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# FAO Strategy on Biodiversity Mainstreaming across Agricultural Sectors

(Draft 1 April 2019)

## Background

1. FAO promotes sustainable development in the agriculture sectors<sup>1</sup> (including crop and livestock production, forestry, fisheries and aquaculture) as a means to alleviate poverty and end hunger and malnutrition. One of the Organization's three global goals is the "sustainable management and utilization of natural resources, including land, water, air, climate and genetic resources for the benefit of present and future generations".<sup>2</sup> The conservation and sustainable use of biodiversity for food and agriculture is central to the mission of FAO, and has been on the agenda of the Organization since 1948.
2. In recent years, the importance of biodiversity mainstreaming has been gaining greater global attention. In December 2016, the high-level segment of the United Nations Biodiversity Conference adopted the *Cancun Declaration on Mainstreaming the Conservation and Sustainable use of Biodiversity for Well-being*.<sup>3</sup> On this occasion, FAO announced the establishment of the Biodiversity Mainstreaming Platform to facilitate dialogue and the exchange of information between governments and other stakeholders on the sustainable use, management and restoration of biodiversity across agricultural sectors in order to build bridges between sectors, identify synergies, align goals and develop integrated cross-sectoral approaches for mainstreaming biodiversity. At the 13th Conference of the Parties (COP13) of the Convention on Biological Diversity (CBD), which was held in Cancun, Mexico immediately after the United Nations Biodiversity Conference, the Parties called for the mainstreaming of biodiversity across all agricultural sectors, adopted the Cancun Declaration, and welcomed the Biodiversity Mainstreaming Platform.<sup>4</sup>
3. In light of these developments, in December 2016, FAO established the Climate, Biodiversity, Land and Water Department. The Department plays an important role in supporting Members to implement the three Rio Conventions: the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Convention on Combating Desertification (UNCCD) and the CBD.
4. In July 2017, the FAO Conference, at its 40th session, endorsed the call on FAO and countries to mainstream biodiversity in agriculture, to promote its contribution to ecosystem services and climate change adaptation and mitigation.<sup>5</sup> The Conference also "welcomed FAO's initiative to act as Biodiversity Mainstreaming Platform" and "requested FAO to facilitate, in collaboration with its partners, such as the CBD and other UN organizations, the integration in a structured and coherent manner of actions for the conservation, sustainable use, management and restoration of biological diversity across agricultural sectors at national, regional and international levels."<sup>6</sup> The FAO Conference also called upon the Committee on Agriculture (COAG), the Committee on Fisheries

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<sup>1</sup> Throughout this document, the term 'agriculture sectors' refers to crop and livestock production, forestry, fisheries and aquaculture.

<sup>2</sup> FAO. 2017. *Reviewed Strategic Framework*. Rome. <http://www.fao.org/3/a-ms431reve.pdf>

<sup>3</sup> UNEP/CBD/COP/13/24.

<sup>4</sup> CBD/COP/DEC/XIII/3, paragraph 6.

<sup>5</sup> C 2017/REP, paragraph 43(b).

<sup>6</sup> C 2017/REP, paragraph 55.

(COFI), and the Committee on Forestry (COFO) to address biodiversity as a cross-cutting issue at their meetings in 2018.<sup>7</sup>

5. The Multi-stakeholder Dialogue on Biodiversity Mainstreaming across the Agricultural Sectors was one of the first activities of the Biodiversity Mainstreaming Platform and was co-organized with the CBD in May 2018 in Rome. The results of the dialogue were made available through a joint report of the co-chairs of working groups established during the dialogue.<sup>8</sup> The joint report called on FAO to:

- prepare, by 2020 at the latest, in collaboration with partners and stakeholders, a Biodiversity Mainstreaming Strategy setting out future activities;
- capitalize on the role FAO plays as a neutral forum for policy dialogue, the Organization's convening and facilitation power at different levels, and its technical support and knowledge management functions;
- facilitate the sharing of information, including case studies and communities of practice on valuation, and policies and legislation; and promote learning among farmers, stakeholders and decision makers in ways that acknowledge the value of local and indigenous knowledge in using and preserving biodiversity; and
- collect data and develop metrics and indicators to measure the impact and performance of actions undertaken to foster the sustainable use and conservation of biodiversity, with the active involvement of research institutions and other stakeholders, such as consumer groups and suppliers.

6. During their 2018 sessions, the FAO Technical Committees considered the outcomes of the Multi-stakeholder Dialogue on Biodiversity Mainstreaming across the Agricultural Sectors in May 2018. COFI commended the work of FAO on biodiversity mainstreaming and requested FAO build on its Biodiversity Mainstreaming Platform to prepare and operationalize a fisheries and aquaculture biodiversity plan as part of its biodiversity strategy and contribution to the CBD's post-2020 biodiversity framework.<sup>9</sup> COFO requested FAO to develop a biodiversity strategy that will include a plan to mainstream biodiversity in the forest sector and submit the plan to COFO for consideration.<sup>10</sup> COAG requested FAO to develop a strategy on mainstreaming biodiversity across agricultural sectors, ensuring consistency with other FAO strategies including the one on climate change, for consideration by the Programme Committee and Council, to be presented at the FAO Conference in 2019, in view of the preparation of the post-2020 Global Biodiversity Framework of the CBD.<sup>11</sup>

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<sup>7</sup> C 2017/REP, paragraph 43(b)

<sup>8</sup> COFI/2018/SBD.20; FO:COFO/2018/Misc.; and COAG/2018/10, Appendix.

