



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

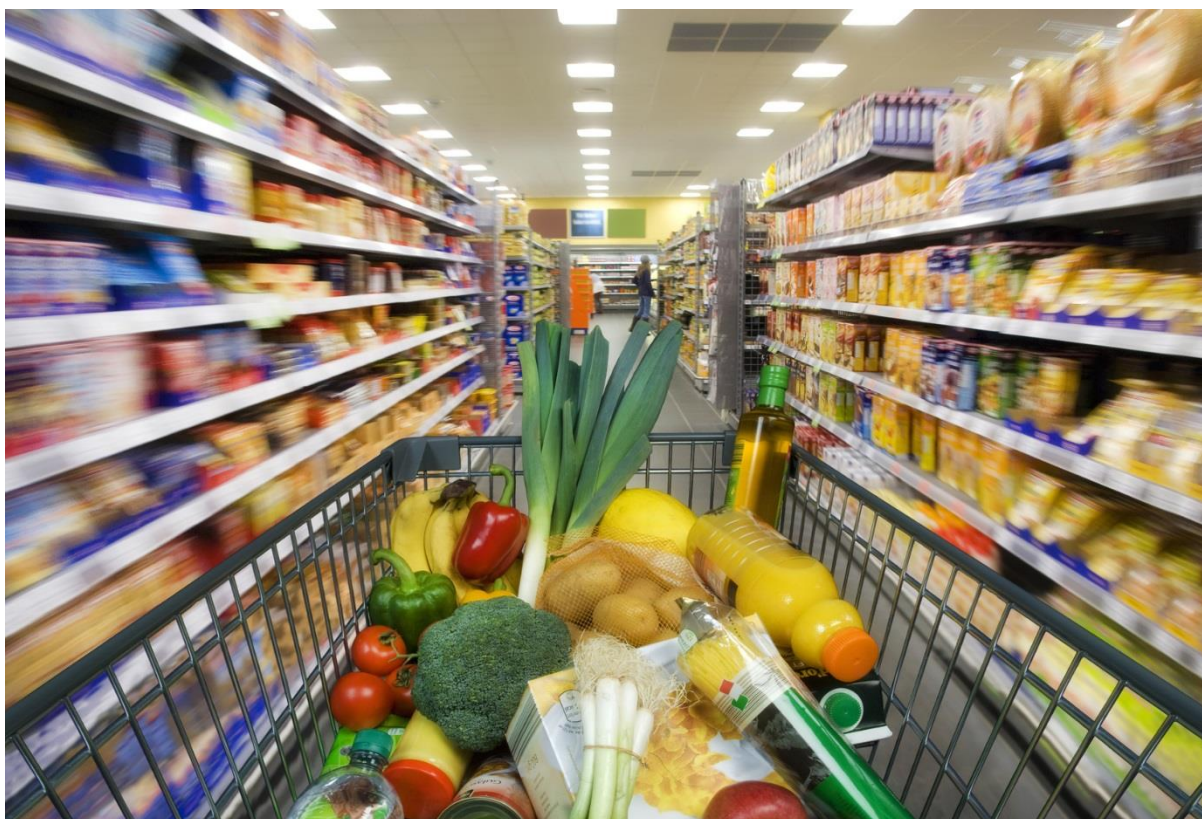
Federal Department of Economic Affairs,
Education and Research EAER

Swiss national FAO Committee CNS-FAO

Prepared by the Swiss National FAO Committee (CNS-FAO), September 2016

Working towards Sustainable Agriculture and Food Systems

A discussion paper



Source: Fotolia

Contents

Abbreviations.....	3
Acknowledgements.....	3
Executive Summary	4
1. Introduction	5
1.1. Objectives of the discussion paper	5
1.2. Scope.....	5
1.3. Target group	5
2. The vision: Sustainable agriculture and food systems	6
2.1. Challenges related to AFS.....	6
2.2. Shared vision and goal	6
2.3. Defining sustainable agriculture and food systems	7
3. What drives change towards sustainable agriculture and food systems?	11
3.1. A Theory of Change	11
3.2. Knowledge (Research, education and innovation).....	12
3.3. Market (Committed and aware businesses and consumers)	12
3.4. Collaboration (Multi-stakeholder initiatives and engaged value chain actors)	13
3.5. Policy (Good governance and suitable incentives)	14
3.6. Monitoring and Evaluation	15
4. Recommendations to work towards sustainable AFS.....	16
4.1. Enhancing knowledge for sustainable AFS	16
4.2. Making markets work for sustainable AFS	16
4.3. Enhancing collaboration for sustainable AFS.....	16
4.4. Creating a conducive policy context	17
5. Annex	18
5.1. Relevant global initiatives towards sustainable AFS	18
5.1.1. Relevant projects and multi-stakeholder partnerships supported by FOAG	18
5.1.2. Other projects	18
5.2. Relevant Swiss initiatives towards sustainable global AFS	18
5.3. Key reference documents on more sustainable AFS	18

Abbreviations

10YFP	10 Years Framework for Programmes on Sustainable Consumption and Production Patterns
ASF	Agriculture and Food Systems
CFS	Committee on World Food Security
CNS-FAO	Swiss National Committee for the FAO
COSA	Committee on Sustainability Assessment
ESCR	Economic, Social and Cultural Rights
FAO	Food and Agriculture Organisation of the UN
FOAG	Federal Office for Agriculture
SAFA	Sustainability Assessment of Food and Agriculture Systems
SDG	Sustainable Development Goals
SFSP	Sustainable Food Systems Program
UN	United Nations
VSS	Voluntary Sustainability Standards

Acknowledgements

The first draft of this discussion paper was elaborated by a Working group mandated by the CNS-FAO. Working Group members were (in alphabetical order):

- Regina Ammann, Head Public Policy Switzerland, Syngenta Crop Protection AG
- Frank Eyhorn, Senior Advisor Sustainable Agriculture, HELVETAS Swiss Intercooperation
- Michelle Grant, Executive Director, World Food System Center, ETH Zurich
- Alwin Kopse, International Sustainable Agriculture Division, BLW
- Urs Niggli, Director, Research Institute of Organic Agriculture (FiBL)
- Anne Roulin, Vice President Nutrition, Health & Wellness & Sustainability, Nestlé
- Sonja Tschirren, Programme Coordinator Advocacy and Policy, Biovision
- Michael Wuerzner, Secretary of the CNS-FAO, BLW

The CNS-FAO as an entity as well as individual members provided detailed feedback that was incorporated into the final version. All contributions are gratefully acknowledged. This discussion paper doesn't necessarily reflect the position of the Federal Council and its administration.

