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COMMITTEE ON FORESTRY

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Development of regional action plans for the FAO Science and Innovation Strategy (2022-25)

Executive Summary

The FAO Science and Innovation Strategy (the Strategy) was adopted by the FAO Council at its 170th Session following an inclusive and transparent consultative process. The Strategy is a tool to accelerate implementation of the FAO Strategic Framework 2022-31, and hence to contribute to the 2030 Agenda for Sustainable Development.

Regional action plans for the implementation of the Strategy are being developed based on a high-level framework which has been developed to guide the development of the action plans, responding to the call by the Regional Conferences to consider local, national and regional circumstances and differences. A strong regional approach will ensure that implementation responds to countries' diverse challenges, needs and capacities with respect to science and innovation. The proposed duration of the regional action plans is four years (2022-2025).

The high-level framework referred to above presents the Strategy's nine outcomes and two enablers and proposes a number of outputs based on the Strategy document. It also links the Strategy's outcomes and enablers to relevant Sustainable Development Goal (SDG) targets, which have been selected to reflect the agrifood systems approach included in the scope of the Strategy, and the Strategy's guiding principles. Relevant Programme Priority Areas (PPAs) have also been indicated, while noting that innovation and technology are accelerators for the FAO Strategic Framework 2022-31, and are therefore mainstreamed in each of the 20 PPAs.

The Strategy seeks to be consistent with, and to mutually reinforce, key FAO strategic documents. Therefore, the regional action plans will seek, in addition to implementing the FAO Science and Innovation Strategy, to contribute to the implementation of the FAO Strategy on Climate Change 2022-2031, the FAO Strategy on Mainstreaming Biodiversity across the Agricultural Sectors, and to align with the FAO Strategy for Private Sector Engagement.

Monitoring will be fully aligned with the causal results chains and SDG targets established in the FAO Strategic Framework 2022-31, reflecting all three dimensions of sustainability. As stated in the Strategy document, the FAO Council will discuss a mid-term review five years after its adoption, and the Strategy may be periodically updated, at Members' request, to reflect important developments.

Suggested action by the Committee

The Committee is invited to:

- acknowledge the approach to develop regional action plans for implementation of the FAO Science and Innovation Strategy, and provide guidance as deemed appropriate.

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I. Introduction

1. The FAO Science and Innovation Strategy (the Strategy) was endorsed by the FAO Council at its 170th Session following an inclusive and transparent consultative process.[1] The Strategy is a tool to accelerate implementation of the FAO Strategic Framework 2022-31, and hence to contribute to the 2030 Agenda for Sustainable Development. It aims to strengthen FAO's work on science and innovation by providing Organization-wide guidance, coherence and alignment on science and innovation. The Strategy is based on recognition that science and innovation can be a powerful engine to transform agrifood systems when they are accompanied by strong institutions, good governance, political will, enabling regulatory frameworks and effective measures to promote equity among agrifood systems actors.

2. The Council highlighted the importance of an action plan for the Strategy's effective implementation and the Programme Committee, at its 133rd Session, highlighted the importance of the Strategy's broad approach to all types of innovation and to all scientific disciplines, including systemic approaches, in terms of its implementation.[2] FAO Regional Conferences held during 2022 welcomed the Strategy and requested FAO to consider local, national and regional circumstances and differences.[3] Throughout the formal and informal consultations, the importance of regional approaches when implementing the Strategy was highlighted.

3. Responding to the call of the Regional Conferences to consider local, national and regional circumstances and differences, regional action plans are being developed based on a high-level framework which has been developed to guide the development of the action plans in alignment with and support to regional priorities and Regional Initiatives. A strong regional approach will ensure that implementation responds to countries' diverse challenges, needs and capacities with respect to science and innovation, including in relation to infrastructure, levels of investment in education, research and development and national technical capacities.

4. Table 1 presents the high-level framework referred to above, grouping the Strategy's nine outcomes and two enablers, and proposes a number of outputs based on the Strategy document to guide the development of the regional action plans. This framework links the Strategy's outcomes and enablers to relevant SDG targets, which have been selected to reflect the agrifood systems approach included in the scope of the Strategy, and the Strategy's guiding principles. Relevant Programme Priority Areas (PPAs) have also been indicated, while noting that innovation and technology are accelerators for the FAO Strategic Framework 2022-31, and are therefore mainstreamed throughout each of the 20 PPAs. While the Strategy is broadly relevant to all PPAs, Table 1 presents some of the most closely related PPAs to each outcome. These PPAs and SDG targets are proposed tentatively to give an indication of the main areas of focus for each outcome, and may be adjusted once the regional action plans are developed to ensure alignment. The proposed duration of the regional action plans is four years (2022-2025).