<sup>9</sup> C 2019/23 paragraph 102

<sup>10</sup> C 2019/24 paragraph 14 d) (iv)

<sup>11</sup> C 2019/21 paragraph 47

### *Key concepts*

**Biodiversity**, or biological diversity, is “the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are part. This includes diversity within species, between species and of ecosystems”.<sup>12</sup> This definition recognizes three levels of biodiversity: ecosystems, species and genes. An **ecosystem** is the dynamic complex of plant, animal and microorganism communities and their non-living environment interacting as a functional unit.<sup>13</sup> Ecosystems exist at various scales. Each ecosystem is characterized by complex relationships between living components such as plants, animals, and humans, and non-living components such as air and water. **Species** diversity refers to the variety of different species. **Genetic** diversity (diversity within species) corresponds to the variety of genes contained in plants, animals, invertebrates, fungi and microorganisms.

**Biodiversity for food and agriculture** is a subcategory of biodiversity and is defined as the variety and variability of animals, plants and micro-organisms at the genetic, species and ecosystem levels that sustain the ecosystem structures, functions and processes in and around production systems, and that provide food and non-food agricultural products. Associated biodiversity is a subcategory of biodiversity for food and agriculture and signifies the range of other species that are present in and around the production system and that sustain ecosystem structures, functions and processes.<sup>14</sup>

**Biodiversity mainstreaming** has been defined as “the process of embedding biodiversity considerations into policies, strategies, and practices of key public and private actors that impact or rely on biodiversity, so that it is conserved and sustainably used both locally and globally”.<sup>15</sup> FAO understands that mainstreaming biodiversity across the agricultural sectors involves prioritizing food and agriculture policies, plans, programmes, projects, and investments that have a positive impact on biodiversity at the ecosystem, species and genetic levels, as well as ecosystem services, which are essential for the sustainability of the agriculture sectors. This involves enhancing the sustainable use of biodiversity for food and agriculture in agro-, forest and marine ecosystems, and minimizing the impact of the agriculture sectors on all ecosystems.

The **ecosystem approach** is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. An ecosystem approach is based on the application of appropriate scientific methodologies focused on levels of biological organization, which encompass the essential structure, processes, functions and interactions among organisms and their environment. It recognizes that humans, with their cultural diversity, are an integral component of many ecosystems.<sup>16</sup>

The **landscape approach**, or integrated management across landscapes and seascapes, involves production systems and natural resources in a physical area that is large enough to produce vital ecosystem services, yet small enough to be managed by the people who use these services.<sup>17</sup> Adopting a landscape approach to management includes taking into consideration the physical and biological features of an area as well as the institutions and people who influence it. The interconnectedness of these factors underlines the value of working across sectors and addresses environmental, social and economic issues in an integrated way.<sup>18</sup>

<sup>12</sup> Convention on Biological Diversity, Article 2.

<sup>13</sup> Convention on Biological Diversity, Article 2.

<sup>14</sup> FAO. 2019. *The State of the World's Biodiversity for Food and Agriculture*. Rome.

<sup>15</sup> GEF. 2016. *Biodiversity mainstreaming in practice: A review of GEF experience*. [https://www.thegef.org/sites/default/files/publications/GEF\\_MainstreamingBiod\\_11.28.16.pdf](https://www.thegef.org/sites/default/files/publications/GEF_MainstreamingBiod_11.28.16.pdf)

<sup>16</sup> CBD COP decision V/6

<sup>17</sup> FAO. 2017. *Landscapes for life: Approaches to landscape management for sustainable food and agriculture*. Rome.

<sup>18</sup> FAO. 2016. *Climate change and food security: risks and responses*. Rome.

**Ecosystem services** are the benefits people obtain from ecosystems. These include provisioning services such as food, water, timber, and fiber; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling. The human species, while buffered against environmental changes by culture and technology, is fundamentally dependent on the flow of ecosystem services.<sup>19</sup>

The **knowledge, innovations, and practices of indigenous and local communities** (including farmers, pastoralists, fisher-folk, and forest dwellers) is relevant to the conservation and sustainable use of biodiversity.<sup>20</sup> Humans have shaped the evolutionary processes by which biodiversity for food and agriculture has developed through the modification of living and non-living conditions in natural ecosystems and the provision of artificial habitats in agricultural production systems. Indigenous and local knowledge represents an important stock of adaptive-evolutionary experience whose continued adaptation and use is essential for food security and nutrition. The role of smallholders as custodians of biodiversity for food and agriculture – in the past, present and future – is recognized in international agreements.<sup>21</sup> Transmission of knowledge to future generations is vital.

