



Food and Agriculture
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The International Treaty
ON PLANT GENETIC RESOURCES
FOR FOOD AND AGRICULTURE

**INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES
FOR FOOD AND AGRICULTURE**

**FIFTH MEETING OF THE AD HOC TECHNICAL COMMITTEE ON
CONSERVATION AND SUSTAINABLE USE OF PLANT GENETIC RESOURCES
FOR FOOD AND AGRICULTURE**

4 – 7 October 2021

**POSSIBLE JOINT PROGRAMME ON BIODIVERSITY IN AGRICULTURE FOR
SUSTAINABLE USE OF PGRFA**

I. Background

1. The Governing Body recognizes the pivotal role of sustainable use of plant genetic resources for food and agriculture (PGRFA) in addressing global challenges, including biodiversity loss, climate change adaptation, poverty alleviation, and food security, especially for smallholder and subsistence farmers, as reflected in Article 6 of the Treaty. The implementation of Article 6 is a standing item on the agenda of the Governing Body with the aim of promoting an integrated approach to the sustainable use of PGRFA among Contracting Parties.

2. In 2017, at its Seventh Session, the Governing Body requested the Secretary, in collaboration with other stakeholders, and subject to the availability of financial resources, to: “*explore the possibility of establishing a Joint Programme on biodiversity in agriculture for sustainable use of PGRFA involving relevant international organizations and other stakeholders, with a view to enhancing the mission and goals of the Programme of Work on Sustainable Use of Plant Genetic Resources for Food and Agriculture and its Supporting Initiatives beyond 2019 through the establishment of a long-term programme 2020-2030, for consideration by the Governing Body at its Eighth Session.*”¹

3. In response to this, the Secretariat organized an informal meeting of experts, to explore possible elements of a Joint Programme on Biodiversity in Agriculture for Sustainable Use of Plant Genetic Resources for Food and Agriculture (PGRFA). The informal meeting of Experts was held in Bari, Italy, from 23 to 25 May 2018.²

II. The Possible Joint Programme on Biodiversity in Agriculture for Sustainable Use of PGRFA

4. The informal meeting of experts in 2018 provided a forum for sharing ideas, best practices, experiences, and lessons learned from the implementation and sustainable use of PGRFA. It stimulated discussions and generated ideas on the possible elements of a Joint Programme on biodiversity for sustainable use of PGRFA (the Joint Programme).

¹ [Resolution 6/2017](#)

² Exploring possible elements of a Joint Programme on biodiversity in agriculture for sustainable use of PGRFA 2020-2030. Proceedings. Informal Meeting of Experts, 23–25 May 2018, CIHEAM, Bari, Italy available at: <http://www.fao.org/3/CA2208EN/ca2208en.pdf>

Rationale of the Joint Programme

5. PGRFA are the raw material indispensable for crop improvement, whether by means of farmers' selection, classical plant breeding or modern biotechnologies. Their conservation and sustainable utilization are essential in adapting to unpredictable environmental changes and future human needs. The diversity between and within crops is an effective means of spreading the risks of crop failure for smallholder farmers; it also forms the basis for exchanging, selecting and developing varieties that can adapt to changing environmental conditions, nutritional and livelihoods needs.

6. Conserving and sustainably using PGRFA is thus central to ending poverty and hunger, achieving food security and improved nutrition, as well as promoting sustainable agriculture (SDGs 1 and 2). Maintaining biodiversity in agriculture is also important for halting biodiversity loss and halting/reversing land degradation (SDG 15). For these reasons, it is also a precondition for ensuring sustainable consumption and production patterns (SDG 12).

7. Concerted action and cooperation among different actors and different levels has a potential to boost global and national efforts that ensure the sustainable use of PGRFA as well as a means to contribute to achievement of these SDGs.

Overall Goal of the Joint Programme

8. The overall goal of the Joint Programme, as suggested by the experts, would be to contribute to sustainable food and nutrition security, poverty alleviation, and resilience to climate change and other challenges through supporting the development of policies, measures and activities that promote the sustainable use of plant genetic resources for food and agriculture. Such an overall goal can be achieved through the following objectives and related activities:

- Promote awareness and capacity-building among stakeholders (decision-makers, institutions, farmers' organizations and other relevant institutions and sectors, scientists, local farmers, agribusinesses, and the general public) on the importance of/and sustainable use of PGRFA;
- Create an enabling environment for sustainable use of PGRFA through coherent policies, legislation, strategies and action plans;
- Strengthen market and financial mechanisms for the sustainable use of PGRFA through support and guidance to governments and relevant stakeholders;
- Facilitate the coordination, synergy and management of scientific and traditional knowledge for the sustainable use of PGRFA;
- Boost sustainable use activities on the ground through an integrated approach to in-situ, on-farm and ex-situ strategies, and through mainstreaming sustainable use activities in on-going measures aimed at achieving the SDGs

Thematic Areas

9. The experts were of the view that for a Joint Programme to be effective in promoting partnerships and synergies, it is important to identify thematic areas that intersect with the work of other organizations and stakeholders (potential partners), and which could provide a platform for collaboration. The initial four thematic areas identified by the experts, are as follows:

- i. A food-system approach to food and nutrition security and ensuring resilience to climate change.
- ii. Disaster relief and the conservation of natural capital.
- iii. PGRFA and an attractive rural life.

- iv. Systemic and holistic approaches to the sustainable use of PGRFA in an enabling legal and institutional environment at all levels.

Potential Partners

10. A Joint Programme can offer an opportunity to form broader partnerships that could promote sustainable use of PGRFA and the implementation of the International Treaty, and support a more holistic approach to the integration and mainstreaming of PGRFA into sustainable development, from local to global levels.

11. Moreover, a Joint Programme on biodiversity in agriculture for sustainable use of PGRFA should be inclusive in terms of partners and collaborators, with broad participation at all levels. In order to ensure effectiveness and efficiency, it would be envisaged as a multi-sector, multi-stakeholder partnership that brings together international and inter-governmental organizations, governments, technical development cooperation/funding institutions, civil society organizations, research and academes, farmers and grassroots organizations, whose work are relevant to PGRFA, and who recognize the fundamental importance of crop genetic diversity and promoting the sustainable use of PGRFA.

12. The concept and elements of the possible Joint Programme on biodiversity in agriculture for sustainable use of PGRFA, as discussed by the experts, is presented in the *Annex I* to this document. The proceedings of the informal meeting of experts are presented in the document IT/GB-9/ACSU-5/21/Inf.3 *Proceedings, Informal Meeting of Experts, 23-25 May 2018, CIHEAM Bari, Italy: "Exploring possible elements of a Joint Programme on biodiversity in agriculture for sustainable use of PGRFA 2020-2030"*

III. Online Consultation on the Possible Elements of the Joint Programme on Biodiversity in Agriculture for Sustainable Use of PGRFA

13. Following the informal meeting of experts, the Secretariat facilitated further consultation to reach more stakeholders, through an online survey. The outcome of the online survey showed strong support for the Joint Programme, particularly the overall objectives and the four thematic areas. The Joint Programme was viewed as a promising platform for collaboration that would promote sustainable use of PGRFA in a broader context and inclusive manner. The results and analysis of the survey was presented at the First Electronic Consultation of the Ad Hoc Technical Committee on Sustainable Use of PGRFA.³

IV. Relevant Initiatives and Programmes

14. During the informal preparatory meeting of the members of ACSU held virtually on 18 February 2021, the members advised the Secretariat to prepare an overview of other global initiatives that may be relevant for the Joint Programme.

15. Below is a list of some of the existing global and regional initiatives⁴ that may be relevant for the Joint Programme.

- *FAO Biodiversity Mainstreaming Platform*. The Platform responds to the need to build bridges between the agricultural sector and the environmental sector. It works to identify the synergies and align the goals between these sectors, and develop integrated approaches to mainstreaming biodiversity into agriculture, forestry, fisheries and aquaculture. Available at: <http://www.fao.org/biodiversity/mainstreaming-platform/en/>

³ IT/GB8-ACSU-Electronic Consultation 1/19/Inf 4, available at: www.fao.org/3/ca4977en/ca4977en.pdf

