



SECTORAL PUBLIC POLICIES AND PRESSURES ON BIODIVERSITY

TRANSVERSAL ANALYSIS REPORT

Prepared by Altai Consulting for IUCN and WWF | 2024

ambition for biodiversity

**BIODEV
2030**



In partnership
with



FUNDING



COORDINATION



IMPLEMENTATION



Cover photo: Dugout canoe used for small-scale shrimp fishing, Senegal © Altai Consulting

ALTAI CONSULTING

Altai Consulting provides research, monitoring and assessment services to public institutions and international organisations in developing countries.

Our teams operate in over 50 countries in Africa, the Middle East and Central Asia. Since its creation 20 years ago, Altai Consulting has developed a strong focus on research and evaluation of programmes related to governance, migration and sustainable development.

AUTHORS

This report was written by Valentine Japiot and Ndeye Fatou Sarr under the guidance of Alice Leroy, Estelle Briot and Mathieu Ducrocq.

CONTACTS

Estelle Briot, Project Director - ebriot@altaiconsulting.com

Alice Leroy, Project Manager - aleroy@altaiconsulting.com

TERMS OF REFERENCE AND MONITORING OF THE STUDY

Antonin Vergez (IUCN), Senior Expert for Natural Resources Economics - antonin.vergez@iucn.org

Camille Hosteint (WWF-France), BIODIV2030 Programme Coordinator - chosteint@wwf.fr

TABLE OF CONTENTS

TABLE OF ILLUSTRATIONS.....	4
ABBREVIATIONS	6
1. INTRODUCTION.....	9
1.1. Context	9
1.2. Objectives of the assignment entrusted to Altai	10
1.3. Scope of the assignment.....	10
1.3.1. Scope of the exercise	10
1.3.2. Limitations of the exercise	11
2. METHODOLOGY.....	15
2.1. Framework (June 2024)	15
2.2. Data collection (July-October 2024)	16
2.3. Analysis of the data collected	17
2.4. Drafting of country analyses and the transversal report (September-October 2024)	18
3. RESULTS OF THE TRANSVERSAL ANALYSIS	20
3.1. Comparison of national contexts	20
3.1.1. Socio-economic context.....	20
3.1.2. Biodiversity issues	21
3.1.3. Review of the literature on mainstreaming	22
3.1.4. The international framework of mainstreaming	24
3.2. Links between pressures on biodiversity, production practices and public policies .	25
3.2.1. Link between pressures on biodiversity and production practices	25
3.2.2. Links between production practices and public policy	27
3.3. Progress of biodiversity mainstreaming in BIODIV2030 countries and sectors.....	32
3.3.1. Integration into public policy framework documents	32
3.3.2. Integration into sectoral policies	33
3.4. Analysis of mainstreaming strategies	41
3.4.1. Most recurrent SPPIs.....	41
3.4.2. The need for a “policy mix” to ensure the consistency and effectiveness of public policies	42
3.4.3. Mainstreaming strategies in public policy	45
3.4.4. Summary: Obstacles to & drivers of mainstreaming.....	48
3.5. Examples of successful and unsuccessful mainstreaming in the world	48
3.5.1. Integrated territorial development	49
3.5.2. Sustainable intensification	49
3.5.3. Evidence-based policymaking.....	50
3.5.4. Aggregation and formalisation of smallholders.....	51
3.5.5. Co-management mechanisms	52
3.5.6. Participatory management mechanisms	53
3.5.7. Empower downstream stakeholders in the value chain (processors, exporters, retailers)	53
3.5.8. Mobilising carbon finance and biodiversity	55

4.	CONCLUSION AND RECOMMENDATIONS.....	56
4.1.	Conclusion	56
4.2.	Recommendations	58
4.2.1.	For multi-stakeholder platforms.....	58
4.2.2.	Formulating local projects	61
5.	APPENDICES	63
5.1.	Study schedule.....	63
5.2.	List of people questioned	63
5.3.	Type of PPIs used for the study	67
5.4.	Assessment of the strengths and weaknesses of the main SPPI	67

TABLE OF ILLUSTRATIONS

Figure 1.	Screenshot of the shared expert identification file	15
Figure 2.	Outline of the approach used for country analyses	18
Figure 3.	The five areas of policy implementation (Eldridge et al., 2020).....	23
Figure 4.	Six principles for successful subsidy reform (World Bank, 2023).....	23
Figure 5.	Example of a “policy mix” to be reformed at the same time to encourage a reduction in the use of phytosanitary products in agriculture (source: IUCN)	45
Table 1.	Priority sectors for Phases 1 and 2 of BIODDEV2030	14
Table 2.	Selection of socio-economic indicators for BIODDEV2030 countries	20
Table 3.	Link between pressures on biodiversity and production practices in the countries and sectors studied	26
Table 4.	Analysis of the obstacles to and drivers of mainstreaming in agriculture	33
Table 5.	Summary of the main PPIs in agriculture and the extent to which they take biodiversity into account	34
Table 6.	Analysis of the obstacles to and drivers of mainstreaming in forestry (including timber and wood energy)	35
Table 7.	Summary of the main PPIs in forestry and the extent to which they take biodiversity into account	35
Table 8.	Analysis of the obstacles to and drivers of mainstreaming in the fishing industry	36
Table 9.	Summary of the main PPIs in the fisheries sector and the extent to which they take biodiversity into account.....	37
Table 10.	Analysis of the obstacles to and drivers of mainstreaming in the extractive industry.....	38
Table 11.	Summary of the main PPIs in the extractive industry and the extent to which they take biodiversity into account.....	38
Table 12.	Analysis of the obstacles to and drivers of mainstreaming in pastoralism	39
Table 13.	Summary of the main PPIs in pastoralism and the extent to which they take biodiversity into account	40

Table 14. The most recurrent SPPIs across the sectors and countries studied.....	41
--	----

ABBREVIATIONS

AFD	Agence Française de Développement (French Development Agency)
ASC	<i>Aquaculture Stewardship Council</i>
TA	Technical Assistant
BIOFIN	<i>Biodiversity Finance Initiative</i>
BRD	<i>Bycatch Reduction Device</i>
CAFI	<i>Central African Forest Initiative</i>
CBD	Convention on Biological Diversity
ECOWAS	Economic Community of West African States
CLI	<i>Country-Led Initiative</i>
COMBO	Conservation, Mitigation and Biodiversity Offset
COMESA	<i>Common Market for Eastern and Southern Africa</i>
COP	<i>Conference of Parties</i>
CPA	<i>Charcoal Producers Association</i>
CPUE	Capture Per Unit Effort
CSDDD	Corporate Sustainability Due Diligence Directive
DPSIR	<i>Driver - Pressure - State - Impact - Response</i>
ESIA	Environmental and Social Impact Assessment
FAO	<i>Food and Agriculture Organization</i>
HCVF	High Conservation Value Forest
IFAD	International Fund for Agricultural Development
FiTI	<i>Fisheries Transparency Initiative</i>
FLEGT VPA	<i>Voluntary Partnership Agreements on Forest Law Enforcement, Governance, and Trade</i>
IMF	International Monetary Fund
FSC	<i>Forestry Stewardship Council</i>
GAPCM	<i>Groupeement des Aquaculteurs et Pêcheurs de crevettes de Madagascar</i> (Madagascar Shrimp Farmers and Fishers' Group)
GOANA	<i>Grande Offensive Agricole pour la Nourriture et l'Abondance</i> (Great Agricultural Offensive for Food and Abundance)
IDDR	<i>Institute for Sustainable Development and International Relations</i>
HDI	Human Development Index
IUU	Illegal, unreported and unregulated fishing
IPBES	<i>Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services</i>
(S)PPI	(Sectoral) Public Policy Instrument
EITI	Extractive Industries Transparency Initiative
JICA	<i>Japan International Cooperation Agency</i>
LMMA	Locally Managed Marine Area Network
MSC	<i>Marine Stewardship Council</i>

CBO	Community-Based Organisations
OECD	Organisation for Economic Co-operation and Development
WTO	World Trade Organisation
NGO	Non-Governmental Organisation
CSO	Civil Society Organisation
PAF	<i>Plan d'Aménagement Forestier</i> (Forest Management Plan)
SAP	Structural Adjustment Programme
PDL	<i>Plan de Développement Local</i> (Local Development Plan)
LDC	Least Developed Countries
PNAT	<i>Plan National d'Affectation des Terres</i> (French National Land Allocation Plan)
NDP	National Development Plan
PNR	<i>Parc Naturel Régional</i> (Regional Nature Park)
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
PRACAS	<i>Programme d'Accélération de la Cadence de l'Agriculture Sénégalaise</i> (Programme to accelerate Senegalese agriculture)
PROJEG	<i>Programme concerté de Renforcement des capacités des Organisations de la société civile et de la Jeunesse Guinéennes</i> (Concerted capacity-building programme for Guinean civil society and youth organisations)
PES	Payments for Ecosystem Services
R&D	Research & Development
DRC	Democratic Republic of Congo
EUDR	European Union Deforestation Regulation
REDD+	<i>Reducing Emissions from Deforestation and forest Degradation in developing countries</i>
CSR	Corporate Social Responsibility
NBSAPs	National Biodiversity Strategies and Action Plans
PGS	Participatory Guarantee Systems
SPS	Sanitary and Phytosanitary
TED	<i>Turtle Excluder Device</i>
EU	European Union
UEMOA	Union Economique et Monétaire Ouest-Africaine (West African Economic and Monetary Union)
IUCN	International Union for Conservation of Nature
WWF	<i>World Wide Fund for Nature</i>

1. INTRODUCTION

1.1. CONTEXT

General context

According to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)ⁱ, nearly 1 million of the world's 8 million animal and plant species are threatened with extinction over the coming decades. The IPBES has identified five factors placing direct pressure on biodiversity: changes in land use, overexploitation of resources, climate change, pollution and invasive alien species. These direct factors stem from underlying causes, such as demographic change, changes in production and consumption patterns, and the rise in global trade.

While the economy exerts pressure on biodiversity, it is also highly dependent on it, through the ecosystem services¹ that biodiversity provides (food production, regulation of the water cycle, carbon sequestration, etc.). More than half of the world's GDP depends on biodiversityⁱⁱ. It is therefore vital that biodiversity be taken into account in sectoral policies in order to address the underlying causes of biodiversity loss; an approach known as mainstreaming.

This challenge is reflected in the international frameworks for the protection of biodiversity. Mainstreaming was first mentioned in 1992 in the Convention on Biological Diversity (CBD). It was then included as the first strategic pillar of the Aichi Biodiversity Targets, adopted in 2010. This pillar provided for the integration of biodiversity values into national and local development and poverty reduction strategies and planning, as well as the repurposing of subsidies that are harmful to biodiversity. The Aichi targets were reaffirmed at subsequent Conferences of the Parties (COPs), culminating in the signing of the Kunming-Montreal Global Biodiversity Framework in 2022. This framework sets out 23 targets aimed at enhancing, conserving, restoring and using biodiversity for 2050. In particular, Target 10 promotes the sustainable use of biodiversity, Target 14 aims to ensure that biodiversity and its values are taken into account in the development of policies and regulations, Target 16 encourages the creation of policy, legislative and regulatory frameworks leading to sustainable consumption choices, and Target 18 calls for the identification and subsequent elimination of incentives, including subsidies, that are harmful for biodiversity, by 2025.

Despite all this, progress in mainstreaming remains limited. The lack of monitoring of commitments and accountability mechanisms at the international level has failed to address the lack of legal and regulatory texts or their lack of enforcement, or to address the low level of collaboration between institutions responsible for biodiversity conservation and stakeholders in the sectorⁱⁱⁱ.

Introducing BIODEV2030

The BIODEV2030 project, financed by AFD, coordinated by Expertise France and implemented by IUCN and WWF-France in 16 countries (Benin, Burkina Faso, Cameroon, Republic of Congo, Ethiopia, Fiji, Gabon, Guinea, Guyana, Kenya, Madagascar, Mozambique, Senegal, Tunisia, Uganda and Vietnam), aims to contribute to the implementation of these different frameworks by developing a methodology for integrating biodiversity and the services it provides into economic sectors.

Phase 1 (December 2019 - December 2022) used a multi-stakeholder approach to help stakeholders in the sector make voluntary commitments to reduce pressure on biodiversity and/or restore ecosystems. In particular, it drew on scientific (DIAG1) and sectoral (DIAG2)

¹ Ecosystem services include provisioning services (food, fuel, materials, medicines, etc.), regulating services (climate, flooding, spread of pathogens, etc.), socio-cultural services (aesthetic, spiritual, recreational, educational aspects) and support services (water and carbon cycle, soil formation, pollination, etc.)

diagnoses, which led to the selection of priority sectors in each country, as well as support for the establishment of inclusive multi-stakeholder dialogue platforms in the various countries.

Phase 2 (September 2023 - February 2026) builds on the momentum of these multi-stakeholder platforms in the same countries², by involving the public authorities in their steering (sectoral ministries, economy, finance, depending on the country). It is intended to operate on three complementary levels: i) the national level, by supporting public authorities in identifying sectoral public policy instruments to be reformed in order to promote changes in practice; ii) the local level, by supporting the design of a local pilot project in each country aimed at implementing actions to reconcile biodiversity (BIO) and development (DEV), iii) the international level via the creation of a community of practice and capacity building for stakeholders on mainstreaming, as well as the mobilisation of resources for biodiversity projects, including contributions to the COP16 Biodiversity Conference in Cali, Colombia, in October 2024.

1.2. OBJECTIVES OF THE ASSIGNMENT ENTRUSTED TO ALTAI

The assignment entrusted to Altai by the IUCN and WWF falls within the scope of the actions of Phase 2 of BIODDEV2030 at the national level, and in particular with a view to achieving result 1.2 of the project: *“The main Sectoral Public Policy Instruments (SPPIs) to be reformed or introduced to support changes in production practices have been identified and shared with the sectoral ministries and financial stakeholders”*.

The general objective of the assignment is to support the Technical Assistants (TAs) in charge of implementing the project at the country level in preparing the multi-stakeholder dialogue, in particular with the relevant ministries, with the aim of identifying the priority public policy measures to be taken to implement the commitments made within the framework of the CBD, and more recently the Kunming-Montreal Global Biodiversity Framework.

The aim of this support is to help ensure consistency between economic, sectoral (agriculture, mining, fisheries, forestry, etc.) and environmental (particularly biodiversity) policies, a key aspect of the mainstreaming approach. By comprehensively integrating biodiversity, we can prevent economic and sectoral policies from encouraging stakeholders (producers) to adopt production practices that are harmful to nature, thus contradicting the biodiversity commitments made by a State.

This general objective is broken down into several specific objectives:

- Foster discussion and debate through multi-stakeholder platforms and familiarise their stakeholders with the triptych: pressures on biodiversity, production practices and SPPIs.
- Identify public policy experts in the countries of intervention who meet the needs of the TAs in order to support the facilitation of discussion and reflection through the platforms.
- Identify and present suggestions for measures on priority SPPIs.
- Identify and present a range of experiences of SPPI reforms that have worked or not, and the associated factors of success/failure.