Executive Summary

The main challenge for the agriculture and food sector is to provide nutritious food for the world's population whilst conserving natural resources. Current agriculture and food systems (AFS) contribute significantly to both humanitarian and environmental impacts: A large proportion of the global population faces severe health issues due to malnutrition (deriving from either under-nutrition or over-nutrition) and a majority of those who work in agriculture and food systems struggle for their livelihood. AFS are a major factor influencing soil fertility, water resources, biodiversity and climate change. However, the transformation of AFS provides a powerful lever to address the key challenges of our time.

There is increasingly broad consensus that AFS need to be transformed in a way that they simultaneously provide adequate nutrition for all, minimize negative impact on ecosystems and human health, improve livelihoods and resilience whilst being economically viable. Sustainable AFS thereby can substantially contribute to achieving the Sustainable Development Goals as globally agreed in the Agenda 2030.

Obviously there is no single approach or technology solution to make AFS more sustainable. A combination of diverse activities is required that are all well aligned with the agreed objectives. Moving towards sustainable AFS requires a combination of key factors to be aligned: enhanced **knowledge** on more sustainable agricultural practices and value chain designs; awareness among consumers and businesses that increase **market** demand for sustainable products and fair prices; increased **collaboration** among the different stakeholders to advance the agenda; and a **policy** environment that promotes and rewards more sustainable solutions. Building on existing strengths, initiatives and best practices will be key, while at the same time identifying opportunities for improvement and addressing gaps. Progress in moving towards sustainable AFS needs to be regularly assessed with regard to key performance indicators based on an agreed set of objectives.

Based on the proposed objectives and approach, the following key recommendations for policy makers, corporates, farmers and civil society organisations can be formulated:

- **Enhance knowledge** by intensifying research and capacity building on sustainable AFS design, technologies and services;
- **Make markets work for sustainable AFS** by raising consumer awareness, more sustainable sourcing and upscaling voluntary sustainability standards;
- **Enhance inclusive collaboration among stakeholders** to jointly address specific issues while ensuring participation of weaker groups;
- **Create a conducive policy context** by offering opportunities and incentives, internalizing external costs, ensuring policy coherence and strengthening accountability and transparency.

1. Introduction

The Swiss National Committee for the FAO (CNS-FAO) decided in its meeting of 16th February 2016 to elaborate a discussion paper on how global agriculture and food systems (AFS) can become more sustainable. Based on the broad experience available among Swiss stakeholders, a joint pluralistic approach shall be outlined that provides a basis for future work of the committee and its recommendations to the Swiss Government and the Administration. The committee mandated a working group to develop a draft paper. This draft paper was further discussed and amended.

1.1. Objectives of the discussion paper

The discussion paper shall inform the strategy, positions and recommendations of the CNS-FAO. Its elaboration shall help identify the common ground of the committee's diverse membership based on shared goals and objectives. The paper shall identify promising initiatives at global, regional and national level, including of Swiss stakeholders, and place them in the broader global context of the SDGs and related initiatives. Based on a comprehensive and holistic understanding of the subject it shall formulate policy recommendations to inspire the work of the Swiss government and Swiss stakeholders. It shall also identify windows of opportunities to influence the global agenda related to this topic.

The discussion paper builds on the understanding that there is no single approach or technology solution to make global AFS more sustainable over time, but that a combination of diverse activities is required that are all well aligned with the overall objective of sustainable agriculture and food systems. It recognizes that there are various relevant initiatives already happening, and that much thinking has been done in this regard (see key references in the Annex).

1.2. Scope

The discussion paper attempts to comprehensively cover relevant approaches to transition global agriculture and food systems¹ – from primary production to consumption - to sustainability. It analyses how the diverse experiences of different stakeholders can contribute to this international agenda². The SDGs relevant for agriculture and food systems and the Sustainable Food Systems Programme of the UN's 10-Year Framework of Programmes on Sustainable Consumption and Production provide the most relevant reference frame at global level. Starting from a description of shared goals and objectives it identifies main drivers of change towards sustainable AFS. On this basis, it formulates relevant policy recommendations.

1.3. Target group

The discussion paper shall provide a basis for the committee's work³ – for its policy recommendations, positions and other activities. The discussion paper shall be shared with the Swiss Government and administration and made available to the public.

¹ This also includes non-food agricultural raw materials such as fibre, biofuels, medicinal plants etc.

² See list of relevant global and Swiss initiatives towards sustainable AFS in the annex.

³ Along with the relevant Human Rights framework and other UN documents and conventions signed by Switzerland, particularly the Right to Food, <http://www.fao.org/righttofood/en/>

2. The vision: Sustainable agriculture and food systems

2.1. Challenges related to AFS

Today, the main challenge for the agriculture and food sector is to simultaneously provide enough food – both in quantity and quality – to meet everyone’s nutritional needs, provide sustainable livelihoods for all food system actors, in particular vulnerable family farmers while conserving the natural resources to produce food for present and future generations.⁴ Livelihoods of those working in agriculture are often poor. Despite the fact that the world is producing enough food to feed its entire population, almost 795 million people – representing about 12.9 percent of the population in developing regions – go hungry; 161 million under-five year olds are estimated to be stunted; and about two billion are malnourished, lacking the essential micronutrients they need to lead healthy lives. At the same time, the number of overweight/obese people has reached more than 1.4 billion adults globally – representing about 30 percent of the total adult population – and obesity-related health conditions are rising rapidly in both developing and developed countries.

Around 30 percent of the food produced worldwide – about 1.3 billion tons – is lost or wasted every year. In addition, price volatility in food markets can cause major impacts on well-being, both for farmers and consumers. In developing countries, volatile food prices form a major barrier to food security, particularly because people spend 50-80 percent of their income on food. At the same time, more than 2.5 billion people depend on agriculture (income or self-supply) for their livelihoods. While women are still bearing the highest burden of responsibility to produce, process, market and prepare food, they still often face discrimination and exclusion from decision making, land tenure and access to finance.

