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Organization of the
United Nations**



**International Treaty
on Plant Genetic Resources
for Food and Agriculture**

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The Joint Programme on Biodiversity in Agriculture for Sustainable Use of Plant Genetic Resources for Food and Agriculture

Executive Summary

At its Ninth Session, the Governing Body “took note of the Concept Note of the Joint Programme on Biodiversity in Agriculture for Sustainable Use of Plant Genetic Resources for Food and Agriculture” and decided to reconvene the Ad Hoc Technical Committee on Conservation and Sustainable Use of PGRFA (ACSU or the Committee) with the mandate, among others, to “provide inputs to the Secretariat for the revision and finalization of the Concept Note of the Joint Programme”.

This document contains the revised Concept Note of the Joint Programme on Biodiversity in Agriculture for Sustainable Use of Plant Genetic Resources for Food and Agriculture (Joint Programme), based on the inputs, suggestions, and guidance provided by the Committee to the Secretary.

Guidance Sought

The Governing Body is invited to consider and approve the Concept Note of the Joint Programme for Biodiversity in Agriculture for Sustainable Use of Plant Genetic Resources for Food and Agriculture. The Governing Body is also invited to note that the Joint Programme will be developed and implemented taking into account the Kunming-Montreal Global Biodiversity Framework.

Concept Note

The Joint Programme on Biodiversity in Agriculture for Sustainable Use of Plant Genetic Resources for Food and Agriculture (Joint Programme)

Rationale

The Joint Programme is a cooperation between and among relevant international organizations, governments and all interested stakeholders committed to working together with the shared ambition and goal of transforming our food and nutrition systems and improving livelihoods in a sustainable, inclusive and gender-responsive manner, in line with Article 7 of the International Treaty.

Objective

The general objective of the Joint Programme is to mainstream plant genetic diversity into seed, food and nutrition systems while strengthening agricultural systems' resistance and resilience to climate change and other emerging challenges.

Areas of Action

The proposed Joint Programme is action- and results-oriented. It includes five mutually supportive and interdependent areas for action to mainstream the conservation and sustainable use of plant genetic diversity into seed, food and nutrition systems:

- (i) Supporting knowledge and information exchange on actions directly related to Articles 5 and 6 of the International Treaty;
- (ii) Supporting the implementation of enabling policies and legal measures according to national contexts, priorities and specificities;
- (iii) Strengthening multi-sectorial and multi-stakeholder cooperation for the development of projects, actions and activities;
- (iv) Raising and strengthening public awareness of the importance of plant biodiversity for sustainable breeding, seed, food and nutrition systems and for climate change mitigation and adaptation; and
- (v) Building capacities for developing actions directly related to the implementation of Articles 5 and 6 of the International Treaty.

A Partnership Approach

The Joint Programme will be carried out following an iterative, dynamic and multi-sectoral and multi-stakeholder participatory process of engagement where all stakeholders at local, national, regional and global levels and of all sizes can take ownership and be involved in the promotion and implementation of the Joint Programme's objective and areas of action.

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1. INTRODUCTION

As the world's population continues to grow, the increasing demand for food places unprecedented pressure on natural resources, which is exacerbated by some unsustainable forms of consumption and farming systems. It is estimated that by 2050, a global population of 9.7 billion will demand 70 percent more food than that consumed today.¹ Whereas the crucial role of biodiversity – the extraordinary variety of life at genetic, species and ecosystem levels – in food security and nutrition and in adapting agriculture to the effects of climate change is increasingly recognised, biodiversity for food and agriculture – the subset of biodiversity that contributes in one way or another to agriculture and food production – is declining globally at unprecedented rates due to unsustainable production practices; lack of interest in and neglect of diverse crops and varieties and their related traditional knowledge; climate change and land-use changes; and pressure on value chains, thereby threatening future agricultural production, food security, and overall ecological integrity.

In the last century, parts of the world's food crop diversity disappeared forever, which reduces coping strategies and resources needed to grow more resistant, resilient, productive, and nutritious crops. The loss of diversity depletes the very resources that are the foundation of our ability to achieve food security, improve nutrition and adapt to ongoing global environmental changes.

2. RATIONALE

2.1 The call for sustainable, resistant and resilient seed, food and nutrition systems

There is global consensus that food systems, which refer to the constellation of activities involved in producing, processing, transporting and consuming food, need to be transformed to nourish people with more nutritious foods while protecting and preserving the environment. The benefits of a more diverse diet are widely recognized. Dietary diversity, founded on diverse farming systems and growing nutrient-dense foods, delivers better nutrition and greater health, with additional benefits for human productivity and potential contributions to increasing livelihoods.

The Sustainable Development Goals (SDGs) recognize that the challenges of biodiversity loss, food and nutrition insecurity, and climate change are interconnected and multi-dimensional. To address these challenges, food production requires sustainable food systems that are based on sustainable seed and agricultural systems.² As a concept introduced in 2014 by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security of the FAO, 'sustainable food systems' are defined as "a food system that delivers food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not compromised".³

In December 2022, the Kunming-Montreal Global Biodiversity Framework, with its four goals and 23 action-oriented targets, was adopted within the ambit of the Convention on Biological Diversity (CBD). Target 10 aims to ensure that areas under agriculture, among other sectors, are managed sustainably, in particular through the sustainable use of biodiversity, to contribute to the resilience and long-term efficiency and productivity of production systems and to food security.