**Sustainable diets** are those diets with low environmental impacts that contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources.<sup>22</sup>

## Rationale

7. The world's food and agriculture systems are at a crossroads. Population growth and rising incomes are increasing the demand for food (and other non-food products and services, such as fibre, medicines, draught power, building materials, and energy) and bringing about changes in dietary preferences. Persistent poverty, inequality and unemployment limit people's access to food and hamper the achievement of food security and nutrition goals. Agricultural production is constrained by the increasing scarcity and diminishing quality of land and water resources, as well as by insufficient investment in sustainable agriculture. Climate change is increasingly affecting yields and rural livelihoods, and at the same time agriculture continues to emit greenhouse gases (GHGs).<sup>23</sup>

8. The natural resources that underpin food and agriculture systems are under increasing pressure. Biodiversity mainstreaming across the agricultural sectors is part of an essential 'paradigm shift' to alleviate the pressure on the world's natural resources. The agriculture of the future needs to conserve biodiversity and manage natural resources sustainably. This shift would protect and enhance the ecosystem functions of biodiversity: nutrient cycling, soil formation and rehabilitation, carbon sequestration, habitat provision for wild species, biological pest control and pollination. In this way, agriculture would become more diverse and consequently more resilient and better able to provide a range of foods to ensure sustainable diets. Promoting agricultural practices that enhancing biodiversity is key for reducing vulnerability to the impacts of climate change and of utmost importance for any adaptation strategy.

9. This paradigm shift is particularly critical given that in a world in which the population continues to expand 800 million people remain undernourished. In addition, 2 billion people are overweight and 672 million of these people are obese.<sup>24</sup> Biodiversity mainstreaming across the agricultural sectors is related to sustainable consumption and production in the agriculture sectors. It

<sup>19</sup> Millennium Ecosystem Assessment. 2005. *Ecosystems and Human Well-being: Synthesis*. Island Press, Washington, DC.

<sup>20</sup> Convention on Biological Diversity, Article 8.

<sup>21</sup> CBD, International Treaty on Plant Genetic Resources for Food and Agriculture, United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas

<sup>22</sup> FAO. 2012. *Sustainable Diets and Biodiversity*. Rome.

<sup>23</sup> FAO. 2018. *The future of food and agriculture – Alternative pathways to 2050*. Rome.

<sup>24</sup> FAO, IFAD, UNICEF, WFP and WHO. 2018. *The State of Food Security and Nutrition in the World 2018. Building climate resilience for food security and nutrition*. Rome, FAO.

will also contribute to sustaining the livelihoods of the people who depend directly on agriculture, including small scale and family farmers who are the principle custodians of agricultural biodiversity. Small scale and family farmers manage over 80 percent of the world's estimated 500 million farms and produce over 80 percent of the food consumed in a large part of the developing world.<sup>25</sup>

Biodiversity is key to food security and nutrition. In the face of the many social and environmental challenges the world is facing, biodiversity is essential for the sustainable production of sufficient quantities of nutritious food. A large number of the world's poor rely directly on biodiversity and the associated ecosystem services, and the loss of biodiversity has immediate effects on their livelihoods. In some cases, gains in economic development have been achieved at the expense of biodiversity, which has put at risk the long-term prospects for safeguarding food security and nutrition, and securing resilient livelihoods.

10. The agriculture sectors have the potential to contribute to the conservation and sustainable use of biodiversity. However, unless the growing demand for food and agricultural commodities is appropriately addressed, the pressures on biodiversity will continue to increase. When managed sustainably, the agricultural sectors support the delivery of ecosystem services. As the demand for agricultural products grows, the role of the agricultural sectors in the conservation and sustainable use of biodiversity will become even more significant.

11. However, despite global efforts spanning several decades, biodiversity generally continues to be eroded. Success in mainstreaming of biodiversity will lie in adopting integrated approaches, such as landscape and ecosystem approaches. These approaches facilitate the integration of actions for the sustainable use, management of biological diversity across agricultural sectors at national, regional and international levels. In an integrated approach, opportunities are identified for creating synergies, and reducing or even eliminating trade-offs between the performance of the agricultural sectors and environmental protection. Mainstreaming biodiversity can make an important contribution to the 2030 Agenda for Sustainable Development and provide a pathway for exploring in a systematic manner the mutually supportive relationships among the UNFCCC, the UNCCD and the CBD.

