



# **CFS POLICY RECOMMENDATIONS ON AGROECOLOGICAL AND OTHER INNOVATIVE APPROACHES FOR SUSTAINABLE AGRICULTURE AND FOOD SYSTEMS THAT ENHANCE FOOD SECURITY AND NUTRITION**

## **DRAFT ONE**

### **PREAMBLE**

- 1) 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”.<sup>1</sup> Agriculture and food systems<sup>2</sup> are deeply inter-twined with economies, cultures, societies, health, climate and the environment and hence both impact, and are uniquely placed to contribute to, the majority of SDGs.
- 2) 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 2015, with an estimated 690 million people suffering chronic undernourishment, 135 million people facing acute food insecurity, and 2 billion people living with moderate food insecurity in 2019.<sup>3</sup> Meanwhile roughly one-third of food produced for human consumption is lost or wasted globally.<sup>4</sup> Globally, more than one-third of the world’s adult population is overweight or obese,<sup>5</sup> and more than two billion people are deficient in one or more micronutrients.<sup>6</sup> The United Nations General Assembly has expressed concern that SDG 2 (Zero Hunger) targets will not be achieved in many parts of the world.<sup>7</sup> Due to the impacts of the COVID-19 pandemic, an estimated additional 130 million people could be pushed to the brink of starvation by the end of 2020.<sup>8</sup> The most affected are the poorest and most vulnerable segments of populations, underlining the importance of access to food.
- 3) Unsustainable agriculture and food systems are dramatically increasing pressure on natural resources. Agricultural expansion leads to land use change, which is one of the key drivers of biodiversity loss worldwide.<sup>9</sup> Agriculture, forestry and other land use contribute an estimated 23% of total anthropogenic greenhouse gas (GHG) emissions while climate events increasingly threaten food production, and especially the most vulnerable - small-scale food producers.<sup>10</sup> In most parts of the world, water resources are increasingly under stress, and water quality in surface and

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<sup>1</sup> UN (2015) Transforming our world: the 2030 Agenda for Sustainable Development

<sup>2</sup> Throughout this document, agriculture refers to crop and livestock production, aquaculture, fisheries and forestry. Definitions of other key terms are included in Annex 1.

<sup>3</sup> FAO, IFAD, UNICEF, WFP and WHO. 2020. The State of Food Security and Nutrition in the World 2020. Rome, FAO.

<sup>4</sup> FAO. 2011. Global food losses and food waste: Extent, causes and prevention. Rome.

<sup>5</sup> Global Nutrition Report. 2020. Action on equity to end malnutrition. Bristol, UK: Development Initiatives.

<sup>6</sup> HLPE. 2017. Nutrition and food systems. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome.

<sup>7</sup> UN General Assembly Resolution on Agriculture development, food security and nutrition. 2019. A/RES/74/242.

<sup>8</sup> WFP Chief warns of hunger pandemic as COVID-19 spreads (Statement to UN Security Council), 21 April 2020, <https://www.wfp.org/news/wfp-chief-warns-hunger-pandemic-covid-19-spreads-statement-un-security-council>

<sup>9</sup> IPBES. 2019. Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Bonn.

<sup>10</sup> 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.

groundwater sources are deteriorating globally, with agriculture playing a key role in these trends.<sup>11</sup> Over 1.3 billion people rely on degrading agricultural land,<sup>12</sup> and globally, 33% of soil is moderately to highly degraded due to erosion, nutrient depletion, acidification, salinization, compaction and chemical pollution.<sup>13</sup> Ruptures to the interlinkages between human and planetary health compromise the well-being of both biodiversity and people.<sup>14</sup>

