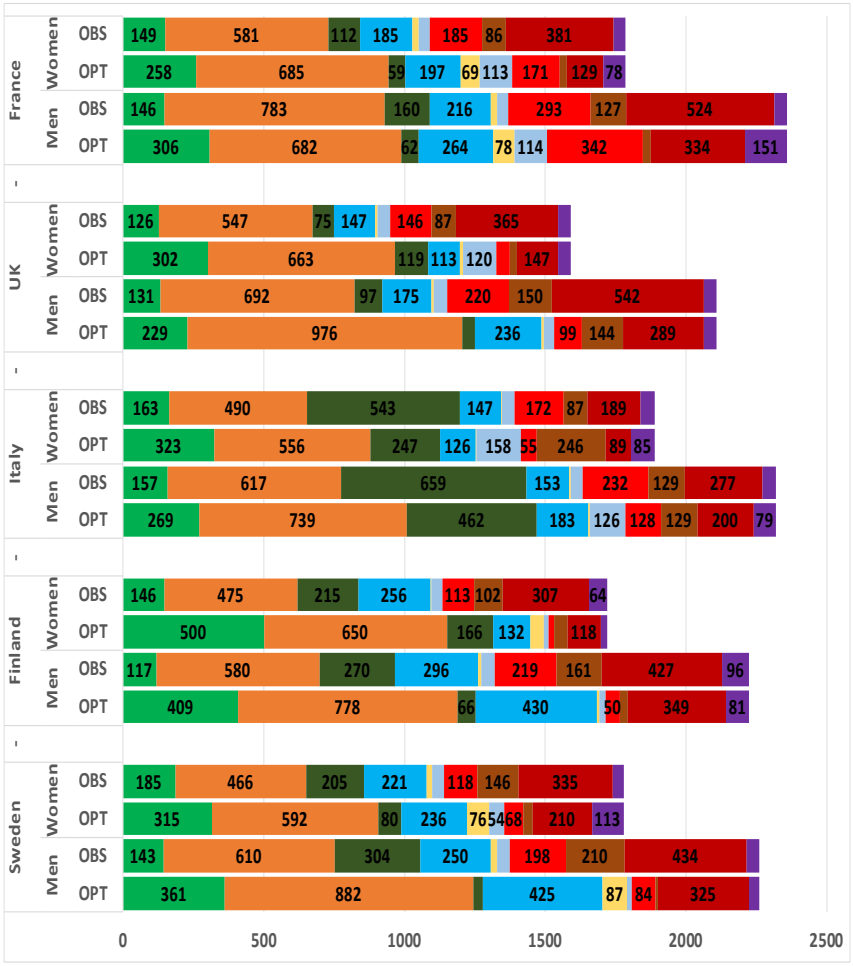
GHGE vs Diet Quality in Self-Selected Diets



Pearsons correlations between energy density of the diet and GHGEs (reprentative samples in each country)

- Higher nutritional quality of diets may be associated with greater environmental impact
- Reduction in meat consumption and energy = main factors for reducing diet-related GHGE
- But the choice of meat replacement foods is crucial, with some foods possibly leading to an increase in GHGEs

Complying with nutritional guidelines and decreasing GHGEs by 30%



- Achieving nutritional adequacy with a 30% reduction in GHG emissions would impose **significant modifications in dietary patterns**…

…but it is possible without suppressing any aggregated food group.

- The **variability of current dietary patterns and consumers' preferences across countries** may require to adapt dietary recommendations according to national contexts.

Consumer and information

• Overall, most consumers are open to sustainability issues but for many of them, there is **a short-term loss of welfare associated with the adoption of more sustainable behaviors**.

• Labels generally **increase consumers' awareness, but do not always affect food choices.** Labels have greater (albeit modest) impacts **if they are very simple (FOP colored logos)**

• Information campaigns (e.g. 5-a-day) have **small but positive impacts on public health and environment. In addition, they are cost-effective**

Tax policies assessment

• Consumers respond to prices but **demand relationships are specific to each country**.

• Overall, **carbon taxes on food products would have modest impacts on GHGE** (-5 to -15% depending on the tax rate)

• **The potential effects vary across countries**.

