LEARNING PATHWAY: COURSE FLOWS & BLUEPRINT

THE STRUCTURE OF THE BLENDED LEARNING PROGRAMME ON MAINSTREAMING BIODIVERSITY ACROSS AGRICULTURAL SECTORS

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This course serves to contribute 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 council of FAO has approved the FAO Strategy on Mainstreaming Biodiversity Across Agricultural Sectors, as well as the 2021-23 Action Plan for the Implementation of the FAO Strategy on Mainstreaming Biodiversity across Agricultural Sectors (Action Plan).
The following course and assessment diagrams have been designed to give facilitators a visual overview of the key information, flow, and assessment structure of the course. This should help facilitators to better decide the best modules to focus on for the group of learners that they are working with.

A diagramatic breakdown of e-learning module is also presented below with the intention of offering quick entry points into key areas of content or specific topic related learning objectives. These diagrams should provide clarity and definition to the various stages and sections of the course as outlined in more detail below in the blueprint.

The key for the diagrams is presented alongside.

Detailed information about using these diagrams and all terminology mentioned here is defined in detail in the Blended Learning Guide.
The Blueprint

Objective

The Blueprint

Course Flows

Figure 1: Overall course and assessment flows

Every country has policies that acknowledge the importance of biodiversity for food security and that ensure diverse food and agriculture systems improve the state of biodiversity.

To provide clear actionable suggestions and entry points for policy makers to better include biodiversity in agriculture

Be able to identify and build upon entry points in current policies to enable the sustainable use and conservation of biodiversity across the landscape through biodiversity-friendly practices/approaches.

Understand the barriers preventing action to sustainably use biodiversity in food and agriculture and the ecological functioning of the landscape.

Design and develop policies and instruments which incentivise biodiversity-friendly agricultural practices.

Biodiverse Agriculture in Landscapes

Module 1


Integrating Biodiversity in Agriculture

Module 2

Finding Entry Points

Finding Entry Points

Integrating Biodiversity in Agriculture

Module 3

Designing policy instruments

Designing policy instruments

Global Systemic Lock-Ins

Module 4

Integrated Policy Instruments

Integrated Policy Instruments

Governing Biodiversity in Agriculture

Module 5

Implementing, Monitoring, and Evaluating

Implementing, Monitoring, and Evaluating

Governing Biodiversity in Agriculture

Module 6

Select an entry point in a given legislation to design a local law and write a policy brief based on a problem area in your landscape (whether sector, land-use, or resource-use). You should outline specific policy instruments which could be used to implement this, and summarise reasons for the changes you have made, and why this is promoting biodiversity integration in food production in your landscape.
To provide clear actionable suggestions and entry points for policy makers to better include biodiversity in agriculture, every country has policies that acknowledge the importance of biodiversity for food security and that ensure diverse food and agriculture systems improve the state of biodiversity.

Module 1: Biodiverse Agriculture in Landscapes

1.1: Adopt a systemic lens to understand the deeply interdependent role of biodiversity, agriculture and livelihoods in landscapes.

1.2: Holistically understand the challenges and opportunities of agriculture and biodiversity.

1.3: Evaluate the importance of the global policy arena and integrate the changing position of global priorities towards food production and biodiversity.

1.1.1: Systemic thinking and the landscape approach (processes and functions) for agriculture

1.2.1: Drivers of biodiversity loss in agriculture

1.2.2: Pathways to sustainable food and agriculture

1.3.1: International positions of agriculture

1.3.2: From agriculture as a driver of biodiversity loss to a partner and creator of value

Assignment that starts in group work (synchronous) - complete the landscape mapping exercise, and begin thinking about agriculture as a driver of biodiversity loss within your landscape (for following session).

Update landscape mapping, begin to think of areas where industrial agriculture still exists, how it is driving the biodiversity loss in your landscape, and how agricultural zones can best be transformed into diversified and integrated agroecological systems.

