



# COMMITTEE ON AGRICULTURE

## Twenty-sixth Session

Rome, 1 - 5 October 2018

## Sustainable Food Systems

### Executive Summary

The development of sustainable food systems will be critical in achieving the majority of the Sustainable Development Goals. To take advantage of the opportunities that food systems provide and to address the many challenges that they create, the paper argues for a more integrated approach to the diagnosis of key constraints and to the design and implementation of effective policy, regulatory and institutional frameworks for incentivizing appropriate stakeholder actions and investments.

The paper recognizes that a holistic approach to food systems development may not be realistic in all contexts given current deficiencies in resources and capacities, by illustrating the challenges faced, for example, in incentivizing appropriate levels and types of investment in food systems. The paper then sets out the actions needed to foster a food systems approach, stressing not just the roles that different stakeholders can play, but also the importance of significantly improved coordination of their actions. FAO is prioritizing its support to Member Countries to strengthen their capacities to adopt a food systems approach through the Strategic Framework, with particular emphasis on delivery through strategic partnerships and multi-stakeholder platforms.

### Suggested action by the Committee

The Committee is invited to:

- Acknowledge the need for a more integrated, multi-stakeholder approach to addressing the complex challenges of food system development;
- Request FAO to support governments in adopting a sustainable food systems approach by strengthening capacities in the design and implementation of enabling policies and regulations.
- Request that FAO continue to support the strengthening of strategic partnerships and platforms, notably the 10YFP Sustainable Food Systems programme;

*This document can be accessed using the Quick Response Code on this page;  
an FAO initiative to minimize its environmental impact and promote greener communications.  
Other documents can be consulted at [www.fao.org](http://www.fao.org)*



- In line with the principles of UN reform, encourage FAO to further increase inter-agency collaboration in supporting sustainable food system development

*Queries on the substantive content of the document may be addressed to:*

Jamie Morrison  
Strategic Programme Leader  
Food Systems Programme (SP4)  
Tel: 56251

## I. Introduction

1. A wide range of interlinked trends and forces drive recent developments in food systems. With a population estimated to reach 9.8 billion in 2050<sup>1</sup>, the world is becoming increasingly globalized and urban. Approximately 50 percent of the total global population now live in urban areas. Even in countries with large rural populations, food markets cater primarily to urban food demands<sup>2</sup>. In the last 30 years, the volume of food flowing from rural to urban areas in Africa increased by 800 percent, while the increase in Southeast Asia was almost 1,000 percent<sup>3</sup>. Many low- and middle-income countries have witnessed strong economic growth giving rise to a “global middle class” whose size is projected to increase almost threefold between 2009 and 2030<sup>4</sup>. However, while food demand of the middle class in many regions is increasingly being met through global supply chains and large-scale distribution systems, the urban poor still rely on informal traditional markets as their primary food supply channel<sup>5</sup>. Rapid technological innovation has been another major driving force shaping the productivity and competitiveness of food systems<sup>6</sup>.

2. These trends have created enormous opportunities, with more efficient food systems having significant potential to underpin economic growth, improve on- and off-farm employment opportunities, to satisfy changing consumer demand and in doing so to help eradicate hunger and malnutrition. However, they have also resulted in complex challenges and controversies, with potentially wide-reaching consequences for the future of food security and nutrition. Food systems have responded to shifts in consumer preferences, resulting in larger shares of animal-sourced and processed food items of inadequate calorific and nutritional content in diets, potentially contributing to significant increases in levels of overweight and obesity<sup>7</sup>. Increased market concentration and the need to produce for a more integrated global market have raised new barriers to market access for family farmers and small-scale food producers who can find it difficult to meet buyers’ requirements for product uniformity, consistency, and regular supply<sup>8</sup>. Developments in food systems have also induced greater food waste, while their greater interconnectivity can increase the risk of fast transmission of food-borne disease and food-related health risks<sup>9</sup>. Concerns have also been raised about their significant contribution to greenhouse gas emissions, to biodiversity loss, and to land and water resource degradation<sup>10</sup>.