These challenges of the 21st century are not only triggered by finite natural resources and continued population growth but also by income growth and urbanization, which drive global food demand and put increased pressure on the natural resources: land, water, and biodiversity – all used to produce food and forest products. Finally and very importantly, challenges are exacerbated in the face of climate change and erratic weather patterns. Agriculture is acknowledged as an important driver pressing against the bio-physical planetary boundaries. There is hence an urgent need that agriculture and food systems become more sustainable. In other words: they need to stop being part of the problem, but must become part of the solution.

2.2. Shared vision and goal

As we have seen above, what we eat and how our food is produced has a major influence on human health, economic well-being and the state of our environment. The majority of current AFS (i.e. of the individual farming operations, supply chains and consumption patterns) has considerable negative social, ecological and macro-economic externalities. There is an urgent and broadly accepted need to shift towards a higher sustainability level (Figure 1). However, at global scale the current trend is still in the opposite direction.

⁴ For detailed analysis of challenges, see key reference documents listed in the Annex

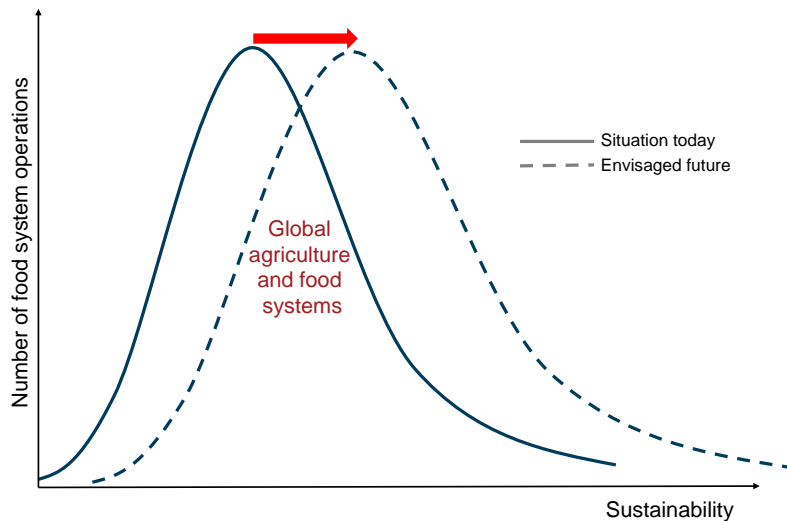


Figure 1: Current AFS are located on a continuum of lower to higher sustainability. The objective is to shift the bell curve to a higher sustainability level.

2.3. Defining sustainable agriculture and food systems

Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.⁵ The four pillars of food security are availability, access, utilization and stability. The nutritional dimension is integral to the concept of food security.

A “food system” comprises activities involved in food production, processing and packaging, distribution and retail, as well as preparation and consumption. A food system further includes on the one hand the bio-geophysical, social, economic and political environments that determine how these food system activities are performed. Equally important on the other hand are the social, environmental and economic outcomes of these activities such as food security and nutrition, the provision of ecosystem services or the accumulation of human, financial and social capital. These outcomes eventually feedback to influence environmental and socioeconomic environments. A food system is therefore based on complex interactions in multiple domains which are not highlighted in conventional food value chain analyses with their focus on yields and material flows (Figure 2).

⁵ See also The Right to Adequate Food, <http://www.ohchr.org/Documents/Publications/FactSheet34en.pdf>

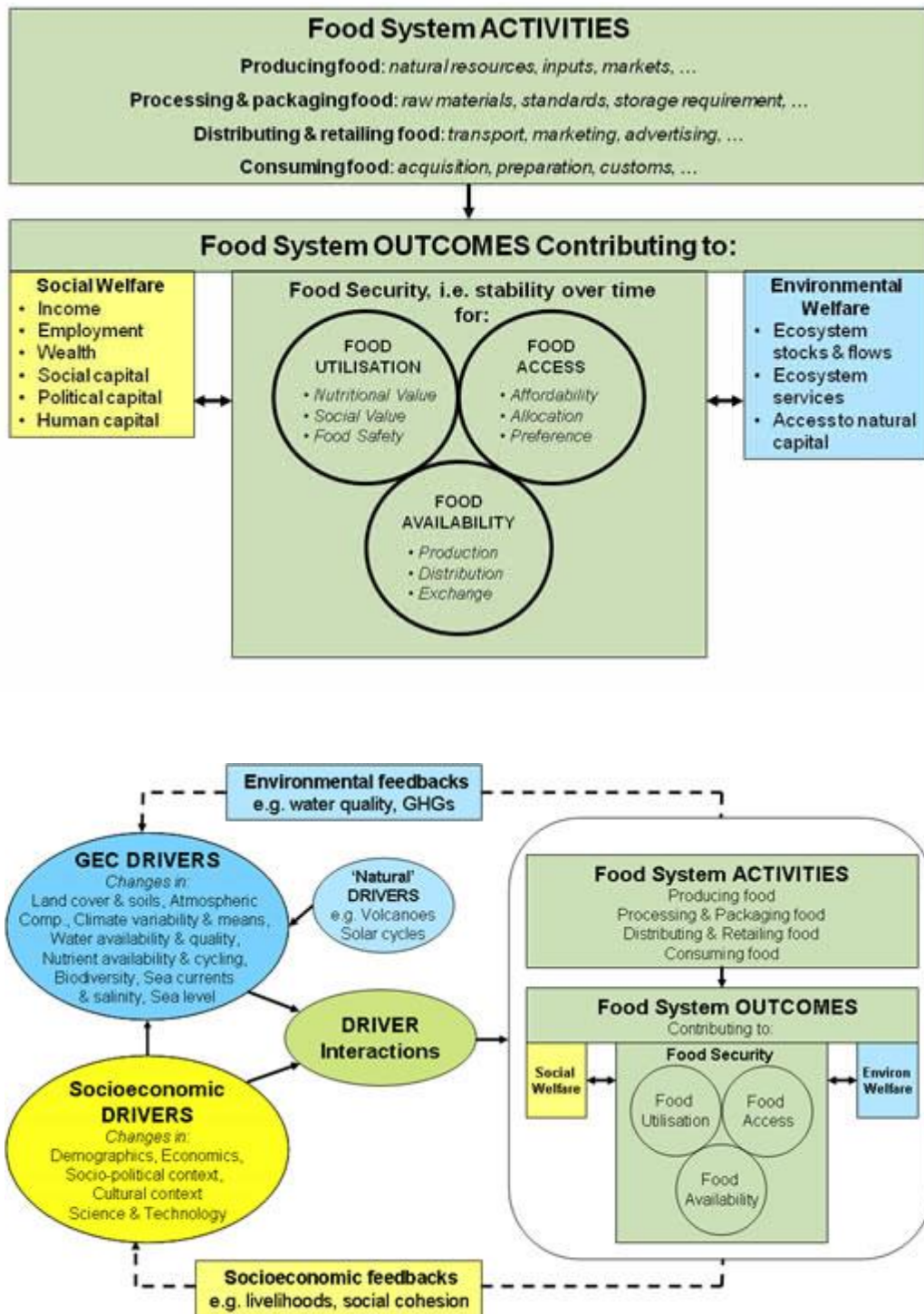


Figure 2: Diagram showing interactions between drivers (global environmental change and socioeconomic), activities and outcomes⁶