Prepare presentations on your own national commitments, evaluate gaps and alignments with global agricultural, developmental and environmental policies, goals and, agendas.
Figure 3: E-learning module 2 flow

Module 2: BIODIVERSITY AND RESILIENCE IN AGRICULTURE

The Ecology of Agriculture
2.1: Understand the ecological processes and ecosystem integrity (the healthy functioning of an agroecosystem) necessary for agriculture

Sustainable and Biodiversity-friendly Agriculture
2.2: Identify and analyze the difference between resilient and biodiversity-friendly agricultural approaches and those that are harmful

An Integrated Approach to Agriculture
2.3: Recognize and apply an integrated approach to agriculture across landscapes

Course Flows
Objective

2.1.1: Agriculture as domesticated human managed ecosystems

2.1.2: Managing biodiversity in agroecosystems

2.2.1: From uniformity to diversity

2.2.2: Sustainable and biodiversity-friendly practices and approaches

2.3.1: Managing for multi-functionality

2.3.2: Integrated approach for a healthy planet

Assignment in groups, learners should develop their own framework for analyzing agricultural systems. The framework should consider the evidence needed, the context and production systems, the systems performance, and participatory approaches for interpretation.
Figure 4: Transition from e-learning to full course

Module 1
Identifying Practice and Enabling Environment

Module 2
Finding Entry Points

Module 3
Designing Policy Instruments

Module 4
Identifying Practice, Enabling Environment and Policy Relevance

Module 5
Global Systemic Lock-Ins

Module 6
Governing Biodiversity in Agriculture

E-Learning Module
Identifying Practice and Enabling Environment

Policy Relevance

Select an entry point in a given legislation to design a local law and write a policy brief based on a problem area in your landscape (whether sector, land-use, or resource-use). You should outline specific policy instruments which could be used to implement this, and summarise reasons for the changes you have made, and why this is promoting biodiversity integration in food production in your landscape.
# Programme title | Mainstreaming biodiversity across agricultural sectors
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**Duration** | This course has been designed to be flexible, and will depend heavily on the facilitator and the availability of the learners. However, a duration for each e-learning module has been set as:
- 24 hours over 3 weeks

**Study load** | Similar to the duration, the course study load is also flexible. A minimum of 10 hours is recommended for facilitators to select very specific learning objectives.

However, each e-learning module has been developed with the following study load in mind:
- 4 hours of synchronous work per week.
- 4 hours of asynchronous work per week.

If this structure were to be applied to the rest of the modules in this blueprint it would cover the course of 18 weeks, or 3 months of intensive blended learning.

**Rhythm** | Because the structure of this course is flexible, the rhythm of this course is also to be decided by the facilitator. However, should the facilitator decide to follow the study load suggested for the e-learning module, the suggested rhythm is as follows:
- Two 2-hour synchronous sessions on a weekly basis,
- 4 hours of asynchronous reading and assignment based work on a weekly basis.

**Target audience** | The target audience for this course covers the following:
- Government official (agriculture/environment)
- Technical expert (agriculture/environment)

**Summative Assessment** | The summative assessment aims to assess the progress of the learners after completing the entire course is suggested here:

Select a specific issue within one of the agricultural sectors that is currently not sufficiently supporting biodiversity conservation. Select an entry point in a given legislation to design a local law and write a policy brief based on a problem area in your landscape (whether sector, land-use, or resource-use). You should outline specific policy instruments which could be used to implement this, and summarise reasons for the changes you have made, and why this is promoting biodiversity integration in agriculture in your landscape.

**Feel of the course** | Based on a detailed blueprinting workshop, the feel of the course was suggested to be: “inspiring,” “fun,” “enabling,” and “straight-forward”
USING THIS MODULE
For this module, we recommend that your learners are not only introduced to the topics laid out here, but also that they are encouraged to look for parallels and examples from within their own landscapes. By delving deeper into their own landscapes, they will be able to not only more effectively conduct the landscape mapping exercise introduced in the content, but also to begin understanding a more holistic perspective of how agriculture within their landscapes is driving biodiversity loss, and how biodiversity can be helpful to agriculture. This will also allow them to envision how agriculture can be changed in their own use cases, whether it be through diversification, or introduction of aspects of circularity. The content can also be evolved in one specific direction based on where the learners are based, allowing learners to take away more specific and regionally useful examples into their own landscapes.

