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FAO ACTIVITIES ON BIODIVERSITY FOR FOOD AND AGRICULTURE FOR FOOD SECURITY, NUTRITION AND HUMAN HEALTH

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I. INTRODUCTION

1. The Commission on Genetic Resources for Food and Agriculture (Commission) at its last session, invited countries and requested FAO to continue improving the scientific evidence base for biodiversity, including genetic diversity at below-species level, and nutrition.¹
2. This document first provides an overview of FAO activities on biodiversity for food and agriculture (BFA) and genetic resources for food and agriculture (GRFA), food security and nutrition. While work on BFA and GRFA, food security and nutrition is a continuation of previous work, the linkages between BFA and human health are a new theme the Commission decided to consider in 2017. Second, the document reports on FAO activities on BFA and human health within the fast-changing landscape on One Health.

II. FAO ACTIVITIES ON BIODIVERSITY FOR FOOD AND AGRICULTURE AND FOOD SECURITY AND NUTRITION

3. Nutrition has been mainstreamed as a cross-cutting theme in the FAO Programme of Work and Budget (PWB) since 2016.² The following sections demonstrate the breadth and depth of FAO's work in nutrition, with an increasing focus on healthy diets.³ It can be noted that biodiversity in general is addressed with increasing consistency across the nutrition work areas, as healthy diets need to be diverse and balanced. There is, however, little specific reference and attention to the GRFA level.
4. *The State of Food Insecurity and Nutrition in the World 2020*⁴ highlights the importance of affordable healthy diets, and the need for food diversity. In the PWB 2022–23, the “Better Nutrition” aspiration aims at ending hunger, and achieving food security and improved nutrition in all its forms, including promoting nutritious food and increasing access to healthy diets.⁵ It includes five Programme Priority Areas (PPAs) on: Healthy diets; Nutrition for the most vulnerable; Safe food; Food loss and waste; and Markets and trade.⁶

UN Decade of Action on Nutrition and UN Food Systems Summit

5. FAO and the World Health Organization (WHO) co-lead the implementation of the United Nations (UN) Decade of Action on Nutrition (2016–2025),⁷ also referred to as the Nutrition Decade, following the mandate given by the UN General Assembly⁸ and taking into account World Health Assembly (WHA) Resolution WHA69/8.⁹ The Nutrition Decade aims to accelerate implementation of the outcomes of the Second International Conference on Nutrition (ICN2),¹⁰ achieve the global nutrition and diet-related non-communicable diseases targets by 2025 and contribute to the realization of the Sustainable Development Goals (SDGs) by 2030.¹¹
6. The Secretary-General of the United Nations will convene in 2021 a Food Systems Summit (FSS) as part of the Decade of Action to achieve the SDGs by 2030, with the aim to create new actions

¹ CGRFA-17/19/Report, paragraph 36.

² C 2015/3.

³ <https://www.who.int/news-room/fact-sheets/detail/healthy-diet>

⁴ FAO, IFAD, UNICEF, WFP& and WHO. 2020. *The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets*. Rome, FAO. (also available at <https://doi.org/10.4060/ca9692en>).

⁵ FAO. 2021. *The Director-General's Medium Term Plan 2022-25 and Programme of Work and Budget 2022-23*. C 2021/3 Forty-second Session of the Conference. (also available at <http://www.fao.org/3/ne576en/ne576en.pdf>).

⁶ C 2021/3, Figure 1.

⁷ www.un.org/nutrition/

⁸ <https://undocs.org/A/RES/70/259> and <https://undocs.org/A/RES/72/306>

⁹ https://apps.who.int/gb/ebwha/pdf_files/WHA69-REC1/A69_2016_REC1-en.pdf#page=27

¹⁰ FAO/WHO. 2015. *Second International Conference on Nutrition (ICN2). Report of the Joint FAO/WHO Secretariat on the Conference*. Rome. (also available at <http://www.fao.org/3/i4436e/i4436e.pdf>).

¹¹ www.un.org/nutrition/sites/www.un.org.nutrition/files/general/pdf/work_programme_nutrition_decade.pdf

to deliver progress on all 17 SDGs, each of which relies to some degree on healthier, more sustainable and equitable food systems.

