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Bioeconomy for sustainable food and agriculture

Queries on the substantive content of this document may be addressed to:

Mr Kaveh Zahedi
Director

Office of Climate Change, Biodiversity Environment (OCB)

Tel: +39 06570 53035

Email: OCB-Director@fao.org

Documents can be consulted at www.fao.org

EXECUTIVE SUMMARY

- Bioeconomy can be a key solution pathway for sustainable agrifood systems transformation to become more efficient, inclusive, resilient, and sustainable, while leaving no one behind.
- The 42nd Session of the Food and Agriculture Organization of the United Nations (FAO) Conference in 2021 elevated *Bioeconomy for Sustainable Food and Agriculture* to the status of a Priority Programme Area (PPA) within the FAO Strategic Framework 2022-31, under Better Environment (BE2).
- FAO's bioeconomy activities are closely aligned with the goals of the Organization's strategies and relevant action plans on Mainstreaming Biodiversity across Agricultural Sectors, Climate Change, Science and Innovation, and Corporate Environmental Responsibility.
- The two components of BE2 are: (i) facilitating the deployment of sustainable bio-innovations that increase resource use efficiency, improve environmental outcomes in agrifood systems and prevent pollution; and (ii) providing support to countries, regions and institutions in developing and implementing integrated, evidence-based bioeconomy strategies, policies and programmes. The PPA supports four key work areas: policy advisory; capacity building and country support; partnerships; knowledge creation and advocacy.
- During the next biennium (2024-2025), FAO will build on the following three elements: (i) consolidating FAO's role as a leading global convening body on bioeconomy for sustainable food and agriculture; (ii) empowering FAO Decentralized Offices to sustain the impact and scale up bioeconomy solutions on the ground; and (iii) further improving the knowledge base, reporting and consolidation of lessons learned based on key performance indicators.

GUIDANCE SOUGHT FROM THE PROGRAMME COMMITTEE

- The Programme Committee is invited to take note of this document.

I. Introduction: Bioeconomy timeline at FAO

1. Bioeconomy can play an important role in advancing sustainable development and transforming agrifood systems. By enhancing resource efficiency, mitigating climate change, conserving biodiversity, stimulating economic growth, driving innovation, minimizing waste, and building resilience, bioeconomy can foster more efficient, resilient, equitable and sustainable agrifood systems.¹
2. Bioeconomy is gaining increased attention. Currently, 22 countries and three regions have implemented specific bioeconomy strategies. Additionally, approximately 35 countries have strategies related to bioscience and biotechnology of relevance to the agrifood sector. This coverage is expanding rapidly; FAO is tracking the development of at least ten more dedicated bioeconomy strategies in progress.²
3. FAO's work on bioeconomy commenced with the issuance of the final communiqué of the Seventh meeting of Ministers of Agriculture, held under the Global Forum for Food and Agriculture (GFFA) on 17 January 2015, who advocated that "*FAO continues and intensifies its work on the primacy of food security in bioeconomy and provides information and pertinent policy advice for the benefit of its Members*", and acknowledged that FAO in collaboration with other partners would provide the appropriate platform for "*tangible action and international cooperation are necessary to seize the opportunities provided by sustainable bioeconomy for agriculture and rural development while securing the primacy of food security and nutrition*".³
4. In 2016, the International Sustainable Bioeconomy Working Group (ISBWG) was established by FAO to function as a diverse, multi-stakeholder expert group, providing a forum for exchanging knowledge and sharing experiences related to bioeconomy. Additionally, it serves in an advisory capacity for FAO's bioeconomy activities. Comprising over 35 members representing all regions, the group boasts a wide spectrum of expertise and backgrounds, spanning policy, research, the private sector, civil society, and international organizations.⁴
5. With support from the German Federal Ministry of Food and Agriculture, FAO launched the "Towards Sustainable Bioeconomy Guidelines" project (2017-2023). This project sought to develop sustainable bioeconomy guidelines to assist countries as well as producers and users of biomass and bioproducts in creating and implementing sustainable bioeconomy strategies, policies and programmes.⁵
6. In June 2021, the 42nd Session of the FAO Conference approved FAO Strategic Framework 2022-31 and its 20 PPAs. *Bioeconomy for Sustainable Food and Agriculture* is one of PPAs under Better Environment (BE2). This makes FAO the first and, so far, only UN agency to have elevated bioeconomy to the level of a strategic priority. BE2 aims at supporting "*a bioeconomy that balances economic value and social welfare with environmental sustainability promoted through formulation and implementation of integrated evidence-based policies and practices in micro and macro environments, using technological, organizational and social innovations*".⁶ Sustainable Development Goal (SDG) targets 12.2 (*By 2030, achieve the sustainable management and efficient use of natural resources*), 12.4 (*By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment*) and 12.5 (*By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse*) were mapped to this PPA.

