Global Landscapes Forum

WAGENINGEN UNIVERSITY & RESEARCH

# WHITE PAPER:
# NEEDS ASSESSMENT & REPOSITORY

FOR THE DEVELOPMENT OF A BLENDED LEARNING PROGRAMME ON MAINSTREAMING BIODIVERSITY ACROSS AGRICULTURAL SECTORS

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# SUMMARY

## Objective:

The needs assessment is part of a series of activities to contribute to the development of a Blended Learning Programme on Mainstreaming Biodiversity across Agriculture Sectors.

The blended learning programme will contribute to FAO's Aspirational Impact of a Better Environment and its Programme Priority Area on Biodiversity and ecosystem services for food and agriculture – Biodiversity for food and agriculture maintained and sustainable use, conservation and restoration of marine, terrestrial and freshwater ecosystems, and their services promoted through adoption of targeted policies and practices.

The target group for this are policy professionals from ministries of agriculture, forestry, fisheries, and the environment (or equivalent).

## Methodology:

The following resources were used:

1. Expert input to capture learning needs, based on post 2020 meetings.

2. Review of resources from FAO Multi-stakeholder Dialogue.

3. Review of CBD glossary.

4. Review of key concepts around agriculture and biodiversity as laid out in the FAO Biodiversity Action Plan.

5. Review of key learning objectives of existing learning products and courses.
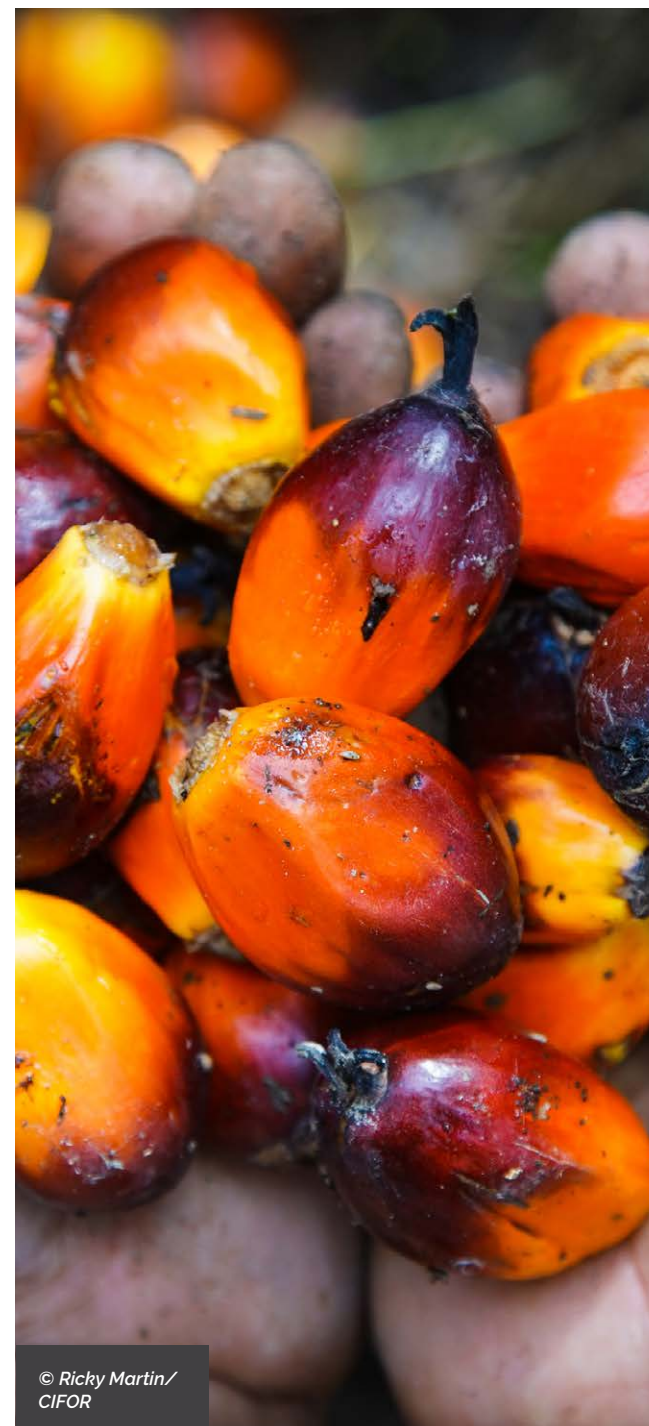
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WHITE PAPER: NEEDS ASSESSMENT AND REPOSITORY