7. FSS Dialogues took place in preparation for the Summit, including Member State Dialogues organized by national governments to explore options for the future of local and national food systems and shape national roadmaps for food systems transformation. Organized on behalf of the FSS Secretariat, a set of global dialogues are also being convened at high-level events to explore the interconnections of food systems with issues such as good nutrition, climate action, biodiversity and the ocean.

8. The FSS and its preparatory process provided an opportunity to highlight the important role that biodiversity plays in underpinning ecosystem functions and services that are essential for the productivity and sustainability of food systems. FAO continues to play a lead role in the definition of approaches to food systems transformation and in advocating for greater attention to the way in which interventions in food systems are designed and implemented, including through the sustainable use of biodiversity. FAO's full support to the preparatory process towards the FSS and, as UN Anchor Organization for Action Track 1, assisted in the positioning of the UN system as a key partner in the implementation of the Summit Outcomes.

9. In collaboration with the Italian government, a pre-summit¹² on transforming world food systems was organized from 26–28 July 2021 bringing together global inputs and proposals to flesh out the goals for transforming food systems that highlighted the need for science and innovation as the centre of global food system transformation to drive sustainable agricultural productivity, ensure food security and better nutrition for all.

10. In general terms, biodiversity is central in the narrative of the Summit, together with other environmental challenges.¹³ It is also explicitly addressed in the first wave of game-changing solutions presented by the FSS Action Tracks earlier this year, in particular Action Track 3 on “Boosting nature-positive production”, which includes some solutions directly related to GRFA and biodiversity.

Vision and Strategy of FAO's Work in Nutrition

11. After a thorough two-year consultative process, the Vision and Strategy for FAO's Work in Nutrition (Nutrition Strategy)¹⁴ was adopted at the 166th Session of the FAO Council.¹⁵ This corporate document aims to guide and support the Organization in its mission to raise levels of nutrition. FAO's vision for nutrition is a world where all people are eating healthy diets from sustainable, inclusive and resilient agri-food systems.¹⁶ The mission is to tackle malnutrition in all its forms by accelerating impactful policies and actions across agri-food systems to enable healthy diets for all. Healthy diets are a prerequisite to good nutrition. They are adequate, safe, diverse and balanced in terms of both quantity and quality.

12. FAO's Nutrition Strategy provides a framework of action that describes entry points, helps to prioritize activities and then acknowledges the contribution of the Organization's work at global and decentralized levels in support of healthy diets and nutrition outcomes. Though there are many factors that influence good nutrition, healthy diets are a cornerstone. With regard to biodiversity, the Nutrition

¹² <https://www.un.org/en/food-systems-summit/pre-summit>

¹³ For example in the FSS principles of engagement: “We recognize that food systems are complex, and are closely connected to, and significantly impact, human and animal health, land, water, climate, biodiversity, the economy and other systems, and their transformation requires a systemic approach”; but also in most of the documents.¹⁴ PC 130/5 Rev.1.

¹⁴ PC 130/5 Rev.1.

¹⁵ CL 166/REP, paragraph 24b.

¹⁶ C 2021/LIM/4: The agri-food system covers the journey of food from farm to table – including when it is grown, fished, harvested, processed, packaged, transported, distributed, traded, bought, prepared, eaten and disposed of. It also encompasses non-food products that also constitute livelihoods and all of the people as well as the activities, investments and choices that play a part in getting us these food and agricultural products. In the FAO Constitution, the term “agriculture” and its derivatives include fisheries, marine products, forestry and primary forestry products.

Strategy clearly highlights the relationship between nutrition and biodiversity (in particular under its Outcome 3) and stimulates collaboration across the Organization.

13. FAO conducts research and releases evidence, data and guidelines on a food system's approach to enable healthy diets for better nutrition including food composition, nutrition assessment and food-based indicators,¹⁷ and human requirements, balancing trade-offs and synergies between options for policies and actions for healthy diets with social (e.g. indigenous knowledge and cultures, gender equity), economic (e.g. viability for smallholder farmers, economic development, decent work) and environmental (e.g. climate change, biodiversity, soil and water degradation) outcomes of agri-food systems. In this context, for example, the Committee on Agriculture (COAG), at its 27th Session, welcomed the launch of the Global-Hub on Indigenous Peoples' Food Systems¹⁸ to provide a structured dialogue that enables an exchange of knowledge between indigenous peoples and scientists to ensure the protection and preservation of indigenous food systems in the context of FSS and in other frameworks.¹⁹