KEY QUESTIONS:
• How are agriculture, biodiversity and livelihood inter-dependent with larger landscape processes and functions?
• What are the major drivers of biodiversity loss, and how can agriculture reverse those negative trends?
• How do global frameworks integrate biodiversity-friendly agricultural commitments?

BIODIVERSE AGRICULTURE IN LANDSCAPES

<table>
<thead>
<tr>
<th>Learning Objective Title</th>
<th>Learning Objective</th>
<th>Key Topics</th>
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</thead>
<tbody>
<tr>
<td>Connecting biodiversity and agriculture</td>
<td>LO 1.1: Adopt a systemic lens to understand the deeply interdependent role of biodiversity, agriculture and livelihoods in landscapes.</td>
<td>1.1.1: Systemic thinking and the landscape approach (processes and functions) for agriculture.</td>
</tr>
<tr>
<td>Challenges and opportunities for sustainable food and agriculture</td>
<td>LO 1.2: Holistically understand the challenges and opportunities of agriculture and biodiversity.</td>
<td>1.2.1: Drivers of biodiversity loss in agriculture. 1.2.2: Pathways to sustainable food and agriculture.</td>
</tr>
<tr>
<td>Agriculture and biodiversity in global policy arenas</td>
<td>LO 1.3: Evaluate the importance of the global policy arena and integrate the changing position of global priorities towards food production and biodiversity.</td>
<td>1.3.1: International positions of agriculture. 1.3.2: From agriculture as a driver of biodiversity loss to a partner and creator of value.</td>
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</table>
  • Goals of the CBD’s Post-2020 GBF, and understanding global conventions: FA-BFA, UNFCCC, CBD, UNCCD, SDGs & key policy concepts and terminology between different frameworks |
### USING THIS MODULE

This module has been designed with an intent to introduce learners to the more detailed agroecological processes that are involved between agriculture and biodiversity. Here it is key to employ any number of case-studies to best transfer the theoretical content into practical application. One good example is the use of a case study from Prieto et al., 2015 who state that on average, grassland studies have shown that multispecies assemblages produced 15% higher outputs than monocultures. Incorporating such case studies alongside the theory can help learners better understand the theory, and adapt it to use when developing policy for the summative assessment that they will be asked to carry out at the end of this course.

Along with module 1, module 2 is an essential part of completing this course.

### INTEGRATING BIODIVERSITY IN AGRICULTURE

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<tr>
<td><strong>The ecology of agriculture</strong></td>
<td>LO 2.1: Understand the ecological processes and ecosystem integrity (the healthy functioning of an agroecosystem) necessary for agriculture.</td>
<td>2.1.1: Agriculture as domesticated human managed ecosystems.&lt;br&gt;2.1.2: Managing biodiversity in agriculture.</td>
</tr>
<tr>
<td><strong>Sustainable and biodiversity-friendly agriculture</strong></td>
<td>LO 2.2: Identify and analyze sustainable and biodiversity-friendly agricultural practices and approaches.</td>
<td>2.2.1: From uniformity to diversity.&lt;br&gt;2.2.2: Sustainable and biodiversity-friendly practices and approaches</td>
</tr>
<tr>
<td><strong>An integrated approach to agriculture</strong></td>
<td>LO 2.3: Recognize and apply an integrated approach to agriculture across landscapes</td>
<td>2.3.1: Managing for multi-functionality&lt;br&gt;2.3.2: Integrated approach for a healthy planet</td>
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</table>
Module 3 looks more holistically and in detail at the global and systemic lock-ins that are keeping industrial agriculture in place and hampering the uptake of diversified agroecological food and agriculture. Here, facilitators can pick, choose, and expand on key topics that are more pertinent to the group of learners working with them.

