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Food System
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The Food System Economics Commission is an independent academic commission that equips political and economic decision makers with tools and evidence to shift food and land use systems.

POLICY BRIEF 4

The Dietary Shift

Eat as if it will save people, societies and the planet — because it will.

SUMMARY

Patterns of how and where people meet and eat have evolved to provide fast, cheap food that relies on a harmful transnational industrial food system. This trend has implications for health, resilience and agricultural sustainability. Dietary change is crucial to reverse the global impact on health, longevity, and the environment. FSEC modelling emphasizes that fostering a healthy food environment is biophysically feasible and the most powerful strategy to improve human and planetary well-being.

BACKGROUND

Ensuring everyone has access to a healthy diet is one of the most crucial ways to reduce risk of long-term illness and premature death, with diet-related illnesses claiming 8 million lives annually and constituting about 13% of global DALYs in 2019.¹ Dietary decisions not only impact individual health but also have far-reaching implications for the planet. The major drivers of unhealthy consumption vary in intensity across and within countries. However, common factors include food environments with low availability, affordability and convenience of healthy food, pervasive marketing of unhealthy foods, problematic food environments and behaviors -- many of which are not controllable by individuals -- that lead to excessive consumption, and low knowledge/awareness of food content and risks in some populations.

Unhealthy diets take various forms, from nutrient-poor diets causing hunger and micronutrient deficiencies, particularly affecting populations in lower-income countries, to those high in fats, sugars, and salt and low in wholegrains, fruit and vegetables which lead to non-communicable diseases affecting people worldwide.

The hidden costs of diet-related non-communicable diseases currently amount to USD 11 trillion in lost productivity, while obesity-related medical costs are expected to reach USD 3 trillion by 2030. The costs of undernutrition add another USD 3 trillion according to the World Bank.

In addition to these impacts, prevailing dietary patterns drive land use expansion. While animal-sourced products constitute a relatively modest albeit important share of total calorie and protein intake, they occupy over 80% of accessible agricultural land. Ruminant-derived products significantly contribute to GHG emissions and environmental degradation, surpassing the impact of plant-based products. Production of resource-intensive foods — which predominate many diets, especially in high-income regions — contributes to a third of global greenhouse gas (GHG) emissions, with consumption alone accounting for 18% of CO₂ equivalent emissions in 2019. Increasing demand for animal-sourced foods requires more agricultural land, often expanding into critical ecosystems and resulting in habitat destruction and deforestation. This, in turn, exacerbates further loss of biodiversity and soil degradation. In addition, 70% of available freshwater and over one third of earth's landmass is used by the agriculture sector.