### **Biodiversity and the 2030 Agenda for Sustainable Development**

12. Mainstreaming of biodiversity across agricultural sectors is connected, both directly and indirectly, to several Sustainable Development Goals (SDGs). It is particularly prominent in relation to the 21 SDG indicators for which FAO is the custodian agency. Fourteen of these indicators correspond with indicators for the Aichi Biodiversity Targets.<sup>26, 27</sup>

13. FAO considers that biodiversity relates both directly and indirectly to the following SDGs<sup>28</sup>:

- Biodiversity contributes to the long-term sustainability of achievements related to the eradication of poverty (SDG 1) and hunger and all forms of malnutrition (SDG 2).
- The conservation and sustainable use of biodiversity is a necessary condition for achieving sustainable agriculture (SDG 2)<sup>29</sup> and building climate resilience (SDG 13).
- Biodiversity mainstreaming contributes directly to all SDGs that are related to the ensuring the sustainability of the natural resource base: water and sanitation (SDG 6), the sustainable use of

<sup>25</sup> IFAD and UNEP. 2013. *Smallholders, food security and the environment*.

<sup>26</sup> These include: Severity of food insecurity (2.1.2); Agricultural sustainability (2.4.1); Conservation of genetic resources for food and agriculture (2.5.1); Risk status of livestock breeds (2.5.2); Women's ownership of agricultural land (5.a.1); Water use efficiency (6.4.1); Water stress (6.4.2); Fish stocks sustainability (14.4.1); Illegal, unreported unregulated fishing (14.6.1); Access rights for small-scale fisheries (14.b.1); Forest area (15.1.1); Sustainable forest management (15.2.1); Frameworks for fair and equitable sharing of genetic resources' benefits (15.6.1) and Mountain Green Cover Index (15.4.2).

<sup>27</sup> The Aichi Biodiversity Targets serve to operationalize the Strategic Plan for Biodiversity 2011-2020 of the CBD.

<sup>28</sup> FAO. 2018. *Transforming Food and Agriculture to Achieve the SDGs: 20 interconnected actions to guide decision-makers. Technical Reference Document*. Rome.

<http://www.fao.org/3/CA1647EN/ca1647en.pdf>

<sup>29</sup> The methodology for indicator 2.4.1, area under sustainable agriculture, was developed by FAO and includes a sub-indicator on the use of biodiversity-friendly practices.

marine resources (SDG 14), and the protection of terrestrial ecosystems and the ending of the erosion of biodiversity (SDG 15).

- Ensuring responsible consumption patterns helps to create incentives for biodiversity mainstreaming (SDG 12).<sup>30</sup> Making cities and human settlements inclusive, safe, resilient and sustainable (SDG 11) involves strengthening efforts to protect and safeguard the world's cultural and natural heritage, including biodiversity.

14. It should be noted that the synergies and trade-offs that can arise when trying to implement actions to achieve multiple SDGs may have an impact on biodiversity. For instance, progress in reducing hunger (SDG 2) may be achieved at the expense of protecting and restoring terrestrial and marine ecosystems (SDG 14, 15) if changes are made in the way natural resources are used. The fact that biodiversity is a public good from which private benefits are derived also complicates the management of biodiversity, and has implications for how these goods are managed, who benefits from them, and how synergies and trade-offs are addressed.

### **FAO's work on biodiversity**

15. Since its establishment, FAO has provided an inter-governmental platform where biodiversity-related policies can be discussed and agreements can be negotiated by Members. FAO has developed a number of different instruments, guidelines and tools that address biodiversity concerns. These include soft law instruments and voluntary guidelines, such as: the Code of Conduct for Responsible Fisheries; the global plans of action for animal, forest and plant genetic resources developed under the Commission on Genetic Resources for Food and Agriculture<sup>31</sup>; the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security; the Principles for Responsible Investment in Agricultural and Food Systems; the International Code of Conduct on Pesticide Management and the Voluntary Guidelines for Sustainable Soil Management. FAO also contributed significantly to the development and adoption by the UN General Assembly in 2007 of the Sustainable Forest Management concept, which recognizes forest biological diversity as one of its seven elements.

16. FAO, through the Commission on Genetic Resources for Food and Agriculture, set the global agenda on the conservation, sustainable use and access and benefit sharing of genetic resources for food and agriculture, while working in close collaboration with the Convention on Biological Diversity. Based on the Commission's global assessments on the state of plant, animal and forest genetic resources for food and agriculture<sup>32</sup>, global action plans were developed. At its 17<sup>th</sup> Session, the Commission recommended developing global action plans on biodiversity for food and agriculture and on aquatic genetic resources by 2021. It stipulated that the former should be complementary to, not duplicative of and coherent with other processes and initiatives in FAO, such as FAO's biodiversity strategy.

17. FAO also hosts legally binding biodiversity-related agreements. The International Treaty on Plant Genetic Resources for Food and Agriculture acknowledges that plant genetic diversity is essential to achieve food security and sustainable agriculture, and recognizes the enormous contribution made by farmers to conserve the diversity of crops that feed the world. The Treaty facilitates the exchange of plant genetic resources and provides common rules on access and benefit sharing. Through the Treaty, countries agree to develop integrated approaches to conserve and use plant genetic diversity to address global challenges, such as climate change. The International Plant Protection Convention (IPPC) is an international treaty for protecting plant resources from plant pests. The IPPC includes forests and aquatic plants, and covers both cultivated plants and wild flora. It aims

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<sup>30</sup> Sustainable Food Systems are part of the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns (SDG 12.1).