2.2 The contribution of agrobiodiversity and plant genetic resources to sustainable, resistant and resilient seed, food and nutrition systems

Agricultural biodiversity, which includes all components of biological diversity that constitute the agricultural ecosystem, contributes to many aspects of a sustainable food production system by providing a set of resources that help "meet current food needs while maintaining healthy ecosystems that can also provide food for generations to come, with minimal negative impact to the environment".⁴ Within biodiversity, plant genetic resources for food and agriculture (PGRFA), defined as any genetic material of

¹ FAO, IFAD, UNICEF, WFP, WHO. 2018. *The state of food security and nutrition in the world 2018. Building climate resilience for food security and nutrition*. FAO, Rome.

² FAO. 2019. *The state of the world's biodiversity for food and agriculture*. J. Bélanger & D. Pilling (eds.). Rome. www.fao.org/3/CA3129EN/CA3129EN.pdf

³ HLPE (High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security of the FAO) (2014) *Food Losses and Waste in the Context of Sustainable Food Systems* (FAO, Rome).

⁴ Story M, Hamm M, Wallinga D (2009) Food systems and public health: linkages to achieve healthier diets and healthier communities. *Journal of Hunger and Environmental Nutrition* 4(3-4):219–224.

plant origin of actual or potential value for food and agriculture, underpin sustainable farming systems that deliver diverse crops to all end users, notably smallholder farmers, in sufficient quantity, quality and diversity through well-functioning seed systems, and produce sufficient, diverse, and nutritious foods in a sustainable way while providing options for climate change mitigation and adaptation. In turn, the use of plant biodiversity for food and nutrition building upon the agroecological knowledge of local and indigenous communities and farmers, embodied in the development and use of specific varieties, species and landscape patterns, together with the knowledge of breeders and scientists, contributes to the conservation of crop diversity, including crop wild relatives and wild edible species, thereby making them available for future climate scenarios and today's nutrient needs. However, many potential benefits of agricultural biodiversity to sustainable food systems and adaptation of agriculture to the effects of climate change are often not realized because of the lack of information, knowledge and understanding of its value, poor conservation systems, or restrictive policies.⁵

Improved availability, accessibility, affordability and utilisation of PGRFA are thus critical to achieving food security and better diets and adapting agriculture to the effects of climate change. The links among conservation, use, production and consumption are fundamental to sustainable, resistant and resilient seed, food and nutrition systems in order to ensure food diversity and security, achieve healthy diets, provide options for mitigating and adapting to climate change, and improve livelihoods. Bringing together seed, food and nutrition systems, and the conservation and use of agricultural biodiversity, including PGRFA, is key to tackle the challenges of biodiversity loss, food and nutrition insecurity, climate change and other emerging challenges.

3. MAINSTREAMING PLANT BIODIVERSITY INTO FOOD AND NUTRITION SYSTEMS

3.1 General objective of the Joint Programme

The proposed Joint Programme aims to respond to the call for a transformation of contemporary food systems according to national contexts, priorities and specificities so that they become more sustainable, resistant and resilient. Its general objective is to mainstream plant genetic diversity into seed, food and nutrition systems while strengthening agricultural systems' resistance and resilience to climate change and other emerging challenges.

3.2 Expected outcomes of the Joint Programme

By focusing on the policy and institutional issues that are currently inhibiting the integration of plans, policies, practices and activities on the conservation and sustainable use of plant genetic diversity into food and nutrition systems, the proposed Joint Programme seeks to achieve the following outcomes:

- (i) Enhanced knowledge at all levels and across all relevant sectors on the value of plant genetic diversity to nutrition, food security and climate change mitigation and adaptation, in order to inform and support policymaking based on up-to-date data and information to promote healthy diets and build sustainable seed, food and nutrition systems;
- (ii) Strengthened capacities to develop actions for the conservation and sustainable use of PGRFA and to implement sound, enabling and mutually-supportive policy frameworks that support the integration of plant genetic diversity in sustainable seed, food and nutrition systems for diverse, healthier and more sustainable consumption patterns;
- (iii) Wider and strengthened cooperation among relevant public, private and civil actors at local, national, regional, and global levels in the planning and implementation of relevant policies, strategies and programmes aimed at promoting the conservation and sustainable use of agricultural plant biodiversity to build sustainable seed, food and nutrition systems and adapt agriculture to the effects of climate change;
- (iv) Increased public awareness of the importance of conserving and using plant genetic diversity including the role of varieties and cultivars of plants, as well as wild, neglected and underutilized

⁵ Bioversity International, 2017. *Mainstreaming Agrobiodiversity in Sustainable Food Systems: Scientific Foundations for an Agrobiodiversity Index*. Bioversity International, Rome, Italy.

species to build sustainable seed, food and nutrition systems and adapt agriculture to the effects of climate change;

- (v) Higher uptake and improved distribution and rationalization of funds available, including funding for agriculture and rural development, food security, nutrition, biodiversity, regional policy and climate change to implement the proposed Joint Programme.