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# Key results:

While the needs assessment is far from comprehensive, the results are a good indication of key issues. We found a disconnect between global institutional thinking on what is needed for mainstreaming biodiversity; the practical approach that the FAO is taking regarding biodiversity friendly farming practices and the understanding of these priorities and action at country level as reflected in both the national agricultural policies and the national NBSAPs.

Based on the review of the learning objectives of already available learning products and courses on mainstreaming biodiversity we suggest that a new FAO led blended learning programme on mainstreaming biodiversity across agriculture sectors needs to focus on the immediate needs resulting from the new Global Biodiversity Framework (GBF).

We understand that the key novelty of the post 2020 framework with regards to the agricultural sector is that the GBF is calling for the integrity of all ecosystems [including agroecosystems] to be enhanced; with integrity being defined as "An ecosystem is generally understood to have integrity when its dominant ecological characteristics (e.g. elements of composition, structure, function, and ecological processes) occur within their natural ranges of variation and can withstand and recover from most perturbations" (CBD/SBSTTA/24/3/Add.2/Rev.1, para. 18). Moreover, Add.2 refers to

"including species diversity and abundance and communities of interacting species within ecosystems" (para. 21). With that Parties to the CBD will need to adjust both their agricultural policies and their NBSAPs to the post 2020 framework, to reflect landscape approaches and landscape level governance as well as emphasizing food producing practices that enhance the integrity, the ecological functioning, of the very managed ecosystems these food systems are depending on.

Excellent learning products and courses on mainstreaming biodiversity already exist from various organisations, covering key learning needs identified by the FAO Multi Stakeholder Dialogues under the thematic categories "Valuing biodiversity & funding"  and "Legal framework". However, none of these courses address explicitly the aspects identified under the "Partnership building / cross-sectoral synergies"; neither the aspect of ecological functioning of agroecosystems as identified as key for the successful implementation of the GBF.

Based on the needs assessment and entry point we are suggesting the following three learning elements:

1. The ecological functioning of the agriculture and food producing-ecosystems, and the principles of land-use practices (including fisheries and aquaculture) that support and enhance these functions.

2. Agroecosystems as a part of a larger connected landscape, and the needs for landscape level governance (landscape approach).

3. Understanding of the different agricultural actors and sub-sectors into which biodiversity concerns are to be mainstreamed.



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# DETAIL OF THE ASSESSMENT

## Needs as perceived by key stakeholders

Extracting and categorizing needs from the resources on the FAO Biodiversity Mainstreaming Platform, which is aimed at building bridges between sectors, identifying synergies, aligning goals, and developing integrated cross-sectoral approaches to mainstream biodiversity in the agriculture, forestry and fisheries sectors. The resources on the platform are mainly presentations given by national and international institutions as part of multistakeholder dialogues on mainstreaming biodiversity, thus providing a valuable indicator of key institutional perception of needs. Based on the presentations available from the FAO Multi Stakeholder Dialogue, all elements that could be interpreted as needs / lacks were listed, first according to stakeholders (few country stakeholders, mostly institutional ones), then grouped based on the FAO's Global capacity needs assessment, then categorized as "process" or "technical" needs, and finally informing the three entry points identified and divided accordingly.

