

AGROECOLOGICAL AND OTHER INNOVATIVE APPROACHES FOR SUSTAINABLE AGRICULTURE AND FOOD SYSTEMS THAT ENHANCE FOOD SECURITY AND NUTRITION

Policy recommendations

SUSTAINABLE
DEVELOPMENT
GOALS

with a core focus on:



Contributes to SDG 3, 4, 5, 6, 7, 8, 10, 11, 14, 16 & 17

The 2030 Agenda for Sustainable Development calls for “bold and transformative steps which are urgently needed to shift the world on to a sustainable and resilient path” while seeking to “realize the human rights of all”¹. Agriculture² and food systems are deeply intertwined with economies, cultures, societies, health, food security and nutrition, climate, biodiversity and the environment, and hence both impact and are uniquely placed to contribute to all the Sustainable Development Goals (SDGs).

The often inter-related challenges associated with agriculture

and food systems require urgent attention. The number of undernourished people in the world has been on the rise since 2015³, while roughly one third of food is lost or wasted globally⁴. Meanwhile the levels of overweight, obesity⁵, micronutrient deficiency and diet related non-communicable diseases are troubling⁶. The United Nations General Assembly had expressed concern that SDG 2 (Zero Hunger) targets will not be achieved in many parts of the world even before the COVID-19 pandemic, which further threatens the food security and nutrition

of millions of people around the world⁷. The most affected are the poorest, people in vulnerable situations⁸, particularly women, youth, indigenous peoples, local communities, underlining the importance of inclusiveness, as well as the importance of availability, affordability of and access to adequate, sufficient, safe and nutritious food that constitute a healthy diet for present and future generations.

In order to improve the sustainability of agriculture and food systems it is critical to reduce their pressure on natural resources

- 1 UNGA Resolution 70/1 (2015): Transforming our world: the 2030 Agenda for Sustainable Development.
- 2 Throughout this document, agriculture refers to crop and livestock production, aquaculture, fisheries and forestry.
- 3 FAO, IFAD, UNICEF, WFP and WHO. 2020. The State of Food Security and Nutrition in the World 2020. Rome, FAO.
- 4 FAO. 2011. Global food losses and food waste: Extent, causes and prevention. Rome.
- 5 As described in para 20 of the CFS Voluntary Guidelines on Food Systems and Nutrition, unhealthy diets are a major risk factor of multiple forms of malnutrition.
- 6 HLPE. 2017. Nutrition and food systems. A report by the High Level Panel of Experts.
- 7 UN Policy Brief of June 2020. The Impact of COVID-19 on Food Security and Nutrition. New York.
- 8 Throughout the text people in vulnerable situations will refer to women, youth, indigenous peoples and local communities.



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AGROECOLOGICAL AND OTHER INNOVATIVE APPROACHES



and their negative environmental impact, including in relation to climate change⁹, biodiversity^{10,11}, water¹², and land¹³.

Ruptures to the interlinkages between human, animal, and plant health and the environment can compromise both biodiversity and the well-being of people. The One Health Approach aims at addressing the interconnection between people, animals, plants, and their shared environment for achieving health outcomes.

Extreme poverty disproportionately affects rural populations¹⁴. Discrimination and human rights violations, in particular through land expropriation, forced evictions and displacement are serious problems for all people, including peasants and other people working in rural areas. The majority of workers in agriculture and rural sectors are informal¹⁵ which may lack the same

protection as formal workers and therefore face greater exposure to direct and indirect effects of crises. Family farmers and small-scale producers contribute to producing an estimated 80 per cent of the world's food in value terms¹⁶. Public policies and markets at the global, regional and national levels need to adequately address their needs¹⁷. These realities point to broad inequalities affecting agriculture and food systems, and emphasize the importance of leaving no one behind, by respecting, protecting and fulfilling human rights of all people, recognizing the importance of ensuring particularly women's rights in the context of food security and nutrition, to achieve the progressive realization of the right to adequate food in the context of national food security.

The COVID-19 pandemic is a challenge for human health,

economic prosperity and food security and nutrition. The pandemic has exposed some of the risks inequalities and strengths characterizing agriculture and food systems. It has highlighted the importance to integrate sustainability in its three dimensions throughout agriculture and food systems, alongside the potentially massive cost of not doing so. It also highlighted the importance to foster transition - in a coherent manner, as appropriate and in accordance with and dependent on national context and capacities - to resilient and diversified sustainable agriculture and food systems including through agroecological and other innovative approaches. It has shown that agriculture and food systems are embedded in, and interact with, wider environmental and human-made systems (such as economies, ecosystems and landscapes).