Using the landscape mapping exercises, and asking learners to look more closely at some of these aspects which drive agriculture around the world. By applying these to a specific landscape map, learners should be able to more carefully apply these ideas to their own situations.

GLOBAL SYSTEMIC LOCK-INS

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<tr>
<td>Power dynamics in food value chains</td>
<td>LO 3.1: Understand how the food system and its actors influence current food production systems that impact biodiversity and livelihoods.</td>
<td>3.1.1: Food value chains, their actors, and power dynamics. 3.1.2: Food sovereignty. 3.1.3: Aligning food sovereignty and land-use policies.</td>
</tr>
<tr>
<td>Global economies and markets</td>
<td>LO 3.2: Understand and evaluate the macro-economic drivers that influence food and agriculture, leading to impacts on biodiversity and livelihoods.</td>
<td>3.2.1: Commodity food and agriculture in a globalised world. 3.2.2: Externalities and fair cost accounting.</td>
</tr>
<tr>
<td>Livelihoods and agriculture</td>
<td>LO 3.3: Understand the factors that influence household land-use decision making.</td>
<td>3.3.1: Gender, culture, norms and values, habits, and household economics. 3.3.2: Bridging traditional world-views, knowledge, and values with science for agriculture.</td>
</tr>
<tr>
<td>Policy and incentives</td>
<td>LO 3.4: Understand the role of policy to correct market and other incentive system, failures.</td>
<td>3.4.1: How policy is adopted into law, and then implemented on different levels (regional, municipal). 3.4.2: Identifying harmful incentives and encouraging the incentivising of positive and disincentivising of agricultural practices that have a negative impact on biodiversity.</td>
</tr>
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**KEY QUESTIONS:**
- What are the global, regional, and national drivers of agricultural and biodiversity land-use decision making?
- Who are the actors influencing agriculture?
- What are the macro-, micro-, and household level drivers which influence land-use decision making and, in turn, biodiversity?
- How can policy be used to correct socio-economic and political system failures which lead to biodiversity loss?
**USING THIS MODULE**

Module 4 covers key aspects in the governance of biodiversity in agriculture. Here facilitators may find it useful to look at effective governance principles to show learners best practices that they can adapt to their own use.

Facilitators should also keep in mind that they can select key topics and disregard others based on the group of learners that they will be working with, this will allow them to adapt best the blueprint to the learning styles, and strengths of their learners.

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### GOVERNING BIODIVERSITY IN AGRICULTURE

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<tr>
<td>Institutional dynamics governing agricultural landscapes</td>
<td><strong>LO 4.1:</strong> Evaluate institutional dynamics governing agricultural landscapes.</td>
<td>4.1.1: Institutional analysis and change. 4.1.2: Stakeholder analysis and engagement tools. • Including landscape mapping, tenure security, rights to natural resources, stakeholder mapping, and participatory decision making.</td>
</tr>
<tr>
<td>Policy cycles and governance principles as a precondition for successful policies</td>
<td><strong>LO 4.2:</strong> Understand the phases of the policy and budget cycles, and analyse the rationale behind governance principles.</td>
<td>4.2.1: From formulation of policies and strategies to adaptation, implementation, monitoring, and evaluation. 4.2.2: The importance of governance principles 4.2.3: Enhancing effectiveness, efficiency, and stakeholder trust 4.2.4: The governance cycle</td>
</tr>
<tr>
<td>Formulating policies and strategies: applying principles for good governance</td>
<td><strong>LO 4.3:</strong> Create actionable new policies and strategies, and adapt existing ones using governance principles to favour biodiversity friendly agricultural approaches.</td>
<td>4.3.1: Role of data, information, and knowledge • Including traditional and indigenous knowledge, and citizen science 4.3.2: Dealing with trade-offs across uses, users, areas, and generations as well as conflict management tools 4.3.3: Finding synergies through policy coherence and removal of perverse incentives 4.3.4: Appropriate scales within systems which ensure that policies are linked and nested</td>
</tr>
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</table>
**USING THIS MODULE**
Because of the variation in learners that different facilitators may face, each should approach this module in the flexible manner. Here, the development of content for this module should be based on the background, and region of your learner. Select specific case studies which showcase best practices that can be most easily applied should be selected.