- 4) Extreme poverty overwhelmingly affects rural populations.<sup>15</sup> The majority of wage workers, the totality of contributing family workers, and more than 80 percent of self-employed workers in agriculture and rural sectors are informal workers, which implies adverse impacts on their earnings, social protection and working conditions.<sup>16</sup> Peasants and other people working in rural areas are discriminated against and their human rights are violated, in particular through expropriation of land, forced evictions and displacement.<sup>17</sup> The majority of them (numbering 2 billion people) depend on smallholder farming and produce about 80 per cent of the food consumed in Asia and sub-Saharan Africa, but public policies and markets generally continue to ignore their needs.<sup>18</sup> These realities point to imbalances of power in agriculture and food systems, and emphasize the importance of leaving no one behind, by respecting human rights and empowering the most vulnerable.
- 5) The COVID-19 pandemic is an emerging challenge for human health, economic prosperity and food security and nutrition, and its impacts are still unfolding. While the virus itself does not distinguish between different people, the impacts have been very unequal because of socio-economic contexts at national and global levels.<sup>19</sup> Even at this early stage, many are highlighting the importance of resilience as a key lesson. The agriculture sectors have proved themselves to be relatively resilient compared to other economic sectors, such as services and industry – nevertheless, the pandemic has exposed some of the risks, fragilities and inequalities (but also some of the strengths) characterizing agriculture and food systems. It has highlighted the urgent need to integrate sustainability in its three dimensions throughout agriculture and food systems – alongside the potentially massive costs of not doing so. It has shown that agriculture and food systems are embedded in wider environmental and human-made systems (such as economies and landscapes) and that they impact these systems, and are strongly impacted by them. Lastly, it has underlined that now more than ever, there is an urgent need for **radical change** and for innovative approaches for sustainable agriculture and food systems.
- 6) The challenges faced by food systems are highly complex, context-specific and unpredictable. Consequently, holistic and innovative approaches to addressing food system challenges have been gaining the interest of many stakeholders over the past several years. This interest 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

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<sup>11</sup> HLPE, 2015. Water for 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 2015.

<sup>12</sup> United Nations Convention to Combat Desertification. 2017. The Global Land Outlook, first edition. Bonn, Germany.

<sup>13</sup> FAO. 2015. International Year of Soils Factsheet: Soil is a non-renewable resource. Rome.

<sup>14</sup> WHO/CBD. 2015. Connecting global priorities: biodiversity and human health – A state of knowledge review.

<sup>15</sup> UN. 2019. The Sustainable Development Goals Report 2019. New York.

<sup>16</sup> FAO. 2020. Impact of COVID-19 on informal workers. Rome.

<sup>17</sup> Human Rights Council. 2012. Final study of the Human Rights Council Advisory Committee on the advancement of the rights of peasants and other people working in rural areas. UN General Assembly.

<sup>18</sup> 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.

<sup>19</sup> HLPE. 2020. Interim issues paper on the impact of COVID-19 on food security and nutrition. Rome.

provides the basis for these policy recommendations.<sup>20</sup> Agroecological approaches<sup>21</sup> were highlighted in the CFS request to the HLPE, and are increasingly prominent in debates around sustainable agriculture and food systems because of their holistic approach and emphasis on equity. As the impact of the COVID-19 pandemic on agriculture and food systems points to the critical importance of resilience, interest in innovative approaches that strengthen resilience is growing, particularly in agroecological approaches.

- 7) The HLPE report considers that 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 towards the transformation of food systems. It underlines the importance of developing comprehensive monitoring and assessment frameworks for agriculture and food systems, which include positive and negative externalities, to establish a baseline and monitor progress. Such frameworks must consider the environmental externalities, both positive and negative, of agriculture and food systems in relation to not only how food is produced but also how much is consumed and how it is processed, transported and sold. Assessments can support the process of considering the most appropriate agroecological and other innovative approaches within a given context.
- 8) Shared principles are needed when attempting to provide guidance for moving towards a common goal (sustainable food systems) while respecting context-specificity. The HLPE report proposes a “combined set of principles shaping transitions towards sustainable food systems for food security and nutrition”: a) regenerative production; b) recycling and efficiency; c) animal health; d) synergy; e) diversity; f) integration; g) climate change adaptation and mitigation; h) knowledge production and dissemination; i) cultural coherence; j) human and social values; k) connectivity; l) governance; m) empowerment; and n) participation.<sup>22</sup> The principles seek to reflect the social, environmental and economic dimensions of sustainability in an integrated manner, and must be applied in a coherent way. When these principles are respected, they should lead to desired outcomes – or system properties – such as resilience.
- 9) The last 50 years has seen a radical transformation of food and agricultural production systems, driven by globalization, trade liberalization, urbanization, increase in incomes and changes in lifestyles.<sup>23</sup> As highlighted by the HLPE report, it is well established that innovation has been a major engine for profound change in agriculture and food systems over the last century. Innovation – which can be technological, social and institutional – is fundamental to bringing about necessary changes of agriculture and food systems because it encapsulates how people will do things differently in the future than they have in the past. It is noteworthy that innovations in agriculture and food systems are distinct from those in many other sectors because ecological relationships and social interactions have a central role. While some technological innovations have been characterized by marked disagreement, this is generally not related to the technologies themselves but to how they are controlled, accessed and used.
- 10) Innovative approaches look beyond single technological innovations to a well-articulated overall set of principles, practices and methods set within an overarching philosophy. An innovative approach gives rise to myriad technologies and practices. The HLPE report identified and analyzed the following agroecological and other innovative approaches for sustainable agriculture and food

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<sup>20</sup> 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>)

<sup>21</sup> These include agroecology, organic agriculture, agroforestry and permaculture (HLPE 2019).