• Carbon taxes on food products **would not damage the nutritional quality of consumers' diets.**

Newsletters, list of publications and final report are available on the project website:

https://www6.inra.fr/sustainablediets

Thank you for your attention

Carbon taxes: scenarios

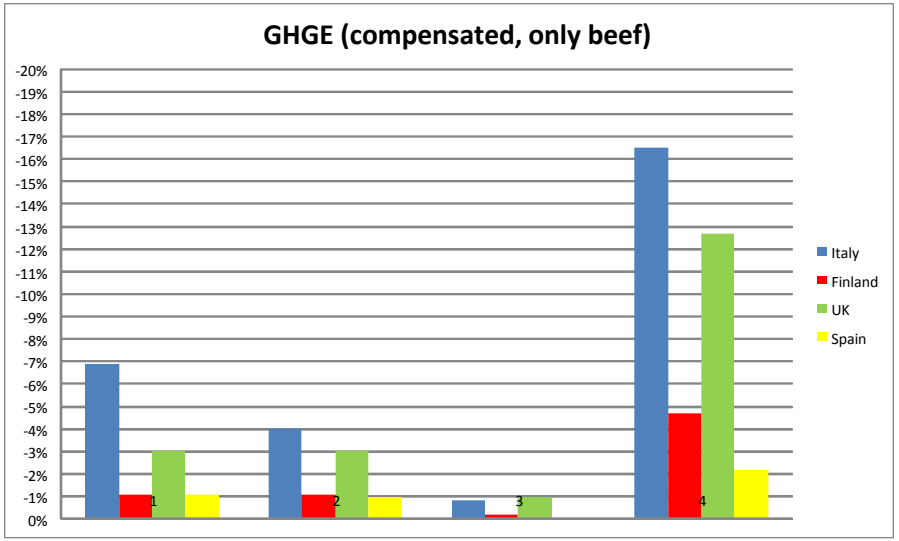
Table 1. Taxation scheme scenarios

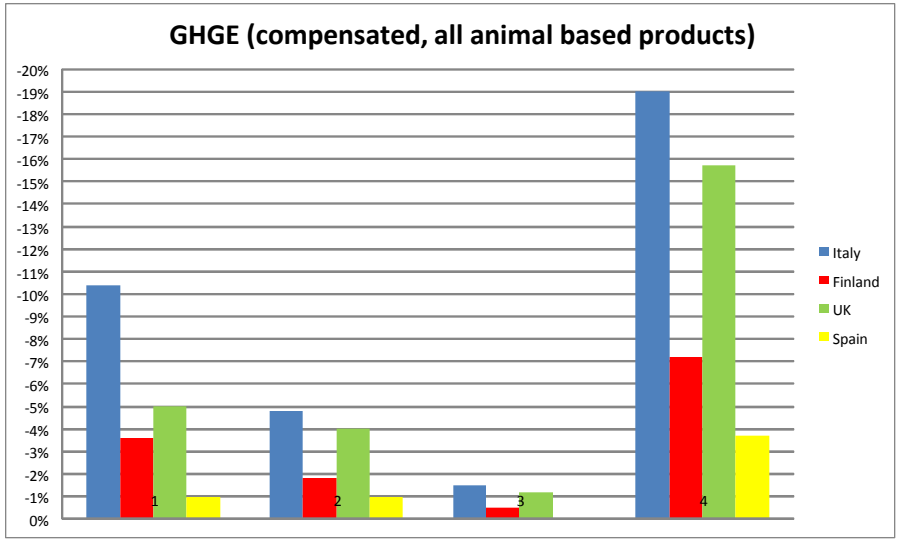
Scheme	Scenario	Food Categories	Ad-valorem rate	Social cost of CO2
1	Compensated/ Uncompensated	Beef and Veal	20%	0.05/0.015/0.2
2	Compensated/ Uncompensated	Beef and veal, pork and processed meat, poultry and eggs	20%	0.05/0.015/0.2
3	Compensated/ Uncompensated	All animal-based products	20%	0.05/0.015/0.2
4	Uncompensated only	All food products	From 5 to50%	-