Each case study here can be used as a basis for the design and implementation of policy instruments, but consider selecting a wide variety of case studies, which may be best to showcase the various policy instruments and tools which can be introduced and the best ways to introduce them.

**INTEGRATED POLICY INSTRUMENTS**

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<tr>
<td>Enabling biodiverse agriculture with equitable land tenure systems</td>
<td>LO 5.1: Design and develop policy instruments that enable biodiversity-friendly agriculture with land tenure systems and spatial planning.</td>
<td>• Examples (concrete case study/ best practices) of different sorts of policy instruments to illustrate how they help to reduce negative environmental impacts or preferably stimulate biodiversity-positive agriculture. Include steps to design and implement.</td>
</tr>
<tr>
<td>Enabling biodiverse agriculture with livelihood development</td>
<td>LO 5.2: Design and develop policy instruments that enable biodiversity-friendly agriculture with livelihood development.</td>
<td>• Identify and apply various policy instruments and tools (regulatory and legal, economic, rights-based, information based, voluntary based and others)</td>
</tr>
<tr>
<td>Enabling biodiverse agriculture with sustainable land-use</td>
<td>LO 5.3: Design and develop policy instruments that enable biodiversity-friendly agriculture with sustainable land-use, climate change adaptation and mitigation, and biodiversity.</td>
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</tr>
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**KEY QUESTIONS:**
- What are the various types of policy instruments?
- How can policy instruments incentivize integrated, biodiversity-friendly, agricultural approaches?
- How to design and develop these instruments for policy implementation for more biodiversity-friendly agricultural approaches?
**MODULE 6**

**USING THIS MODULE**

Module 6 focuses on the practical, and process aspects of policy. Here, facilitators can introduce a number of monitoring, evaluation, and learning practices that can help learners to not only better ideate methods of ensuring successful policy, but also to design and develop policy with long-term success in mind.

**KEY QUESTIONS:**

- What are the financial and administrative requirements to successfully implement policy?
- What are the methods to enable successful integration of policy?
- How to monitor and evaluate the impacts of policy?
- What are actionable learning practices to further develop and implement policy successfully?

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### IMPLEMENTING, MONITORING, AND EVALUATING

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<tr>
<td>Implementation</td>
<td>LO 6.1: Understand and evaluate the finance and administration required to implement policy.</td>
<td>6.1.1: Required organisational capacities to successfully implement policy instruments. 6.1.2: Costs of operationalizing policy instruments and how these costs are finances. 6.1.3: Clear roles &amp; responsibilities (addressing silos and boundary spanning)</td>
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<tr>
<td></td>
<td>LO 6.2: Evaluate and create ways to coordinate, harmonise, and integrate policies.</td>
<td>6.2.1: Follow the policy cycle process 6.2.2: Methods of policy integration and alignment</td>
</tr>
<tr>
<td>Monitoring</td>
<td>LO 6.3: Evaluate and create monitoring, evaluation, and learning practices to make policies perform better.</td>
<td>6.3.1: Choosing the right policy performance indicators at the right scale, feeding into multiple policy agendas 6.3.2: Implementation of monitoring activities and reporting on progress (through clear obligations and timelines). 6.3.3: Methods of checking the integrity and transparency of policy implementation 6.3.4: Role of sharing information on policy performance (disclosure laws) &amp; independent and participatory policy evaluation 6.3.5: Assessing gaps, bridging gaps 6.3.6: From monitoring and evaluation to 'monitoring, evaluation, and learning: the role of social learning 6.3.7: Carrying out another needs assessment: monitor and evaluate the alignment of terminology on sustainable agriculture &amp; ecosystem practices (CBD glossary, FAO Action Plan vs NBSAPs and NAPs) (to mirror the needs assessment upon which the course is based).</td>
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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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