5. The Strategy seeks to be consistent with, and to mutually reinforce, FAO strategic documents; therefore the regional action plans will seek, in addition to implementing the FAO Science and Innovation Strategy, to contribute to the implementation of the FAO Strategy on Climate Change

[1] Report of the 170th Session of the FAO Council (Rome, 13-17 June 2022), Appendix D. www.fao.org/3/nj485en/nj485en.pdf

[2] Report of the 133rd Session of the Programme Committee (Rome, 16-20 May 2022). www.fao.org/3/nj232en/nj232en.pdf

[3] Report of the 36th Session of the Regional Conference of the Near East (www.fao.org/3/ni472en/ni472en.pdf); Report of the 36th Session of the Regional Conference for Asia and the Pacific (www.fao.org/3/ni469en/ni469en.pdf); Report of the 37th Session of the Regional Conference for Latin America and the Caribbean (www.fao.org/3/ni471en/ni471en.pdf); Report of the 32nd Session of the Regional Conference for Africa (www.fao.org/3/ni468en/ni468en.pdf); and Report of the 33rd Session of the Regional Conference for Europe (www.fao.org/3/ni470en/ni470en.pdf).

2022-2031, to mutually reinforce the FAO Strategy on Mainstreaming Biodiversity across the Agricultural Sectors, and to align with the FAO Strategy for Private Sector Engagement.

6. In line with the scope of the Strategy, the regional action plans will emphasize a broad approach to all types of innovations and scientific disciplines, covering all sectors and areas of agrifood systems. They will consider the importance of the specificities of global, regional, national, and local contexts when implementing the Strategy, to ensure that all types of knowledge, science and innovation are accessible and adaptable to local realities. Particular attention will be given to the needs of low- and middle-income countries (LMICs), including Small Island Developing States (SIDS), focusing on small-scale producers, family farmers, Indigenous Peoples, women, youth, and other under-represented agrifood systems actors, including micro-, small- and medium-sized enterprises (MSMEs), in order to accelerate progress towards the achievement of the SDGs.

7. Monitoring will be fully aligned with the causal results chains and SDG targets established in the FAO Strategic Framework 2022-31, reflecting all three dimensions of sustainability. As stated in the Strategy document, the FAO Council will discuss a mid-term review five years after its adoption and the Strategy may be periodically updated, at Members' request, to reflect important developments.

Table 1: Framework for development of regional action plans for the FAO Science and Innovation Strategy (2022-25)

The FAO's Programme Priority Areas (PPAs) and SDG targets below are proposed tentatively to give an indication of the main areas of focus for each outcome, and may be adjusted once the regional action plans are developed to ensure coherence.

Note: The relevant SDG targets are listed in Annex 1, and PPAs are contained in Annex 2.

Outcomes and proposed outputs for the FAO Science and Innovation Strategy	PPAs	Contribution to SDG targets (in brackets)
Pillar 1: Strengthening science and evidence-based decision-making		
Outcome 1.1: Agrifood systems knowledge and evidence enhanced		
1.1.1 Provision of global public goods strengthened (including digital public goods), including on emerging issues and foresight, by reinforcing FAO's work to generate, collate, analyse, communicate and widely disseminate data, information and knowledge on an ongoing basis at national, regional and global levels. 1.1.2 Evidence assessed in a rigorous, transparent and neutral manner to inform FAO's technical work and normative guidance based on the most credible, relevant and legitimate evidence available, including findings from systemic approaches and the knowledge of Indigenous Peoples and small-scale producers. 1.1.3 Evidence assessed on the effectiveness, inclusiveness, affordability and potential benefits and risks of using new technologies and innovations based on the three dimensions of sustainability through analysis of synergies and trade-offs, impact assessments, and monitoring and evaluation of innovations and technologies.	BP1, BP2, BN1, BN2, BN3, BN4, BN5, BE1, BE2, BE4, BL2, BL5, BL6	Enhancing agrifood systems knowledge and evidence lays the foundations for achieving the core of FAO's mandate: ending hunger (2.1) and malnutrition (2.2); increasing agricultural productivity and incomes of small-scale food producers (2.3); and ensuring sustainable food production systems (2.4).