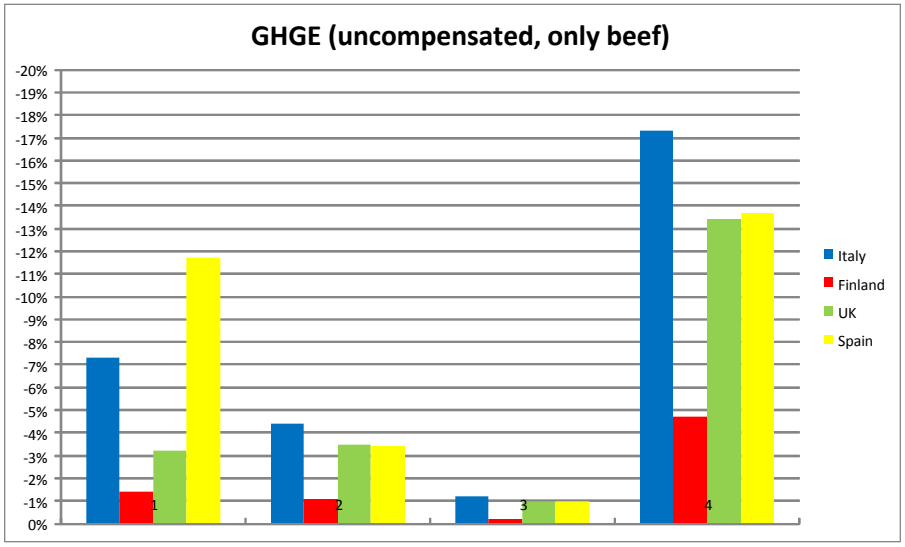
Note: The social costs of CO2 are expressed in € per Kg CO2-eq

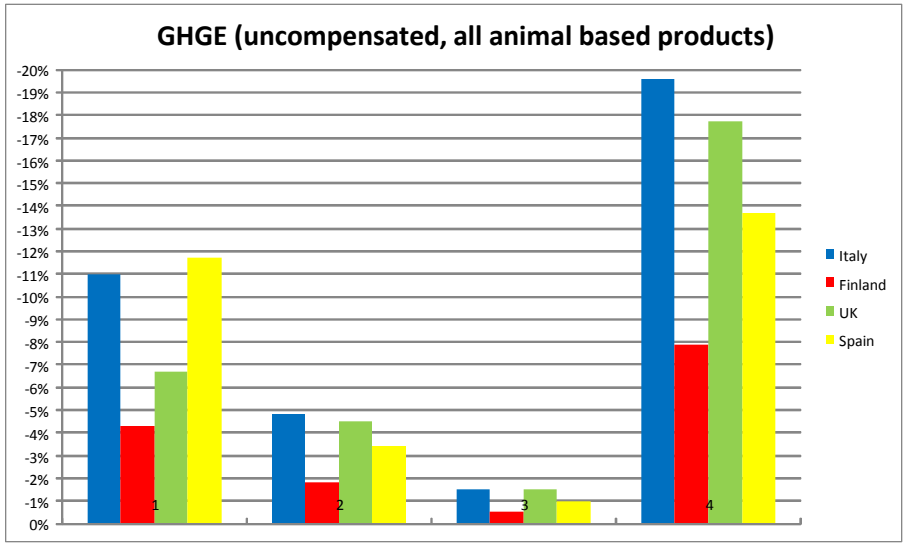
a) 0.05€ per Kg CO2-eq represents the EU medium term projection of carbon price;
b) 0.015€ per Kg CO2-eq corresponds to the current average Emission Trading System (ETS) price;
c) 0.2€ per Kg CO2-eq which reflects the long-term EU projection of carbon price

