



Israel National Pathway Document for Healthy, Equitable and Sustainable Food Systems

Appreciating the purposes (goals) of current food systems.

Israel is a small and densely populated country, with a rapid population growth. The climate in the northern and central part of Israel is Mediterranean while the south is semi-arid and arid. Therefore, we are continuously faced with the need for highly efficient, innovative agriculture and industry in terms of land and water use. This has resulted in the development and implementation of an integrated water resource management system and efficient agricultural practices, including drip irrigation, the breeding of new and improved varieties, and precision agriculture. Moreover, Israel has the tradition and history of a welfare state, resulting in a relatively low hunger prevalence. Agriculture and the local food industry are located mainly in the periphery and contribute to the diversity of employment in Israel.

However, nutritional insecurity and hidden hunger still exist and are exacerbated in times of crises. Similar to many developed countries, a large portion of the population (50% of teenagers and 40% of adults) consumes unbalanced diets and unhealthy foods, and many suffer from obesity, type 2 diabetes, and cardiovascular diseases, which are particularly prevalent in people from low socioeconomic levels (one in every four people from low socioeconomic levels suffers from diabetes). Making matters worse, with the growing population, current food systems apply increasingly onerous pressure upon nature, harm biodiversity, and contribute to climate change and environmental degradation. Israel is a biodiversity hotspot, so the environmental pressures of food production pose a significant threat to its ecosystem and the provision of its services. On top of all that, Israel is also located in one of the world's climate change hotspots. Today, Israeli agriculture supplies most of the fresh agricultural products consumed, however, population growth, limited natural resources and climate change pose a challenge to the national food system. In conclusion, there is a need to improve and fortify our food systems in order to reach sustainable, equitable and healthy food systems which will contribute to all the 17 U.N. SDGs (Sustainable Development Goals).

Clarifying and agreeing on the expectations of national food systems in the coming decade.

Food systems must always supply safe, healthy, affordable, resilient, diverse, and sustainable food to all citizens. At the same time, they should not compromise the ability of future generations to continue consuming such food. To promote the health of our people and the planet we have to ensure that healthy, sustainable, and culturally diversified food will be affordable and become the first choice for all. In accordance to this we expect that by 2030:

- A healthy, affordable, and sustainable diet will be the public norm (based on the recommendation of the Ministry of Health, or MOH) and will guide other policies (educational, economic, agricultural, environmental, educational social and culturally oriented and more).
- The different needs of diverse populations and cultures will be accommodated (e.g., ability to choose between kosher and non-kosher food, other dietary preferences).



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- Hunger and nutrition insecurity will cease to exist. Solutions to food insecurity will be healthy and sustainable foods at affordable prices.
- Animal protein consumption will decrease to the levels recommended by the MOH and will be replaced primarily by a higher proportion of plant proteins and sustainable alternative proteins (once proven to be safe and healthy for human consumption). Domestic aquaculture at a low trophic level, focusing on algae and fish lower on the food chain, will be developed to complete the supply of protein-rich food.
- A substantial budget will be allocated to study the health and sustainability impacts of foods based on alternative proteins (including plant and plant-based proteins, cultivated meat, milk and eggs, and fermentation). The knowledge emanating from these studies will form the basis for updating the national nutrition recommendations as well as a future national food security plan.
- Agriculture in Israel will be nature-positive, efficiently utilizing natural resources, and will ensure a proper local food supply in line with the national dietary recommendations.
- The majority of fresh food (fruits, vegetables) will be grown locally to reduce transportation costs and carbon footprint while simultaneously increasing food security and resilience to supply-chain disruptions. Israel cannot rely on food imports from neighboring countries, increasing the importance of domestic production, especially for perishable products.
- Animal welfare standards in the food industry will be tightened and conform to both the OECD and EU standards.
- The amount of land used for agriculture will be maintained at the national level and remain at its current scale. More efficient and environmental practices will be developed and used based on agroecological principles, including in field crops and permanent crops, greenhouses, aquaculture, urban agriculture, and vertical agriculture. Multiple uses of agricultural areas, such as for agritourism and agrivoltaics will be promoted while ensuring they do not harm biodiversity conservation and agricultural productivity.
- Larger amounts of water will remain in nature, while all wastewater or municipal water will be reclaimed at a high standard and used mainly for agriculture. Water systems (natural vs. reclaimed and desalinated) will be managed according to an integrated water management system and infrastructure. Potable water will be enriched with minerals according to deficiencies based on ongoing research and health monitoring.
- Israel will have an efficient, transparent monitoring and data collection system which will include the use of antibiotics, pesticides, herbicides, zoonotic diseases, pathogens and anti-microbial resistance, health influences, nutrition behavior, biodiversity, greenhouse gas emissions etc. Health and environmental impacts, the origin of food and other information regarding food and food composition will be transparent and available to all sectors in the food chain, including consumers, enabling them to make knowledgeable choices. The origin of produce will be clearly marked to provide basic consumer information.
- Food loss and waste at every stage of the food chain will be reduced according to the SDGs goals.