A total of 12 stakeholder views were included in the assessment:

Convention on Biological Diversity (CBD)

Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE) (Vietnam)

Ministry of Natural Resources and Environment (MONRE) (Vietnam)

Global Environment Facility (GEF)

International Fund for Agricultural Development (IFAD)

OECD Environmental Directorate

Biodiversity International

Office of Agricultural Studies and Policies, Ministry of Agriculture (Chile)

CONABIO (Mexico)

The Economics of Ecosystems and Biodiversty (TEEB)

World Business Council for sustainable development

Mayor of Meckhe, Senegal

IFOAM Organics International

## Results:

Stakeholders' needs as expressed during the FAO Multi Stakeholder Dialogue (Table 1) were grouped based on the FAO's Global Capacity Needs Assessment, into six thematic need areas as listed below:

1. Partnership building / cross-sectoral synergies

2. Valuing biodiversity & funding

3. Capacity building

4. Legal framework

5. Project management / expertise

6. Impact assessment & monitoring

The two categories with the highest mentioning were cross sectorial collaboration as well as building the evidence base for the importance of biodiversity for the productive sectors.

*Table 1: Key needs identified by stakeholders as part of the FAO Multi Stakeholder Dialogue grouped into six thematic areas based on the FAO's Global Capacity Needs Assessment.*

| Partnership building / cross-sectoral synergies | Valuing biodiversity & funding |
| --- | --- |
| • Build bridges between sectors, identify synergies, align goals, develop integrated approaches to mainstreaming BD<br>• Overlapping functions among the ministries<br>• Consider BD in sectorial development plans<br>• Effective communication with non-traditional stake-holders<br>• Trust brokering and assurance, technical intermediation<br>• Integrating regulatory, economic and voluntary approaches<br>• Pursue agrobiodiversity in broader development planning (poverty reduction, adaptation to climate change, food security)<br>• Reinforcing public-private collaboration<br>• Provoking synapsis amongst sectors<br>• Space for MSDs<br>• Linking biodiversity to health (diets)<br>• Integrate wild and agro-biodiversity goals | • Economic development is prioritised over BD<br>• Integrating BD in national accounting systems<br>• Catalytic funding<br>• Importance of urban markets for environmental goods<br>• Identifying perverse subsidies<br>• Tackle vested interest & political and social acceptability<br>• Incentive mechanisms are needed<br>• Valuation of agrobiodiversity and market linkages<br>• Lack of awareness of economic, social and natural capital<br>• Recognising and capturing value<br>• Imagining and integrating new revenue models<br>• Stop perverse subsidies and introduce adapted ones<br>• Support consumer shifts and more diversified diets<br>• Internalise externalities by sectors |
| **Project management / expertise** | **Capacity building** |
| • Flexible project duration and adaptive management<br>• Integrate spatial planning (x2)<br>• Better targeting areas according to needs<br>• Not enough knowledge of alternative practices<br>• Promoting the knowledge of traditional agroecosystems and cultural methods | • Human resources<br>• Foreseeing capacity building and training for stake-holders (notably producers) to implement BD practices, better productivity and financial mechanisms<br>• Capacity building on sustainable agriculture for producers and extension service providers<br>• Strengthening local capacities<br>• Lack of training and information<br>• Know how to scale sustainable solutions |
| **Impact assessment & monitoring** | **Legal framework** |
| • Impacts hard to quantify<br>• Hard to assess effectiveness of mainstreaming approaches<br>• Indicator measurability<br>• Build robust evidence base, invest in a data and indicators<br>• Consolidate gains<br>• More robust monitoring<br>• Information and knowledge management, developing indicators | • Enforcement / Implementation of strategies/legislation<br>• Enabling policy environment<br>• Tenure<br>• Governance on all levels<br>• Unfavourabe regulations for sucessful alternatives<br>• Do away with policies, subsidies and research promoting intensive monocultures |

## Assessing the alignment between FAO Biodiversity Action Plan, NPSAPs, Post 2020 Glossary and National Agricultural Policy

A sample of 10 countries, providing a representative sample with respect to geographic coverage as well as importance of the agricultural sector were selected. 44 key words were extracted from the FAO Biodiversity Action Plan, based on two categories: a) "technical terms" (which could be harder to understand) and b) "terms of interest" (which could be a good indicator). Terms that were only mentioned in the framework of Plans and Projects were excluded (for example

"Implementation of the Recarbonization of Global Soils (RECSOIL) initiative, including the preparation of the Global Soil Organic Carbon sequestration map and the launch of the GSOC-MRV at farm level" - here "recarbonization" and "carbon sequestration were excluded).