<sup>22</sup> HLPE, 2019, Table 2.

<sup>23</sup> HLPE. 2016. Sustainable agricultural development for food security and nutrition: what roles for livestock? A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security. Rome.

systems: agroecology<sup>24</sup>, organic agriculture, agroforestry, permaculture, food sovereignty, sustainable intensification, climate smart agriculture, nutrition sensitive agriculture, and sustainable value chains. These innovative approaches are considered to lie along a continuum – from those that place more emphasis on holistic solutions to those that focus on a single outcome, measured quantitatively – often productivity per unit of resource (e.g. land, water).

- 11) As further highlighted by the HLPE report, policy contexts shape the behavior of agriculture and food system actors with regard to agroecological and other innovative approaches. Policies in most countries are guided by the drive to increase production levels and revenues, rather than by taking a holistic approach that also prioritizes sustainability and equity concerns. They favour a model of agriculture and food systems in which environmental and social externalities are not properly considered or factored into costs and decision-making. For example, policies that provide subsidies and research funding for unsustainable practices tend to lock agriculture and food systems into unsustainable pathways. Meanwhile agroecological approaches, which have shown promising results, tend to be under-researched worldwide and investment has been severely limited when compared to other innovative approaches.
- 12) Developing more appropriate policies requires understanding of the impacts of innovative approaches and specific innovations. Many technological innovations – despite having some positive impacts when assessed on single criteria – have generated significant negative externalities. Thus going forward innovation in agriculture and food systems must address major social and environmental challenges simultaneously by being scrutinized against the criteria of sustainability.
- 13) Today a powerful emerging issue, which is relevant to all innovative approaches, is digitalization. Digital technologies are dramatically re-shaping agriculture and food systems. Digitalization has the potential to play an increasingly important role in achieving global food security and improving livelihoods, especially in rural areas. It provides a new platform for all economic activities and impacts on multiple aspects of agriculture and food systems, including access to information, markets and knowledge. At the same time, concerns about access, capacity-building, leveling the playing field, and appropriate safeguards regarding data privacy, access, control and ownership signal the need to consider possible risks to food security and nutrition.<sup>25</sup>
- 14) The aim of the following policy recommendations is to assist Members and stakeholders in strengthening agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition. Sustainable agriculture and food systems are resilient, equitable, diversified, support climate change adaptation and mitigation, provide healthy diets and respect human rights – for current and future generations. The FAO Conference considered the further integration of sustainable agricultural approaches, including agroecology, in 2019.<sup>26</sup> Since then, the HLPE report has enhanced understanding of the evidence base, showing that while there are overlaps among some innovative approaches, not all innovative approaches contribute to sustainable agriculture and food systems in the same way.
- 15) In working towards this aim, these policy recommendations will build on, and contribute to, relevant existing instruments of the CFS, including the CFS Voluntary Guidelines on Food Systems and Nutrition (VGFSyN).<sup>27</sup> Moreover, the policy recommendations build on, and contribute to global

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<sup>24</sup> 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.

<sup>25</sup> HLPE, 2019, and FAO. 2020. 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.

<sup>26</sup> FAO Conference Resolution 7/2019, Further integration of sustainable agricultural approaches, including agroecology, in the future planning activities of FAO.

<sup>27</sup> 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

human rights instruments, such as 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 recommendations aim to support the achievement of the goals of the UN Decade on Family Farming (UNDDFF), 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, and to contribute to the UN Food Systems Summit. The policy recommendations 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.<sup>28</sup>

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Nutrition in Protracted Crises, the Principles for Responsible Investment in Agriculture and Food Systems, and the Global Strategic Framework for Food Security and Nutrition.

<sup>28</sup> 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.