⁴ Also includes platforms, programmes and projects

- *The Post-2020 Global Biodiversity Framework*. Currently being negotiated under the auspices of the CBD, but seeks to build on the Strategic Plan for Biodiversity 2011-2020 and set out an ambitious plan to implement broad-based action to bring about a transformation in society's relationship with biodiversity and to ensure that, by 2050, the shared vision of living in harmony with nature is fulfilled. Current status available at: <https://www.cbd.int/conferences/post2020>
- *Family Farming Knowledge Platform*. This platform gathers digitized quality information on family farming from all over the world, including national laws and regulations, public policies, best practices, relevant data and statistics, research, articles and publications. Available at: <http://www.fao.org/family-farming/home/en/>
- *Global Farmer Field Schools (FFS) Platform*. This platform has been created to give space to all actors engaged in FFS globally to allow for the exchange of information and improved quality and efficiency of FFS activities. FFS is an approach based on people-centred learning, and deploy participatory methods to create an environment conducive to learning. Practical field exercises using direct observation, discussion and decision making encourage learning-by-doing. The field is the space where local knowledge and outside scientific insights are tested, validated and integrated, in the context of local ecosystem and socio-economic settings. Available at: <http://www.fao.org/farmer-field-schools/home/en/>
- *Sustainable Food Value Chains (SFVC) Knowledge Platform*. The SFVC knowledge platform is a global platform that provides a user-friendly gateway to practical guidance and information on the development of sustainable food value chains. Available at: <http://www.fao.org/sustainable-food-value-chains/home/en/>
- *Plant Genetic Resources International Platform (PGRIP)*. The main objective of PGRIP is to provide a platform for interdisciplinary collaborations analysing and addressing the policies and regulatory developments for plant genetic resources used for research and breeding. PGRIP supports and facilitates international, peer-reviewed publications to ensure that evidence-based and scientific perspectives are available for policy makers and other stakeholders. Available at: <https://www.pgrip.org/>
- *The CGIAR Genebank Platform*. The platform supports the core activities of the CGIAR genebanks to conserve collections of plant genetic resources for food and agriculture. Available at: <https://www.cgiar.org/the-genebank-platform/>
- *Global Partnership Initiative for Plant Breeding Capacity Building (GIPB)*. GIPB is a multi-partner platform convened by FAO with the aim of improving institutional capacity for effective crop variety development and their distribution through seed systems. This initiative is a direct response to Article 6 of the Treaty which mandates the contracting parties to "promote the sustainable use of plant genetic resources for food and agriculture". Available at: <http://www.fao.org/in-action/plant-breeding/en/>
- *European Initiative for Sustainable Development in Agriculture (EISA)*. EISA aims to develop and promote sustainable farming systems, which are an essential element of sustainable development. Available at: <https://leaf-eisa.frb.io/about-eisa/>
- *The Global Forum on Agricultural Research and Innovation (GFAR)*. GFAR makes agri-food research and innovation systems more effective, responsive and equitable, towards achieving Sustainable Development Goals. Available at: <https://www.gfar.net/>
- *European Association for Research on Plant Breeding (EUCARPIA)*. EUCARPIA aims to promote scientific and technical co-operation in the field of plant breeding in order to foster its further development. To achieve this purpose, the Association arranges and sponsors meetings of members, to discuss general or specific problems. Available at: <https://www.eucarpia.eu/>

- *The European Cooperative Programme for Plant Genetic Resources (ECPGR)*. This is a collaborative programme among most European countries aimed at ensuring the long-term conservation and facilitating the increased utilization of plant genetic resources in Europe. Available at: <https://www.ecpgr.cgiar.org/>
- *European Coordination Let's Liberate Diversity (EC-LLD)*. EC-LLD aims is to encourage, develop and promote the dynamic management of cultivated biodiversity on farms and in gardens. Available at: <https://liberatediversity.org/>

V. Guidance sought

16. The Committee is invited to review the information provided in this document and provide its advice on the possibility of a future Joint Programme on Biodiversity in Agriculture for Sustainable Use of PGRFA.

Possible Elements of Joint Programme on biodiversity in agriculture for sustainable use of PGRFA

Rationale

PGRFA are the raw material indispensable for crop improvement, whether by means of farmers' selection, classical plant breeding or modern biotechnologies, and their conservation and sustainable utilization are essential in adapting to unpredictable environmental changes and future human needs. The diversity between and within crops is an effective means of spreading the risks of crop failure for smallholder farmers; it also forms the basis for exchanging, selecting and developing varieties that can adapt to changing environmental conditions, nutritional and livelihoods needs.

Conserving and sustainably using PGRFA is thus a central means to ending poverty and hunger, achieving food security and improved nutrition, as well as promoting sustainable agriculture (SDGs 1 and 2). Maintaining biodiversity in agriculture is also important for halting biodiversity loss and halting/reversing land degradation (SDG 15). For these reasons, it is also a precondition for ensuring sustainable consumption and production patterns (SDG 12). Concerted action among different actors and different levels has a potential to boost global and national efforts that ensure the sustainable use of PGRFA as well as a means to contribute to achievement of these SDGs.