In working towards sustainable agricultural and food production, the proposed Joint Programme will help achieve multiple SDGs, especially SDGs 2, 12 and 15. It will also contribute to the implementation of the Global Plan of Action for Plant Genetic Resources for Food and Agriculture and the Kunming-Montreal Global Biodiversity Framework, especially Targets 4, 10, 13, 14, 19, 20, 21 and 22 aimed at reducing threats to biodiversity; meeting people's needs through sustainable use and benefit-sharing; increasing awareness; and adopting tools and solutions for implementation and mainstreaming.

3.3 Areas of action of the Joint Programme

The proposed Joint Programme is action- and results-oriented. It includes five mutually supportive and interdependent areas of action, each broken down into a set of activities and milestones, to mainstream the conservation and sustainable use of plant genetic diversity into breeding, seed, food and nutrition systems:

- (i) Supporting knowledge and information exchange on actions directly related to Articles 5 and 6 of the International Treaty;
- (ii) Supporting the implementation of enabling policies and legal measures according to national contexts, priorities and specificities;
- (iii) Strengthening multi-sectorial and multi-stakeholder cooperation for the development of projects, actions and activities related to the Implementation of Articles 5 and 6 of the International Treaty;
- (iv) Raising and strengthening public awareness of the importance of plant biodiversity for sustainable breeding, seed, food and nutrition systems and for climate change mitigation and adaptation;
- (v) Building capacities for developing actions directly related to the implementation of Articles 5 and 6 of the International Treaty.

The list of suggested activities and milestones, which is indicative and not exhaustive, is provided in *Appendix I*. The suggested areas of action respond to the policy and institutional needs and priorities identified in regional and global assessments, including:

- the *Background study on the bottlenecks and challenges to the implementation of Articles 5 and 6 of the International Treaty* presented at the Ninth Session of the Governing Body of the International Treaty in 2022;⁶
- The *Voluntary Guidelines for Mainstreaming Biodiversity into Policies, Programmes and National and Regional Plans of Action on Nutrition*, endorsed by the Commission on Genetic Resources for Food and Agriculture (CGRFA) in 2015;
- The *Framework for Action on Biodiversity for Food and Agriculture*, endorsed by the CGRFA in October 2021 and adopted by the 168th Session of the FAO Council in December 2021;
- The *Third Report on the State of the World's PGRFA* once published, and other reports of relevance to plant genetic diversity and sustainable food and nutrition systems.

3.4 Levels of action of the Joint Programme

The areas of action of the Joint Programme can be promoted and implemented at the local, national, regional and global levels in a coordinated, inclusive and integrated manner. Actors should be encouraged to foster synergies and linkages across these different levels of action, with a view to maximising the opportunities derived from the agreed actions and delivering broad impacts that contribute to the objective of the Joint Programme.

⁶ FAO, International Treaty on PGRFA, 2022. *Background Study on the Bottlenecks and Challenges to the Implementation of Articles 5 and 6 of the International Treaty* (IT/GB-9/22/12/Inf.2).

3.5. Existing relevant initiatives and added value of the Joint Programme

3.5.1 Existing relevant initiatives

Several international programmes and initiatives related to biodiversity for food and nutrition have been adopted both within and outside the UN system to promote sustainable consumption and production patterns and build sustainable food systems. The most relevant ones are listed in *Appendix 2* of this Concept Note.

While these various programmes, projects and initiatives greatly contribute to building sustainable food systems, they are either framed in terms of broad policy guidelines; and/or they address biodiversity as a whole and are not focused specifically on plant biodiversity and seed systems; and/or they are geographically limited to a few countries in a specific region; and/or they are focused on specific areas of work.

3.5.2 Added value of the Joint Programme

The Joint Programme should avoid duplication of work while contributing to and building upon existing programmes and initiatives. The added value of the Joint Programme is to:

- favour a holistic, action-oriented approach through five mutually supportive and interdependent areas of action that are each broken down into a set of activities and milestones centred around obtaining substantial and sustainable results in mainstreaming the conservation and sustainable use of plant biodiversity into food and nutrition systems at all levels;
- put the spotlight on the local, national and regional priorities and challenges by placing an emphasis on identifying the collective issues and the creation of common outputs at the national and regional levels;
- provide an unprecedented opportunity to create a multi-sectoral, multi-stakeholder, multi-level and participatory partnership response to the call for sustainable, resistant and resilient food and nutrition systems;
- put the spotlight on the value of plant diversity to building sustainable breeding, seed, food and nutrition systems at the highest political level through regular reporting to the Governing Body of the International Treaty, and engaging with other relevant intergovernmental bodies and multi-stakeholder forums.
- provide global connectivity among all relevant public, private and civil actors across all relevant sectors at local, national, regional, and global levels to create mutual learning and foster synergies for action to achieve common goals;
- empower stakeholders at all levels and of all sizes by inviting them to take ownership and be involved in the choice, improvement and implementation of the activities depending on their needs and capabilities, as appropriate;
- aim to optimise funding opportunities by seeking partnerships with other initiatives already underway and by supporting the identification of additional private and public sources of funding;
- commit to a dynamic and iterative priority-setting process that seeks to review progress and consider new developments on a regular basis through the sharing of experiences and the dissemination of lessons learned;