- 9 IPCC. 2019. Climate Change and Land: IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems.
- 10 IPBES. 2019. Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Bonn.
- 11 FAO. 2019. The State of the World's Biodiversity for Food and Agriculture.
- 12 HLPE. 2015. Water for food security and nutrition. A report by the High Level Panel of Experts of Food Security and Nutrition of the Committee on World Food Security.
- 13 United Nations Convention to Combat Desertification. 2017. The Global Land Outlook, first edition. Bonn, Germany.
- 14 UN. 2019. The Sustainable Development Goals Report 2019. New York.
- 15 FAO. 2020. Impact of COVID-19 on informal workers. Rome.
- 16 FAO. 2014. The State of Food and Agriculture. Innovation in family farming, Rome, FAO.
- 17 HLPE. 2013. Investing in smallholder agriculture for food security. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome.





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The challenges food systems face are highly complex, context-specific and often unpredictable. Transformation to sustainable food systems is needed, in a coherent manner, as appropriate, and in accordance with and dependent on national context and capacities. There is no single approach for achieving food security and nutrition and all food systems have the potential to contribute further to sustainable agriculture and food systems that enhance food security and nutrition by following context appropriate transition pathways. Holistic and innovative approaches to addressing food system challenges have been gaining the interest of many stakeholders over the past years. This led the Committee on World Food Security (CFS) to request its High-level Panel of Experts on Food Security and Nutrition (HLPE) to develop the report, *Agroecological and Other Innovative Approaches for Sustainable Agriculture and Food Systems that Enhance Food Security and Nutrition*, which informs these policy recommendations¹⁸. Agroecological approaches

are increasingly prominent in debates around the sustainability of agriculture and food systems because of their holistic approach and emphasis on equity, also leading to the 10 Elements of Agroecology¹⁹ as an internationally agreed formulation of the main elements that characterize agroecology. The HLPE report puts forward a set of 13 agroecological principles²⁰.

Agroecological and other innovative approaches mentioned in these policy recommendations are a set of practices, technologies and/or methods and that look beyond single technological social or institutional innovations and must contribute to sustainable agriculture and food systems that enhance food security and nutrition for current and future generations. The implementation of these approaches must be inclusive and equitable, in accordance with the three dimensions of sustainable development. The HLPE report analyzed a number of agroecological and other innovative approaches²¹, including those that place more emphasis on holistic solutions

and those that focus on specific outcomes, often measured quantitatively.

The HLPE report highlights the importance of policy contexts because they shape the behavior of agriculture and food system actors. According to the HLPE report, beyond production levels and revenues, policies should take a holistic approach that also prioritizes human rights, in particular the progressive realization of the right to adequate food in the context of national food security, sustainability and equity concerns, food security, food safety and nutrition. Some policies and research funding have supported less sustainable practices. According to the HLPE report, agroecological approaches, which have shown promising results, tend to be under-researched and under-funded worldwide. Public policies, research and investment are urgently needed for more sustainable and comprehensive approaches, including for agroecological and other innovative approaches. Improvements in policy frameworks can best be guided

■ 18 HLPE. 2019. *Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition*. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome. (Available at: <http://www.fao.org/3/ca5602en/ca5602en.pdf>)

■ 19 FAO. 2019. *The Ten Elements of Agroecology* (document CL 163/13 Rev. 1)

■ 20 Which have not been internationally agreed upon. The 13 HLPE principles are based on expert analysis as described on page 39.

■ 21 HLPE 2019. Table 3 and 4 for a characterization of nine different agroecological and other innovative approaches.



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AGROECOLOGICAL AND OTHER INNOVATIVE APPROACHES

by an integrated approach to food systems that includes taking stock of the relevant sectoral policies, mapping and analyzing synergies and trade-offs and externalities within and among the economic, social and environmental dimensions.

Today a powerful emerging instrument, whose proper use can be relevant to all innovative approaches, is digitalization. Digitalization impacts on multiple aspects of agriculture and food systems, including access to information, markets and knowledge. Digitalization can support family farmers and small scale producers in improving their resource management and competitiveness. At the same time, concerns about access and benefit-sharing, capacity-building, equity, digital divide and appropriate safeguards regarding data privacy, access, control and ownership signal the need to consider potential risks to food security and nutrition,

which could be addressed by a regulatory policy framework to create a safe and level playing field for the sector²².