¹ https://sc-fss2021.org/wp-content/uploads/2021/09/ScGroup_Reader_UNFSS2021.pdf

² FAO data (unpublished).

³ https://archiv.gffa-berlin.de/www.gffa-berlin.de/wp-content/uploads/2015/11/GFFA_communicu%c3%a9_2015.pdf

⁴ <https://www.fao.org/in-action/sustainable-and-circular-bioeconomy/international-sustainable-bioeconomy-working-group/en/>

⁵ <https://www.fao.org/3/ca5145en/ca5145en.pdf>

⁶ <https://www.fao.org/3/cb7099en/cb7099en.pdf>

7. For the term bioeconomy, the 42nd Session of the FAO Conference adopted the following definition: “*Bioeconomy is the production, utilization, conservation, and regeneration of biological resources, including related knowledge, science, technology, and innovation, to provide sustainable solutions (information, products, processes and services) within and across all economic sectors and enable a transformation to a sustainable economy*” (Global Bioeconomy Summit Communiqué, 2020).⁷ It furthermore specified that the term was “*to be used without the addition of ‘circular’*”.

In July 2023, the 43rd Session of the FAO Conference “*stressed the importance of bioeconomy for sustainable agrifood systems and highlighted the need to discuss this topic within governing bodies and technical committees of the FAO, bearing in mind the ongoing collaboration between COAG⁸ and COFO⁹ on the linkages between agriculture and forestry and the COFO-COAG joint work roadmap*”, and “*recognized the importance of the inclusive consideration of diverse and regionally balanced perspectives in FAO’s normative, policy, and scientific work, by means of progressive integration, including through voluntary financial instruments*”.¹⁰

II. Update on FAO’s work on bioeconomy for sustainable food and agriculture

8. FAO’s bioeconomy activities are closely aligned with the goals of the Organization’s strategies and relevant action plans on Mainstreaming Biodiversity across Agricultural Sectors,¹¹ Climate Change,¹² Science and Innovation,¹³ as well as Corporate Environmental Responsibility.¹⁴

9. An ongoing FAO analysis shows that ten countries explicitly included bioeconomy in their Food Systems Transformation Pathways, and that most of the 127 submitted Pathways prioritized related approaches such as sustainable consumption and production. Two countries included bioeconomy in their National Adaptation Plans; six in their Nationally Determined Contributions; 24 in their recent Biennial Update Reports and National Communications to the United Nations Framework Convention on Climate Change (UNFCCC); and 22 in their Long-Term Low Emissions Development Strategies. Ten countries included bioeconomy in their Biodiversity National Reports to the Convention on Biological Diversity (CBD) and eight have done so in their National Biodiversity Strategies and Action Plans.

10. FAO also provides inputs on bioeconomy to key Multilateral Environmental Agreements (MEAs), including the UNFCCC and the Paris Agreement;¹⁵ the CBD and Kunming-Montreal Global Biodiversity Framework;¹⁶ the United Nations Convention on Combating Desertification (UNCCD), the Global Framework on Chemicals, and the ongoing negotiations on the international legally binding instrument on plastic pollution, including in the marine environment, among others.

A. FAO’s Aspirational Principles and Criteria for Sustainable Bioeconomy

11. FAO worked with the ISBWG to develop a set of 10 Aspirational Principles and 24 Criteria for Sustainable Bioeconomy across all economic sectors.¹⁷ These Aspirational Principles and Criteria cover the three dimensions of sustainability (social, economic and environmental) while also promoting good governance practices as a fourth sustainability dimension. The Aspirational

⁷ C2021/LIM/4: <https://www.fao.org/3/nf765en/nf765en.pdf>

⁸ Committee on Agriculture

⁹ Committee on Forestry

¹⁰ C 2023/REP: <https://www.fao.org/3/nm800en/nm800en.pdf>

¹¹ <https://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1319600/>

¹² <https://www.fao.org/3/cc2274en/cc2274en.pdf>

¹³ <https://www.fao.org/3/cc2273en/cc2273en.pdf>

¹⁴ <https://www.fao.org/3/cb4218en/cb4218en.pdf>

¹⁵ <https://www.fao.org/3/cc2668en/cc2668en.pdf>

¹⁶ <https://www.fao.org/3/cc3417en/cc3417en.pdf>

¹⁷ <https://www.fao.org/documents/card/en/c/cb3706en/>

Principles and Criteria contribute to ensuring that “no one is left behind” in the transition to a greener, fairer and more profitable economy that enables the achievement of all SDGs.