A content analysis, checking both the presence of the key words as well as the presence of equivalent terms and concepts was conducted across both the NBSAPs and the National Agriculture policies of the 10 sample countries.

- the keyword search included forests in agricultural practices

- the keyword search also includes synonyms, which are highlighted in yellow, in order to screen for the concepts that may have a different terminology but are effectively present in the NBSAPs/NAPs

- the keyword search did not qualify cases where the keyword wasn't accompanied by substantial content (ex.: Croatia's NBSAP where certain keywords appeared only when quoting the Aichi targets but with no further development).

## Results

To see how common a keyword was across countries, a point system quantified "yes" as 1, "partially" as 0.5 and "no" as 0. This point-system informed the repository criteria, as all words below 5.5 are listed.

*Table 2: Summary of key agricultural indicators for the sample used for the needs assessment.*

| Country | Agricultural land (% of land area) | Forest area (% of land area) | Agriculture, forestry, and fishing, value added (% of GDP) | Agrofood exports (% of total exports) | Agrofood imports (% of total imports) |
|---|---|---|---|---|---|
| Norway | 2.70 | 33.40 | 1.80 | 1 | 9 |
| Nicaragua | 42.10 | 28.30 | 15.80 | 48 | 9 |
| Senegal | 46.10 | 41.90 | 17 | 33 | 19.40 |
| Croatia | 26.20 | 34.30 | 3.20 | 20.80 | 14.30 |
| Chile | 21.10 | 24.50 | 3.90 | 18.10 | 10.10 |
| Mozambique | 52.70 | 46.70 | 25.60 | 20.20 | 16.20 |
| S.Korea | 16.90 | 64.50 | 1.80 | 1.30 | 5.50 |
| Lebanon | 64.30 | 14 | 3 | 21.50 | 20.40 |
| Bangladesh | 70.70 | 14.50 | 12.90 | 2.40 | 16.30 |
| Niger | 36.80 | 0.90 | 38.40 | 11.50 | 32.20 |

Sources: https://www.oecd-ilibrary.org/; https://data.worldbank.org/country/

## Coherence between agricultural concepts and practices laid out in the FAO Biodiversity Action Plan, the NBSAPs and the NAPs

Overall there is a large disconnect between the agricultural concepts and practices laid out in the FAO Biodiversity Action Plan and the national policies, both the NBSAPs as well as the NAPs. Higher level agricultural concepts were found more often, whereas specific practices regarding agricultural land-use were incoherent. Overall the NBSAPs lacked a coherent section on biodiversity friendly agricultural practices and the NAPs did not reflect well the biodiversity for food and agriculture dimension.

For the NBSAP's out of 44 identified terms, only 3 terms were found across all 10 countries, these were: Ecosystem services, Genetic diversity, and Genetic resources NBSAPs. Only 10 terms were found in at least 7 out of the 10 NBSAPs. These were: Poverty alleviation, Mainstreaming, Forest restoration, Food security, Invasive alien species (IAS), Sustainable forest management, Traditional knowledge, Access and benefit-sharing (ABS), Ecosystem services, Genetic diversity, Genetic resources.

The complete table can be found here: NBSAPs.
The complete table can be found here: NAPs

## Benchmark existing learning products and courses

Excellent learning products and courses on mainstreaming biodiversity already exist from various organisations:

- Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT)
- CIRAD (French Agricultural Research Centre for International Development)
- Rainforest Alliance
- UNDP Learning for nature
- CBD
- UNITAR
- ICLEI - Local Governments for Sustainability
- IIED - International Institute for Environment and Development

These course cover a lot of the aspects identified by the stakeholders in the FAO Multi Stakeholder Dialogues under the categories "Valuing biodiversity & funding" and "Legal framework". None of the courses available is addressing explicitly the aspects identified under the "Partnership building / cross-sectoral synergies"; neither the aspect of ecological functioning of agroecosystems as identified as key for the successful implementation of the GLF.