3. The future development of food systems will therefore be central to determining whether many of the 17 Sustainable Development Goals (SDGs) are achieved - whether hunger can be eliminated, health and wellbeing improved, more responsible production and consumption fostered, decent work and employment ensured, and environmental stewardship promoted. In a world in which food production is expected to increase by about 50 percent by 2050, in which there are increasing pressures on the natural resource base, exacerbated by climate change, growing inequalities between and within urban and rural communities, and increased conflict and migration, a change to the current trajectory of food system development is essential.

---

<sup>1</sup> UNDESA, 2017. World Population Prospects: 2017 Revision, Key Findings and Advance Tables. New York.

<sup>2</sup> FAO. 2017. State of Food and Agriculture: Leverage food systems for inclusive rural transformation. Rome.

<sup>3</sup> Reardon and Zilberman, 2016

<sup>4</sup> OECD. 2012. An emerging middle class. Paris.

<sup>5</sup> FAO. 2013. The State of Food and Agriculture: Food systems for better nutrition. Rome.

<sup>6</sup> FAO. 2017. The future of food and agriculture - Trends and challenges. Rome.

<sup>7</sup> Baker, P. and S. Friel. 2016. Food systems transformations, ultra-processed food markets and the nutrition transition in Asia. Globalization and Health.

<sup>8</sup> Timmer, P. 2014. Managing structural transformation: A political economy approach. UNU-WIDER Annual Lecture 18. Helsinki, UNU-WIDER

<sup>9</sup> FAO. 2017. Transboundary pests and diseases. Chapter 6 in “The future of food and agriculture: Trends and challenges”. FAO, Rome

<sup>10</sup> Hahn Nguyen, Morrison, J and D. Neven. 2018, forthcoming. Changing food systems: Implications for food security and nutrition. In: Sustainable Food and Agriculture. Elsevier.

4. In this paper, the concept of sustainable food systems is introduced and the constraints to sustainable food system development elaborated. The coordinated actions required to address these constraints, and FAO's role in supporting countries to adopt a sustainable food system approach in underpinning their efforts to achieve the SDGs are examined. It concludes with a series of considerations for the Committee.

## **II. What is Sustainable Food System Development?**

5. Food systems encompass the entire range of actors and their interlinked activities involved in the production, aggregation, processing, distribution, consumption and disposal of food products that originate from agriculture, forestry or fisheries; the institutions that initiate or inhibit change in these systems, and the broader economic, societal and natural environments in which they are embedded<sup>11</sup>. A food system is sustainable if it can provide food security and nutrition in such a way that the economic, social and environmental bases required to generate food security and nutrition for future generations are not compromised<sup>12</sup>.

6. Interventions in food systems have tended to focus on single dimensions of sustainability such as environmental degradation or poor nutritional outcomes in vulnerable groups. However, in many cases, there will be multiple binding constraints that need to be addressed simultaneously. To illustrate, negative nutrition related outcomes such as micronutrient deficiency or overweight and obesity may not be improved through interventions such as food labelling or nutrition education alone. They may also depend on other factors that need to be addressed such as the conditions determining incomes and consequent ability to purchase more nutritious foods; or the availability of infrastructure to facilitate adequate storage of food and the preservation of nutrients; or even the country's food trade strategy.

7. This generally calls for adopting a systems approach to apply integrated interventions across multiple sectors including agriculture, forestry and fisheries, trade, health, finance and education, rather than a series of single interventions within one sector. By looking at the system as a whole, more effective and better coordinated cooperation between different sectors and disciplines can be fostered to create synergies and balance trade-offs. Embracing a food systems approach will require commitment and action from a wider range of involved parties, locally, nationally, and internationally.