Carbon taxes: GHG emissions



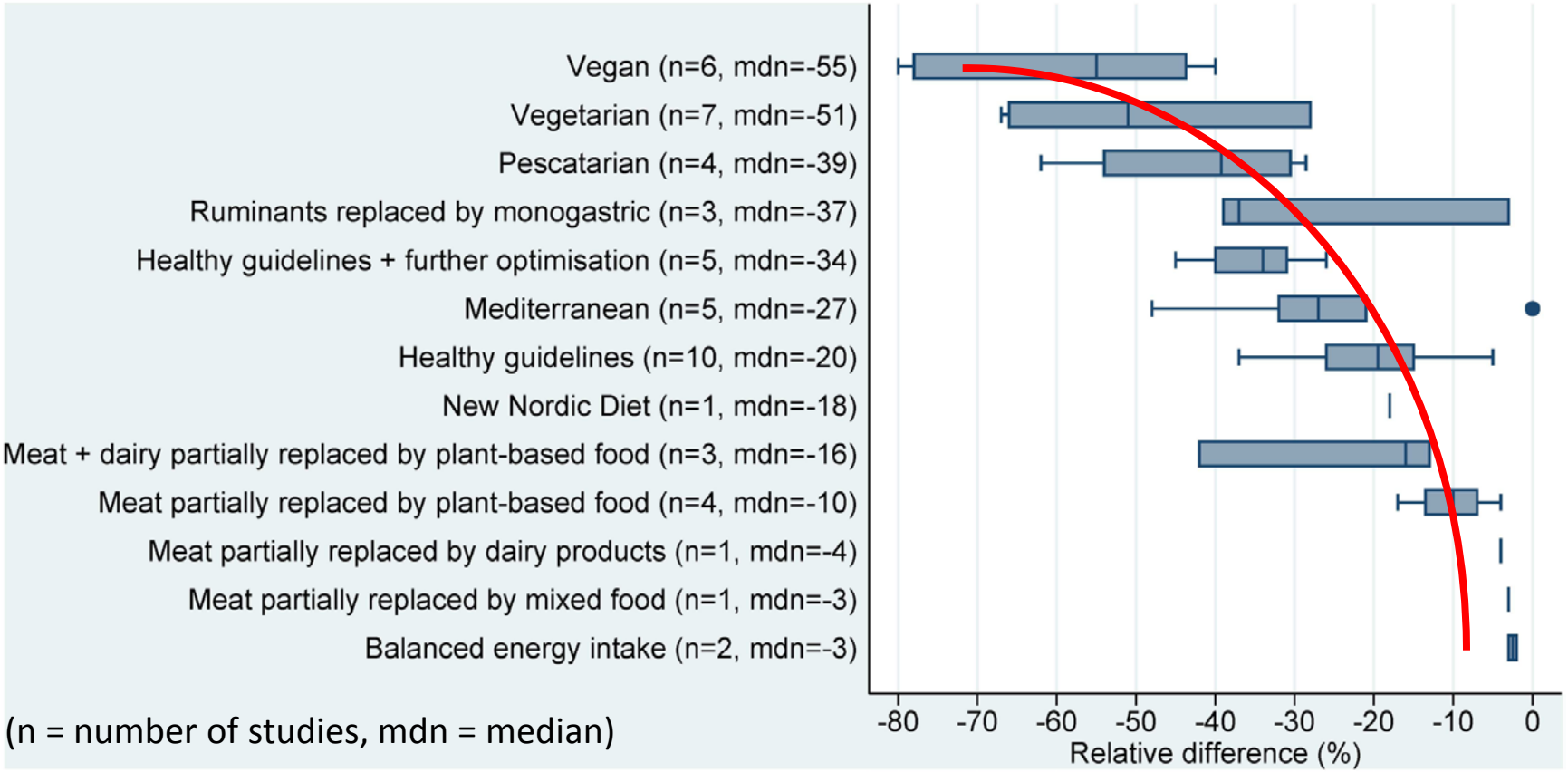






Relative differences in land use (m2/capita/year) between current average diets and sustainable dietary patterns

(Source: Aleksandrowicz et al., 2016)



(n = number of studies, mdn = median)

Mean greenhouse gas emissions by type of diet (per 2.000 kcal)

(Source: Scarborough et al. 2014)

	Adjusted for age and sex	
	Mean dietary GHG emissions (kgCO2e)	95 % CIs
High meat-eaters (≥100 g/day)	7.19	(7.16, 7.22)
Medium meat-eaters (50–99 g/day)	5.63	(5.61, 5.65)
Low meat-eaters (<50 g/day)	4.67	(4.65, 4.70)
Fish-eaters	3.91	(3.88, 3.94)
Vegetarians	3.81	(3.79, 3.83)
Vegans	2.89	(2.83, 2.94)