12. The Aspirational Principles and Criteria can be applied by policymakers and other stakeholders in the development of bioeconomy policies, strategies, and action plans; as well as supporting sustainability assessments of new technologies and practices in agriculture, while making them available, accessible and affordable, particularly for smallholder farmers.¹⁸ Furthermore, the Aspirational Principles and Criteria can be used in monitoring and evaluation frameworks to measure the sustainability of the bioeconomy or to monitor and evaluate a country’s progress as it transitions towards a sustainable bioeconomy.¹⁹

13. The shift to a bioeconomy demands technological, organizational and social innovations. Agrifood systems play a crucial role in this transition, being central to sustainable production and consumption. Existing bioeconomy policies and practices often lack integrated consideration of social, economic, environmental, and governance goals.²⁰ The Aspirational Principles and Criteria aim to facilitate such a holistic approach. Of course, translating them into effective bioeconomy policies and practices that balance potential trade-offs requires a context-specific approach.²¹

14. In 2019, FAO released a comprehensive review of sustainability indicators to assist countries and stakeholders in developing and monitoring sustainable bioeconomy and assessing the sustainability of bioeconomy practices and products in line with the Aspirational Principles and Criteria. The review assessed indicators at the territorial level, including bioeconomy-relevant SDG indicators, alongside indicators at the product/value chain level, including indicators used for standards, certificates, and labels.²²

B. FAO’s Programme Priority Area on Bioeconomy for Sustainable Food and Agriculture

15. The PPA on *Bioeconomy for Sustainable Food and Agriculture* is led by the Office of Climate Change, Biodiversity and Environment and co-led by the Agrifood Economics Division. Upon its establishment in 2021, FAO formed an internal working group to coordinate actions across FAO’s technical work areas and Decentralized Offices around the world.

16. FAO promotes bioeconomy in food and agriculture through technological innovations (biotechnology, digital, bioengineering, product design for outcome, bio-based processing and substitution of carbon-intensive materials and fossil fuels), organizational innovations (policies and institutions), and social innovations (societal awareness, data systems, human capital and job creation) that are inclusive of Indigenous Peoples, rural or disadvantaged communities and those in situations of vulnerability, as well as youth and women producers and consumers.²³

17. FAO supports countries in the formulation and implementation of integrated, evidence-based policies and good practices for agrifood systems encompassing economic, social, and environmental elements, thus rendering production from food and agriculture more sustainable and more accessible, efficient and affordable, especially for the poor and those in situations of vulnerability (i.e., at a more targeted “micro” level).

18. The PPA BE2 is structured into two thematic components:

- i. facilitate the deployment of sustainable bio-innovations (technological, social, policy, institutional, and financial) that increase resource use efficiency, improve environmental outcomes in agrifood systems and prevent pollution, as well as promote high-value production that is sustainable and equitable; and

¹⁸ https://www.gffa-berlin.de/wp-content/uploads/2015/10/GFFA_2021_Final_Communique_EN.pdf

¹⁹ <https://www.fao.org/documents/card/en/c/ca6048en>

²⁰ <https://www.fao.org/documents/card/en/c/ca4352en>

²¹ <https://www.fao.org/3/cb5798en/cb5798en.pdf>

²² <https://www.fao.org/3/ca6048en/CA6048EN.pdf>

²³ <https://www.fao.org/3/ne576en/ne576en.pdf>

- ii. support countries, regions and institutions in developing and implementing integrated, evidence-based bioeconomy strategies, policies and programmes for the transformative change of agrifood systems towards sustainability.

19. The first component focuses on enhancing evidence-based decision-making related to bio-innovations in agrifood systems. It emphasizes expanding knowledge and awareness of the benefits and risks associated with bio-innovations. The second component is dedicated to promoting sustainable agrifood systems transformation through strategic support. It involves developing national expertise, creating strategies and action plans for bioeconomy, ensuring youth and gender inclusion in bio-based projects and governance, and implementing effective monitoring systems for bioeconomy initiatives across sectors.