For a detailed overview of the available learning products and courses see available courses.

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# REPOSITORY

This repository has been created and curated with the intention of gathering existing knowledge on mainstreaming biodiversity across agriculture sectors to provide a foundation to the trainers who will be facilitating the course.

The material gathered here is based on the learning entry points suggested earlier, and comes from the following sources:

· Centre for International Forestry Research and World Agroforestry (CIFOR-ICRAF),

· Food and Agriculture Organization of the United Nations (FAO),

· Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES),

· Global Landscapes Forum (GLF), and

· Convention on Biological Diversity (CBD).
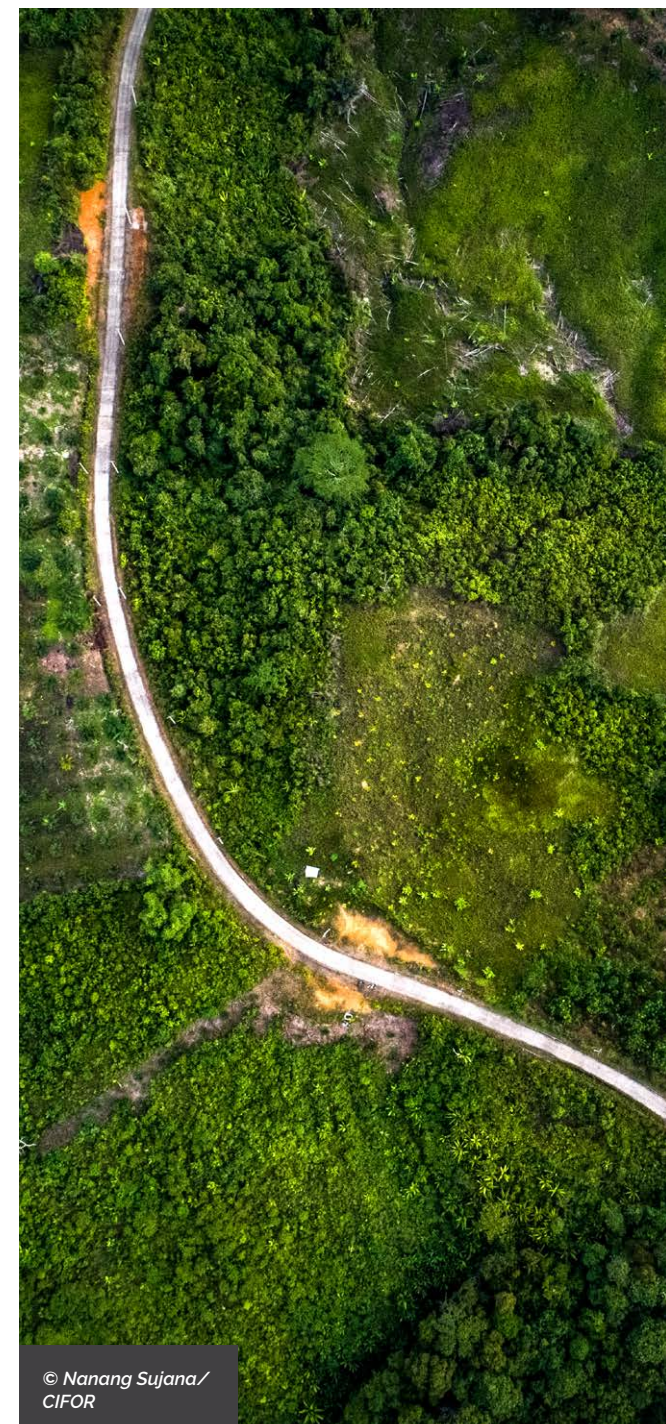
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# REPOSITORY