4. GOVERNANCE AND MANAGEMENT

The governance and management of the Joint Programme includes:

- **A Steering Committee** to:
 - (i) Provide guidance on the operation and implementation of the Joint Programme, including policy/technical advice, at both the regional and international levels;
 - (ii) Assess the progress made in the implementation of the Joint Programme at both the regional and international levels;
 - (iii) Provide strategic advice and recommendations to the ACSU and the Governing Body of the International Treaty for the smooth achievement of the milestones of the Joint Programme; and

- (iv) Advocate and promote the implementation of the Joint Programme.

The Steering Committee shall comprise representatives from Contracting Parties and collaborating agencies, partners and collaborators, including global partners, main partners, supporting partners and funding partners, as well as independent and experienced experts (scientists, technical practitioners, researchers, academics) selected based on their competence in the conservation and sustainable use of PGRFA and in breeding, seed, food, and nutrition systems.

- **The Secretariat of the International Treaty (Secretariat) to:**
 - (i) Provide support and facilitate the process of the work of the Steering Committee;
 - (ii) Handle the overall facilitation, coordination, technical backstopping support to partners, report consolidation, monitoring, evaluation and day-to-day operations of the Joint Programme;
 - (iii) Facilitate the sharing of knowledge and information and disseminate the lessons learned, the best practices, and the results achieved by the different partners and interested stakeholders; and
 - (iv) Foster synergies and linkages across the different levels with other relevant programmes and initiatives while promoting cross-sectoral dialogues.

Where possible, the Secretariat will facilitate networking and collaboration among and between regions and Contracting Parties, and support the planning of activities so that they complement other efforts in the best possible way. Subject to the availability of financial resources, the Secretariat shall also provide technical support to the Contracting Parties participating in the Joint Programme.

5. IMPLEMENTATION

5.1 Implementation approach

The Secretariat of the International Treaty and the collaborating agencies, partners and other collaborators shall implement the Joint Programme following an iterative, dynamic, multi-sectoral and participatory multi-stakeholder partnership approach at local, national, regional and global levels. Participating organizations listed in Section 5.2 can contribute, among others, to the implementation of the Joint Programme to the extent of their mandates, capacities, areas of expertise and levels of intervention, and stakeholders of all sizes and at all levels can take ownership of and play an innovative role in the promotion and implementation of the Joint Programme, including by building upon the activities of the Joint Programme to provide context-specific solutions.

For the initial implementation of the Joint Programme, the Secretariat of the International Treaty shall call interested partners and issue an invitation to Contracting Parties and stakeholders who may be interested in participating in piloting the activities of the Joint Programme. Based on the expressions of interest gathered, the detailed implementation and management of the Joint Programme shall be discussed with the potential partners.

5.2 Implementing actors

5.2.1 *The Secretariat of the International Treaty*

The Secretariat, subject to the availability of financial resources, shall facilitate and coordinate the implementation of the Joint Programme at the international level.

5.2.2 *Collaborating agencies*

The initial partners and collaborating agencies, which have also expressed their willingness, in principle, to collaborate include:

- CGIAR - Alliance of Bioversity International and CIAT
- CIHEAM - Mediterranean Agronomic Institute of Bari
- SCBD - Secretariat of the Convention on Biological Diversity
- UNDP - United Nations Development Programme
- UNESCO - United Nations Educational, Scientific and Cultural Organization
- Commission on Genetic Resources for Food and Agriculture and other relevant units of FAO

5.2.3 *Partners and other collaborators*

In order to ensure effectiveness and efficiency, the Joint Programme will be inclusive of partners and collaborators whose work is relevant to PGRFA and who recognize the fundamental importance of crop genetic diversity and sustainable use of plant genetic diversity to build sustainable food systems:

- **Global partners:** These are organizations within and beyond the UN System that play an active role at the global level in promoting agrobiodiversity to build sustainable food production systems and who provide long-term sustainable funding.
- **Main partners:** Many main partners on the ground play a fundamental role in the conservation and sustainable use of PGRFA and in promoting healthy diets and sustainable food systems – such as national governments, local governments, civil society organisations, smallholder farmers, farmers' groups, breeders, nutritionists, Indigenous Peoples, local communities and their networks. Main partners can actively provide advice, develop, support and implement activities aimed at improving food production and nutrition systems through the use of plant genetic diversity.
- **Supporting partners:** Considering the complexity of the many challenges faced by agriculture and food systems that calls for interventions that transcend disciplinary, sectorial, and institutional boundaries, the implementation of the Joint Programme requires the active support of scientists, researchers, universities, research institutes, implementers and facilitators in these fields. Supporting Partners will range from research institutes and universities to advocacy groups that can support the implementation of activities with a specific geographic or thematic focus within agrobiodiversity and food systems.
- **Funding partners:** Funding Partners are entities or organizations that provide financial support either directly or indirectly to the implementation of the Joint Programme. All interested stakeholders can become a donor to the Joint Programme. In addition, the collaborating agencies and partners may undertake joint resource mobilization to carry out specific or relevant activities, as necessary and appropriate.