## POLICY RECOMMENDATIONS

### ***1. Lay the policy foundations for agroecological and other innovative approaches to contribute to sustainable agriculture and food systems that enhance food security and nutrition***

*States (and regional and local authorities, as appropriate) in consultation with inter-governmental organizations, producer organizations, the private sector (including small and medium sized enterprises) and civil society, are invited to:*

*Recognizing the need for context-appropriate pathways to move towards sustainable agriculture and food systems:*

- a) Undertake comprehensive assessments of the sustainability of their agriculture and food systems (see Recommendation 2), paying due attention to all positive and negative environmental and social externalities, as the first step to developing context-appropriate transition pathways;
- b) In cases where comprehensive assessments show that sustainability can be improved, develop context-appropriate plans to move towards sustainable agriculture and food systems through inclusive and participatory processes based on the results of such assessments; ensure the participation of all relevant stakeholders (giving particular importance to the needs of the most vulnerable) and all relevant sectors, including agriculture, health, labour, gender, education, social protection, youth, finance, trade, energy and environment;
- c) Consider the role of agroecological and other innovative approaches in contributing to such plans, and promote approaches that simultaneously respond to multiple agriculture and food system challenges in the given context, are context-appropriate, affordable and accessible, respond to local employment needs, are co-created between producers and scientists, contribute to equity and respond to the needs of agriculture and food system actors, in particular the most vulnerable (including those in situations of protracted crisis);<sup>29</sup> and,
- d) Implement, monitor and continually improve the agriculture and food system transition plans with the meaningful participation of relevant stakeholders, giving particular attention to the needs of the most vulnerable.

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

- e) Establish public mechanisms to assess the impacts of agroecological and other innovative approaches and specific innovations on key aspects of sustainable agriculture and food systems, such as resilience, food security and nutrition, the right to food, producers' revenues, the environment and public health;
- f) Re-direct public policies, budgets and incentives from innovations and practices that lead to negative externalities to those that reduce externalities while contributing to multiple sustainability goals;
- g) Strengthen public policies to harness market mechanisms to enable sustainable agriculture and food systems by factoring environmental, social and public health externalities into prices;
- h) Encourage sustainable consumption patterns that maintain or enhance – rather than deplete – natural resources, and support circular economies in collaboration with all relevant stakeholders – in particular the private sector;
- i) Promote sustainably produced, affordable and healthy diets, considering local context and culture and indigenous and regional diets, through appropriate food labelling and certification in line with

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<sup>29</sup> See HLPE 2019 Table 3 and Table 4 for a characterization of different agroecological and other innovative approaches.

applicable national and international standards;

- j) Ensure that small-scale food producers have access to the natural resources (e.g. land) that are essential for sustainable agricultural production through adopting formal instruments at the national level that are consistent with international legal frameworks;<sup>30</sup>
- k) Promote the right to adequate food and ensure that individual and collective actions that address the four dimensions of food security and nutrition at different scales adhere to the principles of equality and non-discrimination, participation and inclusion, accountability and rule of law;<sup>31</sup>
- l) Strengthen policies, programmes and actions that challenge the underlying causes of gender inequality, in particular by ensuring that laws and policies ensure *inter alia* equal access to natural resources and public services, respecting and protecting women's knowledge, and ending gender violence and sexism, in line with the UN Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW), and in particular its General Recommendation 34 (2016) on the rights of rural women, which was underscored by CFS 44; and,
- m) Ensure policy coherence across sectors and strengthen inter-sectoral policy-making and planning, in particular between agricultural, environmental, trade, health and nutrition policies.

*The RBAs are invited to:*

- n) Ensure coordination and coherence with respect to their strategies, policies and programmes on agroecological and other innovative approaches, including through the *Scaling up Agroecology Initiative*, taking into account the present policy recommendations.

## ***2. Establish and apply comprehensive performance measurement and monitoring frameworks to encourage the adoption of agroecological and other innovative approaches***

*Recognizing the urgent need for the development of comparable, comprehensive and globally accepted metrics and indicators covering social, environmental and economic dimensions of agriculture and food systems, the CFS, in collaboration with the HLPE should:*

- a) Guide an inclusive process to 1) develop a model framework, guided by the findings of the HLPE report, including the transition principles, including practical, scientifically grounded and comprehensive performance metrics and indicators of agriculture and food systems, as a basis for assessment, planning, deployment of context-appropriate agroecological and other innovative approaches, policy implementation and investment decisions; and 2) in the short-term, select a combination of existing internationally agreed indicators (in particular the SDGs), to be applied in tandem with one another, to track progress towards more sustainable agriculture and food systems.