20. Projects supported by the PPA prioritize women, youth, and inclusivity in activities related to investments, policy development, research, and training. Gender perspectives are already being integrated into bioeconomy policies, emphasizing value-chain development, and reducing food loss and waste and pollution. Similarly, youth-focused strategies are helping to deliver employment opportunities, youth participation in decision-making, and collaboration with global initiatives; though education systems must also adapt to provide the knowledge and skills that are required for the transition to a sustainable bioeconomy. Moreover, FAO is supporting inclusivity policies that cater to diverse stakeholders, emphasizing timely innovations, startups, and public–private partnerships, as well as promoting Indigenous Peoples’ knowledge and inclusion of vulnerable populations as key stakeholders in the bioeconomy transition.

C. FAO’s Key Work Areas under the Programme Priority Area on Bioeconomy for Sustainable Food and Agriculture

21. As of September 2023, supported both by core activities and donor contributions, FAO is engaged in around 150 bioeconomy-related projects associated with the PPA worth almost USD 330 million in the current biennium (2022-2023). FAO supports four key work areas: policy advisory; capacity building and country support; partnerships; knowledge creation and advocacy.

Policy advisory:

22. FAO provides policy guidance and technical support to assist policymakers in establishing and implementing national and regional bioeconomy strategies, action plans, and programmes in line with the *Aspirational Principles and Criteria for Sustainable Bioeconomy* in support of multiple SDGs and goals of MEAs. For example, Namibia’s National Commission on Research, Science and Technology (NCRST) is collaborating with FAO to further develop Namibia’s Sustainable and Circular Bioeconomy Strategy.²⁴ Since 2018, FAO has also supported Uruguay’s Ministry of Livestock, Agriculture and Fishery which is leading a participatory process for the development of a national bioeconomy strategy and action plan.²⁵ This collaboration has in particular emphasized indicators and biomass flows for monitoring the sustainability of the bioeconomy.²⁶

Capacity building and country support:

23. FAO engages with countries in bioeconomy projects that leverage local capacities and biological resources. The goal is to amplify successful innovative practices that enhance resource-use efficiency, bolster environmental sustainability in agrifood systems, curb pollution, and foster equitable, sustainable, and high-value production. Through the PPA, FAO champions sustainable bioeconomy solutions, facilitating technology transfer to farmers, rural communities, women, youth, and other stakeholders, while also emphasizing capacity development. For instance, in June 2023, FAO’s first-ever bioeconomy project, the “*Bananas in Pakistan’s Bioeconomy: Transforming Waste into Textile*”, was approved by the Global Environment Facility (GEF) to valorize non-edible biomass from banana production into a sustainable, alternative textile fiber, saving it from open burning or

²⁴ <https://www.fao.org/in-action/sustainable-and-circular-bioeconomy/country-support/namibia/en/>

²⁵ <https://www.fao.org/in-action/sustainable-and-circular-bioeconomy/country-support/uruguay/en/>

²⁶ <https://www.fao.org/documents/card/en/c/cc7309b>

disposal in landfills.²⁷ In **Côte d’Ivoire**, FAO is piloting an innovative project that empowers women to utilize urban market waste to rear black soldier fly larvae for animal feed, also using the frass residue as organic fertilizer.²⁸ FAO has also worked with communities in **Kenya** on Blue Fashion to use aquatic raw materials and by-products to develop bio alternatives for the fashion industry. These examples put the principles of more efficient and more circular production systems into practice, generating economic, environmental and social value from natural resources that would have otherwise been wasted.

24. FAO supports countries in identifying bioeconomy practices, such as bio-based plant nutrient management alternatives (biofertilizers, biostimulants, biological control), including dialogue with Indigenous Peoples and other local communities in the development of bioeconomy in **the Amazon**; the deployment of biotechnology solutions to animal diseases for shrimp systems in **Thailand**; the promotion of bioenergy production in **Viet Nam** and **Paraguay**;²⁹ circular wastewater management and reuse in the **Syrian Arab Republic**; the use of seaweed for a range of products in **Panama**; and the assessment of crop residue opportunities to improve competitiveness of value chains in **India**.