KEY FINDINGS AND RECOMMENDATIONS

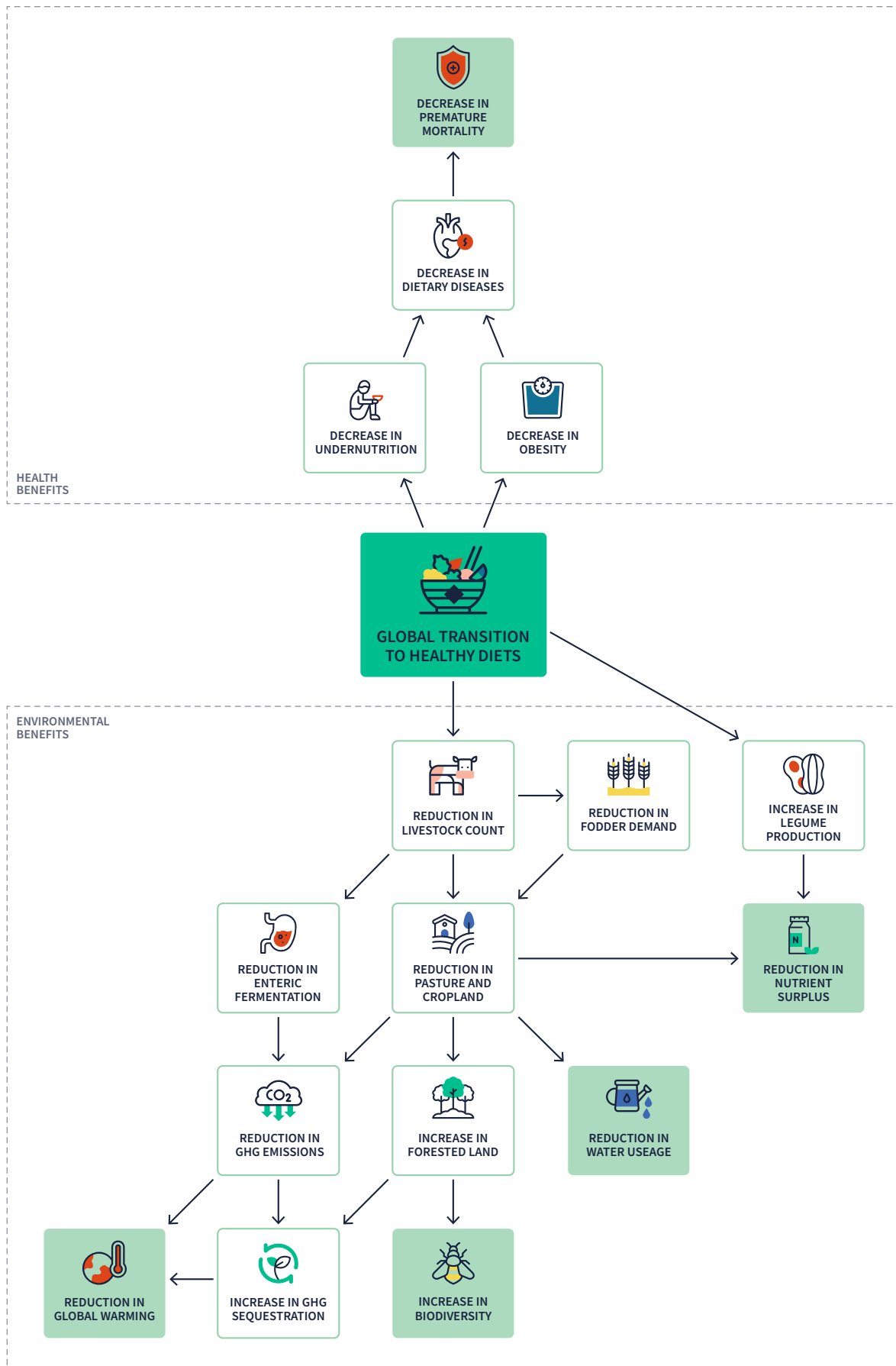
Global change is needed to ensure that people everywhere have physical, economic, and social access to a healthy, safe, and culturally suitable diet. To operationalize the shift to healthy diets, FSEC modelling reflects all countries gradually adopting by 2050 a healthy reference diet as defined by the EAT-Lancet Commission, emphasizing increased consumption of fruits, vegetables, nuts, soybeans, and legumes, and reduced intake of sugar, vegetable oils, red meat, poultry, eggs, and dairy. This means higher consumption of fruits, vegetables and nuts in South and Southeast Asia's highly populous regions and higher consumption of legumes in China. Shifting to a healthier diet also means reducing consumption of animal-source foods, such as meat and dairy, in all regions except sub-Saharan Africa, where increasing meat consumption could make diets healthier, particularly in terms of containing adequate micronutrients. The FSEC analyses show that a healthy diet is economically beneficial and biophysically feasible on a global scale.

While respecting differences in agroecological zones, culture, and dietary preferences, the food system transformation must focus on shifts to healthy diets. In so doing, the transformation could reduce chronic diseases and nutrient deficiencies and lead to gains in healthy life spans across the globe. These changes could cut the majority of costs related to diet-related non-communicable diseases, eliminate undernutrition, and save 174 million lives by 2050. Failure to alter current dietary patterns jeopardizes the 1.5°C target and poses a threat to the environment. Embracing the Food System Transformation pathway proposed by FSEC will not only reduce pressure on land, but will also lead to significant reductions in GHG emissions from the food system. Additionally, it contributes to positive environmental outcomes, including preserving habitats, land regeneration for carbon sequestration, safeguarding freshwater sources, and mitigating nitrogen pollution (Figure A – diet impacts).

