

# SUMMARY AND EXPLANATION TO PATHWAYS TO THE FUTURE OF FOOD

Guidelines for the most effective influences and policy paths for a sustainable food system

Food security is at risk. War, pandemics, climate change, and the disappearance of biodiversity threaten Switzerland's food supply. As an internationally networked country, Switzerland is dependent on globally functioning ecosystems and stable supply chains for the security of its food supply and business endeavours.

Meanwhile, the current food system is a driving force of crises. It exceeds Earth's carrying capacity, causes around 30 percent of greenhouse gas emissions worldwide, and is a key factor in biodiversity loss. To ensure food security, it is essential from a scientific point of view to comprehensively orient the food system along the entire value chain – not only in agriculture – towards sustainable development. The 17 United Nations Sustainable Development Goals (SDGs), which Switzerland and all other UN member states signed as part of the 2030 Agenda, provide a framework for doing so.

Economic, health, and social aspects of the current food system must be considered in addition to ecological ones. For example, people working in agriculture and the food industry often have low incomes. The services and needs of the actors along the food system value chain should be considered, and any costs should be fairly distributed and compensated.

Efforts in creating a more sustainable food system have been and continue to be made at various stages of the value chain. They are not sufficient, though, and change is happening too slowly. Particularly urgent is the threat of ecosystems reaching dangerous tipping points, beyond which, for example, climate change and species loss would drastically accelerate. Without rapid action, global food security – and food security in Switzerland – cannot be guaranteed in the long term, and the sustainability goals will fail.



## Minimizing risks of future crises

To address these challenges, the Sustainable Development Solutions Network (SDSN) Switzerland, the Swiss offshoot of a United Nations initiative, has convened the interdisciplinary scientific panel Food Future Switzerland. The panel, made up of 42 researchers from leading scientific institutions in Switzerland, developed the present guidelines about the major influences and policy pathways towards a sustainable food system. The panel argues that a transformation towards a sustainable food system requires much more ambitious targets and concrete measures along the entire value chain.

To be sustainable, the food supply must combine economic, ecological, and social interests. Scientifically, this means re-orienting the entire food system according to agroecological principles. The faster this reorientation happens, the more likely it will produce profit, prevent crises, and minimize costs.

In Chapter 2 of the guidelines, the scientific panel presents its guiding vision for a sustainable food system. Priority goals are, for instance, adapting the Swiss diet in line with the planetary health diet, reducing losses of nitrogen and phosphorus, and reducing psychosocial and physical health risks in agriculture.

A comparison of the goals to the status quo shows that significant efforts are needed to transform the Swiss food system to meet the Sustainable Development Goals by 2030.

## Strategic nutrition policy for maximum effectiveness

Building on the scientific panel's findings, Chapter 3 outlines a concrete policy path for how the Swiss state, together with the other actors in the system, can accelerate change. An efficient, cost-effective, and implementable food system policy requires not only selecting measures, but also sequencing them chronologically and interlocking them strategically. According to the principle of promoting and demanding, the Swiss state should act not only in agriculture but along the entire value chain. State support for new value-added opportunities and measures to change consumption are key. In this way, positive tipping points can be targeted to set positive acceleration processes in motion. With this in mind, the scientific panel prioritizes the measures according to impact, urgency, and feasibility. They bundle the measures into four packages and arrange them along a timeline until 2030 (see graphic on the backpage).

In a first phase, the scientific panel recommends the establishment of a **transformation fund** by 2025. This should finance information- and education-oriented measures along the entire value chain, as well as compensation and positive incentive instruments. It will help to generate new opportunities for creating value, change social norms, and increase acceptance of necessary further measures in later phases. The fund could initially be fed by additional funds from the federal budget combined with private funds and be expanded in the later phases through incentive taxes and the sustainability-oriented reallocation of existing funds.

In a second phase, **regulatory measures and incentive taxes** would have to be increasingly applied from 2025 onwards to achieve the Sustainable Development Goals. From an evidence-based perspective, it would make sense to introduce incentive taxes that stimulate true-cost pricing, adjustments to customs duties, and national guidelines based on sustainability criteria for public food procurement and company canteens. This phase should also include the binding implementation of industry agreements on the introduction of science-based reduction targets and increased due diligence obligations of corporations in accordance with international guidelines.

Phase three (starting around 2026) focuses on **agricultural policy measures and support for rural areas**. Conceivable measures include, for example, adjustments to direct payments, market support measures, and investment subsidies, as well as a negative income tax in the agricultural sector. Trade measures should also be systematically geared to sustainable food systems at this stage at the latest.

In the fourth phase (starting around 2030), measures can be introduced that have so far enjoyed less acceptance. Thanks to supportive and compensatory measures within the framework of the transformation fund and new opportunities for value creation, more far-reaching regulatory measures and higher incentive taxes will gradually become more realistic by 2030.