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- Small farmers and businesses will have the opportunity to form a significant part of the food chain at decent living standards.
- Israel will promote a strong independent local food industry that implements innovative technological solutions to produce safe, balanced, healthy and sustainable food.
- Israel will be one of the leading countries in the fields of agriculture, agritech and foodtech and will provide solutions and knowhow for developing and growing a variety of healthy foods, in increasingly difficult environmental and climatic conditions with an emphasis on semi-arid and arid regions.

Identifying changes to be made and decisions that must be worked through in the coming three years.

An inter-ministerial committee for food systems should be established. The committee will include representatives from the Ministry of Environmental Protection, Health, Agriculture and Rural Development, and will consult with other relevant stockholders (including other ministries, local authorities, industry, academia, NGOs). The committee's main objective will be to transform the Israeli food system into a healthy, equitable, sustainable and resilient food system, as called for by the U.N. SDGs. The potential of the social, environmental, economic and health impacts of all suggested actions and decisions will be considered. The actual impacts will be regularly monitored to enable corrective policies. The committee will submit a national plan for food system in Israel, including budgets, milestones and timetables.

Among other topics, it is important that the committee address the following issues:

- The lack of available and accessible knowledge and data that hinders pivoting towards sustainable food production and consumption. It is vital to establish a national database, and that regulators systematically collect information and ensure its accuracy, reliability, and availability to all stakeholders including consumers to allow building knowledge-based food systems at the production, processing, and consumption levels. This information should include health information, but also external environmental and social costs, composition of foods (including nutrients and additives) and consumption patterns.
- Based on the national database, sustainable scoring of producers and food should be established and updated annually. Fresh food shall be labelled by country of production, specific production place and grower, including grading quality, animal welfare practices and sustainability of production and processing, to enable knowledgeable, intelligent consumption.
- Israel should develop and adopt a strategic plan for the agricultural sector, establishing clear medium and long-term targets for domestic food production, and in turn providing the incentives and means to reach these targets based on sustainable agricultural production. The plan would balance agricultural production and other services of agricultural land (e.g. maintenance of ecological corridors), for current and future population needs. Nature-positive agriculture should be promoted. Local agriculture will get direct support from the government as is customary in other countries to ensure local production of fresh foods and as an industrial source.
- It is time for a more sophisticated, data-based, and nature-positive use of pesticides, herbicides and fertilizers to be developed and employed. Studying and promoting agroecological methods that reduce



pesticides and herbicides is a central mission. Adaptation to climate change should be part of the development of resilient agriculture. To increase production and reduce emissions while saving open spaces, there is a need to develop urban agriculture, vertical agriculture, aquaculture, and more efficient agriculture in general.

