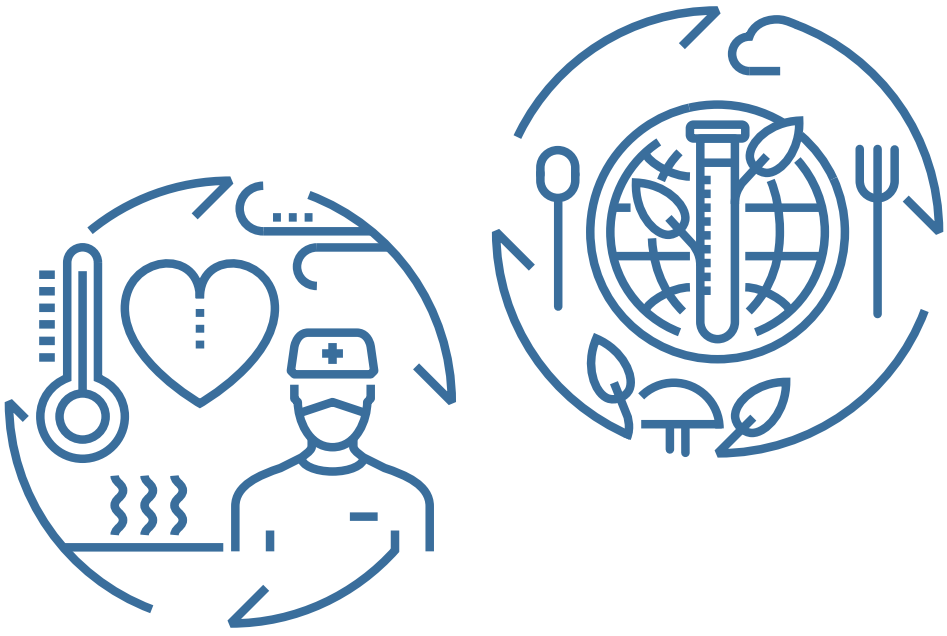
26/6/2023

CLC Statement to the European Commission

Co-benefits of healthy food on public health and climate

– drastic actions needed to promote sustainable dietary choices



CLIMATE LEADERSHIP COALITION

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Additional information:

Just Food project www.justfood.fi/en-US/
Leg4Life project www.leg4life.fi/en/project-info/

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1 Executive summary and recommendations

All food system activities together, including the production, processing, transportation, preparation, marketing, consumption, and wasting of food, form a third of global greenhouse gas emissions, with animal-based foods dominating the impact. At the same time, unbalanced diets – in particular, high consumption of red and processed meat and low consumption of plant-based foods – are causing major health problems. Billions of dollars are spent annually on marketing unhealthy foods that are high in calories, fats, sugars, and salt. A shift in diets where healthier, plant-based products are produced, marketed, and consumed would have great potential to simultaneously mitigate climate change and improve public health.

In this paper, a group of scientists from the *Finnish Institute for Health and Welfare (THL)*, the *University of Helsinki*, and the *Finnish Environment Institute (SYKE)*, at the request of CLC, present their recommendations of the actions required to move towards a more environmentally friendly and healthy food system. These recommendations provide guidelines for the development of legislation towards a more environmentally friendly and healthy food system. This shift is essential for climate change mitigation and the well-being of societies.

Recommendations:

- Re-direct incentives towards food that promotes both public health and climate change mitigation (e.g. plant proteins and plant-based food)
- Direct public and private investments to support the building of novel, sustainable and health-promoting value chains in food systems
- Scrap environmentally unsustainable agricultural subsidies whilst simultaneously supporting primary producers in the transition
- Ensure that food procurement criteria for food services (e.g. school and other catering) include and prioritise health and sustainability
- Standardise health and environmental labelling of food products

2 Scope of the problem

Climate impacts of food production

The United Nations Intergovernmental Panel on Climate Change (IPCC) has recently expressed a serious concern about the looming environmental crisis that is generating a "code red for humanity" and requires drastic actions (IPCC 2022). The entire food system is one of the key factors related to this crisis. All food system activities together, including the production, processing, transportation, preparation, marketing, consumption, and wasting of food form a third of global greenhouse gas (GHG) emissions (Crippa et al., 2021). Animal-based foods dominate the impact on high GHG emissions, cropland use and nitrogen and phosphorus application (Hallström et al., 2022). The environmental impacts of food are mostly related to the production of red meat, dairy, fresh fruit and coffee. A shift in diets where more plant-based products are produced and consumed would have great potential to mitigate the impact of GHG emissions from food systems (IPCC 2019, Figure 1).