1.3. SCOPE OF THE ASSIGNMENT

1.3.1. SCOPE OF THE EXERCISE

The work was carried out in the 15 countries involved in Phase 2 of the BIODDEV2030 project, with steering divided between the project’s two operators:

² With the exception of Burkina Faso, which is no longer within the scope of BIODDEV2030 for its second phase.

- **IUCN:** Benin, Ethiopia, Fiji, Guinea, Kenya, Mozambique, Senegal, Uganda
- **WWF-France:** Cameroon, Congo, Gabon, Guyana, Madagascar, Tunisia, Vietnam

In each country, the target sectors and industries for the study were selected by the stakeholders in each country during Phase 1, on the basis of the diagnoses carried out and by combining their impacts on biodiversity and their potential for development. However, depending on the context in each country (sensitivity of certain sectors, political will to prioritise dialogue in certain sectors, history of intervention by IUCN and WWF), certain developments have taken place and are presented in Table 1 below. Congo was removed from the scope of Altai's work following developments in discussions between WWF and the Congolese authorities, who wanted to move towards a different approach for Phase 2 of BIODEV2030 in the country.

The exercise led to two types of deliverables being formulated:

- Country analyses showing the extent to which biodiversity is taken into account in sectoral public policies in the targeted sectors, integrating economic and trade policies and regional and international agreements where relevant (for example in the ECOWAS/UEMOA region, or the European Union Deforestation Regulation [EUDR]);
- The aim of this transversal report is to compile the lessons learned from the country analyses, compare them and put them into perspective using additional global resources.

In order to maximise the added value of this cross-cutting work, Altai has endeavoured to develop harmonised nomenclatures and analytical frameworks wherever possible, with a view to highlighting the common features and specificities of each country and sector.

1.3.2. LIMITATIONS OF THE EXERCISE

The study entrusted to Altai was carried out over a short period (June-October 2024) given the volume of documents to be analysed and the number of contacts to be consulted to cover the 14 countries. The purpose of the study was to provide material for discussions at COP16 in October 2024, followed by the second workshop of national platforms, also scheduled to take place before the end of 2024. Additional research was also required to identify the dynamics (pressures, practices, stakeholders, etc.) in countries that had undergone sector changes between phases 1 and 2 of BIODEV2030 and therefore did not have a detailed sector diagnosis (Guyana, Gabon, Cameroon).

Time constraints proved to be even greater because the economies of scale initially anticipated in the analysis of sectors common to several countries were limited. Although certain production practices and PPIs are similar, detailed research, specific to each country and each sector, is required to identify the reference texts governing these PPIs and their potential shortcomings.

In addition, the objective of proposing detailed options for reform was redirected to align with the multi-stakeholder dialogue approach adopted by BIODEV2030. The initial objective was to come up with three to four detailed suggestions for reform, targeting one parameter of a PPI (amount, base, conditions for granting, etc.) with a qualitative analysis of the positive or negative impacts according to the categories of stakeholders. In view of the limited time available for the mission, which did not allow for a detailed prioritisation of the reforms, and the need to adopt a nuanced policy mix position compatible with the multi-stakeholder approach and to avoid a prescriptive stance, this objective was redirected with the endorsement of IUCN and WWF-France towards the suggestion of a list of measures to be discussed and explored by platforms and with the support of national experts.

Experts were identified with varying degrees of success according to the country and sector, depending on the profile sought by the TAs and the responses obtained. In order to complete the country analyses within the given timeframe, Altai also prioritised speaking with "resource contacts" with expertise in a particular subject area, but who were not necessarily contractually bound and did not always have the cross-sector/generalist expertise (economics, environmental law, etc.) sought by some TAs. Interviews with these resource contacts did lead to recommendations for consultants, but

the time constraints of the assignment did not allow for systematic interviews with the recommended profiles. Generally speaking, it was not easy to find the profiles most commonly sought by TAs (generalist experts with knowledge of both public policy, or even the legal framework, and the sectors), particularly in countries with very diverse sectors, which limited the number of profiles Altai was able to offer.

Given the timeframe and resources available for the study, the areas of research were ranked according to priority. However, the country analyses could be taken further at national level to provide a more detailed understanding of the integration of biodiversity into public policy:

- **Integrating socio-economic issues:** The scope of this study covers exclusively biodiversity issues. However, mainstreaming aims to address the underlying causes of biodiversity loss, which include the reduction of poverty and gender inequalities, in a context of growing needs. We therefore must ensure that biodiversity issues are always considered alongside socio-economic development issues, including issues relating to local communities and indigenous populations, to guarantee a credible and fruitful dialogue. The challenges of adapting sectors to climate change must also be taken into account.
- **Study of the institutional framework:** In addition to the legislative framework, analysing the institutional framework makes it possible to identify the roles and responsibilities of each stakeholder (ministries and other public institutions, decentralised services, professional organisations, etc.), the balance of power and any conflicts of prerogatives, etc. A sound understanding of this framework is particularly necessary for the analysis of the resources that can be mobilised and potential obstacles to reform and the effective implementation of policies. The institutional aspects were largely addressed by the DIAG2s and when the platforms were set up, and were therefore only occasionally addressed in the country analyses.
- **Study of local policies:** Local authorities (at regional, provincial and municipal level, etc.) play an increasingly important role in the implementation of public policy in countries that have introduced a policy of decentralisation and an effective transfer of skills to local authorities. Prerogatives relating to environmental planning and management are often delegated to local authorities. Depending on their context, some local authorities have been able to put in place legislative frameworks that are more advanced than at national level, and to conduct experiments with public policies, which could provide learning opportunities for the national framework.
- **Study of programmes implemented by public institutions:** The programmes are major vehicles for government intervention. They are made up of a set of activities derived from national strategies and plans and implemented over a fixed period of time. These programmes are partly funded by international donors, who in turn influence how they are formulated, and are one of the key drivers promoting the integration of biodiversity into public policy, even though the use of strategic environmental and social assessments as a prerequisite for the implementation of major programmes generally remains fairly limited. But the multi-faceted support provided by the programmes, which often combine financial incentives and capacity building (awareness-raising, training, construction of infrastructure, etc.), their limited duration and the difficulty of accessing programming documents make them difficult to analyse, even though there are clear challenges in terms of synergy, sustainability, capitalisation and scaling up.
- **Identification of best practices and past experiments:** An initial survey has been carried out in some of the DIAG2s. This could be extended to include a study of the lessons learned from certain past programmes involving the State (see above) or not (activities carried out by NGOs, civil society, the private sector, etc.), with a view, for example, to institutionalising schemes that have proven effective.

- **Support for non-productive uses of biodiversity:** In the countries studied, there are recurring questions about alternative means of subsistence. Non-productive uses of biodiversity (ecotourism, sport hunting, services linked to the regeneration of biodiversity and natural resources, the water cycle, soil fertility, etc.) could be looked at in greater depth.
- **The political economy of reform:** Political economy is the study of the interactions between individuals, economic stakeholders, governments and public policies. It offers analytical keys for designing reforms and identifying potential levers/obstacles to their implementation (identification of different interest groups, social and economic climate, political labelling of reforms, the need for gradual reform, the existence of alternatives, the need for measures to support the adoption of alternative practices, etc.). Possible measures have been proposed in the country analyses, but an in-depth analysis of their political economy would be necessary to refine the details for reform.

A study of these different areas could provide useful input for a more in-depth examination of the priority PPIs and the shortcomings identified. Implementation stands out as a major shortcoming. And yet, this can stem from a variety of causes (lack of financial resources, technical capacity, political will, implementing legislation, etc.), which need to be explored in greater depth in order to provide an adequate response.

Table 1. Priority sectors for Phases 1 and 2 of BIODDEV2030

Region	Country	Sectors and industries - Phase 1 (if different from Phase 2)	Sectors and industries - Phase 2						Operator
			Agriculture	Fishing	Breeding	Logging	Mining	Other	
West Africa	Benin		Rice, Soya and Cotton			Forestry			IUCN
	Guinea		Fruit and vegetables Rice			Timber	Gold mining		IUCN
	Senegal		Market gardening	Small-scale fishing	Pastoralism		Mining and quarrying		IUCN
Central Africa	Cameroon	Plantations Food crops Infrastructure	Cocoa Agro-industrial plantations						WWF
	Congo	Agriculture Mining	Outside the scope of the study						WWF
	Gabon		Cocoa				Mining		WWF
East Africa	Ethiopia		Cereals Coffee		Pastoralism	Wood energy			IUCN
	Kenya	Tomato Pastoralism Wood energy	Food crops Horticulture		Pastoralism	Forestry			IUCN
	Uganda		Plantations Food crops			Wood energy			IUCN
Southern Africa	Madagascar	Maize Gold mining Shrimp fishing		Shrimp fishing					WWF
	Mozambique		Soya Sugar cane	Fishing (crab, shrimp)			Mining		IUCN
Maghreb	Tunisia	Bottled water Cement Banking	Agriculture					Food industry	WWF
Oceania	Fiji		Kava	Coastal fishing					IUCN
Caribbean	Guyana	Rice Sugar cane Gold mining		Fishing					WWF
Asia	Vietnam			Aquaculture (shrimp and fish)		Forestry			WWF
Total (phase 2) / 14 countries			11	6	3	6	4	1	

2. METHODOLOGY

2.1. FRAMEWORK (JUNE 2024)

The objective of the framework phase was to establish a common understanding by Altai, IUCN and WWF of the objectives of the mission, the stages of implementation and the methods of analysis. This phase culminated in the production of a framework note, which was approved by IUCN and WWF.

Launch meeting

The launch meeting brought together teams from Altai, IUCN and WWF. This meeting was held remotely on 31 May 2024, and served to define the specific expectations of IUCN and WWF with regard to the study, to agree on the proposed methodology and the timetable for the mission, and to compile the documents and contacts necessary for the framework phase.

Preliminary review of documentation & framework interviews

Altai reviewed the documents provided by IUCN and WWF and began an initial review of external literature to provide input for the framework (general literature on biodiversity-related public policies - OECD, FAO, World Bank, IMF, UNDP, etc.), a review of the diagnoses carried out in Phase 1 of BIODEV2030, etc., which was then taken further during the data collection phase.

In order to further the discussions on expectations of the exercise and adaptations of the approach according to the countries, preliminary interviews were conducted within the project coordination team. Altai also conducted additional framework interviews with members of the project teams in the countries, in particular the TAs (Senegal, Kenya, Madagascar, Gabon), in order to provide input for the framework exercise on the perceptions of the first beneficiaries of the study and to identify their needs and expectations.

Interviews with TAs & Pre-identification of national experts

Finding national experts capable of supporting the TAs in preparing sectoral dialogues was identified as a priority at the start of the assignment, with a view to involving them from the second platform meetings, scheduled to begin in November 2024.

Altai met with the various TAs in June and July to hear their expectations for the exercise, and in particular their needs in terms of expert profiles. The needs expressed were varied: general experts (public policy analysts, economists, legal experts, dialogue mediators) and sector experts, technical experts and network leaders. Experts were pre-identified on the basis of these needs as expressed, using: i) recommendations from the TAs; ii) recommendations from the French embassies / AFD as requested by IUCN and WWF; iii) the Altai network; iv) online searches (press articles, academic publications, LinkedIn). This identification work was continued during the data collection phase (see next section). A [shared document](#) was put on Google Drive in order to carry out this exercise in collaboration with the TAs and avoid duplication in the search (see screenshot Figure 1).

Figure 1. Screenshot of the shared expert identification file

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	Type	Status	Date	Name	Surname	Gender	Organization	Role	Email	Phone number (optional)	Field of expertise	Type of profile	Identified by	Comments	Appreciation Altai
1	Resource	Email sent	16/10	Nghia	Tran Dai	Male	Institute of Policy and Strategy for Agriculture and Rural Development	Researcher	tran.nghia99@gmail.com		Policy and Strategy	Technical	Technical Assistant		
2	Can be co...	Done	2/10	Quyen	Cao Le	Female	Vietnam Institute of Fisheries Economics and Planning	Researcher	quyenrifep@gmail.com		Economics, Fisheries	Technical	Technical Assistant		
3	Can be co...	Email sent	16/10	Trieu	Van Hung	Male	Forest Science Institute of Vietnam	Director General	trieuvanhung@fhn.vnn.vn	84 4 7550806; 84 0913 270636	Forestry	Mixed	Coop		
4	Can be co...	Email sent	16/10	Phuc	Xuan To	M	Forest trends	Senior Policy Adviser	pto@forest-trends.org (tbc)		Forestry	Technical	Coop		

2.2. DATA COLLECTION (JULY-OCTOBER 2024)

In-depth review of documentation

In order to draw up the country analyses, the review of documentation carried out in the framework phase was expanded at the national level to include four types of resources:

- Sectoral diagnoses produced during Phase 1 of BIODEV2030;
- Public reports (FAO, ministries, donors, NGOs, etc.) and academic literature on the pressures exerted by the sectors and the public policy framework;
- National public policy texts (sectoral, economic, commercial, environmental). These include policy documents (strategies, multi-year plans or programmes, general policy letters, etc.); primary legislation (laws, codes, charters, treaties) establishing the foundation of the legal corpus; secondary legislation (decrees, orders, etc.) bringing together the implementing texts. Where available, documents relating to government programmes were also consulted.
- International and regional public policy texts (binding and non-binding - conventions, directives, declarations, common policies, etc.).

The transversal report was based on country analyses and a general literature review, focusing mainly on reports produced by international organisations (OECD, FAO, World Bank, IFAD, IFPRI, IDDRI, etc.), as well as deliverables from projects dealing with issues similar to BIODEV2030 (BIOFIN³, COMBO⁴). The list of documents consulted is available in the bibliography sections of the country analyses and this report.

Semi-structured interviews

The literature review was supplemented by semi-structured interviews, in which the TAs also participated according to their availability. These interviews helped to identify the PPIs that are most likely to shape harmful practices, consolidate the analysis of shortcomings in public policy and suggest priority measures for discussion on the platforms. They also aimed to identify good practice or failed reforms that had taken place in the past, and to collect documentary resources and additional contacts. Altai conducted a total of 125 interviews in the course of this study.

Altai met with two types of people by videoconference:

- **Resource contacts** (internal WWF/IUCN/AFD experts, ministries, professional organisations, NGOs, etc.): these people were interviewed to provide additional details for the country analysis through their strong knowledge of the issues. These interviews were invaluable in obtaining recommendations of experts who could potentially be contracted by IUCN and WWF to support the work carried out on the platforms.
- **Potentially contractable experts** (individual consultants - including academics, specialist firms): these interviews were structured in the same way as the interviews with the “resource contacts”, and were the first stage in the process of potentially recruiting experts to support the discussions on the platforms. An assessment of the suitability of each expert for the needs expressed by the TAs was recorded by Altai in the contact management document shared with the TAs.