<sup>31</sup> For more information consult the Commission's web page on Global Plans of Action: <http://www.fao.org/cgrfa/policies/global-instruments/gpa/en/>

<sup>32</sup> FAO. 2019. The State of the World's Biodiversity for Food and Agriculture, J. Bélanger & D. Pilling (eds.). FAO Commission on Genetic Resources for Food and Agriculture Assessments. Rome. 572 pp. (<http://www.fao.org/3/CA3129EN/CA3129EN.pdf>)

to implement common and effective actions to prevent the spread and introduction of pests of plants and plant products, and promote appropriate measures for their control.<sup>33</sup>

18. FAO works closely with other international conventions and instruments that focus on biodiversity issues.<sup>34</sup> The Organization has a long history of collaborating with the CBD, as evidenced by joint work programmes and initiatives. FAO and the CBD collaborate in the implementation of several CBD programmes of work: agricultural biodiversity;<sup>35</sup> forest biodiversity; marine and coastal biodiversity; and sustainable use of biodiversity. FAO has similar collaborative arrangements with other multilateral environmental agreements, for example, the Ramsar Convention on Wetlands, which addresses the management of key wetlands; and the Convention on Migratory Species (CMS), which addresses the management of threatened species and rebuilding their stocks.

19. FAO develops and maintains the world's largest databases on food and agriculture statistics: FAOSTAT, FishStat and ForestStat. Thanks to data reporting from Member Nations, these databases, which are updated annually, provides a firm basis to assess trends in crop and livestock production; the underlying use of land, labour and chemical inputs; and key impacts on climate and environment. FAO's data contributes to the Biodiversity Indicators Partnership, an initiative related to the CBD.

20. FAO collaborates closely with the Global Environmental Facility (GEF), the designated financial mechanism of the CBD.<sup>36</sup> In 2018, FAO was selected as Lead Agency of the GEF-7 Drylands Sustainable Landscapes Impact Programme. The Organization will play a significant role in the Impact Programme on Food Systems, Land Use and Restoration, which is led by the World Bank. Biodiversity is one of the focal areas of the GEF's four-year framework of programme priorities for the seventh replenishment period. The first objective in this focal area is the mainstreaming of biodiversity across sectors, as well as across landscapes and seascapes.

21. FAO has a strong track record in carrying out assessments of genetic resources and biodiversity. The Organization provides data used for monitoring progress made in reaching a range of development goals, including the SDGs. Since 1948, FAO has reported on the status of the world's forests through the Global Forest Resources Assessment (FRA). Every year, FAO publishes the State of Food and Agriculture, and every two years it publishes The State of the World Fisheries and Aquaculture (SOFIA) and the State of the World's Forests. The Global Soil Partnership undertakes regular global assessments on the status of soil resources. In 2020, these assessments will expand to include soil biodiversity.

22. The FAO Biodiversity Mainstreaming Platform promotes a systemic and holistic approach to biodiversity mainstreaming. It fosters and highlights the synergies between the work FAO does on biodiversity and its activities in other related areas. FAO supports countries and works with partners to contribute to mainstreaming biodiversity in agriculture, fisheries and forestry through projects and programmes across the globe. These include well-established but still relevant approaches, such as integrated pest management, applying the ecosystem approach in fisheries and aquaculture, sustainable forest management, and sustainable crop and livestock production. FAO is also strengthening its work in emerging issues, such as Globally Important Agricultural Heritage Systems (GIAHS), supporting indigenous peoples' food systems, advising countries on providing incentives for

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<sup>33</sup> International Plant Protection Convention (1997), Article I.1.

<sup>34</sup> These are the CBD, the Convention on Conservation of Migratory Species, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Ramsar Convention on Wetlands, the World Heritage Convention, the International Whaling Commission, the IPPC, and the International Treaty on Plant Genetic Resources for Food and Agriculture. The latter two are Subsidiary Bodies of FAO.

<sup>35</sup> FAO participates in this programme's three international initiatives: conservation and sustainable use of pollinators, sustainable use of soil biodiversity and biodiversity for food and nutrition. In the most recent CBD COP, following successful implementation of the first International Pollinators Initiative, FAO was invited to facilitate the [Plan of Action 2018-2030](#) for the International Initiative on the Conservation and Sustainable Use of Pollinators.

<sup>36</sup> See *Feeding People, Protecting the Planet: FAO and the GEF- Partners in Action*.  
<http://www.fao.org/3/CA0130EN/ca0130en.pdf>



ecosystem services, supporting agroecology, low-carbon agriculture, sustainable diets, and supporting pollination and soil-mediated ecosystem services.<sup>37</sup>

### **Vision**

23. FAO envisions a “world free from hunger and malnutrition, where food and agriculture contribute to improving the living standards of all, especially the poorest, in an economically, socially and environmentally sustainable manner.”<sup>38</sup>

24. Biodiversity is indispensable to the achievement of this vision because it ensures the sustainability of the agricultural sectors.