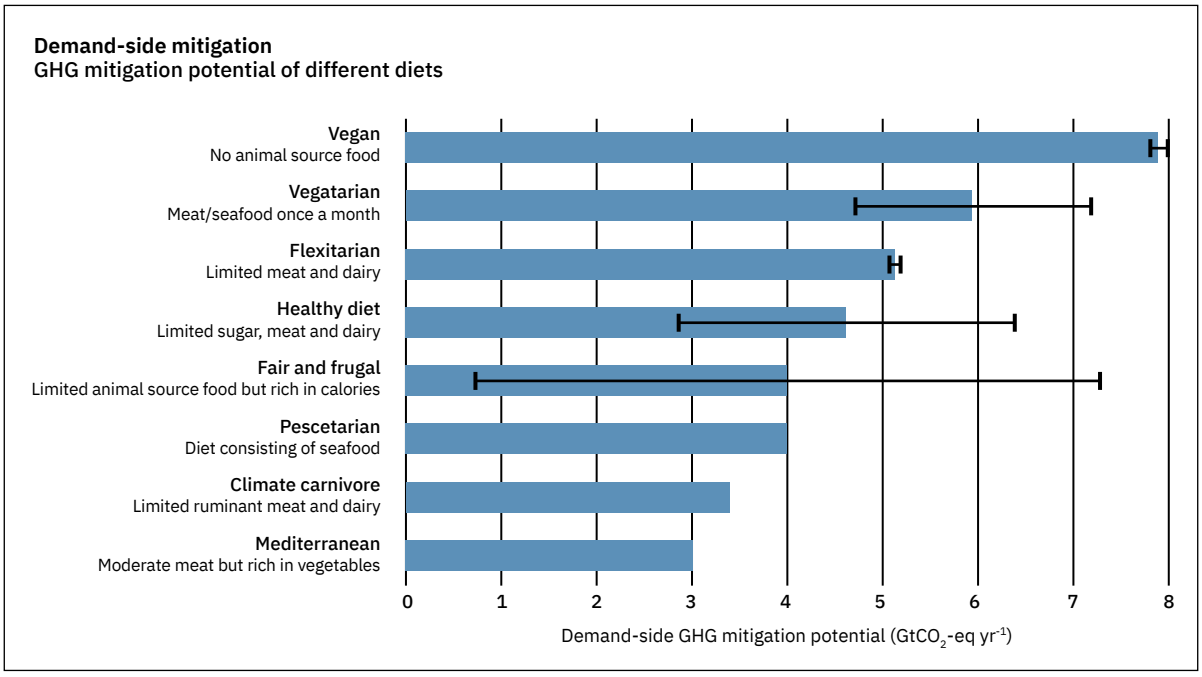

Figure 1. Technical mitigation potential of changing diets by 2050 according to a range of scenarios examined in the literature. *Figure from: IPCC Climate Change and Land 2019. Chapter 5, page 488.*

Food and health impacts

At the same time, unhealthy diets, particularly high consumption of red and processed meat and low consumption of plant-based foods, are causing major health problems (Yip et al. 2018, Willett et al. 2019). Dietary recommendations generally serve as guidelines for promoting healthy growth and development, achieving necessary nutrient intakes, and preventing non-communicable diseases. Nowadays, sustainability and planetary boundaries are increasingly taken into consideration in these recommendations, such as the updated Nordic Nutrition Recommendations published in June 2023. Increasing plant-based protein intake (such as legumes and whole grains) and decreasing animal-based protein intake (especially

red and processed meat and dairy) are also at the core of the planetary health diet (PHD) launched by the EAT-Lancet Commission (Willett et al., 2019). In Finland, for example, in 2017 only 14% of men and 22% of women achieved the food-based dietary guideline for vegetables, fruit, and berries (at least 500 g a day), and 79% of men and 26% of women consumed more red and processed meat than recommended (recommendation no more than 500 g a week) (Valsta et al., 2018). Thus, in some respects, we are still far away from meeting dietary recommendations, let alone the recommendations of the PHD, which has even tighter targets.