14. Furthermore, FAO assists countries in developing capacities to evaluate and monitor food security and nutrition situations, analyse options, and implement agricultural and food systems policies and programmes that impact positively on nutrition, and provides tools, guidance and support for the scaling up of proper nutrition education and consumer awareness at national and local levels. Recent activities include the FAO and WHO joint publication on sustainable healthy diets²⁰ and a guideline on nutrient reference values²¹ under the Joint FAO-WHO Food Standards Programme Codex Alimentarius.²² In 2018, FAO published *Strengthening sector policies for better food security and nutrition results. Food systems for healthy diets*.²³

15. FAO also supports the implementation of the Global Action Programme on Food Security and Nutrition²⁴ with the objective to create an enabling environment for food security and nutrition and to promote sustainable, resilient, nutrition-sensitive food systems.

16. FAO has coordinated the development of a working paper (forthcoming) to identify entry points within agri-food systems to improve biodiversity and diets, two levers that can be used to enhance nutrition and optimize environmental sustainability while ensuring social equity, especially of the most vulnerable people. The paper highlights the link between agrobiodiversity and improved dietary diversity, emphasizing the importance of local cultivars and neglected and underutilized species in the diets of rural populations. The integration of seed-saving and conservation of wild, native and local food sources can serve the multiple benefits of enhancing the adaptability of food production to climate change (including drought and cold tolerance), reducing biodiversity losses and addressing malnutrition, especially micronutrient deficiencies. This working paper provides initial guidance for interdisciplinary work on how to integrate biodiversity and climate change considerations into nutrition planning and vice versa.

17. The Mainstreaming biodiversity conservation and sustainable use for improved human nutrition and well-being (called Biodiversity for Food and Nutrition – BFN) project sought to address biodiversity mainstreaming by promoting knowledge of the importance of biodiversity in ensuring the availability of high-quality, nutritious foods. Co-financed by the Global Environment Facility (GEF) and implemented by Bioversity International with support from FAO, the UN Environment

¹⁷ <http://www.fao.org/infoods/infoods/en/>

¹⁸ <http://www.fao.org/indigenous-peoples/global-hub/en/>

¹⁹ COAG/2020/INF/11; C/2021/21, paragraph 39.

²⁰ FAO & WHO. 2019. *Sustainable healthy diets – Guiding principles*. Rome. (also available at <http://www.fao.org/publications/card/en/c/CA6640EN>).

²¹ Lewis, J. 2019. *Codex nutrient reference values*. Rome. FAO & WHO (also available at <http://www.fao.org/3/ca6969en/CA6969EN.pdf>).

²² FAO & WHO. 2019. *Codex Strategic Plan 2020–2025*. Rome. (also available at <http://www.fao.org/3/ca5645en/CA5645EN.pdf>).

²³ FAO. 2018. *Strengthening sector policies for better food security and nutrition results*. Rome. (also available at <http://www.fao.org/3/CA2797EN/ca2797en.pdf>).

²⁴ FAO. 2017. *Global Action Programme on Food Security and Nutrition in Small Island Developing States*. Rome. (also available at <http://www.fao.org/3/a-i7135e.pdf>).

Programme (UNEP) and by ministerial, academic, non-governmental organizations, private sector and community partners, the project aimed to build knowledge and enhance the capacity of several stakeholders at national level for improving well-being, livelihoods and food security of smallholder and vulnerable communities. Implemented between 2013 and 2019, the project facilitated a number of positive outcomes, spurring positive change across four countries (Brazil, Kenya, Sri Lanka and Turkey). The terminal evaluation of the project is now in progress. After its closure, a number of important publications were released, including two books,²⁵ two papers²⁶ and several chapters focusing on BFN in the book on neglected and underutilized species.²⁷

Committee on World Food Security

18. The Committee on World Food Security, at its 47th Session in February 2021, endorsed *Voluntary Guidelines on Food Systems and Nutrition*²⁸ resulting from a multi-stakeholder process that saw the active participation of FAO in all stages. The Voluntary Guidelines provide guidance on policies and interventions to address malnutrition in all its forms through a holistic “food systems” perspective. They aim to support countries and others to develop coordinated, multi-sectoral national policies, laws, programmes and investment plans for healthy diets through sustainable food systems. They are intended to promote policy coherence and reduce policy fragmentation between sectors relevant to food systems and nutrition such as health, agriculture, education, environment, gender, social protection, trade and employment.