³ The Biodiversity Finance Initiative (BIOFIN) is a programme launched in 2012 and funded by the UNDP, the EU and various governments. It aims to develop a methodology for identifying and mobilising financial resources for biodiversity funding in each country, in particular for implementing National Biodiversity Strategies and Action Plans (NBSAPs). To date, the programme covers 132 countries (91 of which were added following Kunming-Montreal).

⁴ Financed by AFD and the FFEM, the COMBO 2016-2020/COMBO+ 2021-2025 project (“Conservation, Mitigation and Biodiversity Offset”) has been implemented in six countries (Guinea, Madagascar, Uganda, Mozambique, Laos and Burma). It aims to reconcile economic development and biodiversity conservation by supporting the development of policies to mitigate the impacts of development.

2.3. ANALYSIS OF THE DATA COLLECTED

Altai used the definitions set out in the table below during the exercise.

Public policy: action taken by government bodies whose legal, technical and operational procedures are formalised in public documents (laws, decrees, orders, strategies, plans, etc.)^{iv}.

Public policy instrument (PPI): means of action or a scheme through which governments encourage individual and collective stakeholders to take decisions and carry out actions compatible with a given objective^v. It constitutes the building blocks/actions that make up a public policy and are aimed at achieving the objectives of that policy.

Policy mix: Combination of different PPIs in order to maximise their effects towards achieving a given objective.

Economic policy: all the means used by the State to steer, stimulate and regulate economic activity; covers monetary policy, taxation, budget, etc.^{vi}.

Trade policy: the range of means used by the State to influence a country's trade relations with foreign countries, by controlling the rules for importing and exporting goods and services^{vii}.

Sectoral policy: the range of means used by the State to regulate economic activity in each sector, taking into account the specific features of each market; details the role of the government and that of non-governmental players^{viii}.

Priority measure (*typology taken from the terms of reference*):

- Redirecting instruments that are harmful to biodiversity: Modification of the parameters (objective, budget, conditions, etc.) of the instrument so that it encourages the adoption of less harmful practices (e.g. conditioning on environmental criteria)
- Improving instruments that promote biodiversity: Modification of the parameters of "green" instruments to provide an even greater incentive to adopt less harmful practices
- Introduction of new instruments that promote biodiversity: Description of parameters
- Effective implementation of existing instruments in the country's legislation.

PPI typology reference framework used

A typology is an approach that consists of segmenting a complex reality into different categories in order to facilitate analysis, classification and study. In order to meet the objectives of the assignment, and in particular to ensure a sufficiently exhaustive review of PPIs and associated reform scenarios, **the data collected by Altai via the literature review and the interviews falls within a predefined framework consisting of a typology for categorising PPIs.**

Based on a literature review^{ix}, Altai used the following PPI typology:

- **Economic instruments:** are based on market mechanisms, modifying the parameters of the rational economic calculation of economic agents (maximising the difference between the revenues and costs of their activity) - *examples: subsidies, taxes, price regulation, payments for ecosystem services (PES), etc.*
- **Regulatory instruments:** change the "rules of the game" by authorising/prohibiting - *examples: zoning; authorised and prohibited practices; quotas; standards, etc.*
- **Informational instruments:** increase the transparency of actions and the accountability of stakeholders to society - *examples: certification; standards, promotion of good practice, reporting obligations, etc.*
- **Programmatic and support instruments:** create a framework that encourages virtuous practices. This category includes both instruments relating to general services and framework documents, which

are non-binding but which can nevertheless have an incentive effect on the players - *examples: R&D, infrastructure, training, strategies, programmes, etc.*

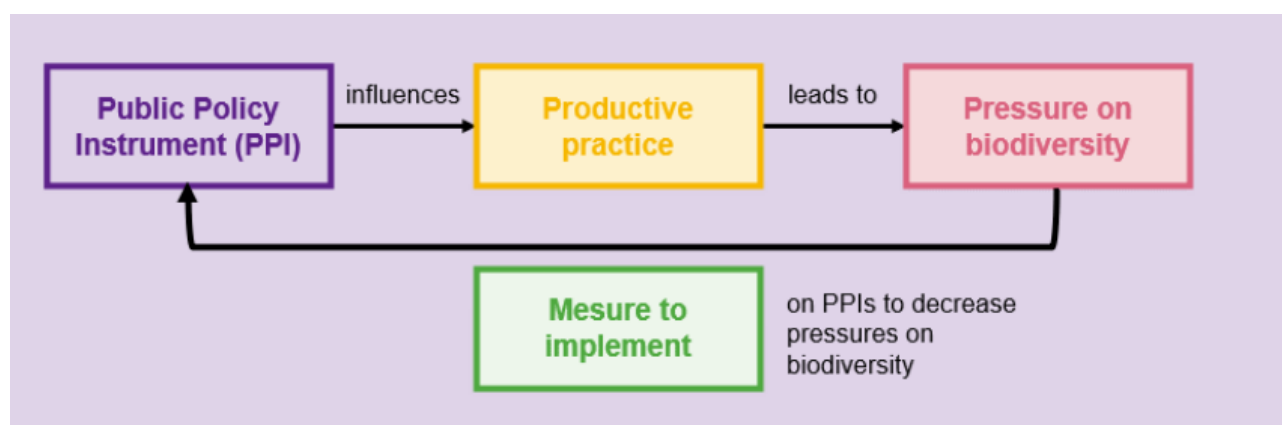
These instruments can then be divided into sectoral policy, economic and fiscal policy, and trade policy (see definitions above). Examples of PPIs organised according to this typology are presented in Appendix 5.3.

Method of analysis

The country analyses set out to highlight the way in which sectoral, economic and commercial public policies⁵ shape the production practices that exert the greatest pressure on biodiversity, and then to suggest measures to reduce this pressure (Figure 2). This approach is based on the DPSIR (Driver, Pressure, State, Impact, Response) framework. Detailed data on the consequences for biodiversity (State) and humans (Impact) are available in the diagnoses carried out in Phase 1 of the BIODDEV2030 project. The description of pressures uses the nomenclature defined by the IPBES.

A typology of measures to be implemented was drawn up: reform (redirection, strengthening or abolition) of an existing instrument; effective application of an existing instrument; introduction of a new instrument.

Figure 2. Outline of the approach used for country analyses



A classification of PPIs according to their impact on biodiversity was proposed: ● blind to biodiversity; ● takes biodiversity into account.

The sectors were identified on the basis of the two diagnoses carried out in Phase 1 of BIODDEV2030, with possible changes in Phase 2 depending on the context of each country. DIAG2s, external literature and interviews were used to prioritise the PPIs that have the greatest influence on practices and the measures to be considered to improve their consideration of biodiversity.

2.4. DRAFTING OF COUNTRY ANALYSES AND THE TRANSVERSAL REPORT (SEPTEMBER-OCTOBER 2024)

Drafting country analyses

The country analyses aim to foster a common understanding of the public policy framework for each sector and its shortcomings among the stakeholders of the platforms, with a view to preparing discussions on reform measures.

They are presented in separate documents and are structured as follows:

⁵ The main public policies considered were national policies. Where relevant, regional and international policies were also studied, as well as the trade policies of the main partner countries.

- i. A cover page summarising the context and methodology of the study;
- ii. A short section on the context of the country, designed to present the situation of biodiversity in the country, the main national objectives for biodiversity (including NBSAPs) and any existing mechanisms for mainstreaming biodiversity in public policies (integrated national strategy, multi-stakeholder policy platform and other initiatives);
- iii. A detailed section by sector (sectoral context, the trio of: main *pressures* on biodiversity, associated harmful *practices* and the main *PPIs* shaping these practices, suggestions for measures)

The analyses were submitted to the study's steering team and the country teams (in particular the TAs and regional coordinators) **for approval**. They were finalised after incorporating feedback received by Altai.

Drafting the transversal report

This report draws on the cross-cutting lessons learned from the country analyses, as well as a literature review and general interviews (list of interviews conducted in Appendix 5.2). It aims to provide an overview of the lessons learned from the country analyses by aggregating the data collected on the 15 countries and highlighting recurring patterns and specific features. In this way, it aims to contribute to the formulation of the agendas of the platforms' workshops and advocacy strategies with governments, and possibly during major international events (COP, etc.). The project also aims to create an international community of practice, with expertise in mainstreaming, which could capitalise on this learning. The report was finalised following feedback received from IUCN and WWF.

Recording video presentations

Altai recorded two short video presentations - one in French and one in English - to provide stakeholders on the multi-stakeholder platforms with access to a presentation of how the country analyses were developed, and what they were intended to achieve.

3. RESULTS OF THE TRANSVERSAL ANALYSIS

3.1. COMPARISON OF NATIONAL CONTEXTS

3.1.1. SOCIO-ECONOMIC CONTEXT

Main socio-economic indicators & dependence on biodiversity

All the countries covered by Phase 2 of BIODDEV2030 face major socio-economic development challenges (Table 2). Of the 15 countries covered, seven belong to the Least Developed Countries (LDCs) (Benin, Ethiopia, Guinea, Madagascar, Mozambique, Senegal and Uganda), while the other eight are developing countries^x. These countries all have low per capita income levels and structural obstacles to development, including human challenges (infant mortality, food insecurity, education, employment for young people and women, etc.) and are highly vulnerable to economic and environmental shocks. However, four countries stand out as being at a more advanced stage of development, marked by the relative diversification of their economies (Tunisia, Vietnam, Guyana, Fiji).

The economies of these countries also rely heavily on biodiversity-dependent sectors (agriculture, forestry, fisheries) to generate wealth, employment and tax revenues. These sectors account for 18% of GDP on average in the BIODDEV2030 countries, compared with 4.1% worldwide^{xi}. Agriculture is generally the leading employment sector (40% on average in the BIODDEV2030 countries^{xii}). And yet, these sectors are facing challenges such as demographic growth, changes in production and consumption patterns, depletion of resources, growing environmental shocks (droughts, diseases, invasive species, etc.), and changes in modes of governance (weakening of traditional management structures, political instability, introduction of decentralisation, influence of private stakeholders at the heads of globalised value chains). These challenges are particularly acute in the primary sector, which generally has the lowest income groups. At the same time, the production systems are marked by a high degree of fragmentation and a predominantly informal sector, due to the proportion of small individual producers.

The extractive sector, which has a major impact on biodiversity, both directly (excavation, fragmentation of habitats, disruptions to natural environments, pollution) **and indirectly** (greenhouse effect due to hydrocarbons), **is very important in certain BIODDEV2030 countries**, in particular Congo, Gabon, Guyana, Guinea and Mozambique. Against a backdrop of volatile global prices and fragile governance, ensuring the contribution of revenues from the extractive sector to the sustainable development of countries is a major challenge.

Table 2. Selection of socio-economic indicators for BIODDEV2030 countries

	GDP per capita (\$) ^{xiii}	HDI (ranking out of 193) ^{xiv}	Annual population growth rate (%) ^{xv}	Share of primary sector in GDP (%) ^{xvi} (agriculture, forestry and fisheries)	Profits from natural resources (% GDP) ^{xvii} (energy, mining, etc.)
Benin	1,435	173	2.7	25.4	2.3
Cameroon	1,674	151	2.6	16.7	5.5
Congo	2,509	149	2.3	9	37.7
Ethiopia	1,294	176	2.5	35.8	5.9
Fiji	5,868	104	0.7	8.3	2.3
Gabon	8,420	123	2	5.8	18.5
Guinea	1,664	181	2.4	28.2	4.5
Guyana	20,626 ⁶	95	0.6	10	33.7
Kenya	1,950	146	2	21.3	1.2
Madagascar	529	177	2.4	21.1	5.5

⁶ To provide a more accurate representation, the GDP per capita figure used to calculate the average for Guyana is \$6,863, which corresponds to the value for 2020, the year preceding the start of oil production.

Mozambique	608	183	2.8	26.7	14.9
Uganda	1,014	159	2.8	23.8	7.5
Senegal	1,746	169	2.5	16.4	4.4
Tunisia	3,895	101	0.8	9.5	2.2
Vietnam	4,347	107	0.7	12	2.5
Average BIODDEV2030	2,921	146	2	18	9.9
World	13,138	1	0.9	4.1	3.0

Financing

The mobilisation of domestic resources in developing countries is a key element in the financing of public policies, but it still faces many obstacles. Overall, tax revenues in countries in the Global South are insufficient to provide citizens with basic public services (health, education, etc.) and at the same time finance the reforms necessary for the sustainable management of sectors impacting biodiversity. This shortfall is due in particular to the burden of the informal economy, but also to the relative loss of state control over income from the exploitation of natural resources (mining, hydrocarbons) following the wave of liberalisation in the 1980s and 1990s. While there is a great deal of discussion today around taxing the profits of multinational companies, the question of improving fiscal capacity more generally is still not sufficiently addressed^{xviii}. Moreover, in countries that have begun decentralisation, local taxation has a very low revenue rate, severely limiting the resources of local authorities to apply their prerogatives. There is generally a significant gap between the powers transferred and the resources available⁷. The prevalence of corruption is also a major issue.

In addition, most of the sectors targeted by this study play a significant role in generating budgetary revenue, prompting the State to support their growth. This is particularly true of export-oriented sectors (cocoa, coffee, seafood, minerals, etc.), which generate tax revenue (notably export tax) and foreign currency to finance other imports (foodstuffs, energy, etc.) and public services⁸. Beyond the incentives put in place to help these sectors grow, which can be detrimental to biodiversity, this also raises issues of traceability and the use of income from the sectors, which tends to be channelled towards other needs rather than financing the sustainable management of the sector (as is the case with fishing levies, for example).

International cooperation also plays an essential role in supporting and financing reforms that promote biodiversity. Some donors make their loans and grants conditional on public policy reforms, focusing primarily on governance and transparency, but also increasingly on the environment and climate change issues. Some financing is therefore conditional on the inclusion of standards dedicated to reducing and offsetting impacts on biodiversity. The amount of financing from donors towards biodiversity, monitored by the Rio markers, reached 7.2 billion USD in 2020, mostly through donations^{xix}. Mozambique, Fiji and Madagascar are the BIODDEV2030 countries receiving the most support in terms of the share of Official Development Assistance (ODA) as a percentage of GDP (13.9%, 7.2% and 6.5% respectively^{xx}). However, this heavy reliance on international financing raises questions in terms of project ownership and dependence on donor strategies.

3.1.2. BIODIVERSITY ISSUES

The BIODDEV2030 countries belong to seven different critical ecosystems for biodiversity (hotspots): the Mediterranean Basin (Tunisia), the Afromontane of East Africa (Kenya, Ethiopia, Uganda), the Guinean

⁷ In an attempt to remedy this, Guinea created a National Agency for the Financing of Local Authorities (*Agence Nationale de Financement des Collectivités Locales* - ANAFIC) in 2017, responsible for managing the National Fund for Local Development (*Fonds National de Développement Local* - FNDL). This fund is supplemented by the state budget allocated to local authorities, 15% of mining taxes, the budget of sectoral ministries in return for transferred powers and funds from technical and financial partners. ANAFIC, for example, has produced a practical guide to drawing up Local Development Plans, integrating environmental issues as required by law ([source](#)).

forests of West Africa (Guinea, Benin, Cameroon), the coastal forests of East Africa (Mozambique, Kenya), the Congo Basin (Cameroon, Gabon, Congo), the islands of the South-West Indian Ocean (Madagascar), the Indo-Burmese region (Vietnam) and Polynesia-Micronesia (Fiji)^{xxi}. These ecosystems are of global importance for the conservation of species diversity, but also for ecosystem services (carbon storage, regulation of the water cycle, etc.). However, they are increasingly compromised due to anthropogenic pressures⁹, leading to a deterioration in the ecosystem services they provide.