The aim of the following policy recommendations is to provide guidance to Members and stakeholders in strengthening agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition, and the progressive realization of the right to adequate food in the context of national food security. The FAO Conference, recognizing that agroecology is one approach among others, requested the further integration of sustainable agricultural approaches, including agroecology in FAO's work, supported the 10 Elements of Agroecology endorsed in 2019^{23,24} and welcomed the Scaling up Agroecology Initiative.

In working towards this aim, these policy recommendations build

upon and complement relevant existing instruments of the CFS, including the CFS Voluntary Guidelines on Food Systems and Nutrition (CFS-VGFSyN).²⁵ These policy recommendations should be interpreted and applied consistently with existing obligations under national and international law, and with due regard to voluntary commitments under applicable regional and international instruments and in accordance with national legal systems and their institutions. Moreover, the policy recommendations are intended to be applied, consistent with the following instruments as far as each of these instruments are relevant and applicable²⁶: the UN Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW), the UN Declaration on the Rights of Indigenous Peoples (UNDRIP), and the UN Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP). These policy recommendations

■ 22 HLPE. 2019, and FAO. 2021. Realizing the potential of digitalization to improve the agri-food system: Proposing a new International Digital Council for Food and Agriculture. A concept note. Rome.

■ 23 See FAO. 2019. The Ten Elements of Agroecology (document CL 163/13 Rev. 1) for an internationally agreed formulation of the main elements that characterize agroecology. HLPE (2019) has elaborated a set of 13 agroecological principles (Table 1), which have not been internationally agreed upon.

■ 24 FAO Conference Resolution 7/2019, Further integration of sustainable agricultural approaches, including agroecology, in the future planning activities of FAO.

■ 25 Other relevant CFS instruments include the Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security, the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT), the Framework for Action for Food Security and Nutrition in Protracted Crises, the Principles for Responsible Investment in Agriculture and Food Systems.

■ 26 And as far as they have been agreed, acknowledged and/or endorsed by respective Member States.



aim to support the achievement of the 2030 Agenda²⁷, and pay particular attention to the promotion of family farming, in particular small-scale food production, as these production systems make highly significant contributions to food security and nutrition, equity, poverty alleviation, employment and sustainable management of natural resources, and require specific policies to support them.

The policy recommendations are voluntary and non-binding.

RECOMMENDATIONS

1 Lay or strengthen, as appropriate, the policy foundations for agroecological and other innovative approaches to contribute to sustainable agriculture and food systems that enhance food security and nutrition

Governments (national, regional and local authorities, as appropriate) in consultation with intergovernmental organizations, producer organizations, the private sector (including micro, small and medium as well as larger-sized-entities) and civil society, are invited to:

Recognizing the need for context-specific measures for moving towards and improving sustainable agriculture and food systems:

a) Undertake comprehensive and inclusive assessments of the sustainability of their agriculture and food systems (see Recommendation 2), paying due attention to all positive and negative environmental, economic, social externalities, trade-offs and synergies, as the first step to developing context-specific transition pathways, in a

coherent manner, as appropriate and in accordance with and dependent on national context and capacities;

b) In cases where comprehensive assessments show that sustainability can be improved, develop context-specific policies and plans to move towards, and to improve, sustainable agriculture and food systems through inclusive processes based on the results of such assessments; ensure the participation of all relevant stakeholders: particularly women, youth, indigenous peoples and local communities, and people in vulnerable situations, and sectors;

c) Promote the integration of agroecological and other innovative approaches in policies and plans that address agriculture and food system challenges in a given context by strengthening the resilience of food systems, thus contributing to the three pillars of sustainable development within the 2030 Agenda; those policies and plans should make agroecological and other innovative approaches affordable and accessible, respond to local employment needs, contribute to equity

■ 27 Including the realization of the UN Decade on Family Farming (UNDF), the UN Decade of Action on Nutrition (2016-2025), the upcoming UN Decade on Ecosystem Restoration, the UN Framework Convention on Climate Change (UNFCCC) Koronivia Joint Work on Agriculture (KJWA), the Convention on Biological Diversity's upcoming post-2020 global biodiversity framework, the strategic framework of the UN Convention to Combat Desertification (UNCCD), and others.



and respond to the needs of all actors, in particular people in vulnerable situations;

d) Implement, monitor, evaluate and continually improve context-specific agriculture and food systems' transformation policies and plans, with the inclusive participation of relevant stakeholders, giving particular attention to the people in vulnerable situations, recalling that transformation of food systems should be encouraged in a coherent manner, as appropriate and in accordance with and dependent on national context and capacities.