## **III. What is constraining Sustainable Food System Development?**

8. The scale and type of investment in food systems are largely determined by the decisions of private sector actors, decisions that both respond to and shape market opportunities created by changing consumer demands. While investment in post-production processing and distribution activities have seen the rapid development and penetration of modern food systems in many countries, the level of investment in some developing countries has been inadequate to promote the transformation towards food systems that improve dietary quality and environmental sustainability while taking advantage of efficiency gains. Additionally, in those regions where investments in modern food systems have been significant, the types of investments have often been incompatible with the development of inclusive and sustainable food systems. The key challenge therefore, is one of ensuring that investment is both adequate to drive dynamic food system development and has the quality of promoting inclusive and sustainable systems<sup>13</sup>.

---

<sup>11</sup> Adapted from FAO. 2013. The State of Food and Agriculture: Food Systems for Better Nutrition. Rome

<sup>12</sup> HLPE. 2014. Food losses and waste in the context of sustainable food systems. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security. Report No.8. Rome.

<sup>13</sup> Morrison, J., Bianchi, E., Bowyer, C., Vos, R. and L. Wellesley. 2018, forthcoming. Redirecting investment for a global food system that is sustainable and promotes healthy diets. Brief prepared for the T20 Taskforce on Food Security and Sustainable Agriculture.

9. Public sector policies, regulations and provision of public goods such as road infrastructure are a key stimulant, if not a pre-condition for appropriate private sector investment. Investments in agrifood systems are often considered to be high risk because of weather variability and other factors such as unstable macroeconomic conditions. These risks are exacerbated in contexts characterized by weak rule of law, an unclear regulatory landscape, or where public goods are lacking.

10. The traditional approaches to the design and implementation of food policy and regulatory frameworks do not necessarily provide incentives for investments in inclusive and sustainable development of food systems. Strategies to encourage a reduction in the extent of food waste, for example, may require a combination of measures ranging from improved legislation on “best before dates” or on mandatory donations of surplus food by supermarkets, to improved consumer education, or investments in processing and distribution infrastructure. This would require improved coordination of action across the relevant ministries.

11. In addition to constraints at local and national level, the transboundary nature of food systems and the public good nature of services that address health and environmental challenges means that global governance processes need to create robust frameworks within which national policies, standards and regulations are designed and implemented, not just with national objectives in mind, but in line with multilateral commitments to reduce the potential for negative food system outcomes in trading partners. For example, trade agreements and international standards need to be reflective of the growing potential incidence of transboundary food safety and disease concerns in a more interconnected global economy.

#### **IV. What actions need to be taken to foster a food systems approach?**

12. The development of more sustainable food systems will require a broader, yet better coordinated set of actions, implemented by, and modifying the behaviour of, a wide range of actors. This will require strengthened and collective governance to foster the resolve of all involved stakeholders to improve food system outcomes.

13. The public sector can push food system developments towards more sustainable outcomes by creating a strong supportive enabling environment through fiscal, legal, and policy measures. For example, it may need to make investments in infrastructure linked to new urban market food systems, set environmental regulations that reflect the real costs of food system actions, or implement school feeding programmes based on innovative public procurement and education strategies<sup>14</sup>. Governments can also influence consumer behaviour through new food labelling requirements, consumer education and awareness programmes or by changing regulations to facilitate direct sales between producer and consumer.

14. Collaboration between different government ministries is essential. The strategies of ministries of agriculture, forestry and fisheries, health, environment, education, trade, finance, and planning are often contradictory and could be better aligned to create clear incentives for sustainable food systems development. There is a need for coherence of policies at all levels from local to regional/provincial to national and global. A key role is played by local government in executing national policy (Box 1).

---

<sup>14</sup> Hahn et al *ibid*

Box 1. A key role for local government

Local governments often make the actual change to the enabling environment through their role in translating national policies into sub-national regulations and ordinances. In Peru, for example, the municipalities are now responsible by law for the procurement of food for schools.