3.1.3. REVIEW OF THE LITERATURE ON MAINSTREAMING

Biodiversity mainstreaming is generally defined as the integration of biodiversity and the services it provides into policies and practices that depend on or have an impact on biodiversity^{xxii}. While the CBD text refers to mainstreaming implicitly, the concept appears explicitly from 2010 in the Aichi Biodiversity Targets, which mention in particular the challenge of repurposing incentives that are harmful to biodiversity, including subsidies. Many documents have attempted to establish analytical frameworks for mainstreaming in order to clarify the implementation of these commitments.

Research on mainstreaming has focused in particular on subsidies and other economic instruments, at a time when public funds are dwindling (due to rising debt), meaning that they must be used effectively and conflicting actions must be minimised.^{xxiii} In particular, in 2008, the OECD noted that governments' strategies largely involved the introduction of pro-biodiversity economic instruments, rather than repurposing harmful subsidies^{xxiv}, raising issues of consistency.

The areas most studied for mainstreaming are agriculture and international trade. Many publications have appeared, driven in part by the Biodiversity Mainstreaming Platform led by the FAO and the extent of the pressures on biodiversity due to agriculture. In particular, they highlight the harmful effect of subsidies based on the quantity produced (output subsidy) and the quantity of inputs used (input subsidy)^{xxv}. International trade has also been widely identified as a key vector of pressure on biodiversity, which should be reformed by making tariff preferences conditional on sustainability criteria for imports and by tightening international standards^{xxvi}. Particular attention should nevertheless be paid to supporting developing and least developed countries, to avoid their exclusion from international trade due to stronger tariff and non-tariff barriers.^{xxvii}

Different mainstreaming strategies have also been identified. The CBD proposes three types of strategy: i) reducing the negative impacts and increasing the positive impacts of sectors on biodiversity; ii) enhancing and restoring biodiversity and ecosystem services; iii) securing local communities' access to the benefits derived from the use of biodiversity and integrating them into the design and implementation of policies for biodiversity^{xxviii}. The OECD, for its part, proposes four other priority areas: i) integrating clear biodiversity indicators into the measurement of public policy performance; ii) using fiscal and economic instruments; iii) integrating nature-related risks into the financial sector; iv) reforming trade incentives that create market distortions in favour of production that is harmful to biodiversity^{xxix}.

One of the main areas of research concerns the political economy of reforms, studying the interactions between individuals, economic stakeholders, governments and public policies. Political economy focuses in particular on the balance of power between stakeholders, including potential winners and losers from reforms. The aim is to establish frameworks for identifying favourable environments for reform, the stages of implementation and the factors for success and failure. Figure 3 presents an initial framework describing the five areas in which the reforms can be implemented^{xxx}.

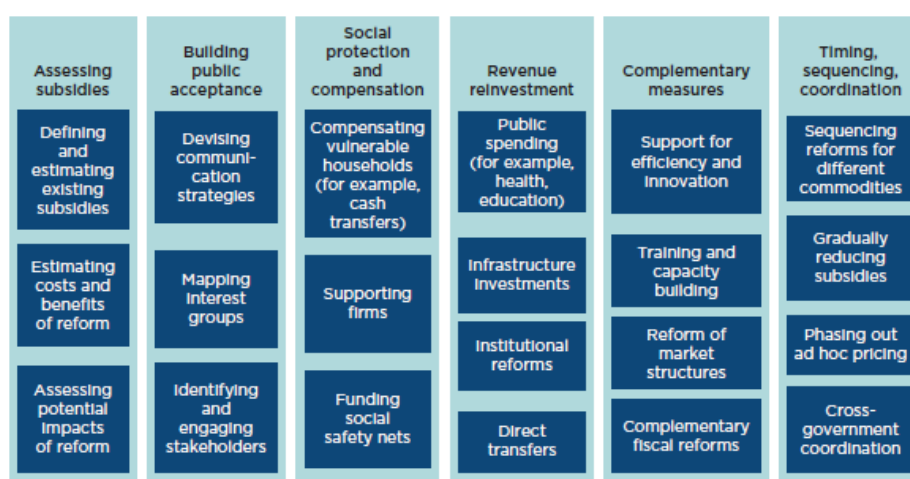
⁹ Changes in land use, overexploitation of resources, climate change, pollution, invasive alien species (IPBES)

Figure 3. The five areas of policy implementation (Eldridge et al., 2020)



The World Bank also proposes six key principles for successful incentive reform (see **Erreur ! Source du renvoi introuvable.**)^{xxxi}. According to its report, the easiest subsidies to reform are those that are already ineffective and do not achieve their primary objective (increased productivity, higher wages for small-scale producers, etc.). The report also stresses the need for each reform to be designed as a package of measures to remove barriers to change (access to information, financial and technical capacities, uncertainty, etc.) and to mitigate short-term negative effects, particularly for vulnerable populations. Finally, political will and the sustainability of the policies promoted are essential^{xxxii}.

Figure 4. Six principles for successful subsidy reform (World Bank, 2023)



Finally, the literature identifies certain recurrent shortcomings in the public policies of developing countries. The FAO lists several shortcomings in the agricultural sector: the lack of tax levers, the prioritisation of consumer protection over producer protection (e.g. price caps), incentives that are largely received by medium and large producers (output subsidy, input subsidy, subsidies based on surface area/size, support for general services such as R&D), the concentration of incentives on a limited number of basic foods that are rich in calories and proteins, which has disadvantaged other types of food, including fruit and vegetables^{xxxiii}.

3.1.4. THE INTERNATIONAL FRAMEWORK OF MAINSTREAMING

International agreements have intensified since the 1990s in order to counter this deterioration. There is now a wide range of general instruments¹⁰, some binding¹¹ and some non-binding¹², devoted to biodiversity, the climate and desertification. These conventions work in conjunction with sectoral instruments adopted by BIODIV2030 countries, particularly in sectors with a nationwide impact. The fishing and mining sectors have the most binding agreements. An agreement to put an end to certain harmful subsidies that contribute to overfishing, illegal, unreported and unregulated fishing (IUU) and the overexploitation of marine resources was signed by the WTO in 2022 and is in the process of being ratified. The agreements on agriculture were made in the early 2000s and are mainly focused on the control of phytosanitary products, GMOs and the regulation of subsidies to promote international trade. No substantial changes have been made to the global agricultural framework since. The forestry sector is also marked by the absence of a binding international agreement, although the development of the REDD+ framework¹³, which remunerates countries for reducing carbon emissions from deforestation and forest degradation, partially provides an international framework for forest management by integrating forests into global efforts to combat climate change¹⁴. The pastoralism sector is not subject to any specific international convention, but is indirectly governed by conventions relating to the rights of indigenous peoples and their knowledge¹⁵.

These agreements were applied at regional level from the mid-2000s. The African Union's Agenda 2063, adopted in 2015, is one of the key development strategies for Africa. The Economic Community of West African States (ECOWAS) and the *Union Economique et Monétaire Ouest-Africaine* (West African Economic and Monetary Union - UEMOA) have drawn up various non-binding strategies on agriculture, sustainable development and the fight against desertification. Nevertheless, the ECOWAS Agricultural Policy (ECOWAP), the COMESA (Common Market for Eastern and Southern Africa) Protocol on the Environment, and the IGAD (Intergovernmental Authority on Development) Protocol on Transhumance in East Africa are examples of binding frameworks. The fisheries sector is the most heavily regulated by binding regional frameworks, such as the ECOWAS and UEMOA regulations on fisheries management and the COMESA regional framework for sustainable fisheries management. Regarding the other regions covered by BIODIV2030, Guyana has joined the Caribbean Regional Fisheries Mechanism and its common policy, which include obligations. Vietnam ratified the Mekong Agreement (Mekong River Commission - MRC) and the ASEAN Framework Agreement on Access to Genetic Resources and Fair and Equitable Sharing of Benefits, which are also binding. Fiji ratified the Noumea Convention and the Niue Treaty on the protection of marine ecosystems and sustainable fishing.

In addition to these agreements, there are international and regional norms and private certification standards. Changes in the context of international trade, involving the intensification of non-tariff barriers (quotas, technical and health standards, administrative red tape, etc.) and in particular the environmental requirements of importing countries, are also likely to have an increasingly strong impact on the practices of exporting countries. As a result, lucrative markets such as the EU, the USA, Japan, etc. are stepping up measures to tighten environmental requirements (traceability, legality, protection of endangered species, combating imported deforestation, etc.), both through dedicated regulations and by incorporating these clauses into free trade agreements. The EU is leading the way, with the Voluntary Partnership Agreements on

¹⁰ Convention on Biological Diversity (CBD), Kunming-Montreal Global Biodiversity Framework (GBF), Nagoya Protocol on Access to Genetic Resources and Benefit Sharing, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Ramsar Convention on Wetlands

¹¹ United Nations Framework Convention on Climate Change (UNFCCC), Paris Agreement

¹² United Nations Convention to Combat Desertification (UNCCD)

¹³ Reducing Emissions from Deforestation and Forest Degradation in developing countries

¹⁴ The limitations of this mechanism are nevertheless regularly pointed out, including the methodological shortcomings that frequently lead to an overestimation of the amount of CO₂ avoided and, ultimately, to an undervaluation of the price of carbon credits.

¹⁵ United Nations Declaration on the Rights of Indigenous Peoples, Nagoya Protocol on Access to Genetic Resources and Benefit Sharing, Kunming-Montreal Global Biodiversity Framework (GBF)

Forest Law Enforcement, Governance, and Trade (FLEGT VPA)¹⁶ on imports of sustainable timber, and its new regulation on imported deforestation (see below).

The European Union Deforestation Regulation (EUDR)

The EUDR aims to ban imports into the EU of agricultural products that have caused deforestation. It targets seven commodities: soya, beef, palm oil, rubber, cocoa, coffee and wood. They must be traceable (geolocation of plots), involve zero deforestation (not from deforested land after 31/12/2020) and legal (compliance with national and international regulations in force). Announced in 2021, the EUDR was due to come into force on 30 December 2024. The European Commission proposed to the European Parliament and Council that the entry into force of the Regulation be postponed by one year, to ensure proper implementation^{xxxiv}. Considering the number of small producers in some countries, traceability is a major constraint.

Among the BIODEV2030 countries, the EUDR particularly concerns Cameroon (cocoa), Ethiopia (coffee), Vietnam (wood) and Gabon (cocoa).

International initiatives to promote transparency are also emerging, such as the Fisheries Transparency Initiative (FiTI) and the Extractive Industries Transparency Initiative (EITI), which introduce regular reporting obligations and membership criteria. The proliferation of internationally recognised standards is also significant (Rainforest Alliance, Fairtrade, Organic certification for agricultural products, Marine, Aquaculture and Forest Stewardship Councils - MSC, ASC, FSC).

3.2. LINKS BETWEEN PRESSURES ON BIODIVERSITY, PRODUCTION PRACTICES AND PUBLIC POLICIES

One of the key objectives of this study was to highlight the “tryptich” of pressures on biodiversity, production/sectoral practices and public policies in the target countries, with particular emphasis on the ways in which public policies seek to influence practices. The following conclusions draw on the public policy analyses carried out for each country, as well as the sectoral diagnoses carried out in Phase 1.

3.2.1. LINK BETWEEN PRESSURES ON BIODIVERSITY AND PRODUCTION PRACTICES

An analysis of the main sectoral practices in the target countries that are harmful to biodiversity highlights three major pressures¹⁷: destruction, fragmentation and artificialisation of natural environments (or changes in land use), pollution (particularly of soil and water) and overexploitation of resources (see Table 3). These pressures contribute massively to the risk of species extinction and the degradation of ecosystem services (supply of renewable natural resources, water cycle, productivity of agricultural soils, reduction in the risk of natural disasters, etc.).

The threats posed by the introduction of invasive alien species, whose spread is facilitated by international transport, agricultural practices (soil left bare), forestry practices (planting of fast-growing exotic species) and livestock movements, were less prominent in the analysis.

Climate change, due to rising CO₂ emissions from human activities, is the fifth pressure on biodiversity. The 15 BIODEV2030 countries account for around 2% of global emissions^{xxxv} and are therefore a minor driver of climate change. They are, however, home to carbon sinks of global importance, notably the Congo Basin, but deforestation and soil degradation are reducing their capacity to store carbon. Furthermore, the BIODEV2030 countries are among those most vulnerable to climate change, particularly island nations and those located in

¹⁶ There is controversy, however, surrounding the FLEGT VPAs over their limited impact on global deforestation, the disproportionate emphasis on legality without addressing broader issues of sustainability, and the difficulties in effectively involving local communities and indigenous peoples in forest governance.

¹⁷ As mentioned above, the IPBES has identified five major pressures on biodiversity: the destruction and artificialisation of natural environments (or changes in land use), pollution, overexploitation of resources, invasive alien species and climate change.

areas with extreme climates or subject to severe climatic events (droughts, cyclones, etc.). Ecosystems play a central role in adaptation and resilience to climate change.

The analysis also highlights many similarities between countries in terms of the main harmful practices. While there are national specificities, often linked to traditional practices (type of fishing equipment used, farming practices, livestock management methods, mining techniques, etc.), these can most often be categorised into broader practices (use of non-selective fishing equipment, release of toxic products from mining, misuse of chemical agricultural inputs, etc.), thus enabling comparisons to be made between countries.