## Better structures for cooperation

Comprehensively reorienting the Swiss food system policy in line with the 2030 Agenda requires improved collaboration on shared opportunities and a compromise-oriented negotiation process for the entire food system. To make this as successful as possible and minimize polarization, the federal government, cantons and municipalities must take a leadership role. Chapter 4 of the guidelines presents what integrated food system governance for an effective food system policy could look like.

The central recommendation is the establishment of a **Future Commission on the Food System**. The purpose of this commission is an accelerated, confidential and multilateral negotiation process between central actors along the value chain. The necessary rapid changes also require regular **citizen involvement** – not as substitute parliaments, but as advisory bodies. The scientific panel also proposes to reconsider the legal basis in the medium term in the sense of a comprehensive **food system law** and to enable improved integration of the offices involved for this cross-sectional task.

**In summary, the scientific panel Food Future Switzerland states that new paths towards a sustainable food system urgently need to be taken in order to ensure sustainability goals and food security. The necessary transformation process offers great opportunities for Switzerland and should therefore be pursued quickly in a strategic and collaborative manner.**





## Recommended for highest-priority measures

According to the scientific panel, the following measures should be addressed with the highest priority. Since an effective food system policy also requires further interlocking measures across the entire food system, additional high- or medium-priority measures are also explained in the guidelines.

### TRANSFORMATION FUND (PACKAGE I)

The transformation fund serves to initiate transformation through promotion and compensation. Initially, it can be fed by a combination of public and private funds. In a second phase, it can be supplemented by incentivized spending and sustainability-oriented reallocation of existing funds.

- Public information campaigns that communicate the benefits and importance of food waste reduction and a plant-based diet to a broad audience **(1a)**.
- Education and counselling programs for consumers in different everyday contexts (e.g. eating out or for supermarkets, educational institutions, businesses, etc.) **(1b)**
- Education and training programs for professions relevant to the entire value chain of the food system (including topics of conversion and sustainable production methods) **(1c)**
- Promotion of independent research and development of animal substitute products with increased minimum health and environmental standards **(2a)**
- Promotion of sustainable and health-promoting nutrition when eating out **(2b)**
- Promotion of development and application of digitalization and precision agriculture **(2c)**
- Promotion of technical development and application of biochar **(2d)**
- Promotion of breeding and application of locally site-adapted plant varieties and livestock breeds instead of focusing purely on high-yielding varieties and breeds **(2e)**
- Compensatory premiums for agricultural conversions **(2g)**
- Support programs for young farmers to convert to more sustainable and crop-based production when taking over a farm **(2h)**