Type 2 diabetes, cardiovascular diseases, respiratory diseases, and cancers are responsible for 71% of global deaths (41 million) each year (Branca et al., 2019). An unhealthy diet, as defined by a cluster of dietary risks, is the leading cause of death, and the first or second biggest contributor to the non-communicable disease (NCD) burden in all six World Health Organization (WHO) regions. The unhealthiest diets are those which are high in salt, low in whole grains, fruits, nuts and seeds or vegetables. Meat consumption alone has been associated with the burden of several diseases such as type 2 diabetes, cardiovascular disease, and cancer (Yip et al., 2018). Additionally, a high body mass index is strongly associated with the disease outcomes. As well as human loss and suffering, diet-related NCDs and malnutrition pose a substantial economic burden. In 2021, for example, the global health expenditure of diabetes was 966 billion dollars (International Diabetes Federation, 2022), and is expected to increase over the decades to come. Furthermore, the overall economic impact of cancer in Europe is estimated to exceed 100 billion euros annually (European Commission, 2022). In all, about 40% of cancer cases in the EU are preventable, and prevention is also the most cost-efficient long-term cancer control strategy. Health promotion and disease prevention, in general, should be major emerging themes in health care. In 2018, on average in the EU, public and private expenditure on preventive care accounted for 2.8% of total health expenditure (Eurostat, 2021). At the same time, billions of euros are spent annually on marketing foods high in calories, fats, sugars, and salt (O'Dowd, 2017), particularly to children (Escalon et al., 2021).

Good availability of food and changes in dietary habits have also led to food overconsumption and food waste. Overconsumption, when energy intake exceeds energy expenditure, contributes to the global overweight and obesity problem. According to WHO global estimates, approximately two billion adults are overweight, and 650 million of them are obese (WHO, 2016). In Finland, 72% of men and 63% of women are at least overweight, and a quarter of them are obese (Koponen et al., 2018). Additionally, overconsumption unnecessarily consumes natural resources and harms the environment (Toti et al., 2019). Metabolic Food Waste (MFW, kg of food) corresponds to the amount of food leading to excess body fat and its impact on the environment, expressed as carbon, water, and land footprint. The global impact of MFW associated with overweight and obesity in the world is 141 million tonnes of food. Of the seven regions included, Europe was responsible for the highest amount of MFW (39 million tonnes) followed by North America and Oceania (33 million tonnes), and Latin America (20 million tonnes).

Possibilities to reduce adverse health and environmental impacts of food

It has been estimated that a 20-25% reduction in premature mortality could be reached in 2030 in all Nordic countries if the Nordic dietary recommendations (Nordic Council of Ministers, 2014), or planetary healthy diet targets (Willett et al., 2019), were achieved. The shift to the Nordic dietary recommendations would already cover a large part of the mortality

reduction (Figure 2), also saving a considerable amount in health care costs and decreasing environmental impacts. Furthermore, recent modelling studies on the population level have shown that even a partial replacement of red and processed meat with legumes would improve the intake of several nutrients without having a marked decrease in protein intake (Kaartinen et al., 2022). Moreover, these substitutions would not result in a higher probability of inadequate intakes of essential nutrients. The emission reduction potentials from achieving different diets are indicated in Figure 1. Adherence to the current dietary recommendations may thus bring marked benefits to diet, public health, and the environment (Kaartinen et al., 2022). While Nordic dietary recommendations might not be directly applicable to all European countries, since local agricultural and food culture aspects need to be considered, a shift towards more plant-based diets is scientifically proven to be good for health and the environment. In addition, localised food systems and seasonal production-consumption habits have higher potential for nutrient cycling, resulting in a reduced need for storage and transportation. These would also provide a better demand-supply balance leading to waste reduction (Jurgilevich et al., 2016). Besides making a dietary shift in human diets, significant environmental and food security benefits can be achieved by making changes in production animals' diets. Replacing food-competing feedstuffs (e.g. cereals) with food industry by-products and residues in animal diets, for example, would increase the global food supply by up to 13% in terms of energy, contributing to increased food security and circularity of food systems (Sandström et al., 2022).