Table 3. Link between pressures on biodiversity and production practices in the countries and sectors studied

Sector	Pressure on biodiversity	Main harmful production practice	Most-affected countries in the analysis (sector if relevant)
Agriculture	Destruction and artificialisation of natural environments	Conversion of natural environments (forests, wetlands, etc.) into farmland and plantations	Benin, Cameroon, Ethiopia, Fiji, Gabon, Guinea, Kenya, Mozambique, Senegal, Uganda
	Pollution	Inappropriate use of chemical inputs (use of toxic or unsuitable products, non-compliance with dosages and rules for use, storage and waste disposal)	Benin, Cameroon (agro-industrial plantations), Guinea, Kenya, Mozambique, Senegal, Tunisia, Uganda
Logging	Overexploitation of resources / Destruction and artificialisation of natural environments	Excessive extraction of wood resources (non-selective felling, targeting of native species with slow regeneration, etc.)	Benin, Ethiopia, Guinea, Kenya, Uganda, Vietnam
		Inappropriate reforestation practices (insufficient replanting, poor spatial planning, single-species replanting with exotic species in natural forests)	Benin, Ethiopia, Guinea, Kenya, Uganda, Vietnam
		Use of inefficient charcoal production and cooking methods	Ethiopia, Kenya, Uganda
Fishing	Overexploitation of resources	Increase in fishing effort	Fiji, Guyana, Madagascar, Mozambique, Senegal
		Use of non-selective fishing equipment	Fiji, Guyana, Madagascar, Mozambique, Senegal
		Fishing in breeding areas	Guyana, Madagascar
		Harmful processing practices (processing juveniles into fishmeal, smoking with mangrove wood)	Senegal
Aquaculture	Pollution	Inappropriate use of medicines and chemicals	Vietnam
	Over-exploitation of resources	Use of fishmeal from wild fish in aquaculture feed	Vietnam
Extractive industry	Destruction and artificialisation of	Clearing and excavation of natural areas	Gabon, Guinea, Mozambique, Senegal

(mining and hydrocarbons)	natural environments	Poor management of excavated materials (leading to sedimentation in waterways)	<i>Gabon, Guinea</i>
	Pollution	Discharge of toxic products	<i>Gabon, Guinea, Mozambique, Senegal</i>
Pastoralism	Overexploitation of resources	Overgrazing (due to the increase in sedentarisation and the increase in livestock numbers)	<i>Ethiopia, Kenya, Senegal</i>
	Destruction and artificialisation of natural environments	Conversion of natural environments (particularly forests) into pastures	<i>Kenya</i>
Food industry	Pollution	Discharge of toxic industrial effluent	<i>Tunisia</i>
	Overexploitation of resources	Excessive pumping of water resources	<i>Tunisia</i>

However, while there is a general consensus on the degradation of ecosystems and their services, stakeholders still fail to recognise the link between practices and pressures. With ecosystems deteriorating so rapidly, over the space of one or two generations, there is a growing awareness of the need to take action (declining fish stocks, erratic rainfall, desertification, declining productivity of agricultural land, etc.). But some harmful practices, such as the use of chemicals in agriculture, aquaculture and mining, have recently become more widespread, resulting in a lack of knowledge and awareness of the risks. Certain traditional practices (traditional fishing equipment, gold mining, use of firewood, pastoralism, etc.) have also become harmful as a result of population growth and the increase in related pressures and extractions. With the diversification of methods of exploiting natural resources and the increasing complexity of competition for access, the attribution of impacts and the willingness of stakeholders to recognise their contribution to the damage observed is a challenge in itself. Faced with these changes in context, major efforts to raise awareness and increase responsibility are necessary and must involve all stakeholders (public, private, communities, NGOs, etc.).

3.2.2. LINKS BETWEEN PRODUCTION PRACTICES AND PUBLIC POLICY

3.2.2.1. The BIODIV2030 countries are stepping up their sectoral policies and gradually integrating biodiversity

To cope with the economic crises and growing levels of debt in many countries in the Global South in the 1980s and 1990s, large-scale liberalisation policies were introduced, causing governments to withdraw from the productive sectors. All of the BIODIV2030 countries (except Fiji) have been involved, to varying degrees, in the IMF's Structural Adjustment Programmes (SAPs), generally encouraged by the World Bank and other international lenders. With the rise in States' levels of debt, these plans were aimed at shifting from a planned economy to a market economy. They led to a drastic reduction in public spending, market liberalisation, deregulation and privatisation or standstill of public companies. In the agricultural sector, SAPs encouraged the opening up of world markets and the abolition of subsidies, which disadvantaged small-scale farmers. This often favoured foreign investors and reduced state control over revenues from natural resources, as well as their ability to regulate production methods or the import of inputs and other means of production. In West Africa, for example, this led to the dismantling of the major public agricultural companies that ensured some form of integration of the sectors, by distributing inputs to producers, collecting production and organising sales. This dismantling placed small-scale producers on the front line facing global markets and was too rarely and weakly accompanied by support measures enabling them to meet the demands of competitiveness and profitability.

The failings of liberal policies are now forcing governments to return to a certain form of voluntarism and to step up their intervention in these sectors. The proliferation of crises (the 2007-2008 food crisis,

the 2008 financial crisis, Covid-19, the Russian-Ukrainian war, etc.) has prompted governments to stabilise their economies and focus on essential public services. The rise in inequalities exacerbated by liberal systems is also leading to a return to state or even sovereignist policies. Governments are seeking first and foremost to improve the contribution of sectors to socio-economic development (wealth creation, job creation, reduction of inequalities, etc.). This involves measures to support the growth of the sectors (subsidies, public investment, etc.), but also regulatory measures to improve the collection of tax revenues and foreign currency (support for the formalisation of the sectors, strengthening the taxation system), making it possible to finance the State budget and public services (health, education, justice, etc.). In Senegal, for example, the doubling of world rice prices in 2008 led to emergency measures (temporary suspension of customs duties on imports, capping of the price of imported rice, introduction of a consumer subsidy) as well as the launch of the *Grande Offensive Agricole pour la Nourriture et l'Abondance* (Great Agricultural Offensive for Food and Abundance - GOANA) aimed at ensuring food self-sufficiency, in particular through massive investment in the development of irrigated areas and subsidies on inputs^{xxxvi}. GOANA was followed by the *Programme d'Accélération de la Cadence de l'Agriculture Sénégalaise* (Programme to accelerate Senegalese agriculture - PRACAS), also aimed at achieving food security and developing exports.

At the same time, governments are stepping up their efforts to preserve biodiversity. This is partly due to the increasing number of international commitments (see 3.1.2), but also to the growing signs of ecosystem degradation that are beginning to affect the resilience of human societies (increasing scarcity of resources, droughts, declining productivity of agricultural land, etc.). These interventions to protect biodiversity fall into two categories: conservation measures (in situ – through restrictions on access to vulnerable resources and the expansion of protected areas – and ex situ – through botanical gardens, seed banks, etc.), the restoration of certain ecosystems (e.g. mangroves) and the implementation of sustainable exploitation methods (mainstreaming). Faced with the growing criticism and limitations surrounding “fortress conservation”¹⁸, there is a growing number of interventions targeting farming practices.

A growing number of countries are setting up frameworks for the sustainable management of natural resources. These frameworks involve either the introduction of sustainable management instruments (licences for access, quotas, subsidies for good practice, certification, etc.)¹⁹ or, more rarely, the “greening” of existing instruments. One example is the announcement by Senegal that 10% of its fertiliser subsidies will be allocated to organic fertilisers in 2021. However, there are significant challenges in harmonising existing instruments, which often promote increased production (fuel subsidies, tax exemptions for major investments, etc.)²⁰ without imposing environmental conditions or sustainable management instruments.

3.2.2.2. However, public policies are still insufficient, and need to be coordinated with the actions of other stakeholders

Public policy documents are still incomplete in many countries, particularly when it comes to production practices. Following the liberalisation movement of the 1980s and 1990s, States scaled back the oversight of production previously carried out by public institutions and companies. They also often refocused their action on certain key areas, notably the quality of the end product and marketing, which, when properly managed, allows for an increase in the selling price and the collection of taxes (for example, export taxes on cocoa in Cameroon or gold in Guinea). Nevertheless, the deterioration of ecosystems, and especially the stricter requirements of the main export markets (sanitary and phytosanitary (SPS) measures for foodstuffs, the fight against IUU fishing, the fight against imported deforestation – see the EUDR in section 3.1.4, etc.), are pushing States to step up their intervention in production, raising issues of coordination with other types of stakeholders such as the private sector and civil society (see below).

¹⁸ Fortress conservation is based on the idea that the best way to protect ecosystems is to create protected areas that are strictly isolated from any human presence. This critical concept, developed towards the end of the 1990s, aims to highlight the limitations of this approach in terms of effectiveness, ethics and equity, especially as it leads to the eviction of communities and issues of illegal exploitation.

¹⁹ Indicated with the pictogram  in the country analyses produced by Altai

²⁰ Indicated with the pictogram  in the country analyses produced by Altai

However, the major shortcomings lie in the implementation of regulations. The first factor is the lack of implementing legislation to give effect to the provisions set out in the framework laws. The many revisions of framework laws that have taken place since the 2010s, aimed in particular at consolidating management of the sectors, have paradoxically led to periods of legal uncertainty, awaiting the alignment of regulatory texts, which can be slow to draft for various reasons (political or institutional instability, lack of technical expertise, obstacles posed by opposing interest groups, etc.)²¹. The second factor is the lack of resources for verification and repression (insufficient number of agents, agents who are inadequately trained, equipped and/or motivated), often associated with poor governance (corruption, lack of political will, jurisdictional conflicts between institutions, lack of transparency, etc.)²².

These shortcomings in state intervention have prompted other types of stakeholders, in particular private companies, professional groups, civil society organisations and international cooperation agencies, to play a more influential role in changing practices. The private sector plays a particularly important role in export production (cocoa in Gabon and Cameroon, coffee in Ethiopia, rubber trees in Cameroon, shrimp in Madagascar, aquaculture in Vietnam and the industrial mining sector in Gabon). Growing consumer demands have pushed major producers, processors and exporters to align themselves progressively with international standards (e.g. International Finance Corporation criteria in mining) and to invest in the promotion of private eco-certifications (Rainforest Alliance, Fairtrade, Organic certification, MSC, ASC, FSC, etc.), often on the basis of CSR and voluntary policies, ahead of public intervention. New mixed governance mechanisms for the sectors have emerged in order to address the challenges of coordinating public action and private initiatives (including public-private partnerships, co-management²³ and partnerships between local authorities and the private sector).

²¹ In Guinea, the Forest Code, revised in 2017, provides for numerous measures to manage the sector (forest management plans at national, regional and departmental level, logging permits, logging quotas, specifications for operators, etc.). However, a large proportion of the regulatory texts required for the implementation of these tools have still not been drawn up, mainly due to a lack of resources in the forestry administration.

²² This has been the case in the forestry sector in Kenya, where the Kenya Forest Service (KFS) has been marred by both endemic corruption and insufficient resources (1 ranger per 1,200 ha on average, compared with 1 per 400 ha recommended by international standards) ([source](#))

²³ See the example of co-management of shrimp fishing in Madagascar in section 3.5.5.

Public-private partnerships: the example of the timber sector in Gabon^{xxxvii}, lessons to be learned for the cocoa sector in Cameroon?

In 2018, the President of Gabon announced that all the country's forest concessions should be certified to the Forest Stewardship Council (FSC) standard by 2022. In doing so, the government decided to rely initially on a mature private standard, enabling it to build institutional capacity and then adapt national regulations in a second phase. To support the transition, the government increased the forestry tax from 400 CFA francs/ha to 800 CFA francs/ha for non-certified forests, and reduced it to 300 CFA francs/ha for certified forests. The country also put in place a framework promoting local processing (ban on raw timber exports, creation of a special economic zone with infrastructure and tax incentives in partnership with Olam). FSC and the government signed a partnership agreement in 2020, under which FSC has supported the training of forest workers and auditors, co-financed High Conservation Value Forest (HCVF) assessments and facilitated market access for Gabonese timber processors. In return, FSC's objective was to consolidate its credibility and recognition on the international market. The *Union des Forestiers et Industriels du Bois du Gabon* (Gabonese Union of Forestry and Wood Industries, UFIGA) also took significant steps to inform stakeholders in the sector and facilitate their participation.

Although the anticipated objectives were not achieved, mainly due to the arrival of new stakeholders supplying markets less sensitive to eco-certifications and insufficient government support to consolidate the change in practices, the lessons learned from this experience will nevertheless be useful when managing such public-private partnerships in the future. In particular, these lessons can be applied to the management of the cocoa sector in Cameroon, which has already made similar efforts in the timber sector to those made in Gabon. Greater collaboration between the public and private sectors on certification and traceability issues would be highly beneficial^{xxxviii}.

Civil society is also developing innovative mechanisms to improve practices. These mechanisms are often initially developed outside the legal framework and are based on a participative and voluntary approach. It also acts as a whistleblower against shortcomings in public action, and plays an important role in advocating for the improvement of the political framework and putting pressure on corporate practices, pushing them to implement voluntary commitments²⁴.

Participatory Guarantee Systems (PGS): civil society's response to the lack of state certification for sustainable agriculture

Although the practices of many small family farms are inherently respectful of the environment and human health, this is not recognised by the certification system, which entails excessive costs. Furthermore, in most countries, the use of terms such as "organic" or "agroecology" is not regulated and demand for this type of production, although growing, remains low.

In response to these issues, PGSs have emerged to meet the growing demand for organic/agroecological products in local and national markets. These private and participatory certifications are driven by a group of producers who together define specifications, a certification process and a common label for sales. They are generally inspired by organic farming or agroecology standards. Certification is awarded by other producers, consumers and local stakeholders, unlike third-party certification which is based on an external audit.

²⁴ In Cameroon, for example, the NGOs Mighty Earth and Greenpeace have played an important role in revealing the deforestation of primary forests by rubber-producing companies and establishing a framework for dialogue to encourage these companies to implement zero deforestation CSR policies ([source](#))

Benin, Burkina Faso and Togo were the forerunners in West Africa. Senegal has also developed such systems, notably through the *Fédération Nationale pour l'Agriculture Biologique* (National Federation for Organic Farming) (FENAB). Benin's new National Strategy for the Development of Ecological and Organic Agriculture (2022) includes various measures to support PGSs. Discussions are also underway on the harmonisation of PGSs at the regional level, led by the *Pôle de Connaissances de l'Agriculture Biologique en Afrique de l'Ouest* (Knowledge Centre for Organic Farming in West Africa - PACO), funded by GIZ (2019-2026)^{xxxix}.

To date, only Tunisia has adopted an organic farming norm in line with international requirements. This has fuelled a boom in organic farming in the country, particularly olive oil.

Finally, international cooperation, often in collaboration with national stakeholders (civil society, ministries, decentralised administrations, etc.), plays a key role in driving changes in practices, through budgetary support to ministries or the direct funding of field experiments²⁵. However, these experiments initiated by international partners face a number of challenges in terms of long-term viability and scaling up, and need stronger institutionalisation mechanisms in public policies.

Multi-stakeholder regional colleges to manage gold mining in Guinea: PROJEG experiments^{xi}

PROJEG (*Programme concerté de Renforcement des capacités des Organisations de la société civile et de la Jeunesse Guinéennes* - Concerted capacity-building programme for Guinean civil society and youth organisations) (2008-2019), funded by the French Ministry of Foreign Affairs, was designed to bring together civil society players to help shape public policy and its implementation in Guinea. This led to the creation of regional colleges bringing together Civil Society Organisations (CSOs), local authorities and elected representatives. In the gold mining sector, the colleges bring together CSOs, traditional gold mining management authorities (*tombolomas*), local elected representatives and authorities. Committees for the collection and management of funds have been organised to share the revenue from mining and improve the contribution of small-scale mining to local development, through the transfer of part of the proceeds from *tombolomas* to rural municipalities and the transparent management of this revenue and its use. A multi-stakeholder consultation conducted during the project established that 20% of *tombolomas* revenues should be paid to the municipalities (10% to finance the Local Development Plan, 5% to repair environmental damage and 5% for safety and training). This made it possible to formally establish an informal system as a mixed system involving local authorities and CSOs.