*Recognizing the importance of applying indicators and metrics that capture multiple dimensions of agriculture and food systems and collecting data, States, inter-governmental organizations (in particular RBAs), regional and local authorities, and research organizations are invited to:*

- b) Promote the use of existing comprehensive assessment frameworks, such as FAO's SHARP tool (Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists)<sup>32</sup> and the TEEB-AgriFood framework,<sup>33</sup> and finalize those under development such as FAO's Tool for

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<sup>30</sup> For example: UN Declaration on the Rights of Indigenous Peoples; CFS Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT); Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW).

<sup>31</sup> 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.

<sup>32</sup> <http://www.fao.org/in-action/sharp/en/>

<sup>33</sup> The Economics of Ecosystems and Biodiversity for Agriculture and Food (<http://teebweb.org/agrifood/>).

Agroecology Performance Evaluation;<sup>34</sup>

- c) Promote the use of ecological footprint in order to ensure that the ecological impacts of consumption, and the effect of current production on future capacity to produce, are adequately factored into assessments, continuing to refine calculation methods as appropriate;
- d) Undertake holistic assessments of positive and negative employment and labour characteristics in agriculture to underpin policies and regulations that favour transitions toward sustainable agriculture and food systems, while ensuring decent conditions for agricultural labour and strengthening the health of farm and other food system workers;
- e) 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 the adoption of agroecological and other innovative approaches; and,

*In view of the upcoming HLPE report on data collection and analysis tools, the HLPE Steering Committee is encouraged to:*

- f) Consider data needs that arise from these policy recommendations, including in relation to comprehensive metrics and indicators covering social, environmental and economic dimensions of agriculture and food systems.

### ***3. Support transitions to resilient, diversified and integrated agriculture and food systems through agroecological and other innovative approaches***

*States, regional and local authorities, relevant inter-governmental organizations, research organizations, extension agencies, civil society (including producer and consumer organizations) and the private sector (including small and medium sized enterprises) are invited to:*

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

- a) Raise public awareness about the importance of diversified production systems that integrate livestock, aquaculture, cropping and agroforestry, as appropriate, for sustainable production, healthy diets and resilient livelihoods;
- b) Strengthen public policies, investment and research in support of holistic approaches that harness natural processes and create beneficial biological interactions and synergies among the different components of agroecosystems (crops, animals, trees, soil and water), such as agroecology;
- c) Provide producers with incentives for diversification and integration of agricultural production, including support during the process of transitioning to more sustainable systems;
- d) Strengthen policy instruments and coherence for the conservation and sustainable use of biodiversity for food and agriculture and support the important past, present and future contributions of producers for the development, conservation and improvement of biodiversity, in accordance with the International Treaty on Plant Genetic Resources for Food and Agriculture and the Convention on Biological Diversity; and,
- e) Promote innovative and integrated approaches to human, animal, and environmental health, such as the One Health approach, to enhance resilience and prevent outbreaks of zoonotic diseases and pandemics.

*Recognizing the urgent necessity of the responsible use of agrochemicals for the protection and*

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<sup>34</sup> FAO. 2019. TAPE Tool for Agroecology Performance Evaluation 2019 – Process of development and guidelines for application. Test version. Rome. Available at: FAO. <http://www.fao.org/3/ca7407en/ca7407en.pdf>



*improvement of human, animal and environmental health:*

- f) Raise public awareness (in particular among producers and consumers) about the risks of pesticides and other agrochemicals to human, animal and environmental health;
- g) Promote the use of ecological alternatives to pesticides that promote the greater integration of biodiversity to prevent pest outbreaks in order to optimize the use of pesticides in the short-term and **phase them out to the extent possible in the long-term;**
- h) Recognize the right of peasants and other people working in rural areas to avoid using or being exposed to hazardous agrochemicals;<sup>35</sup>
- i) Drawing on the International Code of Conduct for the Sustainable Use and Management of Fertilizers, and the Voluntary Guidelines for Sustainable Soil Management, optimize the use of synthetic fertilizers, aiming to reduce pollution from excess use, maximize the recycling of nutrients and minimize the use of external inputs by promoting and rewarding innovative ecological alternatives; and,
- j) Strengthen and enforce stricter national and international regulations on the use of antimicrobials in agriculture and food systems, **phase out their use as growth promoters,** and implement the Global Action Plan on Antimicrobial Resistance, endorsed by the World Health Assembly.