25. In this context, FAO envisions a world where biodiversity is mainstreamed across the agriculture sectors, where agriculture and food systems contribute to the conservation and sustainable use of natural resources for food security and nutrition for present and future generations.

### **Scope**

26. Mainstreaming biodiversity across the agricultural sectors involves bringing an integrated and holistic approach to food and agriculture policies, plans, programmes, projects, and investments. It aims at prioritizing policy actions that have a positive impact on biodiversity, at the ecosystem, species and genetic levels, and ecosystem services.

27. To help conserve biodiversity and ensure the long-term sustainability of the agricultural sectors, the scope of the FAO Strategy on Mainstreaming Biodiversity across the Agricultural Sectors encompasses agricultural activities that are sustained by, or have impact on, biodiversity and ecosystem services, whether they are part of agro-, forest and marine ecosystems or not.

### **Aim**

28. The aim of the FAO Strategy on Mainstreaming Biodiversity across the Agricultural Sectors is to strengthen the Organization’s ability to enhance the capacities of its Members to support mainstreaming biodiversity across the agricultural sectors and to meet their biodiversity goals and targets related to the agriculture sectors, including the goals and targets of the 2030 Agenda for Sustainable Development and the CBD, in full coherence with relevant multi-lateral agreements. By scaling up existing initiatives that support biodiversity mainstreaming, identifying gaps and future priorities, and promoting cross-sectoral collaboration at all scales, the Strategy adds value to the Organization’s ongoing work on biodiversity.

### **Overarching goals**

29. Achieving the FAO vision will be challenging. It requires focusing on critical leverage points that facilitate concerted and effective action among a range of stakeholders. The strategic goals listed below, which pertain to biodiversity at the ecosystem, species and genetic levels, describe the most important pathways for changing food and agriculture systems to strengthen their contribution to making the FAO vision a reality.

30. FAO’s Strategic Framework recognizes the importance of sustainable production in agriculture, forestry and fisheries (SP2), and the linkages between this objective and food security and nutrition (SP1), reducing rural poverty (SP3), inclusive and efficient food systems (SP4), and the

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<sup>37</sup> For more information on some of these examples, consult the FAO Biodiversity Mainstreaming Platform’s brochure at <http://www.fao.org/documents/card/en/c/CA2403EN>.

<sup>38</sup> FAO. 2017. *Reviewed Strategic Framework*. Rome.

resilience of agricultural livelihoods (SP5). Biodiversity is relevant to each of these objectives and needs to be strengthened in the FAO Strategic Framework.

- a) Sustainable use of biodiversity through landscape and ecosystem approaches.

Landscape approaches, Sustainable Forest Management and ecosystem approaches to fisheries will generate positive co-benefits for agricultural production, climate adaptation, biodiversity and local people. These approaches address environmental, social and economic issues in an integrated way to support the conservation and sustainable use of biodiversity while providing sustainable rural livelihoods. They involve ensuring responsible governance of tenure and resource rights, and appropriate access to inputs and services.

- b) Conserve, enhance and restore biodiversity and ensure the continued provision of ecosystem services.

Rural communities depend on biodiversity and ecosystem services. Therefore, agricultural sectors have to reconsider the relationship between production and conservation and restoration of biodiversity. Conservation and restoration measures support agricultural production and ensure its sustainability.

- c) Promote sustainable food and agriculture systems that integrate biodiversity considerations throughout value chains.

Consumption is a major driver of production and influences agricultural practices and their sustainability. Therefore, it is crucial to promote responsible consumption and increase resource efficiency and the environmental performance of food systems, which involves supporting primary producers to adopt more sustainable practices and encouraging consumers to adopt more sustainable diets.

- d) Enhance the contribution of biodiversity, and associated indigenous and local knowledge, to food security and nutrition, ending poverty, and safeguarding resilient livelihoods.

Biodiversity makes important contributions to food security and nutrition, poverty reduction and safeguarding the resilience of rural livelihoods. This contribution is mediated through indigenous and local communities' knowledge of the conservation and sustainable use of biodiversity, and needs to be acknowledged and supported to enhance their contribution to tackling the current state of world food insecurity, including through access and benefit sharing arrangements.