Recognizing the need to promote enabling conditions for agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition:

e) Promote science and evidence-based public mechanisms to assess the effects and impacts of agroecological and other innovative approaches on key aspects of sustainable agriculture and food systems related to food security and nutrition, resilience, food safety, producers' revenues, the environment and public health, the progressive realization of the right to adequate food in the context of national food security, and the reduction of food losses and waste;

f) Using science and evidence-based approaches, re-direct public policies, budgets and public and private investments, to agroecological and other innovative approaches, as well as sustainable practices and innovations, as appropriate, that reduce economic, environmental, and social negative impacts, including externalities, and lead to improved economic, social and environmental outcomes, while considering all externalities, trade-offs and synergies and contributing to the three dimensions of sustainable development and the achievement of the SDGs;

g) Strengthen public policies to harness market mechanisms to enable sustainable agriculture and food systems by considering economic, environmental, and social, including public health, externalities, trade-offs and synergies;

h) Encourage policies to promote sustainable production and consumption patterns that support, maintain, or enhance conservation and sustainable use of natural resources, and resource use efficiencies, including through supporting circular economies and other sustainable approaches and systems, while enhancing livelihoods and offering economic opportunities and growth, in collaboration with all relevant stakeholders;

i) Promote the development of policies and the implementation of joint actions among all relevant stakeholders for the reduction of food losses and waste including, when promoting agroecological and other innovative approaches, in order to achieve sustainable development;

j) Strengthen the policy coherence and synergy between the promotion of healthy diets through sustainable food systems and the support for agroecological and other innovative approaches;

k) Ensure that farmers, including peasants, family farmers and other people working in rural areas, in particular small-scale food producers, have equal access to, and control over land and natural resources, in accordance with national legislation, that are the essential basis for any form of sustainable agricultural production, by adopting appropriate regulations at the national level, consistent with the CFS Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (CFS-VGGT) and other relevant frameworks;

l) Promote the progressive realization of the right to adequate food in the context of national food security and enable individual and collective actions



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that address the four dimensions of food security (availability, access, stability and utilization) and nutrition at different scales, taking into account to the principles of equality and non-discrimination, participation and inclusion, accountability and rule of law²⁸;

m) Strengthen policies, programmes and actions that eliminate structural barriers to address root causes of gender inequality, in particular by considering that laws and policies to support inter alia equal access to natural resources, finance and public services, respecting and protecting women's knowledge, as well as eliminating all forms of violence, including gender-based violence and discrimination against women, and promoting women's empowerment²⁹;

n) Enhance policy coherence and coordination of agroecological and other innovative approaches across sectors consistent with para 26 of the CFS Voluntary Guidelines on Food Systems and Nutrition (CFS-VGFSyN).

2 Establish, improve and apply comprehensive performance measurement and monitoring frameworks to encourage the adoption of agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition

Recognizing the need for the application and further development of comprehensive and inclusive assessments applicable to and/or defined for agroecological and other innovative approaches, with country specific and globally comparable metrics and indicators covering social, environmental and economic dimensions of agriculture and food systems, based on those in development within the 2030 Agenda, which are aligned with internationally agreed methodologies and indicators, governments and relevant stakeholders should:

a) Apply scientifically grounded and comprehensive performance metrics and indicators of agriculture and food systems based on SDG indicators and supplemented by

complementary frameworks³⁰ under development, as appropriate, including, but not limited to: the Tool for Agroecology Performance Evaluation (TAPE); the Sustainability Assessment of Food and Agriculture systems tool (SAFA) and the Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists (SHARP) tool to track progress towards agroecological and other innovative approaches, and for related policy implementation and investment decisions.

Governments, regional and local authorities, inter-governmental organizations (in particular RBAs), and research organizations are invited to:

b) Undertake assessments that adequately consider the environmental impact of food systems, including food losses and waste, and continue to refine calculation methods that consider the environmental impacts of food systems;

c) Undertake holistic assessments of employment and

■ 28 These principles are recognized in the Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security.