What defines sustainable agriculture and food systems? Fortunately, today there is a broad consensus among a diverse range of stakeholders that business as usual is not an option in the face of food insecurity, poverty, natural resource depletion and climate change and that AFS need to ensure food security and nutrition for all in such a way that the economic, social and environmental bases to generate

⁶ GECAFS, http://www.gecafs.org/research/food_system.html

food security and nutrition of future generations are not compromised⁷. To ensure that this is achieved, a major transition toward systemic approaches and sustainability is necessary. Various sets of criteria are available to define what this means in concrete terms. The most recent⁸, relevant ones are:

- The SDGs⁹ (supported by the Addis Ababa Action Agenda). The Agenda 2030 demands an integrated, systemic approach to agriculture and the food system. For AFS the following goals and targets are particularly important (see Figure 3):
 - Goal 1: End poverty
 - Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture
 - Goal 3: Ensure healthy lives and promote well-being for all at all ages (reduced hazards and pollution from chemicals)
 - Goal 6: Ensure availability and sustainable management of water and sanitation for all (reduced pollution, increased water use efficiency, sustainable withdrawals)
 - Goal 10: Reduced Inequality
 - Goal 12: Sustainable Consumption and Production
 - Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
 - The relevant targets of other agriculture and food system related goals
- The Zero Hunger Challenge Pathways to Zero Hunger¹⁰
- FAO's "Building a common vision for sustainable food and agriculture" (five principles)
- The SAFA Guidelines (Sustainability Assessment of Agriculture and Food Systems)
- The COSA Indicators (Committee on Sustainability Assessment)
- The IPES Food 10 Principles to guide the transition to Sustainable Food Systems¹¹
- FAO's "LEGACY of IYFF 2014 and the WAY FORWARD"¹²

Key reports and recommendations on the sustainability of agriculture and food security are further produced by the Committee on World Food Security (CFS), the foremost inclusive, intergovernmental platform on agriculture and food security¹³. At its 42nd Plenary Session in October 2015, the Committee on World Food Security (CFS) decided to put the implementation of the 2030 Agenda at the center of its work. CFS has a key role to play for the achievement of the SDGs, both in relation to SDG2 as well as across the SDGs. Its policy products have the potential to advance an integrated implementation of the 2030 Agenda from the angle of food security, nutrition and sustainable agriculture by systematically addressing nexus issues. In consideration of its multi-stakeholder character, CFS can also make a unique contribution to achieving goal 17 by advancing a collaborative and partnership-based approach at all levels.

⁷ Formulation adopted from „Food losses and waste in the context of sustainable food systems”, CFS-HLPE 2014. <http://www.fao.org/3/a-i3901e.pdf>

⁸ Earlier key work commissioned and adopted by the International Community includes the International Assessment of Agricultural Knowledge, Science and Technology (IAASTD), the Rome Declarations on World Food Security 1996, 2002 and 2009 and the recurrent reports of the relevant UN Conventions.

⁹ <https://sustainabledevelopment.un.org/sdgs>

¹⁰ <http://www.un.org/en/zerohunger/pdfs/ZHC%20-%20Pathways%20to%20Zero%20Hunger.pdf>

¹¹ http://www.ipes-food.org/images/CoreDocs/IPES-Food_10_principles.pdf

¹² <http://www.fao.org/3/b-mm296e.pdf>

¹³ <http://www.fao.org/cfs/cfs-hlpe/en/>



Figure 3: The Sustainable Development Goals. Highlighted in bright colour are those goals and targets to which CFS work has directly contributed so far; highlighted lightly are the goals and targets to which CFS products contributed indirectly and those left in grey are the goals and targets to which CFS so far has not contributed in its work.¹⁴

Based on the different internationally agreed criteria sets and principles we propose the following criteria for assessing whether we move into the right direction:

1. Ensuring food security and adequate nutrition for all (availability, access, utilisation and stability) in order to achieve the Right to Food¹⁵;
2. Sustainable use and conservation of natural resources within planetary boundaries¹⁶;
3. Minimizing negative impact on ecosystems and human health and enhancing the environmental quality;
4. Improving livelihoods for producers and workers and contributing to rural economic and social development;
5. Enhancing resilience of people, communities and ecosystems while mitigating climate change;
6. Responsible and effective governance that respects and strengthens the rights of all, with special attention to those who are most vulnerable;
7. Ensuring access to markets and finance for all actors of the value chain. This requires a more equitable multilateral trade and transparent financing system that supports sustainable development for all and mitigates food price volatility;
8. Acknowledging that agricultural producers and private sector companies are key for the adaption and implementation of sustainability practices and acknowledging the commercial realities and markets in which they operate.

Proposed solutions to make AFS more sustainable need to be assessed on all these criteria.

¹⁴ http://www.fao.org/fileadmin/templates/cfs/Docs1516/OEWG_SDG/3rd_Meeting/CFS_OEWG-SDGs_2016_02_24_05_rev_Mapping.pdf

¹⁵ as defined in the UN ESCR convention, <http://www.ohchr.org/Documents/Publications/FactSheet34en.pdf>

¹⁶ Some actors propose sufficiency in food systems which requires 'temperance'

3. What drives change towards sustainable agriculture and food systems?

3.1. A Theory of Change

A food system approach is achieved by focusing on the interdependencies and feedback loops in a given food system. That entails a cross-sectoral, integrated and comprehensive view of the mechanisms at work in that food system. Moving towards sustainable AFS requires that a combination of key factors are aligned with each other (Figure 4): Research and capacity development to increase **knowledge**¹⁷ on more sustainable agricultural practices and value chain designs; awareness among consumers and businesses that increase **market** demand for sustainable products; increased **collaboration** among the different stakeholders to advance the agenda; and last but not least a conducive **policy** environment that promotes and rewards more sustainable solutions.