*Recognizing that territorial planning is a key element of fostering diversity:*

- k) Govern territories and landscapes at appropriate levels and in an inclusive way so as to respond to local needs, including 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 innovation<sup>36</sup> and strengthening inclusive public bodies, such as local food policy councils and multi-stakeholder landscape and watershed management platforms;
- l) Strengthen responsible investment and innovation in community-led small and medium sized enterprises that support sustainable agriculture and food systems and retain value locally; and,
- m) Incentivize young people to remain in, or move to, rural areas by creating decent and dignified work opportunities, including through addressing specific challenges for young people, such as access to land, credit and information, and by investing in rural infrastructure and services to reduce gaps between rural and urban areas.

***Recognizing the multiple functions of markets and the need to promote innovative approaches to ensure that markets respond to the needs of resilient, diversified, and integrated production systems, and recalling the CFS Policy Recommendations on Connecting Smallholders to Markets (CFS 43, 2016):***

- n) Work with the private sector to promote local, regional and global markets, as appropriate, that demonstrate concrete contributions to the social, environmental and economic sustainability of agriculture and food systems, enhance food security and nutrition and avoid negative impacts on human rights;
- o) Increase the resilience of food systems to global shocks, such as pandemics, by promoting diverse market arrangements that have greater flexibility in the face of disruptions; this involves addressing connectivity challenges in long food supply chains and strengthening short food supply chains to support local autonomy and resilience;
- p) Take appropriate measures to strengthen local, national and regional markets (such as processing hubs, transportation infrastructure and adapted food safety regulations) to support rural

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<sup>35</sup> In line with UNDROP Article 14.

<sup>36</sup> In line with UNDRP Pillar 7.

livelihoods through capturing a high proportion of the value of production locally;<sup>37</sup>

- q) Support market innovations that strengthen linkages between urban communities and food producers, such as participatory guarantee systems (in compliance with public policy and safety standards), and Community Supported Agriculture (CSA), for providing sustainably produced healthy food to all consumers while providing dignified livelihoods to producers; and,
- r) Support innovative public procurement policies (for example, school feeding programmes, other safety nets, food assistance and public regulatory and preparedness mechanisms) that give preference to locally and sustainably produced food while supporting rural development objectives.

*Aware of the importance of digitalization, and welcoming the establishment of the FAO Digital Platform:*

- s) Promote the potential of digitalization through capacity building and a transdisciplinary approach involving all actors (scientists, producers, industry, governments);
- t) Promote digital and other ICT as an entry point for the involvement of youth and women in agriculture and food systems;
- u) Strengthen innovation platforms through the appropriate use of digital technologies to facilitate wider networking; and,
- v) Harness digital technologies to strengthen links between producers and consumers, including through brokering sustainable finance initiatives and **market incentives**.

*Aware that the potential positive and negative impacts of digitalization on food security and nutrition require attention, **the CFS should:***

- w) **Request the HLPE** to review evidence of benefits and challenges of digitalization for sustainable agriculture and food systems that enhance food security and nutrition; assess the potential of digitalization for contributing to the full range of agroecological and other innovative approaches; review national and regional policies, including with respect to safeguards; consider challenges and implications for governance; and provide relevant policy advice.

#### ***4. Strengthen research, training and education, and reconfigure knowledge generation and sharing to foster co-learning***

*Research organizations, academic institutions, educational, training and extension organizations, the private sector, producers' organizations, civil society, inter-governmental organizations and States, regional and local authorities are encouraged to:*

*Recognizing the crucial role played by multi-disciplinary and participatory approaches to research, dissemination and education, such as transdisciplinary science, for understanding and shaping the complex social-ecological systems in agriculture and food systems:*

- a) Reform agricultural knowledge, information and innovation systems to support agroecological and other innovative approaches by ensuring that research, extension/dissemination and education/capacity building are integrated in an inclusive, participatory, and problem-oriented approach;
- b) Develop and support problem-oriented transdisciplinary research, and encourage its integration with 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 agricultural knowledge, information and innovation institutions to: enable transdisciplinary science, valuing the knowledge of all relevant stakeholders and involving them,

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<sup>37</sup> In line with UNDROP Article 16.

including in the setting of research priorities; engage in research at the local, national, regional and international levels, ensuring communication and sharing of knowledge between them; consider and address power imbalances and conflicts of interest between stakeholders and researchers; and, reward researchers who engage in such research;