Local governments have also been instrumental in establishing Food Policy Councils or Food Liaison Advisory Groups as multi-stakeholder platforms for fostering sustainable food systems development.

15. Inter-sectoral collaboration can also highlight potential trade-offs that may need to be made between different goals, such as between the provision of more diverse and nutritious food supplies, the reduction of ecological footprints and the cost of food to consumers.

16. Civil society organizations, consumer organizations, parliamentarians, research and academic institutions can play a key role in awareness raising to foster greater demand for nutritious and environmentally responsible food, and are typically important influencers in changing consumers' perception of desirable foods and eating habits. They can also put pressure on businesses and governments to ensure that the social and environmental impacts of food production, processing and distribution are factored into their decisions. Consumers with sufficient levels of disposable income can choose to buy food that is more nutritious, socially responsible, or greener when these types of food are accessible and affordable. They can also join consumer associations, networks or fora that expose unsustainable food practices or advocate for measures to promote more sustainable approaches<sup>15</sup>.

17. The private sector, ranging from family farmers to large multinational corporations involved in processing, trade and/or retailing, is the main supplier of food products and as such is directly responsible for actions that determine the economic, social and environmental impacts of how food flows to the consumer. Private sector behaviour is driven by a complex set of factors including their need to compete in the marketplace, the regulations, policies and laws they must adhere to, the demands of consumers, the intricacies of their collaborative networks, and their internal risk management and social responsibility strategies.

18. Key to ensuring sustainable food system development is the coordinated action of these stakeholder groups. At the national level, initiatives to promote dialogue and action across sectors and between stakeholder groups are necessary (Box 2).

Box 2. Origin Green – An initiative to promote inter-sectoral dialogue

Ireland's Origin Green programme brings together its food industry – from farmers to food producers, retailers to foodservice operators – with the common goal of sustainable food production. This programme enables Ireland's food industry to set and achieve measurable sustainability targets that respect the environment and serve local communities more effectively.

19. At the global level, platforms such as the UN Committee on World Food Security and the Sustainable Food Systems Programme<sup>16</sup> of the 10 Year Framework of Programmes on Sustainable Consumption and Production (10YFP) can play a key catalytic role in driving more sustainable food systems by providing fora for sharing and extending experience, policy advice and knowledge on food system transformation and its impacts, including the promotion of the appropriate adoption of

<sup>15</sup> Hahn et al *ibid*

<sup>16</sup> Mulet, M., Mink, P., Dernini, S. Bortoletti, M. and J. Lomax. 2018 forthcoming. The 10YFP Sustainable Food Systems as a multistakeholder platform for a systemic approach. In: Sustainable Diets: The Transdisciplinary Imperative. CABI

innovations such as e-agriculture and blockchain which provide an opportunity to build the required levels of trust between actors throughout food systems<sup>17</sup>.

## **V. How is FAO prioritizing its support through the Strategic Framework?**

20. FAO has traditionally worked with the public sector of member countries to address specific constraints to food system development through its core functions, including, inter alia technical and evidence based policy support, capacity development and advocacy in relation to: international standard setting bodies for food safety (Codex Alimentarius), plant health (International Plant Protection Convention) and animal health (Office International des Epizooties); countries' engagement in the formulation and implementation of international trade agreements and voluntary guidelines including the Code of Conduct for Responsible Fisheries, and the CFS Principles for Responsible Investment in Agriculture and Food Systems; the development of value chains, including action to reduce food loss and waste; the strengthening of producer organizations and small food companies; the development of coordinating mechanisms such as public-private partnerships and contract farming; and the provision of investment and finance.

21. The introduction of the Strategic Framework in 2013 reflected a recognition that although these interventions were often successful in addressing identified constraints, because an integrated systems approach was not adopted, some of the critical constraints to food systems development were not identified or addressed, and/or interventions fostered only limited coordination in action between actors and did not always result in positive sustainable outcomes.