19. The Voluntary Guidelines recognize the strong interlinkages between sustainable food systems and healthy diets and call for interventions within and across food systems, and their constituent elements – food supply chains, food environments and consumer behaviour – to enhance the livelihoods, health and well-being of populations; encourage sustainable food production and responsible consumption of safe, diverse and nutritious foods; protect and promote sustainable use of natural resources, biodiversity and ecosystems; and support mitigation and adaptation to climate change. They also present agreed text on key concepts such as healthy and unhealthy diets, nutritious foods and sustainable food systems.

Sustainable wildlife management and wild meat value chains

20. FAO works on sustainable wildlife management through initiatives such as the Collaborative Partnership on Sustainable Wildlife Management (CPW).²⁹ Since 2013, FAO has been a CPW partner organization; it hosts the CPW Secretariat and is a donor of CPW by allocating human and financial resources for the functioning of the CPW Secretariat. The major areas of CPW’s work are promoting sustainable use of wildlife resources in the context of food security and livelihoods, preventing and mitigating human–wildlife conflicts, supporting development of strategies, policies and management systems that contribute to legal and sustainable hunting. The CPW promotes an integrated understanding of the complex interconnections and mutual dependencies between wildlife and people and works to increase cooperation and coordination on sustainable wildlife management issues among its members and partners.

21. Recent CPW efforts included continued promotion of the voluntary guidance for a sustainable wild meat sector, annexed to the CBD/COP/DEC/14/7 on sustainable wildlife management³⁰ and joint contribution to integrating issues related to sustainable wildlife management in the Post-2020 Global Biodiversity Framework.

22. Since 2017, FAO leads the Sustainable Wildlife Management (SWM) Programme,³¹ which is an initiative of the Organisation of African, Caribbean and Pacific States funded by the European

²⁵ <https://cgspace.cgiar.org/handle/10568/107465> and <https://cgspace.cgiar.org/handle/10568/108172>

²⁶ <https://cgspace.cgiar.org/handle/10568/107270> and <https://cgspace.cgiar.org/handle/10568/109712>

²⁷ <https://www.routledge.com/Orphan-Crops-for-Sustainable-Food-and-Nutrition-Security-Promoting-Neglected/Padulosi-King-Hunter-Swaminathan/p/book/9780367902827>

²⁸ CFS. 2021. *Voluntary Guidelines on Food Systems and Nutrition*, Rome. (also available at http://www.fao.org/fileadmin/templates/cfs/Docs2021/Documents/CFS_VGs_Food_Systems_and_Nutrition_Strategy_EN.pdf).

²⁹ <http://www.fao.org/forestry/wildlife-partnership/en/>

³⁰ <https://www.cbd.int/doc/decisions/cop-14/cop-14-dec-07-en.pdf>

³¹ <https://www.swm-programme.info/>

Union (EU) and co-funded by the French Facility for the Global Environment and the Agence Française de Développement. The SWM Programme is currently implemented across 15 countries through a consortium of partners, which includes the Center for International Forestry Research, the French Agricultural Research Centre for International Development and the Wildlife Conservation Society.

23. In close collaboration with national authorities and local communities, the SWM Programme develops and tests, at field level, innovative, collaborative and scalable models of sustainable wildlife management. These models are specific to each country/context but they all aim at: (i) improving local communities' management of hunting, fishing and wildlife habitats, while maintaining ecosystems and their services functional; (ii) ensuring that the consumption of wild meat becomes sustainable by reducing the urban demand for wild meat through an improved supply of alternative proteins combined with behaviour change strategies; and finally (iii) improving relevant legal and institutional frameworks across sectors to enable those previous aspects.

Contribution of livestock to food security, sustainable food systems, nutrition and healthy diets

24. The COAG, at its 27th session in October 2020 “requested FAO to produce a comprehensive, science and evidence-based global assessment of the contribution of livestock to food security, sustainable food systems, nutrition and healthy diets”. The Animal Production and Health Division and the Food and Nutrition Division are leading the development of the assessment. It is planned that the assessment will be published in 2024. A component focusing on the contribution of animal-source foods on healthy diets for improved nutrition and health outcomes is being developed for presentation to the first session of the COAG Sub-Committee on Livestock in 2022.