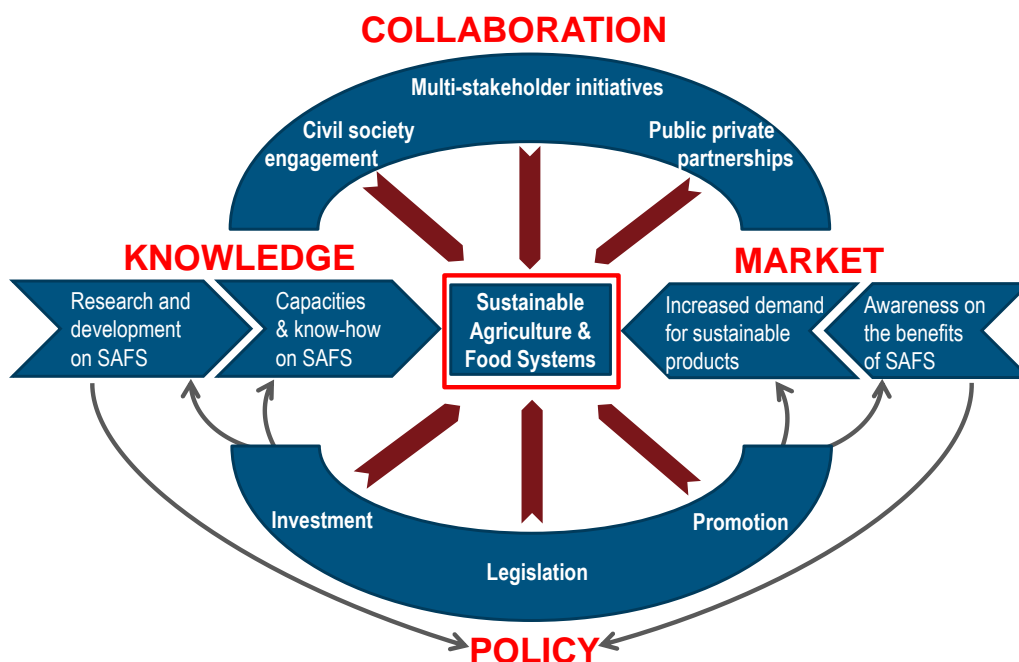


Figure 4: Theory of Change: the four factors need to work together in order to achieve a change towards sustainable AFS.

Within the current universal context of the agenda 2030, Switzerland is required to contribute to the transformation to sustainable agriculture and food systems on two levels:

- We are held to transform our domestic agriculture and food system sector (including imports) so as to be sustainable
- We are required to coherently contribute to making agriculture and food systems sustainable at the regional and global level

Building on existing strengths and best practice will be key in order to deliver in the given time frames, while at the same time identifying room for improvement and tackling gaps.¹⁸

The following chapters explain the key factors identified above and the required measures in more detail.

¹⁷ including knowledge of farmers, women, indigenous peoples

¹⁸ Sustainable Development Strategy 2016-2019. Federal Office for Spatial Development (ARE)
<http://www.are.admin.ch/themen/nachhaltig/00262/00528/index.html?lang=en>

3.2. Knowledge (Research, education and innovation)

Research and development activities of public and private entities need to focus on how to make production systems and supply chains more sustainable. In order to avoid unwanted side effects and trade-offs it is important that strategies and actions are a) built on the understanding of interdependencies and feedback loops in the system and that b) the sustainability criteria (see chapter 2.3) are not undermined. Promising approaches that should receive more attention include:

- Sustainable agro-ecosystems design for all farm sizes and systems, such as:
 - Sustainable soil management practices
 - Agroecological farming systems
 - Biological pest control
 - Best practice organic farming systems
 - Ecosystem- and landscape approaches
- Precision farming and optimized nutrient management and pest control
- Crop enhancement (nutrient efficiency, pest resistance, weed tolerance, drought, salt and storm resistance, micronutrients, longer shelf life) through advanced breeding techniques and participatory selection involving farmers
- Innovative / efficient value chain or market webs design and consumption patterns that provide income to small food producers and diminish oligopolistic or even monopolistic market control
- Impact measurement in all dimensions of sustainability (economic, social, environmental dimension)
- Comprehensive policies that address the multiple burdens of malnutrition and the nutrition transition
- Efforts to improve agrobiodiversity and dietary diversity, for improved resilience and nutrition
- Exchange platforms or new value chain models that provide sustainable livelihoods for all food system actors

In order to develop practical solutions, research under controlled conditions needs to go hand in hand with participatory on-farm research and the participatory development of local seed and food systems. Existing knowledge of farmers, often tacit, has to be taken into account in order to facilitate and regionalize the adoption of novel knowledge. The sharing of comprehensive data from a broad range of farms, businesses and consumer groups allows testing innovations and optimizing farming practices and fast scaling up of best practice. In general, a technology development for smallholders and family farmers is needed (esp. for agricultural machinery, for information and communication, for business development, administrative and financial work).

Equally important is that know-how and technologies are transferred to those who actually manage the operations. This requires that vocational capacity building is increasingly aimed at understanding the food system, that it is enhanced and that it offers affordable education opportunities in the agro-food sector. Rural advisory services and education opportunities for businesses and consumers – both publicly and private funded ones – need strengthening. In order to offer future perspectives in the AFS sector it is particularly important to reach out to and engage young people.

Enhancing knowledge through research, education and innovation is not only vital in agriculture but across all the steps in the value chain. This must encompass diverse aspects such as human rights, safety of workers, food safety, food losses and wastage, processing to enhance shelf life through distribution and retail to the final consumer. There is also a crucial need to improve food literacy, cooking skills and the understanding of nutritive value.

3.3. Market (Committed and aware businesses and consumers)

Market demand is an important pull factor for sustainable AFS. Raising consumer awareness on health, social and environmental issues related to AFS is crucial. Increasing “food literacy” needs to start at schools, but also reach adults. There is a general trend that people want to reconnect with where and how their food is produced. Promoting regional specialties or traditional varieties and making food

production and processing “experienceable” (e.g. through food festivals, farm visits, agro-tourism, cooking classes etc.) are promising approaches in this regard. Community supported agriculture and farmer-consumer cooperatives are promising initiatives that bring farmers and consumers closer.