22. The food system approach promoted under the Strategic Framework advances the Common Vision for Sustainable Food and Agriculture and its five principles<sup>18</sup> endorsed by COAG in 2016. It stresses the need to better understand and strengthen the coordination between the various public and private sector stakeholders. This needs to be at all levels: the individual value chain; at the national level through support to inter-ministerial coordination by assisting in the alignment of the strategies of concerned ministries and coordination between the public and private sectors and civil society; and at the global level in the negotiation of standards, agreements and voluntary guidelines.

23. In doing so, it recognizes the range of non-traditional partners with whom FAO needs to strengthen engagement. It also promotes action to support greater coordination between the global, regional, national and local levels of food system governance. This call for FAO's support to assist countries in taking a food systems approach was reiterated during all of FAO's Regional Conferences in the first half of 2018.

24. The Evaluation of Strategic Objective 4 (SO4) in 2017 stressed the importance of further extending an integrated approach to food system development through programmes designed to foster coordinated action across technical areas. Examples of these programmes are provided in boxes 3 and 4.

---

<sup>17</sup> World Economic Forum. 2018. Innovation with a Purpose: The role of technology innovation in accelerating food systems transformation. WEF. Switzerland

<sup>18</sup> The Principles are:

1. Improving efficiency in the use of resources is crucial to sustainable agriculture;
2. Sustainability requires direct action to conserve, protect and enhance natural resources;
3. Agriculture that fails to protect and improve rural livelihoods, equity and social well-being is unsustainable;
4. Enhanced resilience of people, communities and ecosystems is key to sustainable agriculture;
5. Sustainable food and agriculture requires responsible and effective governance mechanisms.

**Box 3. Urban Food System Programme**

Under this programme, FAO supported Lima and Nairobi in food systems planning, shifting from a sectorial approach that focused on urban agriculture to one that is systemic and involves multiple stakeholders. Multi-stakeholder advisory groups (food governance mechanism) were established and “hotspots” were identified as part of the food systems strategy and action plan in each city.

**Box 4. The Global Action Programme on Food Security and Nutrition in SIDS**

To improve the inclusiveness, sustainability, resilience and nutrition-sensitivity of food systems in a group of countries that suffer disproportionately from unique and complex challenges of food security and nutrition, FAO is implementing a more coordinated set of activities in all three SIDS regions. These range from building the evidence-base to support multi-sectoral policy action, sharing best practices in climate-smart agriculture, supporting systems linking family farmers to school food procurement systems, revision of the dietary guidelines, to workshops on the links between trade and nutrition.

25. The Strategic Framework also facilitates a more coherent approach to FAO’s broader work in relation to food system development, including that related to sustainable production practices (SO2), to reduced incidence of transboundary disease (SO5), to improved food security, nutrition and health outcomes (SO1), and to access of vulnerable groups to food systems both as consumers and producers (SO3).

26. In supporting a more integrated food systems approach, strategic partnerships will be critical as no one organization or stakeholder group has the mandate or the capacities to do this alone. FAO has initiated and strengthened partnerships with a range of actors including UN agencies (particularly UNIDO, ITC, UNCTAD, WTO and UN Environment), the private sector, consumer associations and civil society groups, and has increased its support to strategic partnership platforms such as the 10YFP on Sustainable Consumption and Production, in particular its Sustainable Food Systems Programme.

## **VI. Suggested actions**

27. The Committee on Agriculture is invited to:

- Acknowledge the need for a more integrated, multi-stakeholder approach to addressing the complex challenges of food system development;
- Request FAO to support governments in adopting a sustainable food systems approach by strengthening capacities in the design and implementation of enabling policies and regulations.
- Request that FAO continue to support the strengthening of strategic partnerships and platforms, notably the 10YFP Sustainable Food Systems programme;
- In line with the principles of UN reform, encourage FAO to further increase inter-agency collaboration in supporting sustainable food system development.