## Outcomes

31. In line with the 2030 Agenda for Sustainable Development, FAO will strive to achieve the following Outcomes by 2030:

1. FAO's programmes, policies and instruments strengthened by the integration of biodiversity
2. Enhanced capacities of Members to develop and implement evidence-based policies, investments and programmes relevant to biodiversity and monitor and evaluate their impact
3. The important role of biodiversity for food security and nutrition, and the agriculture sectors, is fully reflected in relevant international agreements and processes
4. Strengthened coordination and delivery of FAO work relevant to biodiversity

## Operationalization

32. The FAO Strategy on Mainstreaming Biodiversity across the Agricultural Sectors calls for coordinated action at national, regional and global levels, and will involve both sectoral and cross-sectoral work.<sup>39</sup>

33. As requested by FAO Governing Bodies, sectoral plans on mainstreaming biodiversity across the agricultural sectors will be prepared with the active participation of the regions.<sup>40</sup> Guidance on the development of the sectoral plans is presented in Annex 1. Synergies will be established with other FAO strategies, including the FAO Strategy on Climate Change<sup>41</sup>, and the Strategy and Vision for FAO's Work in Nutrition.<sup>42</sup> Synergies will also be sought with other relevant FAO action plans, such as the global plans of action for plant, animal and forest genetic resources, which have been prepared by the Commission on Genetic Resources for Food and Agriculture, which also monitors their implementation. At its 17<sup>th</sup> Session, the Commission recommended developing global action plans on biodiversity for food and agriculture and on aquatic genetic resources by 2021. It stipulated that the former should be complementary to, not duplicative of and coherent with other processes and initiatives in FAO, such as FAO's biodiversity strategy.

34. The FAO governing and statutory bodies will play a vital role to provide impetus and guidance to the implementation of the Strategy and to include its implementation in their agendas or multi-year programming. They will take a leading role in developing and adopting new biodiversity-mainstreaming policies or instruments, when needed, or in the review and monitoring of existing ones.

35. To maximize ownership and commitment, a country-driven approach will be applied to develop, implement and monitor sectoral plans in collaboration with stakeholders and partners. This approach will be in line with the development effectiveness principles,<sup>43</sup> and apply a comprehensive capacity development approach that empowers people, strengthens organisations and institutions, as well as the enabling policy environment.

36. Stakeholders and partners include governments, producers, consumers, research and extension, non-governmental organizations and the private sector. The development of the plans will take into account the differentiated roles and responsibilities of stakeholders and partners in relation to the management of biodiversity. In most societies, women and men producers have differentiated knowledge and roles with respect to biodiversity. Consequently, the participation of women and men is required to develop and implement effective plans for the conservation and sustainable use of biodiversity. For this reason, the FAO Strategy on Mainstreaming Biodiversity across Agricultural Sectors shall work to ensure the effective participation of both women and men.

37. Monitoring will be conducted through reporting on the FAO Strategic Framework. As mentioned above, the strategic goals are aligned with FAO Strategic Programmes. Output indicators will be selected to monitor specific outputs of the sectoral plans. Relevant SDG indicators can be used to monitor the impact of biodiversity mainstreaming at national level.

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<sup>39</sup> Agreed additional financial Plan of Work and Budget resources will be allocated according to identified needs: Support Secretariat of FAO Biodiversity Mainstreaming Platform and coordinating work within FAO; Support regional offices, as well as FAO technical departments in the definition of their action plans; Coordinating work with CGIAR (i.e. Bioversity, Crop Trust) and other multi-stakeholders; Developing blended financed projects with donors, banks and private sector; Development of Global knowledge products; and, Promoting global, regional and national dialogues amongst agriculture environment.

<sup>40</sup> The 33<sup>rd</sup> Session of the Committee on Fisheries, and the 24<sup>th</sup> Session of the Committee on Forestry, have requested FAO to develop action plans based on the FAO Biodiversity Strategy, for the fisheries and aquaculture and forestry sector respectively.

<sup>41</sup> The FAO Strategy on Climate Change (<http://www.fao.org/3/a-i7175e.pdf>) recognizes the importance of the protection of biodiversity and ecosystem services for both adaptation and mitigation. FAO's support to Members on climate adaptation and mitigation, including its support for the development and implementation of the Koronivia Joint Work on Agriculture, provides opportunities for synergies between climate and biodiversity actions.

<sup>42</sup> The Strategy and Vision for FAO's Work in Nutrition (<http://www.fao.org/3/a-i4185e.pdf>) recognizes, as a guiding principle, the need to make food and agricultural systems more nutrition-sensitive, which includes increasing food diversity.

<sup>43</sup> For more information consult Global Partnership for Effective Development Co-operation:

<https://sustainabledevelopment.un.org/index.php?page=view&type=30022&nr=692&menu=3170>

38. To strengthen its institutional capacity and lay the groundwork for operationalization of the Strategy, FAO will immediately undertake the following steps:
1. with the involvement of the Regional Offices, establish and facilitate an inter-departmental technical working group on biodiversity mainstreaming<sup>44</sup> to provide coordination, take stock of needs and gaps, and identify priorities,;
  2. review the FAO Strategic Framework, regional initiatives, country programme frameworks, project cycle processes, and environmental and social safeguards with a view to mainstreaming biodiversity;
  3. report regularly to FAO Governing and Statutory Bodies on biodiversity developments in other fora;
  4. appoint specialized biodiversity focal points in Regional Offices and technical divisions; and,
  5. provide learning opportunities on biodiversity mainstreaming for staff.