The EU's Sustainable Cocoa Initiative, in support of the implementation of the EUDR: towards a change of approach, from sanctions to cooperation

The EU's Sustainable Cocoa Initiative was launched in 2020. With a budget of €25 million, it covers Côte d'Ivoire, Ghana and Cameroon, the EU's main cocoa suppliers. It was launched following the decision of Côte d'Ivoire and Ghana to introduce a Living Income Differential in 2019 to guarantee a minimum income for producers, and has since also become a key instrument to support the implementation of the EUDR (see section 3.1.4) and the Corporate Sustainability Due Diligence Directive (CSDDD) passed in April 2024. The programme has led to the organisation of multi-stakeholder "Cocoa Talks" in each country. It has also promoted the implementation of national roadmaps for sustainable cocoa and provides technical assistance.

²⁵ In Ethiopia, for example, the principles of participatory forest management were introduced by GIZ, JICA and the NGO FarmAfrica in the 1990s.

Such collaborative approaches are particularly important to ensure the commitment of developing countries to the transition and to keep them from being excluded from international^{xli} trade or reorienting themselves towards other markets that are less demanding and less subject to the volatility of world prices²⁶.

3.3. PROGRESS OF BIODIVERSITY MAINSTREAMING IN BIODDEV2030 COUNTRIES AND SECTORS

3.3.1. INTEGRATION INTO PUBLIC POLICY FRAMEWORK DOCUMENTS

NBSAPs

The majority of NBSAPs for BIODDEV2030 countries were drawn up around 2015 and are currently undergoing revision to bring them into line with the Kunming-Montreal framework adopted in 2022 at the COP15 biodiversity conference. At the time of the COP16 in October 2024, only Tunisia and Uganda had submitted revised versions of their NBSAPs²⁷. The majority of other countries have only published all or part of their revised national targets^{xlii} and the revision process is still underway.

The revision process provides a useful opportunity to explore mechanisms for aligning biodiversity strategy with sectoral policies. In Ethiopia, for example, discussions are underway to assign the Kunming-Montreal targets to the various ministries and allocate resources to them. In Vietnam, the Ministry of Natural Resources and Environment chairs a National Steering Committee for the NBSAP, and ministerial taskforces are responsible for its implementation at sectoral level (e.g. the Ministry of Agriculture). Several BIODDEV2030 countries have set up national biodiversity committees dedicated, among other things, to reviewing and monitoring the implementation of NBSAPs.

National Development Plans (NDP)

Biodiversity is mentioned in the NDPs of all the BIODDEV2030 countries, to varying degrees of detail, particularly with regard to heritage conservation and the sustainable management of natural resources. Almost all of them were revised after 2015²⁸, i.e. after the publication of the second version of their NBSAP.

- Gabon, Guinea, Madagascar and Mozambique mainly emphasise the heritage aspect/contribution of biodiversity to the living environment. In particular, they include measures on protected areas, ecosystem restoration and the conservation of genetic diversity, and relate biodiversity to the quality of the living environment and to tourism.
- Senegal, Fiji²⁹, Tunisia, Kenya, Uganda and Benin are the countries that link biodiversity and the economy most closely, particularly through the notions of a “green economy” and sustainable use of natural resources.
- Cameroon, on the other hand, makes only a very brief mention of biodiversity, in the sustainable management of natural resources. Ethiopia and Vietnam consider biodiversity almost exclusively in

²⁶ In Cameroon, stricter requirements on the deforestation associated with cocoa production are prompting some producers to turn to the cultivation of cassava for the domestic market, which is less regulated. Similarly, in Ethiopia, growers are turning away from coffee to instead grow khat, a popular stimulant.

²⁷ Uganda's NBSAP 2025-2035 remains in draft form.

²⁸ The oldest NDPs are that of Gabon (2012), which is currently being revised following the arrival of the transitional government in 2023; and those of Kenya (2007) and Uganda (2013), which are set out in five-year plans allowing for the adaptation of guidelines. The most recent five-year plans cover 2023-2027 for Kenya and 2020-2024/25 for Uganda.

²⁹ Fiji has incorporated sustainability indicators into the performance indicators for the various sectors, with the notable exception of sugar cane.

terms of its contribution to climate change mitigation and adaptation, in particular via forest carbon sinks.

- Guyana is the country that most closely links the different aspects of biodiversity, having included sustainability issues in the very title of its NDP, published in 2019, their Green State Development Strategy: Vision 2040. This is the country that explores the heritage aspect of biodiversity in greatest depth, in relation to the importance of indigenous peoples, and mentions the income that can be derived from biodiversity conservation, such as carbon credits (within the framework of REDD+³⁰) and Payments for Ecosystem Services (PES). Numerous objectives for integrating sustainability into the various sectors are listed (extractive industries, fisheries, forestry, agriculture).

Several countries also have a green development plan, or have added a green section to their NDP. This is the case in Ethiopia (Climate Resilient Green Economy Strategy 2011-2025), Kenya (Green Economy Strategy and Implementation Plan 2016-2030), Uganda (Green Growth Development Strategy 2017-2030), Vietnam (National Green Growth Strategy) and until 2024 in Gabon (*Plan Gabon Vert* 2015-2025)³¹ and Senegal (*Plan Sénégal Emergent Vert*)³².

3.3.2. INTEGRATION INTO SECTORAL POLICIES

The following section aims to present, for each sector, the obstacles to and drivers of biodiversity mainstreaming in the countries studied, as well as the PPIs that most influence these practices. These PPIs are divided into PPIs “to be greened”, which in most countries take little or no account of biodiversity, generally because they encourage an increase in production without any environmental safeguards, and which therefore need to be redirected, and “green” PPIs, which have already incorporated into their design the reduction of the impacts of farming, the sustainable management of resources and their restoration, and which therefore need to be strengthened or introduced if they do not already exist.

This section has focused on highlighting the many similarities between BIODIV2030 countries. There are nevertheless differences, the main ones of which are either briefly presented at the bottom of the page or detailed in the good/bad practice format in section 3.5.

3.3.2.1. Agriculture

Countries whose agricultural sector was covered by the study: Benin, Cameroon, Ethiopia, Fiji, Gabon, Guinea, Kenya, Mozambique, Senegal, Tunisia, Uganda

Table 4. Analysis of the obstacles to and drivers of mainstreaming in agriculture

Obstacles	Drivers
• Demographic growth leading to an increase in needs and demand • Low agricultural yields • Public policy priorities geared towards increasing production (linked in particular to the goal of food self-sufficiency), stabilising prices for consumers and generating revenue from export and foreign currency	• Willingness of governments to promote higher incomes for small producers, which can be done through premiums associated with sustainable products, reduced dependence on chemical inputs, etc. • Degradation of agricultural soils due to unsustainable farming practices • Effects of climate change

³⁰ This United Nations forest protection programme provides financial support to countries that put in place a formal plan to reduce carbon emissions from deforestation and forest degradation.

³¹ The new government, which came into power in 2023, is currently finalising its *Plan National de Développement pour la Transition* (National Development Plan for Transition - NDPT) 2024-2026.

³² Following the presidential elections in 2024, the *Plan Sénégal Emergent* (PSE) and the *Plan Sénégal Emergent Vert* were replaced in October 2024 by *Vision Sénégal 2050*. No specific green pillar has been announced to date, and the Senegal 2050 brochure simply states that “Senegal will ensure that its natural resources throughout its marine and terrestrial territory are not over-exploited”.

• Influence of small-scale producers (fragmentation of production) • Insufficient resources allocated to the communication of regulations, their application and technical agricultural advice • A silo-based approach to agricultural policy (promotion of the productivist model in parallel with sustainable agriculture)³³ • Volatility of world prices	• Stricter environmental requirements for export markets • Increasing number of private initiatives to help shape public policy (pilot projects, certification, traceability systems, etc.) • Emergence of framework laws and national strategies on organic farming and agroecology³⁴ • Relative grouping of small-scale producers (cooperatives, clusters, etc.) - depending on the country³⁵ • Maintaining local knowledge of sustainable practices
---	--

Table 5. Summary of the main PPIs in agriculture and the extent to which they take biodiversity into account

● Main PPIs “to be greened”	🌱 Main “green” PPIs to be strengthened or introduced
<u>Economic:</u> • Subsidies/tax exemptions on chemical inputs • Subsidies/tax exemptions on products produced using non-sustainable agricultural • Subsidies/tax exemptions for agro-industrial companies without associated environmental clauses <u>Regulatory:</u> • Regional development plans • Land tenure³⁶ <u>Informational and other:</u> • Public R&D • Technical agricultural advice • Financing solutions • Insurance solutions	<u>Economic:</u> • Payments for Ecosystem Services, carbon credits and biodiversity certificates <u>Regulatory:</u> • Regulation of the use of inputs - chemical and bio-inputs (approved products, rules for application, authorised pesticide residue levels, waste management, respect for buffer zones with protected areas and watercourses, etc.) • National standards on sustainable agriculture (prerequisite for eco-certification) <u>Informational and other:</u> • Certification • Environmental and Social Impact Assessment (agro-industrial) • Reforestation and agroforestry programmes • Traceability systems

NB. The most appropriate PPIs vary according to the characteristics of the sector:

- Land structure and farm size (small-scale farming or agro-industry/horticulture), taxation is not a lever applicable to food crops, for example

³³ For example, in many countries, agriculture is the main cause of deforestation. Although large-scale reforestation campaigns have been organised (in Kenya, Ethiopia, Uganda, Guinea and Vietnam), the instruments for preventing the conversion of natural environments into agricultural land are often insufficient (land-use planning, land allocation rules, etc.)

³⁴ Tunisia's Law on organic farming (1999), the Uganda Organic Standard (2004), Ethiopian Organic Agriculture System Proclamation (2006), Gabon's Law on sustainable agricultural development policy (2008), Uganda's National Organic Agriculture Policy (2019), Benin's National Development Strategy for Ecological and Organic Agriculture (2022)

³⁵ In Guinea, producers are well organised into groups, unions and federations at various levels. The same is true in Senegal. Ethiopia has introduced a policy to promote agricultural clusters (groupings of adjacent cereal producers to pool purchases of agricultural inputs and machinery).

³⁶ Through the influence of the land tenure system and the securing of farmers' land rights in relation to their investments in sustainable land management (see the proposed changes to Guinea's new Law on Agricultural Land Tenure)

- Market (domestic consumption or export crop), export crops are the most targeted by certification and standards initiatives, for example
- Type of speculation (cereals, market gardening, plantations), by contrast, certification is particularly lagging behind in cereals.

Summary: The major challenge of mainstreaming biodiversity in the agricultural sector is to ensure consistency between the increasing number of new political and legal frameworks announced in favour of sustainable agriculture on the one hand, and the policies actually implemented, which are still largely based on the principles of the green revolution (subsidies for chemical inputs, support for mechanisation, use of modified varieties, etc.) on the other. **There is also a need for coordination between public action and other stakeholders** (private sector, civil society, international cooperation).

3.3.2.2. Logging

Countries whose forestry sector was covered by the study: Benin, Ethiopia, Guinea, Kenya, Vietnam, Uganda

Table 6. Analysis of the obstacles to and drivers of mainstreaming in forestry (including timber and wood energy)

Obstacles	Drivers
• Lack of resources to enforce regulations and sanctions • Prevalence of corruption in forestry administrations • Lack of technical skills to develop management tools (inventories, management plans, etc.) • Poor plantation productivity / insufficient added value - depending on the country³⁷ • Lack of resources to develop alternative means of subsistence after the prohibition of forest exploitation, leading to illegal practices • Lack of energy policies supporting alternatives to wood energy for cooking	• Strong awareness of the value of forests, in particular the headwaters of springs and riverbanks, and to prevent desertification • Forestry framework laws generally well advanced on conservation issues • Stricter environmental requirements for export markets • Development of international standards supported by the private sector (FSC) • Development of international financing mechanisms for forest conservation (REDD+)

Table 7. Summary of the main PPIs in forestry and the extent to which they take biodiversity into account

● Main PPIs “to be greened”	🌀 Main “green” PPIs to be strengthened or introduced
<u>Regulatory:</u> • Allocation of forestry-related levies	<u>Economic:</u> • Subsidies for alternative energies and cooking methods (including improved cooking stoves) • Subsidies for more efficient charcoal production methods • Subsidies for seedlings of native species and species adapted to needs (timber or charcoal) • Grants/tax exemptions for the development of private plantations

³⁷ In Guinea, the production potential of forests is virtually nil. In Vietnam, plantations are primarily made up of fast-growing trees with little added value, as they are cut before maturity and used to produce chips and laminates.

	• Payments for Ecosystem Services (PES), carbon credits and biodiversity certificates <u>Regulatory:</u> • Forest zoning (including protected areas) • Logging ban (overall or on native species) • Forest Management Plan • Licences and logging quotas • Reforestation obligations • Framework for participatory community management • Import regulations <u>Informational and other:</u> • Sustainable development certifications • National reforestation campaigns • Promoting and financing infrastructure for alternative energies • Capacity-building on good practice in plant and forest maintenance and on drawing up community forest management plans • Capacity-building on good practice in sustainable charcoal production (species selection, replanting, production techniques) • Promotion of alternative means of subsistence
--	---

Summary: The challenge of mainstreaming biodiversity in forestry lies first and foremost in the application of existing regulatory frameworks, which already include many clauses on forest preservation. These difficulties in application are linked in particular to conflicts of interest between the forest conservation and exploitation. Although the majority of countries have now imposed partial or total bans on the exploitation of non-private forests (Kenya, Guinea, Uganda, Vietnam, Ethiopia), the lack of measures to support the development of alternative sources of income, participatory forest management and large, high-yield forest plantations has led to skyrocketing illegal exploitation. Obstacles also include the lack of technical expertise and scientific data (inventories, growth rates, etc.) needed to draw up sustainable forest management plans.

3.3.2.3. Fishing³⁸

Countries whose fishing sector was covered by the study: Fiji, Guyana, Madagascar, Mozambique, Senegal

Table 8. Analysis of the obstacles to and drivers of mainstreaming in the fishing industry

Obstacles	Drivers
• Population growth and internal migration to coastal areas • Government intervention to boost fishing capacity • Lack of inclusion of available scientific data to guide management measures • Fragmentary knowledge of the state of fish stocks and the dynamics of their recovery	• Stricter environmental requirements for export markets • Relatively mature industrial fishing management frameworks (licences and quotas, satellite surveillance, Turtle Excluder Devices (TED) and Bycatch Reduction Devices (BRD), etc.)