Voluntary sustainability standards (organic, fair trade, UTZ, Rainforest Alliance, etc.)¹⁹ or tools that enable traceability (like UN Blue number or Farm force) play an important role to distinguish products with sustainability benefits in the market and allow farmers to receive a better price for sustainable products. They enable conscious consumers to reward higher sustainability performance by choosing labelled products. Enhancing availability, accessibility, transparency and promotion of these products (through consumer information and prominent placing) therefore stimulates market demand for sustainable AFS. Many of these sustainability standards are also effective tools to help producers in the Global South accessing markets for sustainably produced goods. However, the growing number of quality and sustainability standards – both private and statutory – increase the costs of inspection and certification. This may create economic and administrative obstacles for small producers and for remote rural areas. Therefore, it is important to strengthen cooperative and participatory auditing systems.

Processing brands and retailers play a key role in committing to responsible sourcing by expanding the share of labelled products and sustainability audits of their suppliers. Multi-stakeholder sector initiatives like the Round Table on Responsible Soy, the Better Cotton Initiative or the Sustainable Trade Initiative can contribute to market transformation by setting new standards for entire sectors.²⁰ However, other and non-label based approaches to enhance shared/equitable valorization should be explored.

About one-third of global food production is either wasted or lost every year. Food waste not only generates unnecessary greenhouse gas emissions and wastage of water but also affects farmer income, and the availability and cost of food. In developing countries, this occurs largely in the upstream supply chain, while in the developed world, it is more concentrated downstream, between the retailer and the consumer. Whereas a number of initiatives have been launched by various organizations over the past few years, food wastage remains high and it is crucial to address this issue to achieve sustainable food systems.

3.4. Collaboration (Multi-stakeholder initiatives and engaged value chain actors)

No single stakeholder group alone will be able to meet the challenge of making AFS more sustainable. Collaboration between different stakeholders to jointly tackle issues or advance promising approaches stands better chances for success. As pointed out in SDG17 (Partnerships for the Goals) there is a need for cross-sectoral platforms, structures and Monitoring and Evaluation Systems (M&E systems). In order to ensure that the different sustainability objectives of AFS receive equal attention it is of crucial importance that farmers, pastoralists, indigenous peoples, civil society organisations and business are included in these initiatives and that they give less powerful institutions an equal say.

Various multi-stakeholder platforms, initiatives and networks have already been established to jointly work for sustainable AFS (e.g. the Committee on World Food Security (CFS), the Sustainable Food Systems Programme of the UN’s 10-Year Framework of Programmes on Sustainable Consumption and Production, the Sustainable Agriculture Initiative, the EAT Forum, the Zero Hunger Challenge) or to address specific challenges (e.g. commodity-specific round tables, the 4 pour 1000 Initiative, or the Economics of Ecosystems & Biodiversity (TEEB)²¹). There are many successful development cooperation initiatives and public-private partnerships that address sustainability issues in AFS (e.g. SDC’s Global Program Food Security or partnerships focused on water use efficiency).

¹⁹ Voluntary sustainability standards that meet certain credibility criteria are united under the ISEAL Alliance, <http://www.isealalliance.org>.

²⁰ See <http://www.idhsustainabletrade.com/impact>

²¹ <http://www.teebweb.org/publication/teebagfood-interim-report/>

3.5. Policy (Good governance and suitable incentives)

Initiatives to make AFS more sustainable require a conducive policy environment in order to achieve scale. That includes governance structures and decision-making processes which overcome sectorial silos and work in a cross-sectoral, integrated and evidence-based fashion, including all relevant stakeholders. More exchange is also needed between the international, regional and national level to foster coherence in making AFS sustainable. The setting and policy types that can effectively advance a shift towards sustainable AFS include:

- Ensuring integrated, cross-sectoral policy planning and priority setting based on an inclusive policy dialogue and assessment of the status quo of the respective system;
- Funding independent research on how to adopt a systemic approach and make AFS and supply chains sustainable on a scientific basis;
- Adopt policies to ensure and strengthen local, diverse and/or traditional food production and seed systems as well as decentralised, participatory breeding;
- Orienting vocational training for food system actors and rural advisory services towards sustainability;
- Providing incentives for ecosystem services (e.g. direct payments to farmers linked to certain minimum requirements);
- Guidelines and legislation regarding natural resource management, post-harvest losses and food waste;
- Promote policies to strengthen fair food chains and equitable sharing of added value.
- Supporting the creation and adoption of effective voluntary sustainability standards based on all three dimensions of sustainability;
- Promoting sustainable procurement practices of food processing industry, retailers, and public institutions;
- Consumer information and awareness raising related to sustainable AFS;
- Assessing the true cost of different AFS and introducing mechanisms that internalize external costs and enhance positive externalities;
- Ensuring sustainable finance for implementation and strong and functioning social safety nets;
- Promoting the right to food and ensuring respect, protection and fulfilment of human rights – by conducting human rights impact assessments;
- Following relevant UN Guidelines such as the Guiding Principles on Business and Human Rights, the FAO-OECD Guidance for Responsible Agricultural Supply Chains, the CFS Principles for Responsible Investment in Agriculture and Food Systems;
- Strengthening accountability of all actors in sustainable food systems;
- Introducing strong and independent monitoring systems to measure the impact of different approaches and initiatives.

The Committee on World Food Security's Global Strategic Framework for Food Security and Nutrition (GSF)²² provides an overarching framework and reference with practical guidance for food security and nutrition strategies, policies and actions. It is addressed to decision-makers from the full range of stakeholders by consolidating relevant recommendations that are adopted by yearly CFS Plenaries and taking into account other existing frameworks, guidelines and processes. Moreover the CFS High Level Panel of Experts is currently preparing a report on "Nutrition and Food Systems" to provide the evidence base for CFS work on nutrition and food systems in the coming years.²³

In the shift towards sustainable AFS, it will be important to keep a holistic perspective in order to avoid unwanted trade-offs between the three dimensions of sustainable development.²⁴ Over the last two and

²² CFS' Global Strategic Framework for Food Security and Nutrition (GSF): <http://www.fao.org/3/AV031e.pdf>

²³ The HLPE report on Nutrition and Food Systems is expected to be presented at CFS 44 in October 2017.