- d) Prioritize problem-oriented research that addresses the needs of vulnerable groups, and focuses on the local dimensions of global challenges, such as climate change adaptation and mitigation, **ecological footprint of different production systems and value chains**, biodiversity conservation and sustainable use, ecosystem service provision, positive and negative externalities of agriculture and food systems, global emergencies such as pandemics, and market concentration across supply chains;
- e) Invest in advisory services and strengthen training programmes for promoting ecological alternatives to agrochemical use through agricultural extension, veterinary services, wildlife and forestry services using methods such as farmer field schools (FFS) and producer-to-producer networks; promote women as extension agents and providers of advisory services for women;
- f) Take appropriate measures to promote the right of peasants and other people working in rural areas to maintain, express, control, protect and develop their knowledge,<sup>38</sup> taking into account the specificity of women's knowledge, and support agricultural heritage systems, including those recognized as Globally Important Agricultural Heritage Systems (GIAHS), as an important space for innovation through local and indigenous knowledge;
- 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 (e.g. agroecological lighthouses);<sup>39</sup>
- h) Support the horizontal sharing of knowledge and experiences, building on existing farmers' organizations and networks, including schemes designed specifically for women;
- 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) Support capacity development for producers, in particular small-scale producers, 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; and,
- k) Promote sharing of experiences and co-learning amongst countries on moving towards sustainable agriculture and food systems through agroecological and other innovative approaches.

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

- l) Increase responsible investments in public and private research and development at national, regional and international levels and redress the relative under-investment in agroecological approaches; and,
- m) Prioritize and strengthen public research to address the needs of family farmers, in particular small-scale food producers, women and youth.

## ***5. Strengthen institutions for stakeholder engagement, create an enabling environment for***

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<sup>38</sup> See UNDROP Articles 20 and 26

<sup>39</sup> Lighthouses are societies or training centres that foster farmer-to-farmer knowledge sharing and create communities of practice

***empowering vulnerable and marginalized groups and address power inequalities in agriculture and food systems***

*States, regional and local authorities, producer organizations, indigenous peoples, women's organizations, community leaders, the private sector 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 all people have the possibility to participate actively and meaningfully in defining their desired approaches:*

- a) Support inclusive and democratic decision-making mechanisms at all levels in agriculture and food systems (for example, national inter-ministerial food security and nutrition committees and municipal food policy councils);
- b) Create and strengthen associations, organizations and cooperatives in all parts of food systems, including food producers and consumers, build capacities, create and exchange knowledge, and promote inclusive decision-making processes;
- c) Facilitate the use of social media and digital networking to promote producers' engagement in relevant processes;
- d) Give a central role to the marginalized and vulnerable groups most at risk of food insecurity and malnutrition, including women, youth and indigenous peoples in all decision-making that affects them; and,
- e) Reinforce the autonomy of women, particularly family farmers, their organizations, collective action, negotiation and leadership skills, to increase access to and control over *inter alia* education, appropriate extension services, gender-friendly technology, and full participation in related policy processes.<sup>40</sup>

*Promote the role of innovation in family farming by inviting the Steering Committee of the United Nations Decade on Family Farming, in collaboration with FAO and IFAD, to:*

- f) Integrate the findings of the HLPE report, and the present policy recommendations, into the implementation of the Global Action Plan of the United Nations Decade on Family Farming, which includes numerous actions for strengthening innovation in family farming.

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*In view of the relevance of agroecological and other innovative approaches for the UN Food Systems Summit, the CFS Chair should:*

- a) Transmit the HLPE report and the present policy recommendations for information to the UN Secretary General, the Special Envoy for the Food Systems Summit, the Advisory Committee and the Scientific Group.

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<sup>40</sup> See Pillar 3 of the Global Plan of the UN Decade on Family Farming

## ANNEX: DEFINITIONS

**Digitalization** in food and agriculture, often referred to as digital food and agriculture, is a process involving digital technologies (internet of things, artificial intelligence, blockchain, etc.) that covers access, content and capabilities.<sup>41</sup>

**Ecological footprint of food systems** expresses the impact of food consumed by a defined group of people (an individual, a village, a city, a country or the whole global population), measured in terms of the area of biologically productive land and water required to produce the food consumed and to assimilate the wastes generated.<sup>42</sup>