6. MOBILIZING RESOURCES FOR MAINSTREAMING PLANT BIODIVERSITY INTO FOOD AND NUTRITION SYSTEMS

The implementation of the Joint Programme requires diversified, sufficient, and stable financial resources from both private and public funding to be available and used in an efficient and rational fashion. In cooperation with relevant international organizations in line with Article 7 of the International Treaty, the Joint Programme will support the identification of private and public sources of funding for in situ conservation, including on farm and in the wild, and sustainable use of plant genetic diversity and their integration into sustainable seed, food and nutrition systems, as well as for the definition of areas or projects that could be developed at the local, regional and global levels.

7. DURATION, MONITORING AND REVIEW

The Joint Programme is proposed to cover an initial period of six years (2024-2029).

The Joint Programme will be reviewed on a regular basis in close collaboration with collaborators and partners and build on their respective programmes, projects, partnerships and experiences. The areas of action and activities will be reassessed as new developments emerge, and progress is made in the implementation of the Joint Programme. To support this process, activities to support the sharing of experiences and the dissemination of lessons learned and results achieved by different partners and interested stakeholders on the conservation and sustainable use of plant genetic diversity will be organized on a regular basis.

The Joint Programme will be reviewed three years from its commencement, expected to be in 2026, with regular progress reports provided at each session of the Governing Body

ACTIVITIES OF THE JOINT PROGRAMME⁷

Areas of action	Activities	Milestones
1. Supporting knowledge and information exchange on actions directly related to Articles 5 and 6 of the International Treaty	1.1 Collect and compile data and information originating from different sectors to evaluate the importance of scientific and traditional knowledge on varietal diversity that contributes to building sustainable seed, food and nutrition systems	By 2027, a report on the state of varietal diversity that contributes to building sustainable seed, food and nutrition systems has been prepared and widely disseminated. The report will use data and information collected through the study, 'The Plants That Feed the World: Baseline data and metrics to inform strategies for the conservation and use of plant genetic resources for food and agriculture', which is an output of the collaboration between the Secretary of the International Treaty, the Alliance of Bioversity International and CIAT, and the Crop Trust. ⁸
	1.2 Expand characterization and evaluation of local plant varieties, held as seed and vegetatively propagated material, in community seed banks, in collaboration with national gene banks, as appropriate, that will contribute to breeding and building sustainable seed, food and nutrition systems	By 2027, evaluation of research projects to characterize and evaluate local plant varieties, held as seed and vegetatively propagated material in community gene banks, has been completed, in collaboration with national gene banks, as appropriate, and better characterization and evaluation data on such varieties have been generated (in all seven Regions)
	1.3 Develop publicly available operational information systems and databases on local varieties held in community seed banks and extant varieties on-farm that will contribute to building sustainable seed, food and nutrition systems	By 2029, at least 27 countries (from 2 to 5 in different Regions) have set up publicly available operational information systems and databases on local varieties held in community seed banks and extant varieties on-farm
2. Supporting the implementation of enabling policies and legal measures according to national contexts, priorities and specificities	2.1 Develop regional and national action plans and multisectoral strategies for mainstreaming PGRFA conservation and use into policies and legislation relating to seed, food and nutrition systems	By 2025-27, national action plans and multisectoral strategies for mainstreaming PGRFA conservation and use into policies and legislation relating to seed, food and nutrition systems have been developed and are operational

⁷ Activities related to local varieties must have the prior informed consent of farmers who provide that material.

⁸ Pre-print available at www.fao.org/3/cc1988en/cc1988en.pdf; official publication forthcoming shortly.