Outcomes and proposed outputs for the FAO Science and Innovation Strategy	PPAs	Contribution to SDG targets (in brackets)
1.1.4 Multi-stakeholder engagement platforms and facilitation mechanisms reinforced for sharing experiences of countries and stakeholders.		
Outcome 1.2: Science-policy interfaces for agrifood systems strengthened		
1.2.1 FAO's contribution to Science-Policy Interfaces (SPIs) strengthened at national, regional and global levels to support organized dialogue between scientists, policy-makers and other relevant stakeholders, while taking into account power imbalances, in support of inclusive science- and evidence-based policy making for greater policy coherence, shared ownership and collective action. 1.2.2 Members' needs for information and analysis responded to, for example through establishing ad hoc interdisciplinary and regionally balanced scientific committees of global experts on key issues. 1.2.3 Normative guidance for science- and evidence-based policy processes for agrifood systems developed, helping to ensure that effective policy decisions are made based upon sufficient, relevant and credible science and evidence.	BN1, BL2	Strengthening science-policy interfaces for agrifood systems contributes directly to ensuring responsive, inclusive, participatory and representative decision-making (16.7) and enhancing policy coherence for sustainable development (17.14), as well as contributing indirectly to realizing sustainable agrifood systems.
Outcome 1.3: Research for development strengthened		
1.3.1 Public investment in research promoted, including for sustainability science, interdisciplinarity and transdisciplinarity in order to address systemic challenges in a holistic manner,	BP1, BP2, BL6	Strengthening research for development contributes directly to increased investment in order to enhance agricultural productive capacity in developing countries, including through agricultural research and extension services, (2.a). It is closely linked to enhancing scientific research and encouraging innovation (9.5), supporting

Outcomes and proposed outputs for the FAO Science and Innovation Strategy	PPAs	Contribution to SDG targets (in brackets)
1.3.2 Cooperation with, and capacities of, regional, national and local research organizations (both formal and informal) supported to harness collective impact and comparative advantages. 1.3.3 Demand-driven, participatory approaches promoted throughout the entire research cycle, with the inclusion of the knowledge of Indigenous Peoples and small-scale producers. 1.3.4 Partnerships harnessed to co-develop shared global agenda on science and innovation.		domestic technology development, research and innovation in developing countries (9.b), and expanding scholarships available to developing countries (4.b). One specific area of research in relation to agrifood systems highlighted in the 2030 Agenda is marine technology (14.a).
Pillar 2: Supporting innovation and technology at regional and country level		
Outcome 2.1: Access to, and use of, inclusive, affordable and context-specific innovations and technologies aiming at achieving sustainable agrifood systems by small-scale producers, family farmers and other agrifood systems actors enhanced		
2.1.1 Equitable access to, and use of, inclusive, affordable and context-specific innovations (including social, policy, financial and institutional) and technologies aiming at achieving sustainable agrifood systems enhanced, with a focus on adapting innovations and technologies to local needs through participatory, needs-driven and problem-focused approaches that respond to needs of small-scale producers and other under-represented groups. 2.1.2 Promising experiences scaled up and out, with due attention to the need to enhance infrastructure and education. 2.1.3 Updated information on the full range of innovations and their impact delivered, including through rural communication services.	BP1, BP2, BP4, BP5, BN4, BE1, BE3, BE4, BL2, BL4, BL5	Enhancing access to innovations and technologies is directly related to ensuring that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources and services, including appropriate new technology (1.4). Enhancing access to innovations and technologies also contributes to numerous SDG targets throughout the entire agrifood systems: agriculture (2.3 and 2.4), fisheries (14.2), and biodiversity (15.5), in the context of climate change (13.1). It is also associated with promoting scientific and technological capacity to move towards more sustainable patterns of consumption and production (12.a). This outcome is directly linked to achieving higher levels of economic productivity through diversification, technological upgrading and innovation (8.2), including

Outcomes and proposed outputs for the FAO Science and Innovation Strategy	PPAs	Contribution to SDG targets (in brackets)
2.1.4 Country options for accessing innovations and technologies assessed and shared.		through access to information and communications technology (9.c). Enhancing access to innovations and technologies will be carried out in a way that contributes to decent jobs (4.4), reduces the proportion of youth not in employment, education or training (8.6), promotes the empowerment of women (5.b), and overall contributes to income growth of the bottom 40 per cent of the population (10.1) and promotes inclusion (10.2).
Outcome 2.2: Capacities of national agrifood innovation systems to prioritize, co-create, and scale innovations and technologies aiming at achieving sustainable agrifood systems strengthened		
2.2.1 Capacities of agrifood innovation systems strengthened to prioritize, co-create, and scale relevant and appropriate innovations and technologies aiming at achieving sustainable agrifood systems. 2.2.2 Coordinated pluralistic extension and advisory services promoted that support farmer-to-farmer knowledge sharing. 2.2.3 National and regional innovation platforms and hubs for knowledge sharing and capacity development established and strengthened. 2.2.4 Exchange of knowledge and experiences promoted between countries and regions.	BP1, BL5, BL6	Strengthened capacities of national agrifood innovation systems is an outcome of increasing investments to enhance agricultural productive capacity (2.a).
Outcome 2.3: National capacity to design, implement and evaluate strategies, policies and regulatory frameworks on science, technology and innovation strengthened		