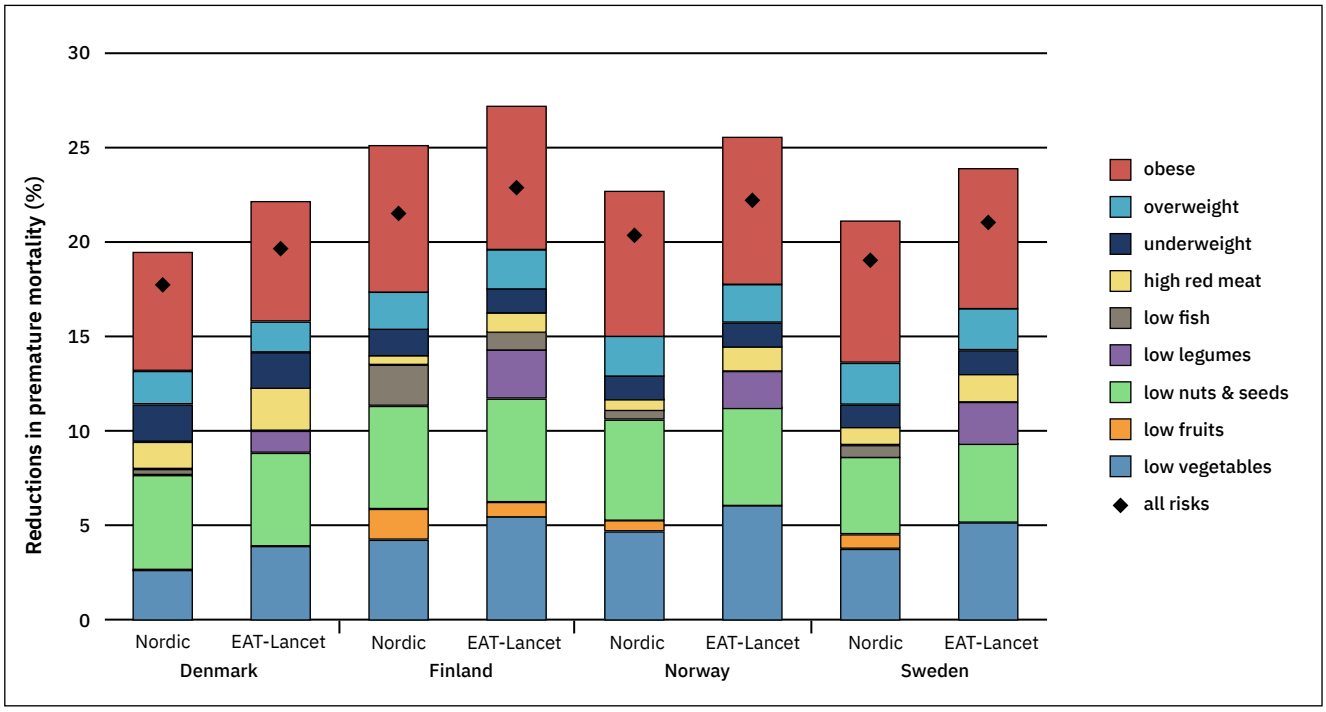

Figure 2. Reductions in premature mortality in 2030 from shifts to Nordic dietary recommendations (Nordic) or the EAT-*Lancet* dietary targets (EAT-*Lancet*). *Figure from: Wood et al. 2019.*

These examples indicate that a comprehensive transition of the food system and dietary changes to promote public health and support climate change mitigation are urgently needed. This requires several action points from several stakeholders and transdisciplinary policy-making. However, currently there are no fully integrated international or EU-level plans to support efforts towards these synergistic benefits.

3 Actors to enable the transition to a sustainable food system

Policy-makers have an essential role in promoting policies to ensure the transition to sustainable and healthy diets and that the business is profitable for primary producers (Kaljonen et al., 2022; Kaljonen et al., 2021). For example, legumes as niche crops have not received a comparable investment in crop improvement to the investment given to cereals and oilseeds, so their yields remain low and variable, and many farmers find them unprofitable (Magrini et al., 2016). While scientists and plant breeders work to develop better cultivars and agronomic production systems, investments in the food sector need to be reallocated. In addition, the food industry is in a key position to facilitate the transition by providing innovative, tasty, and sustainable food products. The global market for plant-based proteins is estimated to grow 10% annually in the 2020s, which indicates there are good possibilities for new businesses and economic growth related to the sustainability transformation of the food system.

Ensuring the transition to a sustainable food system requires:

- Public and private investments to be re-incentivised to support the building of novel sustainable value chains in food systems (policy-makers)
- Environmentally unsustainable agricultural subsidies to be scrapped whilst simultaneously supporting primary producers in the transition (policy-makers)
- Increased investments and innovations from the food industry (food industry)
- Increased collaboration between plant and animal production leading to more sustainable nutrient circulation and increased cultivation of carbon-fixing perennial grass species also on crop farms (farmers)
- Facilitation of new, more sustainable farming methods that take farmers' needs into consideration (scientists and plant breeders)
- Support of agricultural advisory services and training of advisors (scientists and policy-makers)
- Research to gain adequate knowledge about the possibilities and risks of increasing the use of food industry by-products in animal diets to decrease food-feed competition between humans and production animals (scientists, farmers, food industry)