²⁴ The mechanisation of sugarcane harvesting can serve as an example of such trade-offs: while mechanization has positive effects for the environment (e.g. less carbon emissions), it can create local or regional social problems (unemployment of land workers).

a half decades, the environmental dimension of sustainability has had the major share of international attention and rightly so. However, in recent years the international community is fostering its efforts to bring the social dimension closer to the centre of the sustainability debate. During its general review on the State of Food and Agriculture during its 39th Conference in 2015, FAO emphasised the social dimension of sustainable development. It highlighted the importance of social protection as part of sustainable agricultural development. Social protection was recognized as an important tool in strengthening rural resilience and hence as instrumental in the efforts towards breaking the cycle of rural poverty and hunger.

Women play a particularly important role in the development of sustainable food systems since their income and decision-making power is closely linked to improved nutrition for household members. Women have a central role in translating agricultural inputs and outputs into nutrition impacts. However, in many parts of the world women do not have access to services (such as training, finance, land); the tasks undertaken by women on the farm is undervalued with the associated consequences on income levels and sources of income. The lack of equality of land tenure between men and women has particularly consequences as inheritance laws and property rights in many societies favour men over women.

3.6. Monitoring and Evaluation

Assessing progress in moving towards sustainable AFS requires that the situation is regularly assessed with regard to the objectives defined in chapter 2.3. There is a need to develop a performant M&E process for measurement of sustainability of the food system and ensure accountability²⁵. For this purpose, suitable Key Performance Indicators (KPI) need to be defined and measured. In order to ensure coherence they need to be aligned with the indicators and monitoring systems that are currently developed for the SDGs. The monitoring must take into consideration gender aspects as highlighted in a number of the SDGs.

²⁵ Including existing qualitative and quantitative indicators/measurement and development of new indicators to assess performance of the system where needed.

4. Recommendations to work towards sustainable AFS

Based on the criteria, the theory of change and the best practice examples identified in the previous chapters several recommendations can be formulated. The recommendations are valid for all stakeholders of AFS, but particularly for policy makers, private sector and civil society organisations. They are organized in the same categories as indicated in the theory of change (Figure 4).

4.1. Enhancing knowledge for sustainable AFS

- 1) **Systemic view:** Instead of looking at food system elements or sustainability dimensions in isolation, apply a systemic view that takes into consideration the linkages between (diversified) production, diets, health, education, livelihoods and economic development and the environmental, social, economic and political context.
- 2) **Research and Development:** Governments and private sector actors should leverage their research capacities to intensify research on sustainable AFS design, technology and impact. Research should be participatory (involving farmers and other practitioners), accessible to the public and also include the development of low-cost solutions (e.g. ecological systems, good farming practices).
- 3) **Capacity building:** Revise vocational training and rural advisory services in a way that they enhance comprehensive sustainable AFS knowledge and skills, including entrepreneurial skills. Careers in farming and the agri-food system need to become attractive to young people.
- 4) **Investments:** Enable and encourage investments into the development of sustainable AFS tools, services, funding mechanisms and education.

4.2. Making markets work for sustainable AFS

- 5) **Food literacy and awareness:** Use various means to raise food literacy and awareness amongst the population, particularly among children and young people.
- 6) **Price stability and fairness:** stabilize producer prices by increasing the negotiation power of producers in the value chain mechanisms, preventing misuse of monopoly power and dependence to single traders.
- 7) **Business case:** Translate the AFS sustainability agenda into economic interests, and vice versa. Sustainable AFS operate in commercial realities and need access to markets and finance.
- 8) **Sustainable sourcing:** Brands, retailers and governments should commit to increasingly source sustainable products (i.e. products that fulfil holistic sustainability requirements or standards).
- 9) **Voluntary Sustainability Standards:** Support the upscaling of VSS, and ensure their credibility and impact.
- 10) **Innovative marketing mechanisms:** Support systems that bring producers and consumers closer together, strengthen trust and mutual understanding.

4.3. Enhancing collaboration for sustainable AFS

- 11) **Overcome polarization:** Recognize that there is no single approach to address these complex challenges and that the combination of best practices from different systems is needed.
- 12) **Dialogue:** Facilitate direct dialogue and exchange between stakeholders to increase mutual understanding of issues and required action.
- 13) **Joint efforts:** Farmers, private sector, academia, civil society and governments need to join hands to address specific issues and to upscale best practices.
- 14) **Participation:** Ensure that all relevant stakeholders and value chain actors are involved in these efforts and are able to contribute in a meaningful way. This requires enhancing political literacy and resources of weaker stakeholder groups so that they can participate.

- 15) **Transparency:** Enhance transparency and traceability in food systems and value chains with regard to their sustainability performance in order to allow buyers and consumers to make informed choices.

4.4. Creating a conducive policy context

- 16) **Opportunities:** Offer programs and incentives to make farming and the agri-food system attractive particularly to young people.
- 17) **Governance:** Facilitate multi-stakeholder governance structures ensuring that all have a say (including smallholders); foster integrated, cross-sectorial, cross-ministerial planning for a truly systemic view of AFS
- 18) **Policy coherence:** Identify and revise existing policies and legislation that provide incentives for non-sustainable AFS, and reframe them in a way that they encourage more sustainable solutions.
- 19) **True cost/value:** Assess the true cost of different AFS and introduce mechanisms that internalize external costs and enhance positive externalities.
- 20) **Accountability of actors:** Ensure that all actors of AFS are transparent and accountable concerning their sustainability impacts (positive and negative ones).

Applied in combination the recommended measures can significantly contribute to shifting AFS towards more sustainability (Figure 5).