³⁸ Vietnam has not been included in this analysis, insofar as the stakeholders and SPPs governing aquaculture are very different from those governing the fishing of species in the wild. The dynamics are quite similar to those of agriculture, however

• Free access schemes for small-scale fishing despite its high contribution to catches • Lack of resources invested in regulating and monitoring small-scale fishing • Lack of political will to enforce regulations on small-scale fishing (challenge of social acceptability due to the lack of alternative sources of income) • Volatility of world prices (for export products)	• The contribution of industrial fishing to the joint management of the sector, which influences but also encourages compliance with regulations • Development of international standards supported by the private sector (MSC) • Alignment of marine protected area policies and small-scale fishing management • Developing frameworks for community-based fisheries management³⁹
--	---

Table 9. Summary of the main PPIs in the fisheries sector and the extent to which they take biodiversity into account

● Main PPIs “to be greened”	🌀 Main “green” PPIs to be strengthened or introduced
<u>Economic:</u> • Subsidy/tax exemption on fuel and other types of supplies • Subsidy/tax exemption on all types of fishing vessels • Subsidy/tax exemption on engines and boats <u>Regulatory:</u> • Allocation of fishing-related levies • No obligation to land by-catches • Authorisation of processing practices that cause additional environmental harm⁴⁰ • Authorisation to import and sell banned fishing vessels	<u>Regulatory:</u> • Licences, quotas and other measures restricting fishing capacity (vessel size, net length, etc.) • Authorised fishing equipment (type/mesh size) • TED and BRD obligations • Zoning (including marine protected areas) • Biological rest periods, closed seasons and/or restrictions on the number of days at sea • Fisheries development plan • Framework for community management <u>Informational and other:</u> • Certification • Research (surveys of stocks, breeding areas and periods, etc.) • Promotion of alternative means of subsistence • Fishing agreements with foreign countries (quotas, allocation of fees)

NB. Coastal fishing (shrimp in Madagascar, shrimp and crabs in Fiji) is also heavily impacted by the degradation of habitats and breeding grounds by other sectors (mangrove deforestation in particular). This calls for the creation of interministerial coordination frameworks.

Summary: Most of the countries studied have seen a sharp decline in stocks since the 2000s or even earlier, due to overfishing. This has led to tight regulation of industrial fishing. Nevertheless, two major challenges remain in order to support the sustainability of fishing: the fight against IUU fishing, the regulation of small-scale fishing, which is highly informal and fragmented, and the lack of scientific

³⁹ See the experiments carried out in Madagascar on the transfer of management of fisheries resources and locally managed marine areas

⁴⁰ The processing of fish is particularly problematic in Senegal, where by-catches are processed into fishmeal and fish is smoked over mangrove wood.

data to guide management measures (number of licences, quotas, duration of fishing season, location of marine protected areas, etc.).

3.3.2.4. Extractive industry

Countries whose extractive industry was covered by the study: Gabon, Guinea, Mozambique, Senegal

Table 10. Analysis of the obstacles to and drivers of mainstreaming in the extractive industry

Obstacles	Drivers
Industrial sector	
- Conflicts between conservation objectives and the need for income from the extractive industry (frequent cases of deposits being located in or near protected areas/areas rich in biodiversity) - Sector management priorities focused more on revenue generation than on environmental impacts - Lack of resources to monitor Environmental and Social Management Plans	- Tougher environmental requirements for banks and insurance companies (e.g. International Finance Corporation standards) - Increasing CSR commitments by international companies
Small-scale sector	
- Population growth and internal/regional migration to mining areas - Sector management priorities focused more on revenue generation than on environmental impacts - Regulatory framework not suited to the small-scale sector, which is highly informal and fragmented, and to the ongoing transition from small-scale to semi-industrial (mechanised) mining - Lack of effective and affordable methods for processing ore without toxic substances - Corruption - Lack of resources to enforce regulations and sanctions - Lack of alternative sources of income	- Increase in harmful consequences for human health and the environment, also damaging nearby fishing and agricultural activities⁴¹ - Signing of international treaties on the use of toxic products (Minamata Convention on Mercury)

Table 11. Summary of the main PPIs in the extractive industry and the extent to which they take biodiversity into account

● Main PPIs “to be greened”	🌀 Main “green” PPIs to be strengthened or introduced
<u>Economic:</u> - Tax exemption on equipment imports - Tax exemption and other incentives for foreign investment	<u>Economic:</u> Subsidies for non-toxic processing equipment <u>Regulatory:</u>

⁴¹ Guinea and Senegal have been particularly affected by such radical deterioration and have temporarily suspended all gold mining activities.

<u>Regulatory:</u> • Mining land register/zoning • Allocation of mining-related levies • Import regulations for toxic equipment and products	• Zoning • Environmental and Social Impact Assessment, Environmental and Social Management Plan and other forms of assessment (simplified impact statement and specifications, etc.) • Restoration and compensation obligations • Regulations/norms on the use of toxic products and waste management (authorised products, safety measures to be put in place, standards for discharge, etc.) • Obligation to devote part of revenues towards local development <u>Informational and other:</u> • Promoting the creation of groups for better management of practices • Promoting and financing solutions for non-toxic processing methods • Promoting alternative sources of income
--	---

Summary:

Industrial sector: The extractive industry represents a substantial source of income for States, which often means that decisions are not favourable to biodiversity⁴². Public intervention therefore focuses mainly on collecting and redistributing revenues. Mining practices in key biodiversity areas must be more strictly regulated. Nevertheless, stronger international standards and the proliferation of CSR initiatives and voluntary commitments by companies are gradually improving the practices of industrial mining companies. Another key issue in the extractive sector is addressing the rights and needs of local communities and indigenous peoples through the implementation of appropriate and fair consultation and compensation mechanisms.

Small-scale sector: The framework for practices in the small-scale sector is often ill-suited to its informal and fragmented nature, as well as to the rise in mechanisation, which blurs the line between small-scale and semi-industrial. The absence of mature and accessible alternative processing techniques with comparable efficacy to mercury and cyanide is a major challenge, as is the restoration of mining sites. Formalising the activity into groups is one of the preferred avenues for better regulating practices.

3.3.2.5. Pastoralism

Countries whose pastoral sector was covered by the study: Ethiopia, Kenya, Senegal

Table 12. Analysis of the obstacles to and drivers of mainstreaming in pastoralism

Obstacles	Drivers
• Lack of recognition of the economic, cultural and environmental value of pastoralism and local knowledge • Priority placed on urbanisation and agricultural expansion, leading to the	• Increasing challenges in pastoral areas (poverty, hunger, insecurity, impacts of climate change, etc.), which also play an important role in the production of animal

⁴² In the South-West Indian Ocean region, which includes Mozambique, 28% of hydrocarbon concessions cover areas of high ecological and biological value, and 8% are located in Marine Protected Areas ([source](#)). In Guinea, some mining concessions also encroach on protected areas.

fragmentation of transhumance corridors and the loss of dry season pastures, ultimately reducing the mobility of herds and generating conflicts between crop growers and pastoralists • Policies geared towards promoting commercial ranching (feed-lots, consumption of industrial feed) and insufficiently linked to the needs of pastoral farmers (fodder in particular) • Lack of resources to implement policies over vast areas and in highly degraded contexts (poverty, hunger, insecurity, etc.)⁴³ • Ethnocultural role of herd size (issue of social acceptability of any policy to reduce herd size) • Lack of research adapted to arid and semi-arid zones, identifying resources (water, pasture), transhumance corridors and the capacities of ecosystems, to provide information for management plans • Degradation of pastures, leading to a reduction in the number of cattle and an increase in the number of sheep and goats, which further degrade the pastures⁴⁴ and young trees, creating a vicious circle	proteins, attracting the attention of public authorities • The historical presence of humanitarian organisations, who are increasingly complementing their approach with support for development through climate-smart approaches ⁴⁵ • Decentralisation underway (Ethiopia, Kenya), which will encourage the development of policies tailored to local contexts
---	--

Table 13. Summary of the main PPIs in pastoralism and the extent to which they take biodiversity into account

● Main PPIs “to be greened”	🌱 Main “green” PPIs to be strengthened or introduced
<u>Economic:</u> • Subsidies/tax exemptions for investment in large-scale livestock farming and food production • Subsidies to increase livestock numbers⁴⁶ <u>Regulatory:</u>	<u>Regulatory:</u> • Pasture zoning • Pasture management plans • Framework for community management • Grazing permits and quotas <u>Informational and other:</u> • Insurance solutions • Certification (meat, dairy products, leather)

⁴³ Particularly in East Africa, affected by increasingly recurrent and long droughts

⁴⁴ Especially goats, which eat plant roots and young trees

⁴⁵ Particularly in Kenya and Ethiopia, where droughts cause recurring food crises.

⁴⁶ There are subsidies for reducing livestock numbers, which are often emergency measures to deal with periods of drought. They may be followed by policies to subsidise the purchase of livestock when the situation improves. These policies are not guided by a long-term vision aimed at aligning livestock numbers with the capacity of ecosystems.

- Regional development plan and land tenure system⁴⁷ <u>Informational and other:</u> - Research - Technical advice	
---	--

Summary: Pastoralism has generally suffered from a lack of appropriate policies and even a lack of recognition as a viable way of using the land. Instead, policies have focused on agriculture, followed by urbanisation and intensive commercial livestock farming. These policies have resulted in the fragmentation of pasture areas and transhumance routes, restricting herd mobility, leading ultimately to the partial sedentarisation of pastoralists and overgrazing in their areas of settlement, as well as conflicts with crop farmers.

Pastoral areas are faced with a growing number of challenges (overgrazing, droughts, invasive species, conflicts) and a lack of public investment (research, technical advice, roads, access to veterinary care and water, regulation of movements, etc.), all of which greatly hinder the adoption of best practices. The implementation of pastoral management plans based on knowledge and the revitalisation of traditional management authorities is a priority.

3.4. ANALYSIS OF MAINSTREAMING STRATEGIES

3.4.1. MOST RECURRENT SPPIs

There are a number of existing SPPIs that recur across the sectors and countries studied, which can be classified according to the typology presented in section 2.3. They are listed in order of frequency in the table below.

Table 14. The most recurrent SPPIs across the sectors and countries studied

Economic	Regulatory	Informational	Other
Subsidies (financial or in kind) Taxes (exemption/introduction - increase) Financing solutions/subsidised loans (preferential rate, government-backed, etc.)	Authorised/prohibited practices Zoning and land use planning (including protected areas and peripheral zones) Operating licences and quotas	Certification and standards Reporting standards, including Environmental and Social Impact Assessment (ESIA) Awareness and advocacy campaigns	Public R&D Training and technical support Public infrastructure (storage, processing, transport, etc.)

⁴⁷ In all three countries, agricultural expansion and urbanisation have been given priority over pastoralism in land development plans. In addition, pastoral communities face insecurity over their land rights, generally due to the lack of adequate legal recognition of community/collective ownership. Kenya's 2016 Community Land Act aimed to protect community land by placing it under county protection, but the implementation of this act remains inadequate.

• Price controls (price floor, guaranteed minimum income) • PES, carbon credits and biodiversity credits • Insurance solutions	• Norms⁴⁸		• Stakeholder co-management bodies⁴⁹
---	---	--	--

3.4.2. THE NEED FOR A “POLICY MIX” TO ENSURE THE CONSISTENCY AND EFFECTIVENESS OF PUBLIC POLICIES

3.4.2.1. The role of national strategies and plans in ensuring the consistency of public policies

Governments are faced with public policies whose stated objectives may appear contradictory (combating poverty, including young people and women, controlling public debt, adapting to climate change, etc.). In the cocoa sector in Cameroon, for example, the government wants to double production to generate rural employment, tax revenue and foreign currency, while at the same time dealing with the imminent entry into force of the EUDR, which aims to ban any product resulting from deforestation from entering the European market. In this case, an instrument for consistency needs to be developed, reconciling the different objectives within one integrated strategy.

The development of integrated, multi-year planning documents (strategy, plan, policy, etc.) is an important step in establishing a vision and aligning the various priorities. These can then be broken down into sequenced plans (five-year or ten-year plans, for example), by sector or theme (Cameroon’s National Strategy for the Sustainable Development of the Palm Oil Value Chain 2021 - 2030, Kenya’s National Agricultural Soil Management Policy, etc.) and into investment plans. Drafting these documents can also provide an initial opportunity for consultation between stakeholders (including the private sector and civil society, which play a central role in practices and support for public policies - see 3.2.2.2). These documents also provide significant leverage for attracting funding from international donors.

Although many countries have strategies that mention biodiversity, implementing them effectively remains a significant challenge. This implementation first involves anchoring them in the legal framework (sectoral law, tax code, finance law, etc.) and developing intervention programmes, often jointly financed by international donors and combining various incentive measures (subsidies, research, technical advice, etc.). Implementation depends on two main factors: the political will to ensure consistency, which depends on the prioritisation of public policy objectives by a leading public player who is necessarily above the sectoral ministers in terms of protocol (Prime Minister, President), and on funding. In Guinea, for example, the National Agricultural Development Policy 2017-2025 explicitly cites the protection of biodiversity and the dissemination of good agricultural practices as priorities for strengthening the resilience of the agricultural sector. However, the *Refondation Verte* policy pursued since 2021 by the National Committee of Reconciliation and Development (*Comité National du Rassemblement pour le Développement* - CNRD) following its accession to power is more in line with the principles of the classic green revolution, which promotes chemical inputs and mechanisation. In countries that have begun to decentralise, the strategies need to be rolled out at local level, which requires financial and technical resources. In Kenya, for example, the counties, created in 2012, are responsible for their own integrated development plan and spatial planning. Only a small number of counties have actually drawn up such plans, due to a lack of technical and financial resources.

⁴⁸ Norms and standards are sets of rules to be complied with. A norm is established by a public or state-approved body, while a standard can be established by any user group.

⁴⁹ Institutional aspects are outside the scope of this study. Nevertheless, they are a cross-cutting tool for public intervention. The need for joint management bodies bringing together public and professional stakeholders and civil society came up regularly.

The processes for monitoring, evaluating and revising these strategies need to be significantly strengthened. While there is an international accountability mechanism for NBSAPs based on the COPs, there are very few monitoring and information systems for sectoral, economic and trade policies. This could be incorporated, at least in part, into the prerogatives of institutions that already have a role in the production of statistics, such as those that already exist for fisheries (FAO, regional fisheries management organisations such as the International Commission for the Conservation of Atlantic Tunas – ICCAT – or the Indian Ocean Tuna Commission – IOTC).

3.4.2.2. Limitations of the different types of SPPI and the case for “policy mix” reforms

Each type of SPPI has its advantages and limitations, making a policy mix approach necessary. These elements are set out in detail for each SPPI in Appendix 5.4. The main limitations are listed below.