Role of the microbiome in human, animal and ecosystem health

25. FAO has further developed its work on the role of the microbiome in human, animal and ecosystem health and the role of the gut microbiome, and diet-related factors in the rapidly emerging diet-related non-communicable diseases epidemic.³² FAO's work includes studies of how factors in agriculture and food systems impact the human microbiome and the related links with human health and climate change, and how crop production practices impact the soil microbiome. FAO is further exploring microbial applications such as microbial biofertilizers and biopesticides.

26. In addition, ongoing activities are being conducted by FAO to: (i) determine the scientific status quo of the dietary exposure of the gut microbiome to chemical residues (pesticide and veterinary drugs) and microplastics; and (ii) assess if current research addresses the biological relevance of gut microbiome disturbances in relation to the above-mentioned chemicals and if it clearly distinguishes the microbiome impact on human health as an association or as a proven causal relationship. This work should help to eventually evaluate the potential role of the gut microbiome as a component of food safety-related activities (e.g. chemical safety assessments). To this end, FAO is identifying knowledge gaps, technical limitations and research needs.

III. FAO ACTIVITIES ON BIODIVERSITY FOR FOOD AND AGRICULTURE AND HUMAN HEALTH

27. In its review of the MYPOW, the Commission, at its Sixteenth Session in 2017, took note of the many interactions between agricultural production, BFA and human health besides the direct effects on nutrition³³ and added to the MYPOW the development of a concept note on biodiversity for food and agriculture and human health for consideration at its Eighteenth Regular Session. It also added to its workstream on nutrition the element of health.³⁴

28. In view of the boost of work in the biodiversity–human health realm since 2017, the following paragraphs describe some areas of FAO's work and the global institutional landscape on these matters.

³² FAO. 2020. *Microbiome: The missing link?* Rome. (also available at <http://www.fao.org/3/ca6767en/CA6767EN.pdf>).

³³ CGRFA-16/17/22, paragraph 26.

³⁴ CGRFA-16/17/Report Rev.1, *Appendix C*; CGRFA-17/19/Report, *Appendix F*, Annex 1.

The One Health approach

29. Since the Commission's Sixteenth Session, developments globally and within FAO have placed strong emphasis on an integrated One Health approach. WHO has broadly defined One Health as "an approach to designing and implementing programmes, policies, legislation and research in which multiple sectors communicate and work together to achieve better public health outcomes".³⁵ It is a holistic cross-sectoral and interdisciplinary approach that seeks to examine interconnections among human and ecosystem health. The One Health approach has been increasingly applied in food safety, the control of zoonoses and the wildlife–livestock–human interface, and in combatting antibiotic resistance. One Health offers opportunities to mainstream biodiversity in the human, animal and plant health communities, paying greater attention to preventive measures based on strengthening the resilience of socio-ecological systems, and greater consideration of a broader concept of health beyond the absence of diseases.³⁶ In FAO, it has been especially applied in animal health since the Avian influenza epidemics in the early 2000s and, as mentioned above, in sustainable wildlife management.

30. Enhancing the integration of biodiversity and biodiversity–health linkages in One Health involves the following:³⁷

- maintain, protect and enhance diversity in socio-ecological systems;
- consider ecological and evolutionary processes;
- address the common drivers of biodiversity loss and ecosystem degradation and ill health;
- deploy ecosystem-based solutions (nature-based solutions);
- apply economic valuation to assess the multi-sectoral costs and benefits of changes to ecosystems; and
- systematically evaluate health impacts as part of environmental and strategic impact assessments.

31. At the global level, the Convention on Biological Diversity (CBD), WHO and NEP published in 2015 "Connecting Global Priorities: Biodiversity and Human Health, a State of Knowledge Review".³⁸ A WHO–CBD joint work programme on biodiversity and health was also defined to raise awareness of the intimate interconnections between healthy ecosystems and human health.