| Title | Publisher | Year | Link |
|---|---|---|---|
| The role of biodiversity in integrated landscape approaches | CIFOR | 2020 | PDF |
| CIFOR-ICRAF: Building resilient landscapes | CIFOR-ICRAF | 2022 | PDF |
| Agroforestry: a primer | CIFOR-ICRAF | 2022 | PDF |
| Discussing the role of citizen science in agroecology | CIFOR-ICRAF/CSC | 2022 | VIDEO |
| Landscape transformation through the use of ecological and socioeconomic indicators in Xishuangbanna, Southwest China, Mekong Region | ICRAF | 2012 | PDF |

| Title | Publisher | Year | Link |
|---|---|---|---|
| Ecosystem Approach to Fisheries - Introduction | FAO | 2021 | COURSE |
| Food Security and Sovereignty | FAO | 2013 | PDF |
| Global hunger continues to rise: new UN report says | FAO | 2018 | VIDEO |
| 2021-23 Action plan for the implementation of the FAO strategy on mainstreaming biodiversity across agirucltural sectors | FAO | 2021 | PDF |
| Global Dialogue on the Role of Food and Agriculture in the Post-2020 Global Biodiversity Framework | FAO | 2021 | PDF |
| Ecosystem Approach to fisheries - Policy and Legal Implementation | FAO | 2021 | COURSE |
| Ecosystem Approach to Aquaculture management | FAO | 2020 | PDF |
| Guidelines for the integration of sustainable agriculture and rural development into agricultural policies | FAO | 1997 | PDF |
| The 10 elements of agroecology: enabling transitions to sustainable agriuclture and food systems | FAO | 2022 | VIDEO |

# REPOSITORY

**Food and Agriculture Organization of the United Nations**

| Title | Publisher | Year | Link |
|-------|-----------|------|------|
| A multi-billion-dollar opportunity – Repurposing agricultural support to transform food systems | FAO | 2021 | PDF |
| The State of the World's Bidiversity for Food and Agriculture | FAO | 2019 | PDF |
| Climate change impacts and adaptation options in the agrifood system | FAO | 2022 | PDF |
| Ecosystem approach to fisheries management training course (Inland fisheries) Volume 1: Handbook for trainees | FAO | 2019 | PDF |
| Ecosystem approach to fisheries management training course (Inland fisheries) – Volume 2: Inland fishery case studies | FAO | 2019 | PDF |
| Ecosystem approach to fisheries management training course (Inland fisheries) – Volume 3: Training course presentations & visuals | FAO | 2019 | PDF |
| Ecosystem approach to fisheries management training course (Inland fisheries) – Volume 4: Training session plans | FAO | 2019 | PDF |
| SDG Indicator 14.4.1 - Fish stocks sustainability - elearning course | FAO | 2019 | COURSE |
| SDG Indicator 14.b.1 - Securing sustainable small-scale fisheries | FAO | 2017 | COURSE |
| Soils and biodiversity | FAO | 2015 | PDF |
| Agroecology: farmer's perspectives | FAO | 2014 | VIDEO |
| OECD-FAO guidance for responsible agricultural supply chains | FAO/OECD | 2016 | PDF |
| Mainstreaming Biodiversity in Forestry | FAO/CIFOR-ICRAF | 2022 | PDF |
| State of knowledge of soil biodiversity | FAO | 2020 | PDF |

# REPOSITORY

**Food and Agriculture Organization of the United Nations**

| Title | Publisher | Year | Link |
|---|---|---|---|
| Mainstreaming Ecosystem services and biodiversity into agricultural production and management in the Pacific Islands | FAO | 2016 | PDF |
| Mainsreaming ecosystem services and biodiversity into agricultural production and management in East Africa | FAO | 2016 | PDF |
| The potential of agroecology to build climate-resilient livelihoods and food systems | FAO | 2020 | PDF |
| Tool for Agroecology Performance Evaluation - Process of Development Guidelines for Application (Test Version) | FAO | 2020 | PDF |
| The State of the World's Forests: Forests, Biodiversity and People | FAO | 2012 | PDF |
| FAO Strategy on Mainstreaming Biodiversity Across Agricultural Sectors | FAO | 2020 | PDF |