- It is paramount that Israel prepare its food system today for the predicted changes in climate and population growth tomorrow. The allocation of additional research funds is called for to meet these challenges at a national level. It is time to set up regional collaboration for reducing the potential for food and water-based conflicts while at the same time optimizing local production capabilities. Agricultural practices and a discriminating choice of crops have to be adapted to a hotter and dryer climate predicted for the near future.
- Stakeholders (e.g., farmers, producers, processors, industry and even NGOs) frequently face an inherent conflict of interest between their productivity (i.e. "profit") demands and the need to ensure sustainable, healthy, safe, accessible, and resilient food systems. This detrimental phenomenon can be overcome by offering incentives for sustainable production and processing, which factor in the external costs of non-sustainable, environmentally harmful and/or non- healthy production. Financial incentives and grants ought to be allocated to healthy and sustainable food producers, while taxing unhealthy, non-sustainable food producers as a function of the damage they cause.
- Large institutions, corporations and the public sector are to set examples in the implementation and promotion of improved, healthier and sustainable food systems .
- Currently food insecurity in Israel is primarily regarded as a poverty and welfare issue. The solution to food insecurity must take into account all facets of sustainable and healthy food systems.
- The present and future impacts of economic measures should be studied to ensure economic accessibility of healthy basic sustainable food to all. For example, imported foods will conform to domestic regulations to ensure that these foods are sustainable, healthy and also provide a fair and market-oriented system. Finally, a carbon tax imposed on agricultural imports is needed.
- Animal protein consumption should be reduced in line with MOH recommendations to improve human health, increase national food security and decrease the environmental footprint of food production. Nevertheless, since the consumption of animal proteins continues unabated, we must ensure that animal welfare in the food industry adheres to high standards. Sustainable fishing should be required and implemented, and environmentally destructive fishing techniques and overfishing must be prohibited.
- Israel has the potential to be a world leader in the field of innovative foods such as alternative proteins. The government should invest in sustainable healthy food startup companies and objective academic research. Conditional on approval as safe for human consumption, these foods can close the gap between the limited production capacities in Israel and demand, while reducing animal suffering and the ecological footprint generated by contemporary food systems.
- Local municipalities should have more responsibility and ability to promote sustainable, healthy, and equitable local food systems, including city nutritionist, ecologist, and agronomist. Local producers, digital and direct marketing and farmers' markets should be encouraged. Promoting the growth of vegetables and fruit



within the community and even the school, as well as in forest gardens should be promoted to achieve greater healthy food production as well as advancing educational, social and healthy activities for children and the elderly in the community.

- Israel uses an Integrated Water Resources Management scheme, and water is the property of the state. Wastewater, according to the Israeli Water Law, is defined as a water source. Currently, 50% of water consumption in Israel is for agriculture, 40% is for households and only 1% is water left to nature. The use of treated effluent in agriculture and desalinated water in households should increase, leaving more untouched water to nature. Rainwater should be collected and used, and floods should be prevented and managed as a water source. Water systems should be managed separately (natural vs. reclaimed and desalinated) whereas drinking water is to be fortified with minerals it is deficient with like fluorine and magnesium.
- There is an urgent need to reduce food loss and waste along the food supply chain including at the consumer level. A national plan should be finalized, adopted, and implemented in collaboration with the public sector.
- Success can only be attained if accompanied by the following actions: a profound education and public awareness campaign to promote the understanding of what sustainable food systems are, the bolstering of environmental and agricultural education, and the consumption of local, healthy, and sustainable foods while continuing to reduce the consumption of animal proteins (meat, eggs, and milk products). These actions are incumbent upon people at all ages.

Defining how stakeholders can work well together for collective action.

To fulfill the "One Health", unified, approach (environmental, human, and animal health), there is a need to strengthen existing connections and establish new connections among all relevant stakeholders, especially government bodies and professionals in health, agriculture, food industry and environmental protection sciences. Policies and regulations should be synchronized and complementary, proportional, understandable, accessible, and transparent. An inter-ministerial committee for food systems should be established.

Highlighting and reinforcing connections between the pathway and other planning documents.

Climate change mitigation and adaptation

Protection of biodiversity

SDGs adoption

Health in all policies

Indicating key milestones along the timeline of the pathway.

1. Adoption of the National Pathways Document by the ministers.
2. Establishment of an inter-ministerial committee for food systems charged with formulating and submitting within a year a national plan for equitable, healthy and sustainable food systems.