32. In 2018, human health and biodiversity was considered by the World Health Assembly (WHA).³⁹ Also in 2018, CBD Decision 14/4 on health and biodiversity invited WHO, the World Organization for Animal Health (OIE), FAO and other relevant organizations to consider ecosystem-based approaches in their efforts to strengthen the prevention of ill health. The Parties to the CBD also welcomed a *Guidance on integrating biodiversity considerations into One Health approaches, among other holistic approaches*.⁴⁰ In line with Decision 14/4, the CBD developed a draft global action plan for biodiversity and health⁴¹ for consideration by the Parties at their 15th conference meeting. The global action plan and the compilation of key messages to health and biodiversity interlinkages⁴² make several references to FAO's work and publications.

33. The 7th work programme of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) includes a thematic assessment of the interlinkages among biodiversity, water, food and health, which will examine the interlinkages among the SDGs related to

³⁵ <https://www.who.int/news-room/q-a-detail/one-health>

³⁶ CBD/SBSTTA/21/9.

³⁷ <https://www.who.int/news/item/01-01-2020-biodiversity-and-health-the-who-cbd-joint-work-programme>

³⁸ <https://www.cbd.int/health/stateofknowledge/>

³⁹ CBD/COP/DEC/14/4; World Health Assembly document A71/11 of 29 March 2018

https://cdn.who.int/media/docs/default-source/climate-change/wha-report-on-biodiversity-and-health.pdf?sfvrsn=c9fdae95_2

⁴⁰ <https://www.cbd.int/doc/c/501c/4df1/369d06630c901cd02d4f99c7/sbstta-21-09-en.pdf>

⁴¹ <https://www.cbd.int/doc/c/76f9/1b75/42e360ab3ae6e53d0762c449/sbstta-24-09-en.pdf>

⁴² CBD/SBSTTA/24/9, Annex ; CBD/SBSTTA/24/INF/26.

food and water security, health for all, protecting biodiversity on land and in the oceans and combatting climate change.⁴³

34. In FAO, One Health has become a topic of a new Office (Joint FAO/WHO Centre (CODEX Food Standards, Zoonotic Diseases [CJW]) and is included as a Programme Priority Area under the “Better Production” aspiration in the 2022–2031 Strategic Framework,⁴⁴ the Medium Term Plan 2022–25 and PWB 2022–23.⁴⁵

35. The link between biodiversity and One Health was addressed by FAO’s Governing Bodies, including under the agenda items on biodiversity mainstreaming.⁴⁶ The Council, at its 166th Session, approved the *2021-23 Action Plan for the Implementation of the FAO Strategy on Mainstreaming Biodiversity across Agricultural Sectors*⁴⁷ with several actions related to One Health, as well as the *FAO Action Plan on Antimicrobial Resistance 2021-2025*.⁴⁸ This Action Plan refers to improved genetics and the promotion of more environmental-friendly plant protection practices as alternatives to antimicrobials for treatment of infections and promoting good animal and plant health.

36. The Tripartite Zoonoses Guide (TZG)⁴⁹ was published by FAO, OIE and WHO in 2019 to assist countries with the implementation of One Health approaches in the prevention and control of zoonotic disease threats, including antimicrobial resistance, at the animal–human–environment interface. The Joint Risk Assessment⁵⁰ was published in December 2020 as the first TZG Operational Tool (OT) and provides countries with a methodology for joint, multi-sectoral assessment of risks related to health threats at the interface, generating mutually accepted recommendations for risk mitigation and communication messaging.

37. The Surveillance and Information Sharing OT (in preparation) guides a stepwise process that enables countries to evaluate existing capacity for coordinated, multi-sectoral surveillance and information sharing for zoonotic diseases according to a framework of indicators, ultimately creating a roadmap and a workplan to establish or strengthen their system. The Multi-sectoral One Health Coordination Mechanism OT (in preparation) provides a stepwise methodology to support countries in their efforts to establish or strengthen a formal One Health coordinating mechanism that oversees and supports the design and implementation of the national One Health strategy or roadmap and is therefore instrumental in the operationalization of One Health at national and subnational levels.