Overall goal

The overall goal of the Joint Programme is to contribute to sustainable food and nutrition security, poverty alleviation and resilience to climate change and other challenges through supporting the development of policies, measures and activities that promote the sustainable use of plant genetic resources for food and agriculture.

Objectives:

1. Promote awareness and capacity building of stakeholders such as decision-makers, farmers' organizations and other relevant institutions and sectors, scientists, local farmers, agribusinesses, and the general public;
2. Create an enabling environment for sustainable use of PGRFA through coherent policies, legislation, strategies and action plans;
3. Strengthen market and financial mechanisms towards the sustainable use of PGRFA through support and guidance to governments and relevant stakeholders;
4. Facilitate the coordination, synergy and management of scientific and traditional knowledge for the sustainable use of PGRFA; and
5. Boost sustainable use activities on the ground through an integrated approach to in-situ, on-farm and ex-situ strategies.

Expected Results

For each of these objectives, the group derived expected results from a joint programme on biodiversity in agriculture for sustainable use of PGRFA, as presented below.

1. Promote awareness and capacity building of stakeholders such as decision-makers, farmers' organizations and other relevant institutions and sectors, scientists, local farmers, agribusinesses, and the general public

Results:

- a) Decision-makers, farmers' organizations and other relevant institutions and sectors, scientists, local farmers, agribusinesses, and the general public have greater awareness of selected policies, financial mechanisms and the value of

sustainable use of PGRFA, as well as the complementarity of *in situ*, on-farm management and *ex situ* conservation of PGRFA.

- b) Decision-makers, farmers' organizations and other relevant institutions and sectors, scientists, local farmers and agribusinesses are trained in the implementation of selected policies, financial mechanisms and the sustainable use of PGRFA.

2. Create an enabling environment for sustainable use of PGRFA through coherent policies, legislation, strategies and action plans

Results:

- a) Contracting parties and stakeholders receive support for inter-sectoral and inter-institutional policy and legislation that promote the sustainable use of PGRFA, including guidance for:
 - i. review of legislation relevant for sustainable use of PGRFA (e.g., on variety release, distribution of seed and plant propagation material, phytosanitary issues and intellectual property rights)
 - ii. achieving coherence in policies and strategies affecting sustainable use of PGRFA
- b) Contracting parties and stakeholders receive support for the development of strategies and action plans to promote and enhance the sustainable use of PGRFA, including the conservation and utilization of crop wild relatives, involving all stakeholders.

3. Strengthen market and financial mechanisms to promote the sustainable use of PGRFA through support and guidance to Governments and relevant stakeholders

Results:

- a) Governments have established national financial strategies for the sustainable use of PGRFA
- b) There is greater funding, including public funding, for the sustainable use of PGRFA
- c) Market- and non-market-based incentives have been established for the sustainable use of PGRFA

4. Facilitate the coordination, synergy and management of scientific and traditional knowledge for the sustainable use of PGRFA

Results:

- a) Operational linkages have been developed between scientific and traditional knowledge that enhance the sustainable use of PGRFA
- b) Conservation activities at local/on-farm, national, regional and international levels support the sustainable use of PGRFA
- c) Information exchange and sharing of experiences on best practices improve the conservation and sustainable use of PGRFA
- d) Synergies among informal and formal conservation sectors, community seed banks, research institutions and agribusiness companies enhance the sustainable use of PGRFA
- e) Central databases for mobilizing and monitoring exchange of materials and information at multiple levels enhance the knowledge needed for sustainable use of PGRFA

5. Boost sustainable use activities on the ground through an integrated approach to *in-situ* on-farm and *ex-situ* strategies

Results:

- a) Methods and approaches for sustainable use of PGRFA for nutrition and food security in the context of climate-change adaptation and sustainable development contribute to the:
- identification of preferred traits by farmers
 - characterization and evaluation of gene-bank materials
 - matching the identification of traits preferred by farmers with characterization of gene-bank materials
 - pre-breeding to enhance plant genetic diversity
 - enhancement of diversity through selection and breeding
 - development of community seed banks
 - linkages among community seed banks
 - linkages between community seed banks, and national and international seed banks
 - enhanced cultivation, use and marketing of local varieties

Thematic areas

Thematic areas for a joint programme that would cross-cut with the work of other organizations and stakeholders/potential partners, thereby providing a platform for collaboration. The focus is on areas where there is a growing understanding of the importance of PGRFA to another sector and an increased willingness and desire to reflect the relationship in policy and action.