■ 29 As appropriate, in line with the UN Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW), and taking into account in particular its General Recommendation 34 (2016) on the rights of rural women, which was underscored by CFS 44.

■ 30 There are many different complementary frameworks available. The examples here are illustrative and should not be read as an endorsement



AGROECOLOGICAL AND OTHER INNOVATIVE APPROACHES

labour conditions in agriculture and food systems, disaggregated by gender and age, in support of: i) decent labour policies and regulations for sustainable agriculture and food systems; ii) improved livelihoods, health and social and legal protection of farmers and other food system workers, particularly migrant workers and people in vulnerable situations;

d) Encourage data collection (differentiated by factors including gender and farm size) and analysis at national level, documentation of lessons learned and information sharing at all levels to support evaluation of the performance of agroecological and other innovative approaches.

3 Foster the transition to resilient and diversified sustainable agriculture and food systems through agroecological and other innovative approaches

Governments, regional, national and local authorities, as appropriate, along with relevant intergovernmental organizations, research organizations, extension agencies, civil society (including producer and consumer organizations) and the private sector (including micro, small and medium sized enterprises) are invited to:

Recognizing resilience, diversification and integration as key foundations of sustainable agriculture and food systems:

- a)** Raise awareness about the importance of diversified production systems that integrate livestock, aquaculture, cropping and agroforestry, as appropriate, to enhance resilient livelihoods and promote sustainable production for healthy diets;
- b)** Strengthen public policies, responsible investment and research in support of agroecological and other innovative approaches;
- c)** Provide producers, and in particular small scale producers and women, with public policies and private investments, for diversification and integration of their production, including providing support during the process of transitioning, in a coherent manner, as appropriate, according to, and dependent on national context and capacity, to more sustainable food systems;
- d)** Strengthen policy instruments and coherence for the conservation of biodiversity for food and agriculture, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the

utilization of genetic resources and support the important past, present and future contributions of producers and researchers for the development, conservation and improvement of biodiversity, taking into account, as appropriate, the International Treaty on Plant Genetic Resources for Food and Agriculture and the Convention on Biological Diversity, and the recommendations of the FAO Commission on Genetic Resources for Food and Agriculture, (for those states which have ratified those Treaties);

e) Promote an integrated One Health approach, including through agroecological and other innovative approaches, that fosters cooperation between the human health, animal health and plant health, as well as environmental and other relevant sectors, to address antimicrobial resistance, strengthen food safety, enhance resilience and minimize, control and strive to prevent the emergence of diseases of animal origin and the potential and not necessarily correlated pandemics;

f) Promote healthy diets through sustainable food systems, including through the implementation of agroecological and other innovative approaches in order



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to improve food security and nutrition;

g) Promote measures to improve animal welfare, in line with OIE standards, including through the implementation of agroecological and other innovative approaches³¹.

Recognizing³² the importance of the optimization, proper management and the reduction, as appropriate, of the risk of and the reliance on chemical pesticides and other agrochemicals for the protection and improvement of human, animal, plant health and the environment:

h) Raise policy makers' and public awareness, using a science and evidence-based approach, about the risks of pesticides and other agrochemicals, to human, animal and plant health and the environment;

i) Promote, based on agroecological and other innovative approaches, alternatives to chemical pesticides and the greater integration of biodiversity for food and agriculture. Promote the removal of highly hazardous pesticides, in line with recommendation 7.5 of the WHO/FAO International Code of Conduct on Pesticide Management and depending

on specific context and national capacities;

j) Promote the human rights of all and recognize the importance of the values and interests of peasants, indigenous peoples, local communities, family farmers, and other people working in rural areas, and the importance of strengthening their ability to avoid exposure and poisoning from hazardous agrochemicals;

k) Drawing on the International Code of Conduct for the Sustainable Use and Management of Fertilizers, the Voluntary Guidelines for Sustainable Soil Management, and consistent with national strategies and contexts, recognize the value of, and strengthen support for, agroecological and other innovative approaches that promote recycling, optimizing, or reducing, as appropriate, the reliance on external inputs, and facilitate the regeneration of soil health;

l) Recognize the value of agroecological and other innovative approaches in tackling the increasing challenges posed by AMR, and in supporting the implementation of national action plans in line with the

WHO Global Action Plan on Antimicrobial Resistance, taking note of the recommendations of the UN interagency coordination group on AMR, where appropriate.