38. Biodiversity loss and degradation can be linked to disease emergence and spread. However, One Health has so far more strongly engaged the public health sector and veterinary services than ministries responsible for natural resource management, ecosystems, environment, wildlife and biodiversity. Together with the EcoHealth Alliance, FAO is conducting a study to clarify the environmental dimension of the One Health approach and identify operational strategies for ecosystem-sensitive disease risk reduction. A final report on this work is currently being produced. Together with the World Bank, FAO is publishing two reports on building animal health and wildlife systems for One Health in East Asia and the Pacific, which cover disease drivers and risk factors as well as important policies and investments to move from responding to preventing pandemics. With

⁴³ <https://ipbes.net/nexus>

⁴⁴ C 2021/7, Table 2.

⁴⁵ C 2021/3.

⁴⁶ C 2021/21, paragraph 74; ERC/20/REP, paragraph 34k iii; LARC/20/REP, paragraph 25i b; NERC/20/REP, paragraph 19e; APRC/20/REP, paragraph 22 viii; C 2021/24, paragraph 17c; COFI 34 / Report paragraph 27; CL 165/REP, paragraph 22h, i.

⁴⁷ CL 166/REP, paragraph 24 h; CL 166/9 Add.1.

⁴⁸ CL 166/REP, paragraph 24 f; CL 166/9 Add.2.

⁴⁹ WHO, FAO & OIE. 2019. *Taking a Multisectoral, One Health Approach: A Tripartite Guide to Addressing Zoonotic Diseases in Countries*. Geneva, Switzerland. (also available at <http://www.fao.org/3/ca2942en/CA2942EN.pdf>).

⁵⁰ WHO, FAO & OIE. 2020. *Joint Risk Assessment Operational Tool (JRA OT), An Operational Tool of the Tripartite Zoonoses Guide, Taking a Multisectoral, One Health Approach: A Tripartite Guide to Addressing Zoonotic Diseases in Countries*. Geneva, Switzerland (also available at <http://www.fao.org/3/cb1520en/cb1520en.pdf>).

partners, FAO is also developing One Health capacity-building materials for natural resource management and environment sector professionals in Africa and Asia.

39. Furthermore, the One Health approach is more prominent in the human–animal health realm than in the human–plant health realm, despite the human health impacts of plant pests and diseases beyond interfering with crop yields (e.g. mycotoxins) and the linkages of those with climate change.⁵¹ However, both the *2021-23 Action Plan for the Implementation of the FAO Strategy on Mainstreaming Biodiversity across Agricultural Sectors* and the *FAO Action Plan on Antimicrobial Resistance 2021-2025* address health aspects of all sectors of food and agriculture.

Increased awareness and action on One Health triggered by COVID-19

40. The global COVID-19 pandemic has triggered further awareness of and action on the biodiversity–health nexus, and raised awareness about the need for the management of ecosystems in order to avoid or mitigate the potential emergence of new pathogens for infectious diseases, including zoonotic and vector-borne diseases.

41. A Workshop on Biodiversity and Pandemics was convened by the IPBES⁵² in July 2020. FAO’s comprehensive COVID-19 Response and Recovery Programme includes a key priority area with focus on One Health and preventing the next zoonotic pandemic⁵³ and has triggered the development of many tools and guidelines.⁵⁴

42. Zoonotic diseases and health aspects now hold a prominent place in the work of the CPW. In 2020, the CPW published a joint statement “*The COVID-19 challenge: Zoonotic diseases and wildlife*” with four principles⁵⁵ that aim to reduce the risk of future pandemics originating from wild animals, at the same time as strengthening the conservation of wildlife while respecting livelihoods, food security and culture of diverse groups of people, and building more collaborative approaches in human health and wildlife management.

43. Following the publication of the white paper⁵⁶ and policy brief⁵⁷ “Build back better in a post-COVID-19 world: reducing the risks of wildlife-borne disease spread”, a One Health component has been added to the exiting SWM Programme results. From 2021, the SWM Programme includes a new component aimed at contributing to make the One Health approach effective at reducing, preventing and responding to the risks of spillover of wildlife-borne zoonotic pathogens along forest-to-fork wild meat value chains. Activities will place particular emphasis on promoting the importance of the environment/biodiversity aspects and the roles of the associated sector in the effective implementation of the One Health approach.

44. As with nutrition, FAO’s work on One Health is more focused on biodiversity in general rather than BFA or GRFA specifically.