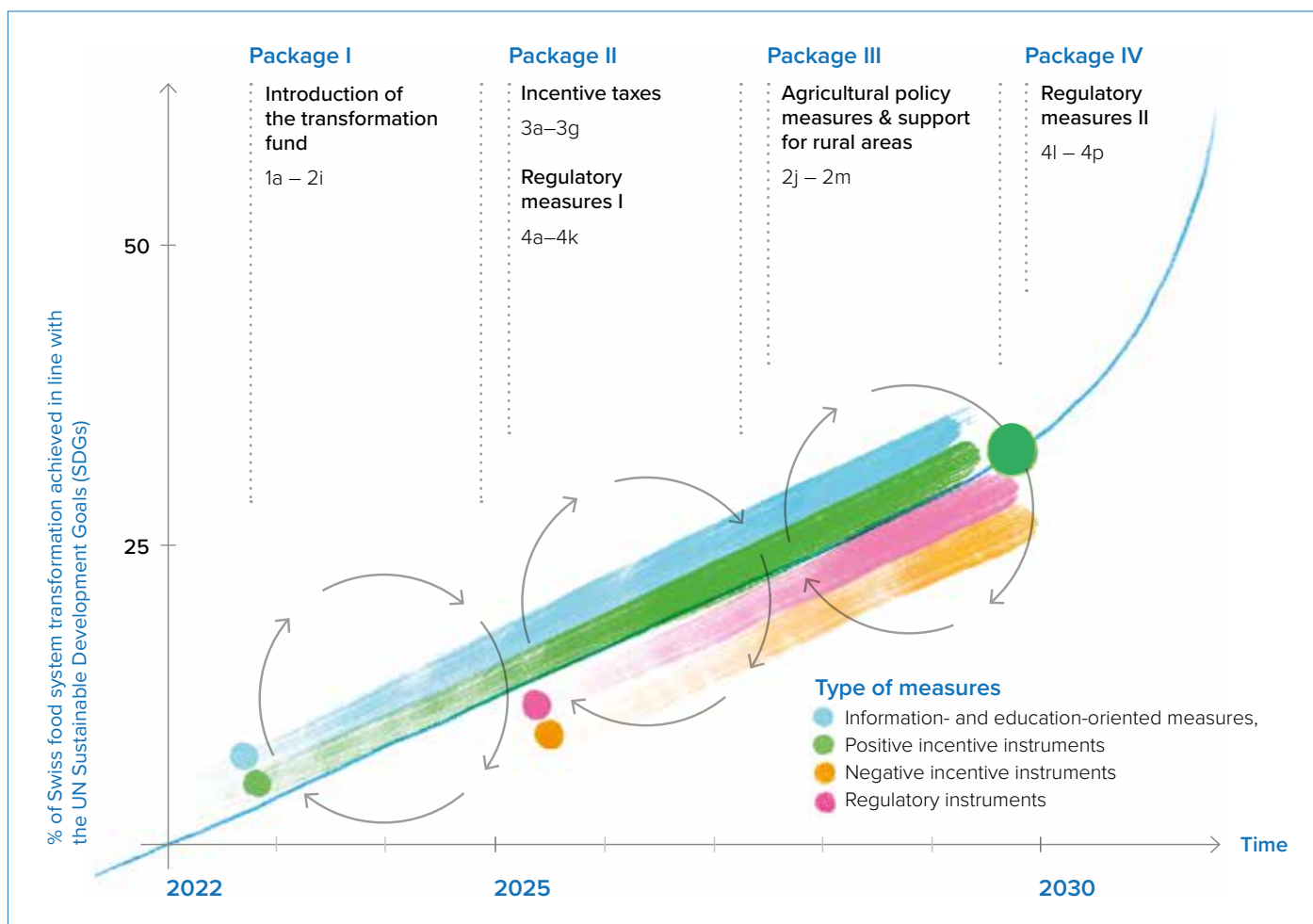
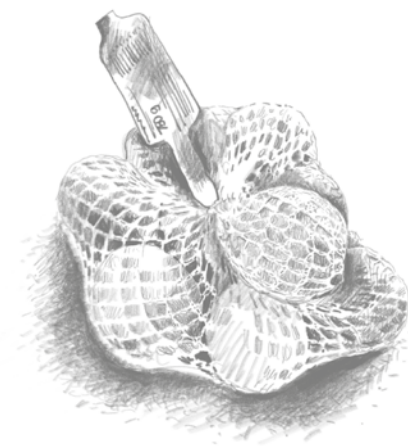
### INCENTIVE TAXES & REGULATORY MEASURES (PACKAGE II)

- Introduction of a consumption-based CO<sub>2</sub>-equivalent levy on food in combination with revenue sharing, without compromising animal welfare **(3a)**
- Introduction of a surplus levy on nitrogen, ammonia, and phosphorus **(3b)**
- Taxation instead of subsidies for managing organic soils (> 30% humus) **(3c)**
- Removal of the reduced VAT rate for polluting products in the agricultural sector **(3e)**
- Increased tariffs for animal products, imported feed, and mineral fertilizers **(3g)**
- National guidelines for public food procurement as well as minimum supply standards for company canteens to promote healthy and sustainable nutrition and corresponding industry agreements with the corporate community catering sector **(4a)**
- Explicit mention of reduction targets for emissions from the food system in nationally determined contributions (NDCs) for climate change, as well as industry agreements to introduce mandatory science-based targets (SBTs) for Swiss companies in the food and agriculture sectors **(4d)**
- More flexible regulations for food shelf life, simplified legal transfers to food banks, adaptation of quality and industry standards to avoid food waste, mandatory application of the principle of waste avoidance (USG Art. 30) to food **(4e)**
- Reduction of the fertilizer livestock units from 3 to 2.5 in the Water Protection Act **(4i)**
- Adaptation of the Spatial Planning Act to ensure, as quickly as possible, no new soil-independent livestock farms in intensive agricultural zones **(4j)**



## A path of action for the transformation of the Swiss food system

The authors of these guidelines recommend a sequence of **four strategically coordinated packages of measures**. The individual measures are interlinked along the value chain so that the focus is deliberately not only on agricultural policy measures, but on the entire food system. With measures oriented towards information and education, plus financial support instruments within the framework of the transformation fund, barriers to transformation are reduced and **positive tipping points** are addressed in a targeted manner. This prepares the groundwork for more in-depth transformation measures in later phases.



Fesenfeld et al. (2023) / Telek

These guidelines are based on the work and professional exchange of the interdisciplinary scientific panel Food Future Switzerland, convened by SDSN Switzerland in February 2022. The technical work of the scientific panel and the preparation of these guidelines were coordinated by Dr. Lukas Fesenfeld. The scientific panel worked largely on a voluntary basis. This publication was supported financially by the project Food Future Switzerland and by SDSN Switzerland.

A list of the members of the scientific panel can be found here:



The digital version of the complete guidelines (in German or French) can be downloaded at:  
[www.sdsn.ch/en/](http://www.sdsn.ch/en/)