Recognizing that territorial planning is a key element of fostering diversity and the long-term provision of ecosystem services:

m) Govern territories and landscapes at appropriate levels and in an inclusive way, with particular attention to people in vulnerable situations, so as to respond to local needs. This includes enhancing the provision of ecosystem services and managing trade-offs between them, protecting biodiversity-rich habitats, and responding to the local impacts of global emergencies; in particular by supporting social innovation³³ and strengthening inclusive public bodies, such as local food policy councils and multi-stakeholder landscape and watershed management platforms;

n) Strengthen responsible investment and innovation in micro, small and medium sized enterprises that support sustainable agriculture and food systems and retain value locally;

■ 31 And as far as they have been agreed, acknowledged and/or endorsed by respective Member States.
 ■ 32 In the framework of agroecological and other innovative approaches.
 ■ 33 In line with UNDRR Pillar 7.



AGROECOLOGICAL AND OTHER INNOVATIVE APPROACHES

o) Create an enabling environment for young people to remain in, or move to, rural areas by: i) protecting their rights and livelihoods; ii) creating decent work opportunities, including through applying agroecological and other innovative approaches; and iii) by addressing specific challenges for young people such as access to land, in accordance with national legislation, mechanization and technologies, credit and information, educational and entrepreneurial opportunities, and by investing in rural infrastructure and services to reduce gaps between rural and urban areas.

Recognizing the multiple functions of markets in attaining sustainable, resilient, diversified, and integrated agriculture and food systems, including food safety, and acknowledging the CFS Policy Recommendations on Connecting Smallholders to Markets:

p) In collaboration with relevant actors, including the private sector, promote local, national, regional and global markets, and their interconnections, as appropriate, that enhance food security and nutrition, strengthen supply chains in particular local ones³⁴ and demonstrate concrete

contributions to sustainable agriculture and food systems, that do not impact negatively on livelihoods³⁵;

q) Increase the resilience of food systems in facing crises, by promoting diverse market arrangements that have greater flexibility in the face of disruptions, promote an open, transparent, non-discriminatory, predictable, rules-based trade including in the sectors of agriculture and sustainable food systems, and protect farmers and consumers against food price volatility. This involves recognizing the special challenges faced by small scale producers in addressing existing relevant challenges in food supply chains at all levels;

r) Strengthen local, national and regional markets (through appropriate measures such as processing hubs, transportation infrastructure and adapted food safety regulations in line with international standards (IPPC, Codex and OIE) to link urban communities and rural territories through sustainable food production systems that support rural livelihoods, including by capturing a high proportion of the value of production locally;

s) Support market and social innovations that strengthen linkages between urban communities and food producers, in particular small-scale producers and family farmers that provide sustainably produced healthy, safe and nutritious food to all consumers while providing living wages and decent livelihoods to producers. This could include Community Supported Agriculture (CSA), participatory guarantee systems (in compliance with public policy and safety standards), and relevant product differentiation systems;

t) Support innovative public procurement of food from small-scale producers and local small and medium enterprises and micro-enterprises in public policies regarding, among others, school feeding programmes, other safety nets, food assistance and public preparedness mechanisms, prioritizing low-income and food insecure people. Preference should be given to sustainably produced food that contributes to healthy diets while supporting local and rural development objectives.

Aware of the importance of digitalization, and welcoming progress towards the FAO

■ 34 CFS 43. 2016. CFS policy recommendations on Connecting Smallholders to Markets. Paragraph on 'Local, national and regional markets and food systems' pg. 2.

■ 35 CFS 43. 2016. CFS policy recommendations on Connecting Smallholders to Markets. Recommendation 2.