⁵¹ IPCC Secretariat. 2021. *Scientific review of the impact of climate change on plant pests – A global challenge to prevent and mitigate plant pest risks in agriculture, forestry and ecosystems*. Rome. FAO on behalf of the IPCC Secretariat.

⁵² IPBES. 2020. Workshop Report on Biodiversity and Pandemics of the Intergovernmental Platform on Biodiversity and Ecosystem Services. Daszak, P., das Neves, C., Amuasi, J., Hayman, D., Kuiken, T., Roche, B., Zambrana-Torrel, C. *et al.* IPBES secretariat, Bonn, Germany, DOI:10.5281/zenodo.4147317(also available at https://ipbes.net/sites/default/files/2020-12/IPBES%20Workshop%20on%20Biodiversity%20and%20Pandemics%20Report_0.pdf).

⁵³ <http://www.fao.org/policy-support/coronavirus-pandemic/en/>

⁵⁴ <http://www.fao.org/2019-ncov/resources/policy-briefs/en/>

⁵⁵ FAO. 2020. *The COVID-19 challenge: Zoonotic diseases and wildlife*. Joint CPW Statement. Rome. (also available at <http://www.fao.org/3/cb1163en/cb1163en.pdf>).

⁵⁶ FAO, CIRAD, CIFOR & WCS. 2020. *White paper: Build back better in a post-COVID-19 world – Reducing future wildlife-borne spillover of disease to humans: Sustainable Wildlife Management (SWM) Programme*. Rome, FAO. (also available at <http://www.fao.org/3/cb1503en/cb1503en.pdf>).

⁵⁷ FAO, CIRAD, CIFOR & WCS. 2020. *Policy brief: Build back better in a post-COVID-19 world – Reducing future wildlife-borne spillover of disease to humans: Sustainable Wildlife Management (SWM) Programme*. Rome, FAO. (also available at www.fao.org/3/cb1490en/cb1490en.pdf).

Partnerships

45. FAO has been a member of the CBD-WHO Interagency Liaison Group on Biodiversity and Health (2015–2020), and since 2021 is a member of the newly-established WHO-IUCN Expert Working Group on Biodiversity, Climate, One Health and Nature-based Solutions.⁵⁸

46. In 2021, FAO took the rotating chair of the Tripartite until March 2022. Under the Tripartite Collaboration, FAO is developing the Vision Paper and Global Plan of Action for One Health. The latter will provide a global framework, supporting countries, organizations and institutions active in the One Health landscape to focus their initiatives, meeting the overall goal and common vision. The mechanism of One Health funding is being explored.

47. WHO, FAO, OIE and UNEP recently established a One Health High-Level Expert Panel with a view to strengthening global efforts to prevent future pandemics by collecting, distributing and publicizing reliable scientific information on the links between human, animal and environmental health.⁵⁹ The One Health High-Level Expert Panel will guide the partner organizations' work under the framework of their One Health collaboration, in particular the provision of evidence-based scientific and policy advice to Members and the support of enhanced cooperation among governments. Efforts are ongoing to formally include UNEP as a fourth agency in this partnership. Furthermore, the WHA resolution on pandemic preparedness calls for international actors to “strengthen partnerships, global coordination and cooperation in response to infectious diseases based on lessons learned from COVID-19 and previous public health emergencies of international concern and fostering a One Health, whole-of-society and health systems strengthening approach, including between WHO and relevant multilateral organizations (...)”.⁶⁰

⁵⁸ [https://www.cbd.int/health/ilg-health/#:~:text=The%20Interagency%20Liaison%20Group%20\(ILG,Programme%20on%20Biodiversity%20and%20Health](https://www.cbd.int/health/ilg-health/#:~:text=The%20Interagency%20Liaison%20Group%20(ILG,Programme%20on%20Biodiversity%20and%20Health); <https://www.who.int/news/item/01-01-2020-biodiversity-and-health-the-who-cbd-joint-work-programme>; <https://www.who.int/news/item/30-03-2021-who-iucn-expert-working-group-biodiversity>; see also CBD/SBSTTA/24/INF/26.

⁵⁹ <https://www.who.int/news/item/20-05-2021-new-international-expert-panel-to-address-the-emergence-and-spread-of-zoonotic-diseases>

⁶⁰ https://apps.who.int/gb/ebwha/pdf_files/WHA74/A74_ACONF2-en.pdf