25. FAO supports Members with technical expertise to strengthen policies, inclusive financial mechanisms, transparency, legal and institutional arrangements to enhance sustainability and increase the productivity of wood and non-wood forest products’ value chains from natural and planted forests as a contribution to a sustainable bioeconomy.³⁰ In **Pakistan**, FAO supports capacity-building efforts aimed at the conservation and sustainable use of medicinal plants and non-timber forest products in the Astore Valley and Deosai National Park Buffer Zone of Gilgit-Baltistan. In **Jordan**, FAO is bolstering the resilience of rural women by valorizing forest products, addressing challenges in a country with limited forest coverage. In **Peru**, FAO is collaborating on a project that aims to build human well-being and resilience in Amazonian forests by enhancing the value of biodiversity for food security and bio-businesses while conserving healthy and functional forests and wetlands. This builds resilience to climate change, maintains carbon stocks, prevents greenhouse gas (GHG) emissions, and generates sustainable and resilient local livelihoods. Additionally, FAO assists many countries in revising laws and guidelines, integrating sustainability into forest product value chains through national standards, procurement policies, and trade regulations.

Partnerships:

26. FAO leads dialogue and knowledge exchange to maximize synergies and manage trade-offs when implementing bioeconomy innovations in agrifood systems. In addition to facilitating the work of the ISBWG, FAO is a partner and provides secretariat to the Global Bioenergy Partnership (GBEP), which has a dedicated working group on the thematic area of “Bioenergy in the context of the broader bioeconomy”³¹. Bioeconomy is discussed in the Task Advisory Group on “Circular Bioeconomy Approaches” of the Livestock Environmental Assessment and Performance” (LEAP) Partnership, a multi-stakeholder initiative that seeks to improve the environmental sustainability of the livestock sector through harmonized methods, metrics, and data.³² LEAP Secretariat is hosted by FAO and is responsible for the technical support and administrative activities of the Partnership. The Advisory Committee on Sustainable Forest-based Industries (ACSFI) is a FAO statutory body composed of senior executives from the private sector worldwide. It identified bioeconomy as one of its strategic priorities aiming at “identifying and disseminating good practices as well as related capacity building to support the development of innovative forest product value chains in the forest bioeconomy”^{33,34,35} FAO also engages in international bioeconomy fora, such as the International

²⁷ <https://www.fao.org/in-action/sustainable-and-circular-bioeconomy/resources/news/details/en/c/1643196/>

²⁸ <https://www.fao.org/publications/card/en/c/CC6593EN>

²⁹ <https://www.fao.org/3/i9181en/I9181EN.pdf> and <https://www.fao.org/3/i9576es/I9576ES.pdf>

³⁰ <https://www.fao.org/forestry/industries/en/>

³¹ <http://www.globalbioenergy.org/>

³² <https://www.fao.org/partnerships/leap/news-and-events/news/detail/en/c/1633715/>

³³ <https://www.fao.org/3/cb4294en/cb4294en.pdf>

³⁴ <https://www.fao.org/3/cb7013en/cb7013en.pdf>

³⁵ <https://www.fao.org/forestry/industries/en/>

Advisory Council on Global Bioeconomy (IACGB)³⁶, the International Bioeconomy Forum (IBF)³⁷ and the World Bioeconomy Forum (WBF).³⁸

27. Further, FAO highlights the opportunities the sustainable bioeconomy provides in existing food security, environmental and sustainable development fora, including UNFCCC, CBD, and UNCCD Conferences of the Parties (COP), the SDG Summit and UN Food Systems Summit processes, the World Food Forum and Science and Innovation Forum, among others.³⁹ To name only one example, FAO provided training on bioeconomy and entrepreneurship to women climate negotiators ahead of UNFCCC COP27.⁴⁰

28. FAO is collaborating with the International Maritime Organization (IMO) and United Nations Environment Programme (UNEP) and other relevant stakeholders in supporting developing countries in preventing and reducing plastic pollution from sea-based activities through the ongoing GloLitter Partnerships project⁴¹, a dedicated Working Group of the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) on sea-based sources of marine plastic litter⁴² and the development of a GEF-funded project named “Plastic Reduction in the Oceans: Sustaining and Enhancing Actions on Sea-based Sources” (PRO-SEAS)⁴³, implemented by FAO and executed by IMO in collaboration with other relevant organizations.

29. As regards resource partnerships on bioeconomy that support engagement at national, regional and global levels, FAO has ongoing partnerships with the governments of Canada, Germany and Ireland.