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International Platform for Digital Food and Agriculture:

- u)** Realize the full potential of digitalization for sustainable agriculture and food systems through capacity building and cooperation and technology transfer on voluntary and mutually agreed terms, in particular for developing and low-income countries, and include safeguards for data privacy and for the identification and management of potential conflicts of interest. Undertake analysis and provide scientific evidence to assess the benefits and potential risks of digital technological applications to contribute to agroecological and other innovative approaches and promote a participatory transdisciplinary approach of all relevant actors, recognizing the relevance of the FAO International Platform for Digital Food and Agriculture to these discussions and assessments;
- v)** Promote agroecological and other innovative approaches including, as appropriate, through the use of digital technologies and other Information and Communication Technologies as an entry point for the involvement of youth, women, indigenous peoples and local communities in agriculture and food systems;
- w)** Strengthen innovation platforms and promote digital

technologies and applications that enhance sustainable agriculture and food systems to facilitate wider networking, taking into account traditional and ancestral knowledge, consistent with context-specific needs of small scale producers and family farmers;

- x)** Harness digital technologies to establish and strengthen more direct links between producers and consumers offering opportunities for economic diversification, including through brokering sustainable finance initiatives, market opportunities and solidarity economy initiatives;
- y)** Promote context-specific policies to bridge the digital divide between and within countries, as well as between rural and urban areas, by reducing currently existing technical, legislative, economic and educational barriers, and promote cooperation schemes to facilitate access to the application of digital tools, digital infrastructure, and technological solutions to improve rural attractiveness in particular for young people and women.

4 Strengthen research, innovation, training, and education and foster knowledge co-creation, knowledge sharing and co-learning, on agroecological

and other innovative approaches

Governments (including regional and local authorities) and inter-governmental organizations, research organizations, academic institutions, educational, training and extension organizations, the private sector, producers' organizations, and civil society are encouraged to:

Recognizing the crucial role played by multi-disciplinary and participatory approaches to research innovation, dissemination and education, such as transdisciplinary science, including the interactions between the three dimensions of sustainable development for improving sustainable agriculture and food systems:

- a)** Strengthen agricultural knowledge, information and innovation systems by enabling that research, extension/ dissemination and education/ capacity building to be integrated in an inclusive, participatory, bottom-up and problem-oriented manner in order to find holistic solutions to food system challenges based on agroecological and other innovative approaches, while not discouraging research and adoption of existing technologies and practices that contribute positively to sustainable development;



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b) Develop and support problem-oriented transdisciplinary research, and encourage giving value to local and indigenous knowledge in participatory innovation processes across the range of contexts experienced by producers and other stakeholders in agriculture and food systems;

c) Re-design, where relevant, and support agricultural knowledge, information and innovation institutions to: i) enable transdisciplinary science and capacity building, valuing the knowledge and participation of all relevant stakeholders, particularly indigenous peoples and local communities and sharing of knowledge among them, including in the setting of research priorities; ii) include safeguards for the identification and management of possible conflicts of interest and against power imbalances; iii) recognize researchers who engage in transdisciplinary research; iv) promote the co-creation of knowledge in a systemic and holistic way for the development and strengthening of the sustainability of food systems; v) deepen the horizontal exchange of knowledge and experiences between producers and other relevant actors of food systems at

the local, national, regional and international levels;

d) Promote, as well as enable, responsible investment in participatory research and innovation on agroecological and other innovative approaches addressing especially the specific needs of people in vulnerable situations with their active engagement. This might include a focus on the local dimension of global challenges such as socio-economic inequalities, climate change adaptation and mitigation assessment of environmental impact³⁶ and of ecosystem services, agricultural productivity, increasing returns to labor, biodiversity conservation, sustainable use of natural resources, infectious and noncommunicable diseases, market concentration across supply chains, reduction of food loss and waste, and access to new technologies;

e) Promote advisory and agricultural extension services, and strengthen training programmes to improve the implementation of agroecological and other innovative approaches, which could include ecological and environmental-friendly alternatives to agrochemical use as a mean to achieve food security and nutrition while protecting

the environment. This should cover all agricultural sectors, using a holistic approach and using methods such as farmer field schools (FFS) and producer-to-producer networks; promote women as extension agents and providers of advisory services;

f) Take appropriate measures to promote the human rights of all and recognize the importance of the values and interests of peasants, indigenous peoples, local communities, family farmers and other people working in rural areas, particularly in maintaining, expressing, controlling, protecting and developing their knowledge, including traditional knowledge, taking into account its specificity, for example through knowledge systems embedded in agricultural heritage systems, while recognizing the critical role of rural and indigenous women in the context of food security and nutrition;

g) Support innovation platforms for transdisciplinary research that foster co-learning between practitioners (e.g. producer organizations) and researchers; these may include producer-to-producer networks, communities of practice, “transdisciplinary labs”, and decentralized centers of excellence;