4 Supporting consumers in the transition towards sustainable and healthy diet

Decisive action must be taken to raise awareness among health care professionals and consumers and change behaviour towards healthy and sustainable diets. In addition to traditional educational means, e.g. via healthcare, day-care and school professionals, businesses could take more responsibility in their role to provide consumers with more sustainable food choices, by nudging, for example (Kaljonen et al., 2022). However, several actions need to be considered as the same nudges may not work for men and women or in different population groups where habits, preferences, and attitudes towards foods, central to the transition, may diverge (Sares-Jäske et al., 2022, Valsta et al., 2022). By highlighting that even small steps matter in the shift towards healthier and more sustainable dietary habits, we can prevent consumers from potentially feeling as though the transition is too arduous. At the same time, the benefits of the shift to consumers should be emphasised. In addition, new policies are needed at the consumer end of the food system, while it must be ensured that the transition does not economically strain disadvantaged population groups.

Possible ways to support consumers include:

- Increasing knowledge among consumers and encouraging them via health care professionals to make healthy and environmentally more sustainable choices
- Reducing the price of healthy and sustainable foodstuffs
- Standardising health and environmental labelling of food products and meal choices in catering services
- Ensuring that food procurement criteria of food services include health and sustainability
- Re-thinking the selection of sustainable products in supermarkets and re-placing these products. Ensuring clear shelf markings regarding the sustainability of the products in supermarkets
- Digital services for consumers, e.g., displaying information about the carbon footprint of purchased products
- Increasing food education and developing healthy sustainable meals in day-care, schools, and other public and private food catering services
- Raising consumers' knowledge on the benefits of avoiding food waste

5 Concluding remarks

In this policy brief we highlighted the urgent need to improve public health, mitigate climate change, and support food security, and that this can be achieved through the comprehensive transition of the food system and with dietary changes. The suggestions and recommendations presented in this policy brief support the achievement of the European Green Deal goals. Part of the Green Deal is the Farm-to-Fork strategy, which aims to accelerate our transition to a sustainable food system. Food systems should: 1) have a neutral or positive environmental impact; 2) help mitigate climate change and adapt to its impacts and reverse the loss of biodiversity; 3) ensure food security, nutrition, and public health, making sure that everyone has access to sufficient, safe, nutritious, sustainable food; and 4) preserve the affordability of food while generating fairer economic returns, fostering competitiveness of the EU supply sector, and promoting fair trade (European Commission, 2020).

These suggestions are also in line with and would support the European protein strategy, which is currently being planned as a consequence of the sanctions imposed on Russia. These sanctions cause significant cumulative disruption of global agricultural, fisheries and aquaculture markets. In addition to the COVID-19 crisis, there have been significant input cost increases, particularly in relation to the grains and vegetable oil markets. This is due to Ukraine and Russia accounting for approximately 30% of world trade in wheat, 32% of barley, 17% of corn and over 50% of sunflower seed oil, 20% of sunflower seeds, and their role in fertiliser production chains. The planning of the European protein strategy calls on the Commission, in view of the protein crop deficiency, to propose a comprehensive European protein strategy to increase European protein production and reduce the EU's dependency on third countries in this regard (European Parliament, 2022).

In summary, food production causes one third of global greenhouse gas emissions and the potential to reduce these has been recognised. Diets rich in plant-based food products would help to reduce the climate burden of the food system whilst also improving public health. To gain these co-benefits, several stakeholders must act; scientists need to provide evidence-based information for policy makers so that new farming methods consider farmers' needs, improved integration of plant and animal production is required in order to lead to more sustainable food production, and environmentally unsustainable agricultural subsidies should be demobilised while primary producers are simultaneously supported in the transition. Consumers need to be supported in the dietary transition by health-care professionals, catering services, and businesses, e.g., food retailers. At the same time, continuous support for research to monitor the health and environmental consequences of the actions is needed. Only through joint efforts and actions in all sectors can the sustainability of the food system and better public health be achieved.

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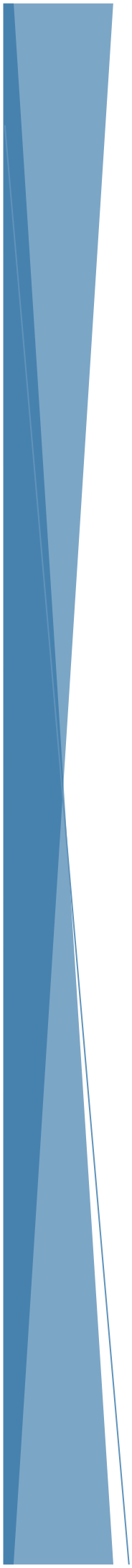

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