	2.2 Enhance access to and use of the diversity in the Multilateral System and the use of SMTAs for the exchange of PGRFA among relevant stakeholders from different sectors	By 2027-2029, the use of SMTAs for the exchange of PGRFA has increased
3. Strengthening multi-sectorial and multi-stakeholder cooperation for the development of projects, actions and activities related to the implementation of Articles 5 and 6 of the International Treaty	3.1 Promote and strengthen new and ongoing North-South, South-South and triangular networks, alliances and partnerships on agrobiodiversity, food and nutrition systems	By 2027, 10 regional capacity development workshops and research projects have been carried out through networks, alliances and partnerships
	3.2 Establish and/or strengthen national coordination committees involving stakeholders across all relevant sectors to facilitate cooperation for the implementation of Articles 5 and 6 of the International Treaty and for the development of projects, actions and activities related to the conservation and use of PGRFA and their mainstreaming into food and nutrition systems	By 2025, guidelines for setting up coordination committees have been developed and widely disseminated By 2027, guidelines for the implementation of Articles 5 and 6 of the International Treaty have been developed and widely disseminated
4. Raising and strengthening public awareness of the importance of plant biodiversity for sustainable breeding, seed, food and nutrition systems and for climate change mitigation and adaptation	4.1 Develop national communication strategies and targeted public awareness programmes on the importance of plant biodiversity to building sustainable breeding, seed, food and nutrition systems	By 2025-2027, tools and methodology for developing communication strategies and targeted public awareness programmes on the importance of plant biodiversity have been developed and widely disseminated By 2027-2029, national communication strategies and targeted public awareness programmes have been developed and are operational
	4.2 Organize conferences, workshops, and stakeholder meetings at all levels to increase awareness of the public sector and decision-makers of the importance of plant biodiversity to building sustainable breeding, seed, food and nutrition systems	By 2025, a global symposium on the importance of plant biodiversity for sustainable breeding, seed, food and nutrition systems and for climate change mitigation and adaptation has been organized By 2027-2029, the awareness of the public sector and decision-makers on the importance of plant biodiversity to building sustainable breeding, seed, food and nutrition systems has increased
	4.3 Produce and disseminate technical, academic and scientific publications and policy briefs documenting the importance of plant biodiversity to building sustainable breeding, seed, food and nutrition systems using traditional, digital and social media platforms	By 2025, technical, academic and scientific articles and policy briefs documenting the importance of plant biodiversity will be published in the Toolbox for Sustainable Use of PGRFA

<p style="text-align: center;">5.</p> <p>Building capacities for developing actions directly related to the implementation of Articles 5 and 6 of the International Treaty</p>	<p>5.1 Develop capacity-building programmes and action plans to mainstream PGRFA conservation and use into breeding, seed, food and nutrition systems</p>	<p>By 2025, tools and methodology for developing capacity building programmes and action plans to mainstream PGRFA conservation and use into breeding, seed, food and nutrition systems have been developed and widely disseminated</p> <p>By 2027, 14 (2 per region) capacity-building programmes and action plans to mainstream PGRFA conservation and use into breeding, seed, food and nutrition systems are operational</p>
	<p>5.2 Develop capacity for providing/improving market opportunities for local varieties with appropriate nutrient profiles</p>	<p>By 2027, capacity for providing/improving market opportunities for local varieties with appropriate nutrient profiles has increased and market opportunities for local varieties with appropriate nutrient profiles has improved</p>

Appendix 2

EXISTING INTERNATIONAL PROGRAMMES AND INITIATIVES RELATED BIODIVERSITY FOR FOOD AND NUTRITION

Programme/Initiative	Brief description	Relevance to the Joint Programme
Benefit-sharing Fund of the International Treaty	<p>The Benefit-Sharing Fund (BSF) is a mechanism within the International Treaty that supports high-impact projects for small-scale farmers in developing countries, addressing livelihoods, food security and adaptation of crops to climate change. This is achieved by enhancing the management of plant genetic diversity, strengthening local seed value chains, and developing a community of practice to share plant genetic material, data, and knowledge. In BSF projects, a diversity of plant genetic resources are accessed, characterized, tested, developed, and adapted at multiple locations within diverse agroecologies and cropping systems. These projects support farmers to work together with plant breeders and extension agents. Practical trainings have been provided in on-farm conservation and management techniques, seed certification, breeding, and crop diversification system. Training sessions were also made on knowledge and technical skills for soil conservation, organic production, and crop diversification; and to enhance the institutional capacities of partners and collaborating institutions to work on seed-related policies and legislation.</p>	<p>The BSF seeks to support adaptation to climate change, food security and on-farm conservation of crop diversity. Unlike the BSF, the JP focuses on the linkages between plant biodiversity and breeding, seed, food and nutrition systems. It also operates at different levels (local, national, regional and global). Activities of the JP that are not covered by the BSF include, among others, the preparation of a report on the state of varietal diversity that contributes to building sustainable seed, food and nutrition systems; the organization of a global symposium on the importance of plant biodiversity for sustainable breeding, seed, food and nutrition systems; the development of guidelines for setting up coordination committees and for the implementation of Articles 5 and 6 of the International Treaty; and the development of education and teaching resources for schools/colleges on nutrition, food security and the value of plant biodiversity, among others.</p>
One Planet Network's Sustainable Food Systems Programme (SFS Programme) ⁹	<p>The SFS Programme is a multi-actor partnership focused on catalyzing urgent transformation towards sustainable food systems through four objectives: (1) Raise awareness on the need to shift to more sustainable food systems; (2) Build capacity and enabling conditions; (3) Take stock of, categorize, disseminate and develop accessible tools and methodologies to contribute to more sustainable food systems; (4) Bring together initiatives and develop partnerships to build synergies and cooperation towards sustainable food systems.</p> <p>As part of the SFS Programme, the SFS-MED Platform is a multi-stakeholder initiative aimed at promoting collaborative actions for the sustainable transformation of food systems in the Mediterranean region.</p>	<p>Unlike the SFS Programme, the JP focuses specifically on plant diversity and seed systems. It also supports the implementation of enabling policies and legal measures, an area of action that is currently not addressed under the SFS Programme. Other activities of the JP that are not covered by the SFS Programme include, among others, the preparation of a report on the state of varietal diversity that contributes to building sustainable seed, food and nutrition systems; the development of publicly available operational information systems and databases on local varieties held in community seed banks; and the organization of a global symposium on the importance of plant biodiversity for sustainable breeding, seed, food and nutrition systems.</p>