The four thematic areas identified, are as follows:

- i. *Disaster relief and the conservation of natural capital:* Human-induced and natural disasters are on the rise. The conservation and sustainable use of natural capital, including PGRFA, is essential to maintain the functioning of ecosystems. This part of the joint programme would help with disaster prevention but also include the development and testing of protocols for the restoration of agricultural biological diversity in disaster relief.
- ii. *PGRFA and an attractive rural life:* Urban migration is a huge challenge to agricultural production, rural livelihoods and demography, as well as the sustainable use of PGRFA. It is essential to put culture and dignity back into agriculture and make rural life attractive. This part of the joint programme would focus on reward and economic benefits from the sustainable use of PGRFA as well as off-farm livelihoods, with particular attention to the role and impact on women and youth.
- iii. *A food-system approach to food and nutrition security and ensuring resilience to climate change:* Hunger and malnutrition are on the rise, while more and more people struggling with obesity. The global burden of disease is now increasingly diet-related. Dietary diversity offers a highly efficient and cost-effective approach to hunger and malnutrition in all its forms. In addition, the ability to produce food requires an ability to adapt to climate change. PGRFA is crucial to both; this part of the programme could focus on nutrition sensitive agriculture in the age of climate change and in light of other global changes, such as socio-economic transformation.
- iv. *Systemic and holistic approaches to the sustainable use of PGRFA in an enabling legal and institutional environment* at all levels. There is a need to raise awareness of the role of PGRFA in many of the challenges addressed in the Sustainable Development Goals. The lack of understanding, coupled with institutional boundaries and power imbalances, needs to be addressed. This programme could bring together sectors addressed by the SDGs within which PGRFA must be acknowledged, to look for win-wins and how trade-offs can be mitigated in an enabling legal and institutional environment.

For each of these thematic areas, potential objectives, rationales for why these areas are important to PGRFA, suggestions of ways to build the connection and the identification of potential partners are outlined below. In the sub-sections titled 'Ways to build the connection' the group identified some means that applied to more than one thematic area. These are noted with an '*'. Here it should be noted that the sections on ways to build the connection and potential partners are non-exhaustive: they are the results of what could be achieved during the time available in Bari.

Disaster relief and the conservation of natural capital

Conservation and sustainable use of natural capital is important because the function of ecosystems is the very basis of life. The function of ecosystems regulation is of particular importance in this context (e.g. the water cycles, the capacity of vegetation to purify water).

The function of ecosystems and their regulation is important for climate-change adaptation, food and nutrition security, and for building and maintaining a sustainable environment. It provides a basis for social coherence, triggers collective responsibility and provides a wide biological pool. It delivers crucial services to humanity and the fundamental elements of economic development.

Understanding the functions of the agroecosystem is a tool for addressing the actions involved in restoration of lost biological diversity in cases of disaster.

PGRFA-sensitive disaster relief is crucial to enable disaster-struck farming populations to revert to the agricultural production and nutrition to which they have been accustomed, the related cultural identity, and to re-establish sustainable food and nutrition systems in the wake of disasters.

Some ways to build the connection:

- Strengthening education and capacity-building on *inter alia*:
 - understanding the functions of agroecosystems;
 - knowledge management of agriculture;
 - integration of knowledge on the sustainable use of PGRFA among those involved in biological, scientific and local development for the enhancement of relevant technologies;
 - integration of agro-ecology skills among those involved in the informal and formal sectors in agriculture (e.g. extension services, research and development, land-use planning);
 - management of biological diversity;
 - restoration after disasters (including integration of PGRFA issues in disaster management and recovery plans).
- Supporting policy and activities to:
 - promote the exchange of seeds and sharing knowledge on farm seed production;
 - promote seed fairs;
 - promote community seed banks for restoration after disasters;
 - enhance and mainstream the multifunctional roles of farmers in agriculture, societal life, food processing, tourism, etc.;
 - activate payments or other forms of public support for ecosystem services provided by farmers who conserve and manage PGRFA, recognizing the roles that these farmers and resources perform in the functions and ecological sustainability of natural resources;
 - develop tools, methodologies and models for the restoration of agricultural biodiversity on farms as well as off-farm activities (e.g. related to wildlife).

Potential partners:

- The UN, including UNICEF and the World Food Programme, and other multilateral humanitarian relief agencies such as the International Federation of the Red Cross
- Civil society relief agencies, such as Oxfam International, Action Against Hunger, Catholic Relief Services and Mercy Corps
- Farmer organizations and networks aimed at cooperation to conserve ecosystems functions in certain areas
- Policy-makers, public bodies, private sector, local authorities, scientists, farmers, seed system, international agencies, regional bodies through a multi-stakeholder approach
- Scientists and farmers cooperating for capacity building
- Networks that can be activated for collaboration and cooperation

A food-system approach to food and nutrition security and resilience to climate change

In addition to being essential for the resilience and stability of agricultural production systems and the ability to adapt to climate change and other stressors (like food security), PGRFA is fundamental to the security of human nutrition.