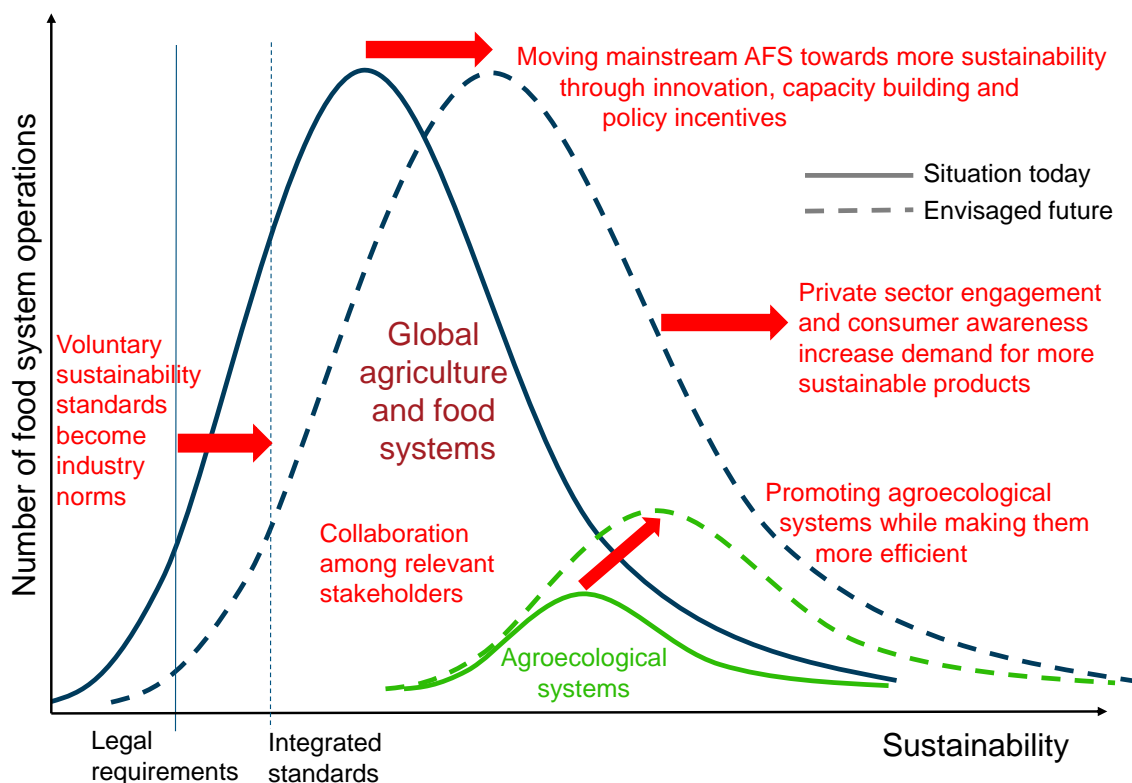


Figure 5: The combined recommended measures contribute to cutting highly unsustainable practices, increasing the share of highly sustainable systems, and moving mainstream AFS towards a higher level of sustainability.

5. Annex

5.1. Relevant global initiatives towards sustainable AFS

5.1.1. Relevant projects and multi-stakeholder partnerships supported by FOAG

- [Sustainable Food Systems Program](#) under the UN 10 Years Framework Program on Sustainable Consumption and Production (FOAG is Co-Lead Agency)
- [Global Agenda for Sustainable Livestock \(GASL\)](#)
- [Livestock Environmental Assessment and Performance Partnership \(LEAP\)](#)
- [Capacity Development for Food Safety and Quality](#)
- [Committee on World Food Security, including its High Level Panel of Experts \(HLPE\)](#)
- [Global Soil Partnership \(GSP\)](#)
- [Incentives for Ecosystem Services in Sustainable Agriculture \(IES\)](#)
- [Mountain Partnership \(MP\)](#)
- [International Treaty on Plant Genetic Resources for Food and Agriculture](#)

5.1.2. Other projects

- The [European Institute of Innovation and Technology \(EIT\)](#) calls for Knowledge and Innovation Communities (KICs) on [Food4Future -Sustainable Supply Chain from Resources to Consumers](#)
- [IPES Food](#), an international panel of experts on Sustainable Food Systems
- [EAT Forum](#), a platform for science, politics and business sharing food for thought
- [Center for Integrated Modelling of Sustainable Agriculture and Nutrition Security \(ILSI CIMSANS\)](#)
- [Ecological Organic Agriculture Initiative \(EOA\) of the African Union](#)
- [SHARP](#): integrating a traditional survey with participatory self-evaluation and learning for climate change resilience assessment
- FAO Agroecology regional symposia

5.2. Relevant Swiss initiatives towards sustainable global AFS

- [SDC Global Program Food Security](#): Large projects on post-harvest management, nutrition through diversified agriculture, water productivity (with Helvetas and other partners)
- [SECO Promoting Sustainable Trade](#): Sustainable commodities, [Voluntary Sustainability Standards](#), PPPs under the [Sustainable Trade Initiative IDH](#), capacity building platform [sustainabilityXchange](#)
- [World Food System Center](#) and the [Enhancing Resilience in Food Systems project](#)
- [Changing Course in Global Agriculture \(CCGA\)](#): integrated multi-stakeholder policy-planning for sustainable food systems (supported by SDC and others)

5.3. Key reference documents on more sustainable AFS

- The [SDGs](#) (supported by the Addis Ababa Action Agenda); General Assembly 2015.
- The [Zero Hunger Challenge Pathways to Zero Hunger](#)
- [The Right to Food](#)
- The [SAFA Guidelines](#) (Sustainability Assessment of Agriculture and Food Systems)
- The [COSA Indicators](#) (Committee on Sustainability Assessment)
- [International Assessment of Agricultural Knowledge Science and Technology](#). IAASTD 2008.

- [Building a common vision for sustainable food and agriculture: Principles and approaches.](#) FAO 2014.
- [CFS' Global Strategic Framework for Food Security and Nutrition \(GSF\):](#)
- [The IPES Food 10 Principles to guide the transition to Sustainable Food Systems](#)
- [The new science of sustainable food systems: Overcoming barriers to food systems reform.](#) iPES Food 2015.
- [EAT in Sustainia.](#) EAT 2015.
- [Principles for responsible investment in agriculture and food systems.](#) CFS 2014.
- [Voluntary Guidelines on the Responsible Governance of Tenure of land, fisheries and forests in the context of national food security.](#) CFS 2012.
- [Agriculture development, food security and nutrition.](#) UN Secretary General 2015.
- [Agricultural technology for development. UN Secretary General](#) 2015.
- [Sustainable Food Systems Programme Document. UNEP 2016.](#)
- [The Global Food System – An Analysis. Metabolic 2016.](#)
- World Food Program: [Who are the hungry?](#)
- [Reports of the special rapporteur of the right to food](#)
- ILSI Research Foundation: [Seven Food System Metrics of Sustainable Nutrition Security,](#) Sustainability 2016, 8, 196