⁹ www.oneplanetnetwork.org/programmes/sustainable-food-systems

<p>FAO Strategy on Mainstreaming Biodiversity across Agricultural Sectors¹⁰ and Action Plan for its implementation¹¹</p>	<p>This Strategy, which was adopted by the 163rd FAO Council in 2020, aims to mainstream biodiversity across agricultural sectors at national, regional and international levels in a structured and coherent manner, taking into account national priorities, needs, regulations and policies and country programming frameworks, through four outcomes: (1) Support provided to Members, at their request, to enhance their capacity to mainstream biodiversity; (2) Biodiversity mainstreamed across FAO's policies, programmes and activities; (3) Role of biodiversity and its ecosystem services for food security and nutrition globally recognized; (4) Coordination and delivery of FAO's work on biodiversity strengthened.</p> <p>The Action Plan for the implementation of the Strategy was approved at the 166th FAO Council in 2021 and translates the Strategy's outcomes into key actions.</p>	<p>Whereas the Strategy and its Action Plan address biodiversity as a whole, the JP focuses specifically on plant diversity and seed systems. A number of activities of the JP are not covered by the Strategy and its Action Plan including, for instance, the development of publicly available operational information systems and databases on local varieties held in community seed banks; the development of guidelines for setting up coordination committees and for the implementation of Articles 5 and 6 of the International Treaty; the organization of a global symposium on the importance of plant biodiversity for sustainable breeding, seed, food and nutrition systems; and the development of education and teaching resources for schools/colleges on nutrition, food security and the value of plant biodiversity, among others.</p>
<p>FAO Framework for Action on Biodiversity for Food and Agriculture¹²</p>	<p>The Framework was endorsed by the CGRFA at its 18th Session in 2021. It contains more than 50 individual actions grouped into three strategic priority areas: (1) characterization, assessment and monitoring; (2) management (sustainable use and conservation); and (3) institutional frameworks.</p>	<p>The Framework addresses biodiversity for food and agriculture as a whole, including those components covered by the CGRFA's existing Global Plans of Action (plant, animal, forest and aquatic genetic resources), as well as the range of ecosystem services it provides. By focusing on plant diversity and seed systems, the JP includes targeted activities that are not covered by the Framework including, for instance, the development of publicly available operational information systems and databases on local varieties held in community seed banks; the development of education and teaching resources for schools/colleges on nutrition, food security and the value of plant biodiversity; and the capacity for providing/improving market opportunities for local varieties with appropriate nutrient profiles.</p>
<p>FAO/GEF-8 "Food Systems" Programme¹³</p>	<p>The Food Systems Programme supports governments in transforming agri-food systems to drive economic recovery from the COVID-19 pandemic and get back on track to achieve the SDGs. For GEF-8, FAO is developing new strategic approaches for regenerative food production and sustainable agriculture, aquaculture and livestock, with a vision that links diversified, productive and resilient farming, livelihood and landscape systems; harmonized multi-sectoral policies; and value chains that reward sustainable production and the availability of healthy, sustainable food for consumers.</p>	<p>The Programme covers agri-food systems in general, including agriculture, aquaculture and livestock. By focusing on plant diversity and seed systems, the JP includes targeted activities that are not covered by the Programme including, for instance, the development of publicly available operational information systems and databases on local varieties held in community seed banks; the development of education and teaching resources for schools/colleges on nutrition, food security and the value of plant biodiversity; the development of guidelines for setting up coordination committees and for the implementation of Articles 5 and 6 of the International Treaty; and the organization of a global symposium on</p>