**Family Farming** (including all family-based agricultural activities) is a means of organizing agricultural, forestry, fisheries, pastoral and aquaculture production that is managed and operated by a family, and is predominantly reliant on the family labour of both women and men. The family and the farm are linked, co-evolve and combine economic, environmental, social and cultural functions.<sup>43</sup>

A **Food system** gathers all elements (environment, people, inputs, processes, infrastructures, institutions, etc.) and activities that relate to the production, processing, distribution, preparation and consumption of food, and the outputs of these activities, including socio-economic and environmental outcomes.<sup>44</sup> A diversity of food systems exist on a continuum, at different scales, and often co-exist within the same country.<sup>45</sup>

**Innovation** is used as a verb (to innovate) referring to the process by which individuals, communities or organizations generate changes in the design, production or recycling of goods and services, as well as changes in the surrounding institutional environment, that are new to their context and foster transitions towards SFSs for FSN. Innovation is also used as a noun to refer to the changes generated by this process. Innovation includes changes in practices, norms, markets and institutional arrangements, which may foster new networks of food production, processing, distribution and consumption that may challenge the status quo. Innovation in agriculture and food systems may be principally institutional, or may relate more to knowledge or to practice.<sup>46</sup>

An **innovative approach** to sustainable food systems for food security and nutrition is a well-articulated set of principles, practices and methods, that is widely understood, promoted and practiced, and that is intended to foster transitions towards more sustainable food systems that enhance food security and nutrition and is set within an overarching philosophy and a strategic vision for the future. Different innovative approaches fostering transitions to sustainable food systems for food security and nutrition have tended to place emphasis on different modes of innovation.<sup>47</sup>

**Innovation platforms** are initiatives or efforts bringing together diverse stakeholders to create space for co-learning and collective action that support transitions towards SFSs for FSN.<sup>48</sup>

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<sup>41</sup> FAO working definition (July 2020).

<sup>42</sup> 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.

<sup>43</sup> FAO and IFAD. 2019. United Nations Decade of Family Farming 2019-2028. Global Action Plan. Rome.

<sup>44</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, Rome 2014.

<sup>45</sup> HLPE. 2017. Nutrition and food systems. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome.

<sup>46</sup> HLPE, 2019.

<sup>47</sup> HLPE, 2019.

<sup>48</sup> HLPE, 2019.

**The right to adequate food:** “is realized when every man, woman and child, alone or in community with others, have physical and economic access at all times to adequate food or means for its procurement. The core content of the right to adequate food implies (...) the availability of food in a quantity and quality sufficient to satisfy the dietary needs of individuals, free from adverse substances, and acceptable within a given culture (and) the accessibility of such food in ways that are sustainable and that do not interfere with the enjoyment of other human rights (...) Accessibility encompasses both economic and physical accessibility”.<sup>49</sup>

A **Sustainable food system** is a food system that ensures food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition of future generations are not compromised.<sup>50</sup>

**Small-scale food producers** are producers who:

- operate an amount of land falling in the first two quintiles (the bottom 40 percent) of the cumulative distribution of land size at national level (measured in hectares); and
- operate a number of livestock falling in the first two quintiles (the bottom 40 percent) of the cumulative distribution of the number of livestock per production unit at national level (measured in Tropical Livestock Units – TLUs); and
- obtain an annual economic revenue from agricultural activities falling in the first two quintiles (the bottom 40 percent) of the cumulative distribution of economic revenues from agricultural activities per production unit at national level (measured in Purchasing Power Parity Dollars) not exceeding 34,387 Purchasing Power Parity Dollars.<sup>51</sup>

**Transdisciplinary science** transcends disciplinary boundaries and seeks to generate transformative outcomes by having:

- i. a problem focus (research originates from and is contextualized in “real-world” problems);
- ii. an evolving methodology (the research involves iterative, reflective processes that are responsive to the particular questions, settings and research groupings involved); and
- iii. collaboration (including among transdisciplinary researchers, disciplinary researchers and external actors with interests in the research).<sup>52</sup>

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<sup>49</sup> The United Nations Committee on Economic, Social, and Cultural Rights (CESCR) (E/C.12/1999/5 – General Comment 12 , pp 6, 8 and 13) (as referenced in the Global Strategic Framework for Food Security and Nutrition of the Committee on World Food Security)

<sup>50</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, Rome 2014.

<sup>51</sup> Metadata for SDG 2.3.2 (<https://unstats.un.org/sdgs/metadata/files/Metadata-02-03-02.pdf>)

<sup>52</sup> HLPE, 2019.