Fortunately, these conditions are changeable with a systemic and coordinated plan using incentives and regulation, innovation, and investment – the three policy categories identified by FSEC.

1 DALYs are disability-adjusted life years which quantify the years of life spent with disability or lost to premature death.

Figure A – diet impacts



KEY FINDINGS AND RECOMMENDATIONS (CONT'D)

Incentives and regulations

- Among the most effective actions to incentivize healthy diets is harmonized taxation of unhealthy foods and beverages. More than 120 countries impose taxes on unhealthy foods and sugary beverages, with at least some evidence of benefits, ranging from increased revenue to reductions in child obesity.
- Another incentive-based strategy is to reallocate agricultural subsidies away from production types that pose both health and environmental risks (e.g. palm oil, excessive animal-based foods) and towards promoting healthier food options. Currently, the majority of agricultural support tends to favour larger producers and is associated with negative environmental and health impacts. By redirecting subsidies towards the cultivation of nutritious, fibre-rich and protein-rich crops such as fruits, vegetables and nuts, we can increase their supply, reduce prices and improve the accessibility and affordability of healthy foods for all. Subsidies for fruits and vegetables, nuts, and legumes have shown a potential return on investment of more than 200:1 in Mexico.
- Using government purchasing power to choose healthy foods for institutions such as schools and hospitals. Healthy food procurement programs have been successful in increasing availability of nutritious food, while green public procurement initiatives, like Sweden's organic food goal, and local purchasing mandates in school catering programs show potential for positive impacts on the environment, economy, and nutrition.
- Other proven actions that government can take are regulation of marketing, including front-of-package labeling on unhealthy food and beverages. Protection of exposed populations (e.g. children and youths) against advertisement of unhealthy food by government regulations is another promising tool supporting the shift towards healthy diets. These actions have led to consumption changes in many countries.

Innovation

- Innovation by producers is necessary to offer consumers healthier choices. One proven approach is product reformulation to reduce salt, sugar, and/or fat in many foods. Initial examples demonstrate the feasibility of this—though more R&D is needed for large-scale impact. Regulations to eliminate industrial trans-fatty acids—produced during the hardening of vegetable oils and leading to cardiovascular disease—in numerous

countries are a health success story. Similarly, salt content in foods can be reduced stepwise, with consumers progressively adjusting to a different taste. Another opportunity is the support of sustainable alternative proteins, such as fermentation-derived microbial proteins or other meat substitutes.

- Producers can also develop new products – with and without policy encouragement. Developing and disseminating biofortified orange-flesh sweet potatoes is a case study of how innovation and investment combine to provide a healthy and culturally appropriate product at a scale that can help reduce vitamin A deficiency in Africa. National and international public institutions can speed up the development and diffusion of such innovations—and ensure that they meet the needs of lower-income food producers and consumers.

Investment

- A third pillar of this strategy is investment in infrastructure (physical infrastructures such as roads and electricity, digital services, property rights, market infrastructure, business development services, skills development and extension services) to support innovation, market development and production of healthy food, leading to affordable and accessible healthy diets for all, everywhere.

In addition to these well understood interventions which need to be scaled up and enforced, other policy and industry changes need to be tried and tested before they can be recommended.

Ambitious actions that need more evidence include:

- Use the purchasing power of public procurement to grow the market for new healthy foods, such as nutritious alternatives to animal-source foods.
- Use market-based measures to change production systems in industrial food production e.g. introduce emission pricing schemes in agriculture.

Yet individual policies alone will achieve only minor changes: a comprehensive, bundled package of actions is needed for maximum effect. For example, modelling from FSEC shows that revenue from a tax on processed foods could subsidize fruit and vegetable consumption while creating no net budget impact and providing jobs for agricultural workers. This policy bundling produces benefits in all regions. An alternative option in land-abundant areas is a GHG tax; this would both lessen this driver of climate change and increase healthy food consumption.