10 www.fao.org/3/ca7722en/ca7722en.pdf

11 www.fao.org/3/cb5515en/cb5515en.pdf

12 www.fao.org/3/cb8338en/cb8338en.pdf

13 www.fao.org/gef/GEF8/en

		the importance of plant biodiversity for sustainable breeding, seed, food and nutrition systems.
FAO/IFAD Food Systems Integrated Program ¹⁴	This GEF-funded Food Systems Integrated Program supports selected nations to catalyze the transformation to sustainable food systems that are nature-positive, resilient, and pollution-reduced. It focuses explicitly on sustainable, regenerative, nature positive production systems and support efficient value/supply chains covering selected food crops (maize, rice, and wheat), commercial commodities (soy, oil palm, coffee and cocoa), livestock, and aquaculture. The Program will operate at two levels - global and selected national/sub-national levels - and promote work around transformational “levers” (governance and policies, financial leverage, multi-stakeholder dialogues, and innovation and learning) for advancing systems transformation.	This Program focuses on a limited number of production systems and value/supply chains of selected food crops, commercial commodities, livestock and aquaculture and it operates at two different levels (international and selected national/sub-national levels). The scope of the JP is both more specific to plant biodiversity and seed systems and more comprehensive in terms of areas and levels of action. Activities of the JP that are not covered by this Programme include, among others, the preparation of a report on the state of varietal diversity that contributes to building sustainable seed, food and nutrition systems; the organization of a global symposium on the importance of plant biodiversity for sustainable breeding, seed, food and nutrition systems; the development of guidelines for setting up coordination committees and for the implementation of Articles 5 and 6 of the International Treaty; and the development of education and teaching resources for schools/colleges on nutrition, food security and the value of plant biodiversity. The activities of the JP can be promoted and implemented at the local, national, regional and global levels in all parts of the world.
Bioversity International Initiative “Healthy Diets from Sustainable Food Systems” ¹⁵	The initiative studies how agricultural and tree biodiversity can be better used within food production systems through: (1) rural to urban agri-food chains; (2) local agri-food systems.	This initiative focuses on two specific thematic issues and is research-based. The holistic approach of the JP allows to cover matters that are not addressed by the initiative, including support to the implementation of enabling policies and legal measures; strengthening multi-sectorial and multi-stakeholder cooperation; and building public awareness of the importance of plant biodiversity for sustainable breeding, seed, food and nutrition systems.
CGIAR Flagship Programme “Food Systems for Healthier Diets” ¹⁶	This Flagship Program focuses on food systems from a nutrition point of view through the agri-food value chains impact pathway and the associated policy enabling required to accelerate food system innovation, scaling, and anchoring. It conducts research in four countries: Ethiopia, Nigeria, Bangladesh and Vietnam. It is built around 3 elements: (1) Diagnosis and Foresight; (2) Food systems innovations; (3) Upscaling and anchoring of food system transformation.	This programme does not specifically address plant biodiversity and it conducts research in four targeted countries. The JP includes areas of action that are not covered by the Flagship Program, including support to the implementation of enabling policies and legal measures; and building public awareness of the importance of plant biodiversity for sustainable breeding, seed, food and nutrition systems. The areas of action of the JP can be promoted and implemented at the local, national, regional and global levels in all parts of the world.
Programme “Local food plants for nutrition” (SD = HS) ¹⁷	This programme aims to improve the quality and diversity of the diet, and reduce the food scarcity period by increasing the intake of nutritious	This programme focuses on the use of local food plants for nutrition and targets farmers and rural families. Some activities

¹⁴ www.fao.org/fsnforum/consultation/food-system-integrated-program-transformation

¹⁵ www.bioversityinternational.org/initiatives/healthy-diets/

¹⁶ a4nh.cgiar.org/category/flagships/food-systems-for-healthier-diets/

¹⁷ sdhsprogram.org/what-we-do/nutrition-and-local-food-plants/

	<p>food through tapping into communities' knowledge and strengthening their capacities to cope with the food scarcity periods, diversify their diet and improve nutrition through a better use of local food plants. It supports policies and legislation that promote diverse and healthy diets using the local biodiversity, encourages the creation of networks of seed and knowledge exchange, and empowers farmers through experiential learning.</p>	<p>of the JP will usefully contribute to and build upon this programme, including characterization and evaluation of local varieties held in community seed banks; the development of publicly available operational information systems and databases on local varieties held in community seed banks; and the development of capacity for providing/improving market opportunities for local varieties with appropriate nutrient profiles. The JP has a holistic approach and includes activities that are not implemented under the programme, including the organization of a global symposium on the importance of plant biodiversity for sustainable breeding, seed, food and nutrition systems; the development of guidelines for setting up coordination committees and for the implementation of Articles 5 and 6 of the International Treaty; the development of education and teaching resources for schools/colleges on nutrition, food security and the value of plant biodiversity; and the development of tools and methodology for developing capacity building programmes and action plans to mainstream PGRFA conservation and use into breeding, seed, food and nutrition systems, among others. The JP targets all types of stakeholders at local, national, regional and global levels.</p>
<p>Project Node on Healthy Food Systems at Charles Perkins Centre, University of Sydney¹⁸</p>	<p>This academic research programme studies challenges to nutrition, diversity and safety from all angles, with the goal of providing good nutrition through well-managed food systems in sustainable urban and rural environments. Current research projects include: (1) implementing participatory, nutrition-sensitive and gender-sensitive interdisciplinary research projects in southeast Asia, the Pacific, Sub-Saharan Africa and Australia; (2) collaborating with the public and private sector and civil society partners globally; and (3) mentoring interdisciplinary cohorts of graduate students from Australia and partner countries.</p>	<p>Unlike the Project Node, the JP focuses specifically on plant diversity and seed systems. The JP also supports the implementation of both research and non-research activities. Areas of action included in the JP and that are not covered by the Project Node include support to the implementation of enabling policies and legal measures; strengthening multi-sectorial and multi-stakeholder coordination; and building public awareness of the importance of plant biodiversity for sustainable breeding, seed, food and nutrition systems. The activities of the JP can be promoted and implemented at the local, national, regional and global levels in all parts of the world.</p>

¹⁸ www.sydney.edu.au/charles-perkins-centre/our-research/nutrition/healthy-food-systems.html