**ipbes** Science and Policy for People and Nature

| Title | Publisher | Year | Link |
|---|---|---|---|
| Policy Instruments | IPBES | 2022 | WEB |
| Chapter 2.1 of the IPBES Global Assessment on Biodiversity and Eco-system Services | IPBES | 2019 | PDF |
| Valuing nature's contribution to people: the IPBES approach | IPBES | 2017 | PDF |
| Global Assessment Report on Biodiversity and Ecosystem Services : Summary for policymakers - B. Driect and Indirect Drivers of Change | IPBES | 2019 | PDF |
| The Assessment Report on Pollinators, Pollination and Food Production | IPBES | 2016 | PDF |
| The Asssessment Report on The Sustainable Use of Wild Species | IPBES | 2022 | PDF |
| Global Assessment Report on Biodiversity and Ecosystem Services | IPBES | 2019 | PDF |

# REPOSITORY

| Title | Publisher | Year | Link |
|-------|-----------|------|------|
| Financial incentives for a biodiversity-friendly future – is green recovery a catalyzer? | GLF | 2020 | VIDEO |
| Rights-Based Ecosystem Approaches for a Green, Just Recovery | GLF | 2020 | VIDEO |
| Biocultural Conservation and Support for Indigenous Land Management | GLF | 2020 | VIDEO |
| Assessing and enhancing capacities to restore ecosystems globally – UN Decade on Ecosystem Restoration | GLF | 2020 | VIDEO |
| Recommendations to harness the power of landscapes | GLF | 2020 | PDF |
| Harnessing the Power of Nature: Building Resilient Food Systems Through Greater Agrobiodiversity | GLF | 2020 | VIDEO |
| The role of diverse agricultural landscapes in biodiversity conservation and food system resilience | GLF/CIFOR | 2020 | VIDEO |
| The Landscape Approach: A Case Study | GLF/CIFOR | 2020 | VIDEO |
| From Project to Process: Pitfalls and Potential of Implementing Long-term Integrated Landscape Approaches | GLF/CIFOR | 2021 | PDF |
| Landscapes for Forests and Food | GLF/CIFOR | 2021 | PDF |
| Ecosystem-based adaptation in agriculture: How agroecology can contribute to tackling climate change | GLF/CIFOR | 2021 | PDF |
| The food, climate and biodiversity 'triple challenge' and One Health in the Greater Virunga landscape | GLF/WWF | 2020 | VIDEO |

| Title | Publisher | Year | Link |
|-------|-----------|------|------|
| Global Biodiversity Outlook | CBD/UNEP | 2020 | PDF |

## Global Landscapes Forum

The Global Landscapes Forum (GLF) is the world's largest knowledge-led platform on integrated land use, dedicated to achieving the Sustainable Development Goals and Paris Climate Agreement. The Forum takes a holistic approach to create sustainable landscapes that are productive, prosperous, equitable and resilient and considers five cohesive themes of food and livelihoods, landscape restoration, rights, finance and measuring progress. It is led by the Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF), in collaboration with its co-founders UNEP and the World Bank and Charter Members.