Outcomes and proposed outputs for the FAO Science and Innovation Strategy	PPAs	Contribution to SDG targets (in brackets)
2.3.1 Guidance provided to countries on national policies, regulatory framework, institutional arrangements, governance systems and new technologies. 2.3.2 Women's inclusion and equal decision-making power promoted to shape relevant legal frameworks, policies, programmes and initiatives. 2.3.3 National capacities developed for the implementation and evaluation of policies and frameworks. 2.3.4 Exchange of knowledge, experiences and best practices promoted between countries and regions. 2.3.5 Countries supported to collect, analyse and use technology and innovation-related information in decision-making.	BP1, BN1, BN3, BL2, BL5	Strengthening national capacities on policies and regulatory frameworks on science, technology and innovation contributes to the promotion of development-oriented policies that support productive activities and innovation (8.3), supports domestic technology development, research and innovation in developing countries (9.b), and enhances policy coherence for sustainable development (17.14).

Pillar 3: Serving Members better by reinforcing FAO's capacities
As the focus of Pillar 3 is on reinforcing FAO's internal capacities, this pillar will be monitored through relevant Key Performance Indicators (KPIs) of the FAO Strategic Framework 2022-31 including Objective 5 (Technical quality, statistics and cross-cutting themes and accelerators).
Outcome 3.1: Knowledge management and exchange of information and experiences enhanced
3.1.1 Knowledge management enhanced to improve sharing of knowledge and learning and incorporating lessons. 3.1.2 Normative guidance informed by lessons from technical interventions.
Outcome 3.2: Science communication improved
3.2.1 Science communication strengthened for increased public awareness and science and evidence-based dialogue.

Outcome 3.3: FAO capacities to enable science and innovation enhanced across the Organization;
3.3.1 FAO's capacities strengthened to increase the use of science and innovation across its programme of work, particularly at country level. 3.3.2 Alignment promoted among the Science and Innovation Strategy and corporate initiatives such as the Hand-in-Hand Initiative and the work plans of existing FAO policies and strategies. 3.3.3 Progress on enhancing FAO's capacities monitored and lessons learnt incorporated.
Enablers
The enablers focus on securing the enabling environment, and will be measured through relevant Key Performance Indicators (KPIs) in the FAO Strategic Framework 2022-31, in particular the KPIs under Functional Objective 7: Outreach. Furthermore, the enabler "Innovative funding and financing" will be aligned with the relevant PPAs, which include BP5, BL5, and BL6.
Transformative partnerships
1. Transformative partnerships and multisectoral collaboration, including South-South and Triangular Cooperation, to harness science and innovation reinvigorated, supported, and developed for leveraging knowledge and capacities, enhancing access, and harnessing investments. 2. Collaboration with relevant UN entities on science and innovation strengthened, including Rome-based Agencies (RBAs), the Technology Facilitation Mechanism and UN science-policy interfaces supported. 3. Innovative cooperation mechanisms strengthened, such as joint centres with UN entities,
Innovative funding and financing
1. Initiatives and programmes to boost innovative funding and financing frameworks identified and promoted. 2. Capacities of FAO staff and Members to support the development of innovative funding and financing mechanisms frameworks enhanced. 3. Cooperation strengthened in the area of science, research, technology and innovation, including traditional knowledge, including through the voluntary sharing of knowledge and practices, research and technology transfer on mutually agreed terms and equitable access improved to research results and technologies on mutually agreed terms at the national, regional and international levels, such as through South-South and Triangular Cooperation, and access to investments and financial resources improved.

Annex 1: Relevant SDG Targets

1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance

2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round

2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons

2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment

2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries

4.b By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries

4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women

8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors

8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services

8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training

9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending

9.b Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities

9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average

10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

12.a Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans

14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species

16.7 Ensure responsive, inclusive, participatory and representative decision- making at all levels

17.14 Enhance policy coherence for sustainable development

Annex 2: FAO Programme Priority Areas (PPAs)

BP1: Innovation for Sustainable Agriculture Production

BP2: Blue Transformation

BP3: One Health

BP4: Small-Scale Producers' Equitable Access to Resources

BP5: Digital Agriculture

BN1: Healthy Diets for All

BN2: Nutrition for the Most Vulnerable

BN3: Safe Food for Everyone

BN4: Reducing Food Loss and Waste

BN5: Transparent Markets and Trade

BE1: Climate Change Mitigating and Adapted Agrifood Systems

BE2: Bioeconomy for Sustainable Food and Agriculture

BE3: Biodiversity and Ecosystem Services for Food and Agriculture

BE4: Achieving Sustainable Urban Food Systems

BL1: Gender Equality and Rural Women's Empowerment

BL2: Inclusive Rural Transformation

BL3: Agriculture and Food Emergencies

BL4: Resilient Agrifood Systems

BL5: Hand-in-Hand (HIH) Initiative

BL6: Scaling up Investment