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<sup>44</sup> The inter-departmental technical working group would be chaired by the Assistant Director General of the Climate, Biodiversity, Land and Water Department and include representatives all relevant technical divisions (including but not limited to fisheries, forestry and agriculture) and the Regional Offices, as well as the Commission on Genetic Resources for Food and Agriculture, the International Treaty on Plant Genetic Resources for Food and Agriculture, the IPPC, the Rotterdam Convention, and GIAHS.

### *Annex 1: Guidance on development of Sectoral Plans*

It is foreseen that sectoral mainstreaming plans will be prepared, as requested by FAO Governing Bodies.<sup>45</sup> The regions (including Regional Offices and relevant FAO regional commissions) should be actively engaged in this process as to ensure grounding in their respective context. Sectoral plans can be developed according to the following methodology:

1. Use the strategic goals to conduct a participatory situation analysis with relevant stakeholders and partners with regard to biodiversity mainstreaming across agricultural sectors, and determine needs, opportunities and gaps, which will include the identification of synergies and trade-offs.<sup>46</sup>
2. Use the outcomes to develop specific outputs, focusing on both sectoral and inter-sectoral work, and link each output to an output indicator from the FAO Strategic Framework.
3. Develop plans for resource mobilization.

The following list of potential areas of action may be of use in developing the sectoral plans.

#### National (with support from the regional and global levels)

1. Strengthen country capacities to develop, implement and monitor appropriate policies and programmes for biodiversity mainstreaming in an inclusive manner with relevant stakeholders and partners.
2. Strengthen the engagement of the private sector for biodiversity mainstreaming including through public-private partnerships, and collaboration with international financing institutions, including regional and national banks.
3. Support dialogue on critical and emerging issues (e.g. innovations, tenure and rights) related to biodiversity mainstreaming in food and agriculture systems, particularly on their potential impacts on food security and nutrition and livelihoods.
4. Strengthen the evidence base on the interactions between biodiversity, the agriculture sectors, related value chains, and food security and nutrition, building on the latest scientific findings and traditional knowledge.
5. Convene national dialogues across agricultural sectors and with the environment and health sectors.
6. Raise awareness about the importance of biodiversity and ecosystem services, and their contribution to sustainable production and consumption, and human and environmental health and well-being.
7. Provide guidance to Members on ways to address synergies and trade-offs between the conservation and sustainable use of biodiversity, climate change adaptation and mitigation,

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<sup>45</sup> The 33<sup>rd</sup> Session of the Committee on Fisheries, and the 24<sup>th</sup> Session of the Committee on Forestry, have requested FAO to develop action plans based on the FAO Biodiversity Strategy, for the fisheries and aquaculture and forestry sector respectively.

<sup>46</sup> This could include a mapping and prioritization of areas important for essential ecosystem functions and services, including ecosystems that are important for food (e.g., mangroves for fisheries), for climate mitigation (e.g., carbon-dense ecosystems, such as forests, peatlands, mangroves), for water security (e.g., mountains, forests, wetlands and grasses that provide both surface and groundwater), for poverty alleviation (e.g., ecosystems that provide subsistence, livelihoods and employment), and for disaster risk reduction (e.g., ecosystems that buffer impacts from coastal storms, such as reefs, seagrass beds, floodplains). See CBD/COP/DEC/14/8 Decision on protected areas and other effective area-based conservation measures. <https://www.cbd.int/doc/decisions/cop-14/cop-14-dec-08-en.pdf>

and agriculture, which are based on approaches that support poverty reduction, and food security and nutrition.

8. Assist Members in including priorities related to the agriculture sectors, and food security and nutrition, in National Biodiversity Strategies and Action Plans (NBSAPs); developing synergies with action plans related to UNFCCC and UNCCD, and integrating priorities for biodiversity into national plans for food and agriculture.
9. Support Members in resource mobilization and scaling up responsible investments for biodiversity mainstreaming.

### Global

1. Support the inclusion of biodiversity mainstreaming related issues in the sessions of FAO Governing and Statutory Bodies, as requested by Members.
2. Strengthen policies, programmes and instruments developed and hosted by FAO to biodiversity mainstreaming and enhance food security and nutrition, and address gaps if necessary.
3. Raise awareness in international biodiversity agreements and processes about the role of the agriculture sectors in biodiversity mainstreaming, and providing livelihoods and food security and nutrition.
4. Strengthen collaboration and partnerships between FAO and inter-governmental agreements and international organizations relevant to biodiversity, particularly the CBD.<sup>47</sup>
5. Integrate biodiversity for food and agriculture in global processes related to food security and nutrition (e.g. UN Decade of Action on Nutrition, UN Decade of Family Farming, and UN Decade of Ocean Science for Sustainable Use).

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<sup>47</sup> Other relevant inter-governmental agreements and international organizations include the UNFCCC, the UNCCD, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Ramsar Convention, the Intergovernmental Conference on Marine Biodiversity of Areas beyond National Jurisdiction, the World Health Organization, UN Environment, and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.