Charter members: CIAT, CIFOR-ICRAF, CIRAD, Climate Focus, Conservation International, Crop Trust, Ecoagriculture Partners, The European Forest Institute, Evergreen Agriculture, FAO, FSC, GEF, GIZ, ICIMOD, IFOAM - Organics International, The International Livestock Research Institute, INBAR, IPMG, IUFRO, Rainforest Alliance, Rare, Rights and Resources Initiative, SAN, TMG-Think Tank for Sustainability, UNCCD, UNEP, Wageningen Centre for Development Innovation part of Wageningen Research, World Farmer Organization, World Bank Group, World Resources Institute, WWF International, Youth in Landscapes Initiative (YIL)
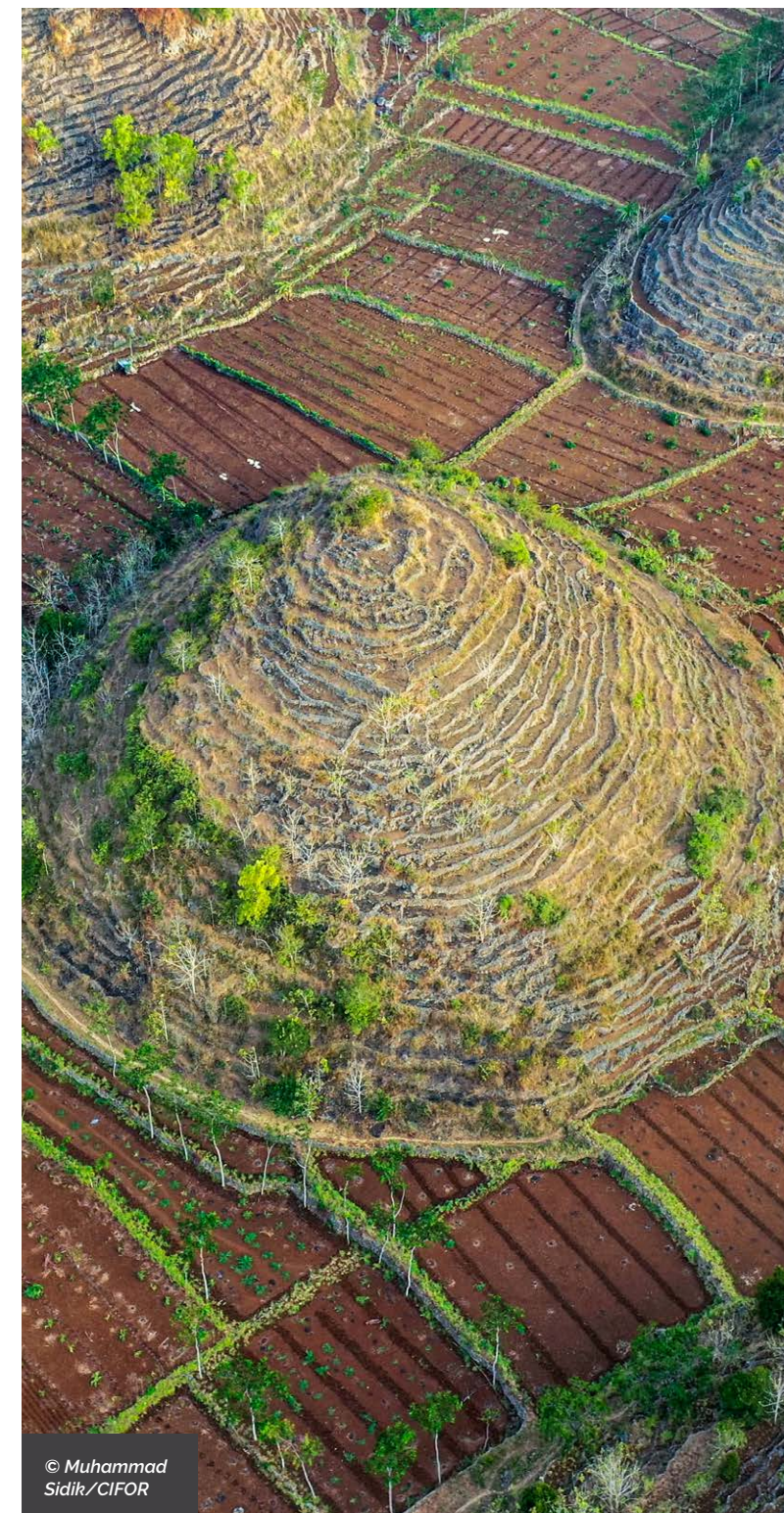
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