One in nine people, or about 795 million globally, go to sleep on empty stomach each night. Hidden hunger, also known as micronutrient deficiencies, afflicts more than 2 billion individuals, or one in three people, globally.⁵ The 2017 State of Food and Nutrition Security in the World Report informed the world community that 2016 saw the first increase in the number of hungry people in a decade. Today, at least 2 billion people consume excess calories, many of whom also do not get enough nutrients. Malnutrition is often taken to mean too little nutrition, but in fact it means poor nutrition.

Underpinning both overconsumption and undernutrition is dietary over-simplification. The benefits of a more diverse diet are widely recognized. A diverse and balanced diet can ensure exposure to a broader set of nutrients and non-nutrients, which may have antioxidant, anti-cancer and other beneficial properties.

Diversity of diet, founded on diverse farming systems and growing nutrient-dense foods, delivers better nutrition and greater health, with additional benefits for human productivity and livelihoods. Additionally, it is essential for coping with the predicted impacts of climate change. Unfortunately, much of this food diversity is under threat worldwide, as current production and consumption revolves around only twelve major crops, three of them providing close to 50% of all calories consumed.⁶ The loss of on-farm diversity depletes the very resources that are the foundation of the ability to adapt to global environmental change. In addition, the abandonment of diverse farm management practices associated with the arrival of industrial agriculture erodes smallholder farmers' capacity to innovate in response to environmental and socio-economic changes.

Some ways to build the connection:

- Raise awareness of food and nutrition systems from production to consumption and put the 'culture' back into agriculture, by *inter alia* strengthening:
 - connections between farmers, PGRFA and gastronomic trends;
 - connections across rural–urban continuums to build understanding that farmers and the sustainable use of PGRFA are crucial for ending hunger and malnutrition sustainably in both rural and urban areas, and of the synergies available by supporting these linkages;
 - education, at all levels, in where food comes from, why food and diversity are important to health (a food systems approach to health and nutrition, why food is something important to all of us and is something to enjoy);
 - education, at all levels, in how agro-ecological approaches that support the sustainable use of PGRFA are necessary to transform food systems while safeguarding the environment and ensuring the resilience of agricultural production systems and hence our ability to feed ourselves.
- Align policies and metrics to support nutrition sensitive production and consumption where PGRFA is an integral factor, by, *inter alia*:
 - evaluating the drivers of production and consumption of unhealthy diets and developing and adopting metrics that takes into account the three dimensions of sustainable development (economic, social and environmental) and move beyond the usual production metrics (i.e. yield/hectare, including nutrition density/ha; and energy–water–resource use/ha)
 - promoting agro-ecological approaches that support the sustainable use of PGRFA, integrated crop-livestock-forest systems, and sustainable water management, while reducing reliance on agrochemicals;

⁵ Cited in the Global Hunger Index of 2014 (published by Welt Hunger Hilfe, IFPRI and Concern Worldwide) at https://www.ifpri.org/sites/default/files/ghi/2014/feature_1818.html, referring to The State of Food and Agriculture 2013 of the FAO, <http://www.fao.org/docrep/018/i3300e/i3300e.pdf>.

⁶ FAO, 2016: *Save and Grow in Practice. Maize, Rice, Wheat. A Guide to Sustainable Cereal Production*. Rome: FAO. Available at: <http://www.fao.org/3/a-i4009e.pdf>.

- implementing agricultural policies and practices that guarantee the rights of smallholder farmers and support sustainable and nutritious diets and livelihoods. Strengthen rural–urban linkages – including physical, economic, social, and political connections – linking in particular to farmers who manage and sustainably use PGRFA through:
 - applying integrated territorial planning to create links between rural and urban stakeholders, with a focus on farmers managing and sustainably using PGRFA and ensuring the participation of rural people, in particular farmers managing and sustainably using PGRFA, in this planning and implementation;
 - supporting public procurement schemes and other innovative policies that promote the production and consumption of locally-sourced, healthy, diverse foods;
 - regulating the availability of ultra-processed foods in the food supply chains through policies that might include for instance marketing regulations to limit or prohibit marketing to children, as well as incentives and disincentives (e.g., sugar-sweetened beverage tax).