■ 36 Including ongoing work in some countries to develop the methodology of ecological footprint. There is no internationally agreed understanding on its definition or methodology.



h) Support the horizontal sharing of knowledge and experiences building on existing producers' organizations and networks, including processes designed specifically by and for women, youth, indigenous peoples and local communities;

i) Encourage explicit coverage of achieving sustainable agriculture and food systems in curricula of educational institutions at all levels, and integrate hands-on, experiential learning;

j) Promote nutrition education including through the implementation of agroecological and other innovative approaches as part of a range of activities to support healthy diets, in line with recommendation 3.5.1.h of the CFS Voluntary Guidelines on Food Systems and Nutrition;

k) Support capacity development for producers, in particular small-scale producers, as well as policy makers and all other relevant actors, on agroecological and other innovative approaches to support innovation processes suited to their contexts and needs, and link these with social protection programmes where appropriate;

l) Promote sharing of experiences and co-learning amongst countries and regions on moving towards sustainable agriculture and food systems through agroecological and other innovative approaches.

Recognizing the need to foster investments in research, dissemination/extension and education/capacity building towards the priorities and approaches mentioned above for agroecological and other innovative approaches:

m) Encourage, in line with national contexts and regulations, increased resource allocation in public research and responsible investments in private research, with appropriate safeguards for the identification and management of possible conflicts of interest, innovation and development activities at national, regional and international levels promote evidence-based balanced investment towards enhanced support for agroecological and other innovative approaches addressing the specific needs of people in vulnerable situations;

n) Strengthen public research to address the needs of farmers and all other people working and living in rural areas, in

particular women, youth, elders, indigenous peoples and local communities³⁷.

5 Strengthen institutions for stakeholder engagement, create an enabling environment for empowering people most at risk of food insecurity and malnutrition and people in vulnerable situations and address power inequalities in agriculture and food systems

Governments, regional and local authorities, intergovernmental organizations, indigenous peoples, women's organizations, community leaders, the private sector, academia, producers' and consumers' organizations, and civil society are invited to:

Considering that agroecological and other innovative approaches are more likely to contribute to sustainable agriculture and food systems that enhance food security and nutrition when active participation of all stakeholders is enabled:

a) Support inclusive, transparent, participatory and democratic decision-making mechanisms at all levels in agriculture and food systems (for example, national inter-ministerial food security

■ 37 See Pillar 1 of the Global Plan of the UN Decade on Family Farming.



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AGROECOLOGICAL AND OTHER INNOVATIVE APPROACHES

and nutrition committees and municipal food policy councils);

b) Create and strengthen producers', consumers', labor and other relevant stakeholders' associations, organizations and cooperatives across the different components of food systems, build capacities, create and exchange knowledge, promote inclusive decision-making processes and strengthen linkages between urban communities and food producers;

c) Facilitate the use of social media and digital networking to promote producers' leadership and engagement in relevant processes and to increase availability and access to affordable and reliable networks;

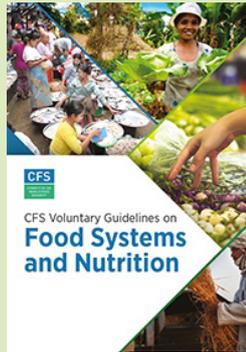
d) Support processes that facilitate and prioritize the active participation of people most at risk of food insecurity and malnutrition in all its forms and people in vulnerable situations, including women, youth, indigenous peoples and local communities, in decision-making that affects them at the local, national and global levels, through the progressive realization of the right to adequate food in the context of national food security.

Recognizing the need to advocate, promote and strive for gender equality in the framework of agroecological and other innovative approaches, through transformative approaches that are able to tackle both the symptoms and structural causes of gender inequalities, with the aim of achieving lasting change in terms of the power and choices women have over their own lives, rather than just temporary increases in opportunities:

e) Promote the empowerment of women, particularly small-scale food producers and family farmers, and their organizations, by supporting collective action, negotiation and leadership skills, to increase access to and equity in the control over land and natural resources, according to national legislation. Increase access to, inter alia, education, appropriate extension and financial services, methodologies and technologies that are adequate for women, youth and elders, and full participation in related policy processes³⁸.

■ 38 See Pillar 3 of the Global Plan of the UN Decade on Family Farming.

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The policy recommendations are part of the CFS Global Strategic Framework for Food Security and Nutrition (GSF)