Knowledge Creation and Advocacy:

30. FAO has developed practice-oriented tools to support the devising of bioeconomy policies, the implementation of good practices, and the monitoring and evaluating of bioeconomy performance and impact, not only in single agricultural sub-sectors but also through a holistic bioeconomy approach to cover gaps in current knowledge.⁴⁴ FAO has created and contributed to numerous knowledge products that address various dimensions of bioeconomy, including innovative forest-based products,⁴⁵ soil microbiome⁴⁶, bioeconomy in urban food agenda,⁴⁷ aligning sustainability indicators for bioenergy and bioeconomy,⁴⁸ non-wood forest products in Asia,⁴⁹ wood residues in the transition to sustainable bioenergy,⁵⁰ and others. Forthcoming technical studies include research on opportunities for and barriers to youth employment and entrepreneurship in the bioeconomy and gender dynamics and mainstreaming (in particular in management of plastic waste from the fisheries sector), an overview of forest-based bioeconomy in different regions, and recommendations for gender sensitive programming and empowerment within the bioeconomy.

31. FAO organizes workshops, training sessions, and capacity-building programmes benefiting stakeholders, including government officials, farmers, and entrepreneurs, about the concept of bioeconomy and how it can be integrated into various sectors of the economy. The Organization ran awareness campaigns to inform the public about the benefits of bioeconomy and the importance of

³⁶ <http://www.iacgb.net/>

³⁷ <https://agriculture.canada.ca/en/science/international-engagement/international-bioeconomy-forum>

³⁸ <https://wcbef.com/>

³⁹ <https://www.fao.org/in-action/sustainable-and-circular-bioeconomy/resources/news/en/>

⁴⁰ <https://www.fao.org/in-action/sustainable-and-circular-bioeconomy/resources/news/details/en/c/1616687/>

⁴¹ <https://www.imo.org/en/OurWork/PartnershipsProjects/Pages/GloLitter-Partnerships-Project.aspx>

⁴² <http://www.gesamp.org/work/groups/wg-43-on-sea-based-sources-of-marine-litter>

⁴³ <https://www.thegef.org/projects-operations/projects/11166>

⁴⁴ <https://www.fao.org/in-action/sustainable-and-circular-bioeconomy/resources/publications/en/>

⁴⁵ <https://www.fao.org/3/cb7274en/cb7274en.pdf>

⁴⁶ <https://www.fao.org/3/cc0717en/cc0717en.pdf>

⁴⁷ <https://www.fao.org/3/ca3151en/ca3151en.pdf>

⁴⁸ <https://www.fao.org/3/cc7557en/cc7557en.pdf>

⁴⁹ <https://www.fao.org/3/ca8590en/CA8590EN.pdf>

⁵⁰ <https://www.fao.org/documents/card/en/c/cc3826en>

sustainable agricultural practices.⁵¹ These campaigns utilize multiple media channels to reach a wider and more diverse audience, including social media, publications, multilingual videos and infographics, and knowledge exchanges on best practices with bioeconomy stakeholders through conferences, workshops, webinars, and other engagement opportunities. Highlighting successful bioeconomy projects and initiatives serves as inspiration for others. FAO often showcases such success stories to demonstrate the tangible benefits of bioeconomy approaches.⁵²

III. Key directions for the future

32. From forestry and fisheries and aquaculture (notably seaweed cultivation)⁵³, to crop and animal production, to waste valorization and technological innovation, bioeconomy is a cross-cutting approach needed to bring about more efficient, inclusive, resilient and sustainable agrifood systems. With the agricultural sectors providing renewable raw materials, bioeconomy solutions furthermore have a potential to contribute to sustainability efforts undertaken by other sectors beyond agriculture including construction, textiles, pharmaceuticals, and many others, with positive benefits for livelihoods, human health, climate, and environment.

33. During the next biennium (2024-2025) of the PPA on *Bioeconomy for Sustainable Food and Agriculture*, FAO will build on three elements that have stood out as success factors during this first biennium of implementation (2022-2023):

- a. Consolidating FAO's role as a leading global convening body on bioeconomy for sustainable food and agriculture through the inclusive consideration of diverse and regionally balanced perspectives in FAO's normative, policy, and scientific work on bioeconomy;
- b. Empowering FAO Decentralized Offices to sustain the impact and scale up bioeconomy solutions on the ground through continuous knowledge exchange, capacity building, and advisory technical, policy, monitoring criteria and investment support; and
- c. Further improving the knowledge base, reporting and consolidation of lessons learned.

34. FAO anticipates Members' input on BE2, aiming to help countries and regions harness bioeconomy potential for agrifood systems transformation through an inclusive, transparent, and participatory approach.

⁵¹ e.g., <https://www.fao.org/interactive/bioeconomy/en/> and <https://www.fao.org/fao-stories/article/en/c/1330390/>

⁵² <https://www.fao.org/3/ca4352en/ca4352en.pdf>

⁵³ <https://www.fao.org/3/cb5670en/cb5670en.pdf>