Potential partners:

- UN organizations, such as the United Nations Standing Committee on Nutrition (UNSCN), the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD) and the World Food Programme (WFP), the Committee on World Food Security (CFS) and the World Health organization (WHO)
- the Secretariat of the Convention on Biological Diversity (CBD)
- Bioversity International (coordinating e.g. the multi-country and multi-partner initiative Biodiversity for Food and Nutrition in collaboration with *inter alia* the CBD)
- UN-Habitat (which, in collaboration with partners such as Cities Alliance, FAO – Food and Agriculture Organization, GIZ/Germany, IFAD – International Fund for Agricultural Development, OECD – Organization for Economic Cooperation and Development, UNCRD – United Nations Centre for Regional Development, UN Environment – United Nations Environment Programme, WFP – World Food Programme, and WHO – World Health Organization, is developing guidelines on urban-rural linkages. The CBD is now getting involved as well and may launch its own initiative.)

Making rural life attractive

Over 50 per cent of the world population now live in urban areas, a proportion that is expected to increase to 66 per cent by 2050.⁷ Nevertheless, in the two regions with the highest rates of poverty – sub-Saharan African and South Asia – 57 per cent and 60 per cent respectively of the population will still be rural in 2025, with these rural populations continuing to grow for many years.⁸ Government policies often focus on urban sectors, increasing rural–urban migration despite the inability of cities to absorb and employ displaced rural populations. This leads to congestion, slums and ever-increasing unemployment.

Connecting farmers, the sustainable use of PGRFA and making rural life attractive, particularly while raising awareness of the importance of this to stemming the growth of congestion, slums and rising unemployment in urban areas, can create synergies with regard to the environment (climate resilience, ecosystem services etc.), health and employment. For the ITPGRFA Secretariat, a relevant point is this thematic area – making rural life attractive – ties closely to the thematic area on nutrition and climate change enabling synergies and coordinated work and action possible. The objectives include making rural life attractive, especially for women and youth; reducing urban migration, putting culture and dignity back into agriculture and sustain PGRFA and use to generate on- and off-farm/livelihood benefits in rural areas, especially for women and youth. Why is this necessary?

⁷ United Nations Department of Economic and Social Affairs, 2018: *68% of the world population projected to live in urban areas by 2050, says UN*. Press release available at <https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html>.

⁸ United Nations, 2014: *World's population increasingly urban with more than half living in urban areas*. Press release available at <http://www.un.org/en/development/desa/news/population/world-urbanization-prospects-2014.html>.

- Without people on the land, there will be no food on the table: aging farming populations and migration of workforce constitute a major challenge;
- Genetic erosion – reduction of intra and interspecific crop diversity – is occurring at a fast pace;
- Loss of farming and PGRFA knowledge are increasing;
- Prejudice against farming and rural life, the expanding gap between rich and poor as well as in technology access;
- Loss of knowledge on food culture and value, food preparation, and bio-cultural information;
- Increasing dependence on fast and less nutritious food.

The thematic area was also chosen because of the heightened understanding and interest in building rural–urban linkages – including physical, economic, social, and political connections – to end hunger and malnutrition sustainably in rural and in urban areas. Integrated territorial planning creates linkages between rural and urban stakeholders, can support integrated value chains across the rural–urban continuum and promote diets based on nutritious, diverse and locally produced food. It has the potential to promote local employment and holistic approaches to the sustainable management and use of water, energy and biodiversity. There is a growing understanding among decision-makers nationally and internationally that a focus *on the rural dimension of urbanization* is critical for sustainable development. However, the connection to PGRFA is less understood, and more attention should be given to the value of support to more marginalized farmers who use PGRFA sustainably.

Some ways to build the connection:

- Recognition of the contributions of rural farmers and knowledge holders in the conservation and sustainable use of PGRFA, especially for quality, biodiverse production systems, and positive social impact, by, *inter alia*,:
 - Finding ways and means to support economic improvement of rural livelihoods including developing and using incentives that promote the use of what is produced by rural people, especially youth and women.
- Target policy and capacity-building for, *inter alia*,:
 - conservation, improving PGRFA, product development (planting materials to downstream value-addition), processing, marketing;
 - transmitting and enhancing PGRFA knowledge (tradition, indigenous and scientific) and practices;
 - participation by smallholder farmers, especially women and youth, in decision-making;
 - empowering farmers as scientists and protagonists of change rather than recipients and beneficiaries.
- Strengthen rural–urban linkages, including physical, economic, social, and political connections, linking in particular to farmers who manage and sustainably use PGRFA through:*
 - Applying integrated territorial planning to create links between rural and urban stakeholders, with a focus on farmers managing and sustainably using PGRFA and ensuring the participation of rural people, in particular farmers who manage and sustainably use PGRFA, in this planning and implementation;
 - Facilitating constructive interactions among urban and rural dwellers;
 - Supporting public procurement schemes and other innovative policies that promote the production and consumption of locally-sourced, healthy, diverse foods;
 - Raising awareness, understanding and connection between farmers, PGRFA and gastronomic food systems movements.*
- Devise and use metrics, including:
 - percentage of youth out-migrating vs staying locally;
 - numbers of local new business and business longevity;
 - measure of baseline and increased documentation and access of knowledge systems;
 - increased intra- and inter-specific diversity of PGRFA use at household and community levels.

Potential partners:

- UN and other multilateral organizations (UNDP – United Nations Development Programme, UN Environment – United Nations Environment Programme, IFAD – International Fund for Agricultural Development, FAO – United Nations Food and Agriculture Organization, World Bank)
- UN Habitat and organizations noted in the thematic area on nutrition
- Global Forum on Agricultural Research and Innovation (GFAR)
- CGIAR centres (for certain capacity building)
- Civil society organizations (research and academe, NGOs, farmers' organizations)
- National governments

Systemic and holistic approaches to the sustainable use of PGRFA in an enabling legal and institutional environment

To effectively implement the sustainable use provisions of the ITPGRFA, a holistic and systemic approach surrounded by an enabling legal and institutional framework is needed to:

- acknowledge and promote the activities of farmers and local communities in the maintenance and diversification of PGRFA;
- support institutional and legal environment for conservation and use of CWR and wild harvested species;
- adjust any laws and policies that may not support these communities and activities;
- create coherence across instruments.

The lack of a holistic approach to policies promoting sustainable development often results in the disregard of the importance of farmers and the sustainable use of PGRFA to achieving critical sustainable development goals that may not be seen as 'PGRFA' goals (e.g. in the areas of employment, urban nutrition, ecosystem services and climate resilience)

Some ways to build the connection:

- Regarding policy- and decision-making, there is a need to, *inter alia*:
 - identify and assess the impacts of the existing legal and policy measures on the implementation of Art. 5, 6 and 9;
 - provide recommendations for adjustment, alignment and/or for new measures and institutional arrangements;
 - review legislation and institutional arrangements to ensure complementarity between *in-situ* and *ex-situ* conservation;
 - review existing legislation to improve conservation of CWR, and develop a supportive institutional and legal environment for CWR and wild harvested species, if none exists;
 - ensure legislative and policy support for community seed banks, including pathways for access to resources from national and global gene banks and for collaboration with these;
 - ensure participation in decision-making, particularly of Indigenous and local communities and smallholder farmers;
 - review effective mechanisms and require that they recognize and support farmer seed supply system, and farmer innovation. Provide policy support and recognition of community seed banks, seed fairs, farmer field schools, promote participatory approaches crop improvement and ensure complementarity between *in-situ* and *ex-situ* conservation.
- Regarding capacity building there is a need to:
 - build capacity, including of policy-makers, scientists and farmers to understand and engage in policy-making;
 - build capacity of national decision-makers, smallholder farmers and farming organizations to understand the international legal landscape affecting implementation of the ITPGRFA, including any that may limit options for implementation including building capacity to implement guidelines of relevance to Articles 5, 6 and 9;

- provide support to Contracting Parties to integrate policy for sustainable use into national frameworks (CBD, SDGs, GPA).
- Regarding information needs, there is a need to:
 - create a platform for exchange of experiences, including lessons learned and best practices;
 - create effective information channels to communicate global policy to local level and customary practice and local practices from local to global;
 - promote a multi stakeholder/ inter-sectorial dialogue for the development and implementation of policies and legal frameworks.

Potential partners:

- Secretariat of the CBD
- The Alliance of Bioversity International and CIAT, and other CGIAR Research Centres
- Other research institutions
- International Development Law Organization (IDLO)
- United Nations Environment Programme (UNEP)
- United Nations Food and Agriculture Organization (UNFAO)
- United Nations Development Programme (UNDP)
- International Fund for Agricultural Development (IFAD)
- Global Forum on Agricultural Research and Innovation (GFAR)
- Oxfam-Novib and other NGOs engaged in PGRFA management