Several factors common to the sectors and countries studied complicate the development and application of the law, thus restricting any regulatory and coercive approach (prohibition-sanction):

- The superimposition of different levels of operation with different modes of functioning (industrial, semi-industrial, small-scale, subsistence/food-producing), making it necessary to define instruments for the regulation of the sectors that are adapted to the realities of the different types of stakeholders and the degree to which they are organised;
- In particular, the fragmentation of small-scale and subsistence production among a large number of producers, who generally have limited resources to transform their practices and therefore require substantial support measures to promote social acceptability, finance investment and share the risks of transition;
- The high prevalence of informal small-scale producers within value chains, who operate without operating permits or paying fees and are therefore difficult to trace, making it difficult to apply regulations and sanctions to offenders;
- The superimposition of positive law and customary law, making it difficult to understand the rights and duties of each party and often working to the detriment of small farmers, particularly in terms of land rights;
- Lack of political will, generally resulting from a conflict between political objectives (preservation of resources versus food security, generation of foreign currency and tax revenue to fund other sectors, support for small-scale producers versus electoral issues, etc.);
- Lack of appropriate sanctions, which are often not differentiated according to the type of stakeholder (large companies versus sole traders) and are either too low to act as a deterrent, or too high⁵⁰ or require legal action and are therefore unenforceable in practice;
- Corruption within the supervisory authorities⁵¹;
- Lack of resources for enforcement officers (insufficient staff⁵², lack of equipment – vehicles, GPS, etc., lack of technical training, insufficient financial incentives for these officers to carry out rigorous checks and monitor the application of sanctions and enforcement of compliance);

⁵⁰ In the gold mining sector in Guinea, the installation of crushers is prohibited in the vicinity of waterways, under penalty of confiscation of the equipment or an environmental tax higher than the cost of the equipment. In practice, these rules are not applied locally and are replaced by informal penalties paid to decentralised institutions, serving as a significant source of funding for these institutions. (Petit-Roulet, R., 2023)

⁵¹ In Kenya, widespread corruption within the Kenya Forest Service (KFS), which is responsible for forestry administration, has largely contributed to the declassification of protected forests and illegal logging (source)

⁵² In Madagascar, the Fisheries Surveillance Centre had 24 officers for 5,000 km of coastline (Ranaivomanana et al., 2019)

- Risk of exclusion of the most vulnerable people in the event of stricter barriers to access for the exploitation of resources (restriction of free access to resources through systems of licences or paid permits, initial investment in equipment, etc.)⁵³;

Economic instruments are generally more socially and politically acceptable in BIODIV2030 countries, as governments tend to employ more “positive” instruments (subsidies, financial assistance, price caps for consumers, etc.) than “coercive” ones such as taxes, due to the generally limited tax framework (see 3.1.1)⁵⁴. However, a number of factors also restrict their use:

- Limited budgetary resources due to the difficulties of developing countries in generating sufficient tax revenues; most of the sectors targeted by BIODIV2030 are major contributors to tax revenue, particularly where there is an industrial sector (levies from industrial fishing and industrial timber exploitation) or export sectors (export taxes), which encourages States to seek to increase their production and generate revenue in order to channel a significant portion of the income generated by these sectors towards priorities other than their sustainable management;
- The size of the informal sector (small-scale, food production), which escapes taxation, means that the State can essentially only intervene with “positive” levers mobilising budgetary resources (such as subsidies and PES), or by implementing a prior policy of formalising groups of producers, enabling them to be integrated into a tax framework together⁵⁵;
- Difficulties in targeting the beneficiaries of financial aid, which is often received automatically by the biggest stakeholders who have the knowledge and resources to apply for it, while small, often informal stakeholders are poorly identified and therefore poorly integrated into the aid distribution channels⁵⁶. Targeting subsidies is all the more important given the limited budgetary resources available;
- The influence of international donors in the financing of the sustainable management of sectors, which raises issues of continuity of aid facilities and mechanisms after the completion of programmes⁵⁷. The development of Country-Led Initiatives (CLIs) is one way of encouraging a long-term vision and ownership by countries⁵⁸.

Similarly, SPPIs such as R&D, technical advice and infrastructure are indirect financial aids with similar limitations. Indeed, through these other SPPIs, the State indirectly covers part of the transition cost related to innovation, skills and infrastructure.

Finally, the relevance of informational instruments depends on the sectors, and they generally require the framework to mature in order to be fully operational:

- They can be promoted by export channels (eco-certifications enabling a premium on the price or secure access to a market), but the transposition of international standards at national level is complex (particularly with regard to traceability and harmonisation of phytosanitary standards). On the domestic market, these instruments are intended for niche markets in urban centres;
- They can be used by large companies (large producers, processors, exporters) that have the technical and financial resources to comply with standards, produce reports and pay for third-party certification (Rainforest Alliance, Forest Stewardship Council - FSC, Aquaculture Stewardship Council - ASC,

⁵³ This is the case, for example, in the gold mining sector, where mechanisation of mining and the introduction of mining permits tend to channel added value into the pockets of investors and landowners rather than vulnerable workers, including women ([source](#))

⁵⁴ Some countries, such as Gabon, Kenya and Senegal, have introduced the “polluter pays” principle into their legislation, but enforcement and inspections are still very limited.

⁵⁵ In Senegal and Guinea, formalising gold mining by organising it into groups is a political priority, and will make it easier to influence their practices.

⁵⁶ Kenya’s fertiliser and improved seed distribution programme has mainly benefited large maize farms ([source](#)). In Cameroon, the Cocoa and Coffee Industry Development Fund (*Fonds de Développement des filières Cacao et Café* - FODECC) has launched a programme to geolocate plots and register small producers in order to facilitate the distribution of subsidies.

⁵⁷ In Madagascar, donor funding for the fisheries sector amounts to €12 million, compared with a €7.6 million budget allocated by the State in 2024 ([source](#))

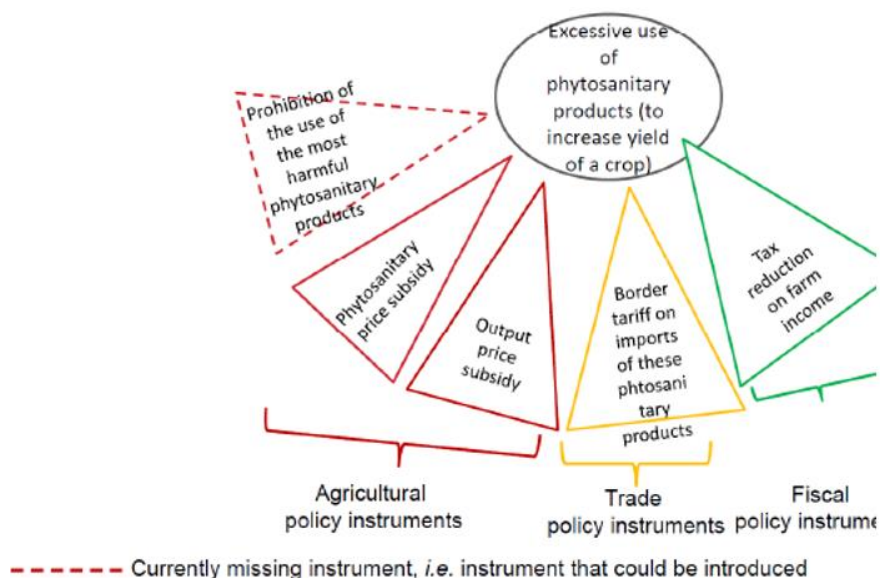
⁵⁸ In Cameroon, the Central African Forest Initiative (CAFI) funds the fight against deforestation in the cocoa sector, mainly through support for the FODECC (see above) ([source](#))

etc.). Mechanisms to ensure that they are accessible to small producers, via group certification, participatory guarantee systems (PGS) or geographical areas, could be beneficial;

- Greater transparency is needed to ensure that reliable information is effectively disseminated, for example by complying with the obligation to publish environmental and social impact assessments;
- Audit capacities also need to be improved in order to guarantee compliance with standards, maintain the stringency of specifications and promote the fight against falsifications and false declarations, particularly with regard to biodiversity aspects, which are often less well known and understood than social aspects or issues relating to the sanitary quality of products.

An appropriate combination of the different types of SPPI (“policy mix” to be reformed at the same time) must therefore be found, in order to respond to the limitations of each SPPI and achieve the public policy objectives set. The “policy mix” approach is particularly necessary in sectors facing difficulties in applying regulations due to the lack of resources on the part of stakeholders to change their practices.

Figure 5. Example of a “policy mix” to be reformed at the same time to encourage a reduction in the use of phytosanitary products in agriculture (source: IUCN)



3.4.3. MAINSTREAMING STRATEGIES IN PUBLIC POLICY

SPPI that influence practices the most are regulatory and economic SPPI (“carrots and sticks”^{xliii}). Informational SPPI and others essentially act as enabling factors, creating a favourable environment for changes in practice. These types of SPPI can be adapted according to different strategies, depending on the national and sectoral context.

The first possible mainstreaming strategy is the regulatory approach (*stick then carrot*). Firstly, this involves integrating biodiversity protection measures into the legal framework that establishes the rights and obligations of the different stakeholders. The main outcome is to render a certain number of practices illegal or illicit. Many of the countries and sectors covered by the study therefore have relatively developed legal frameworks that define restrictions targeting the sustainable management of natural resources and biodiversity⁵⁹. Secondly, alongside the sanctions provided for by legislation, direct (subsidies, exemptions, tax

⁵⁹ This is particularly the case for logging in Guinea, Ethiopia and Kenya, shrimp fishing in Madagascar, the mining sector in Guinea, Senegal and Gabon, aquaculture and logging in Vietnam, and agriculture in Uganda.

refunds, etc.) and indirect (support for public research, training and support services, etc.) economic incentives are developed to encourage stakeholders to comply with regulations.

This approach is particularly well-adapted to the following contexts:

- Political will to enforce the law, at both central and local level⁶⁰;
- Solid and transparent governance of the sector helps to limit corruption and circumvention of the law;
- A well-structured sector / Influence of major stakeholders (producers, processors and exporters) who have the resources to comply with regulations and are driven to do so by the risk of financial penalties, image issues and to secure their outlets, while their limited number also makes it possible to rationalise controls;
- A well-functioning legal system, with the adoption of implementing legislation at national level (and local level in highly decentralised countries) and monitoring the consistency between regulations, including binding EU, regional and international provisions;
- Existence of communication services to disseminate regulatory updates and guidelines, implementation and reporting services for operators, particularly small-scale operators, some of whom may be illiterate;
- Availability of human, technical and financial resources for effective enforcement of regulations and to prevent the spread of illegal activities⁶¹.

The second possible mainstreaming strategy is the incentive approach (*carrot then stick*). Firstly this involves integrating biodiversity protection measures into direct (subsidies, taxation, etc.) and indirect (support for public research, training and support services, etc.) economic incentives to encourage changes in practice on a voluntary and if possible, conscious, basis. In BIODEV2030 countries, the economic instruments used are almost exclusively positive due to the poor fiscal framework, the financial capacity of stakeholders, and the capacity and general will of States to enforce coercive tools such as high taxes for environmental reasons. A reduction or even removal of subsidies or tax exonerations is much more widespread, but more often linked to budgetary constraints rather than environmental policy⁶² and does not lead to many long-term changes in practice (for example, a reduction in subsidies for fertilisers most often leads to reduced yield and a deterioration in producers' socio-economic situation rather than encouraging these producers to use alternative fertilisation methods). Instead of the "polluter pays" principle, the "beneficiary [of environmental services] pays" principle is more common, particularly via PES.

Subsequently, the regulatory framework was strengthened to harmonise the level of requirements to all stakeholders. Provisions were also added to promote and regulate emerging sustainable practices (sustainable agriculture, rotational grazing practices, community-based fisheries management, etc.)⁶³. This approach is particularly well-adapted to the following contexts:

- Political and social acceptability issues, which limit any direct regulatory and coercive approach; these issues are particularly significant for communities without sufficient alternative sources of revenue (fisheries for coastal communities, pastoral communities, rural communities where gold mining is prevalent; etc.);

⁶⁰ In Guiana and Madagascar, restricting access to small-scale fisheries is highly unpopular as it is often the main source of revenue for coastal communities. The many restrictions set out in legislation are in fact barely applied in practice, especially in the run-up to elections, particularly local elections.

⁶¹ In Kenya, the 2018 moratorium on logging made charcoal production illegal. The Charcoal Rules, which featured a number of measures in favour of sustainable charcoal production, were effectively rendered unenforceable. The many producers who had continued operating on an illegal basis were therefore no longer subject to these regulations.

⁶² For example, the decision to remove tax exoneration on fuel for fishing boats in Madagascar was made mainly for economic, not environmental, reasons.

⁶³ It is interesting to note that many of these practices were traditionally mastered, thanks to endogenous knowledge and customary institutions. However, many of them have been unsettled by a number of factors since the 20th century.

- Non-mature alternative practices (techniques to be stabilised, value chain to be recalibrated, evolving international regulatory framework, etc.) which require a gradual transition and flexibility for economic stakeholders in the short to medium term;
- A network of non-State stakeholders with initiatives the government can draw on;
- Availability of financing to fund support measures (subsidies, PES, R&D, technical advice, etc.), which depend on political priorities, their visibility and long-term nature, the country's ability to mobilise domestic resources (including tax revenues) and its political stability, which also affects the likelihood that international donors will get involved.

The regulatory approach is therefore a top-down approach, which can subsequently turn into a bottom-up approach to ensure stakeholder practices are aligned with regulations. **The incentive approach is more varied, most often based on a bottom-up approach**, where the State provides support for initiatives brought to the table by other stakeholders in the field (private sector, NGO, international cooperation).

Finally, it is possible to adopt a hybrid approach. This is the case for aquaculture in Vietnam for example, where the State is heavily involved. In this case, it helps improve the sustainability of the sector through both national strategies and established legislation, deployed along with various financial incentives (public investment in infrastructure, subsidies, tax exemptions and loans at preferential rates for private investors, etc.).

Example of a regulatory approach: Shrimp fishing in Madagascar

Following the collapse of shrimp stocks in the 2000s^{xliiv}, a number of regulations were introduced in the 2010s, alongside the launch of the MSC certification process (not yet completed). The fishing and aquaculture code (2015) and decree n°2021-361 on the organisation of coastal shrimp fisheries set out the key policies for managing this sector, including licence, zoning, quotas, usage fees, fishing closure period, mandatory use of Turtle Excluder Devices (TED) and Bycatch Reduction Devices (BRD), mandatory restoration of mangroves, etc. These measures have led to a relative stabilisation of shrimp catches.

The relative success of the regulatory approach is highly correlated with the implementation of joint management practices with the industrial sector which represents a significant share of catches (see section 3.5.5). For several years, the State provided considerable financial support for the sector to compensate for the declining catches (reduced fuel taxes for example).

However, this regulatory approach has many limitations when it comes to managing traditional fishing practices, which are highly fragmented and where the freeze on fishing effort raises numerous social and political issues (lack of resources to change practices and lack of alternative sources of income).

It should also be noted that industrial fishing effort has been reduced alongside the development of aquaculture, which has created new economic opportunities and maintained export revenues, while relieving the pressure on wild stocks.

Example of an incentive-based approach: Cocoa in Cameroon

There are no regulations on cocoa production methods in Cameroon. Existing regulations mainly cover quality and commercialisation, with the aim of protecting the image of Cameroonian cocoa on the international stage, and supervising sales to maximise revenue for the government. In terms of production, the government intervened mainly via support programmes to help intensify production (distribution of improved plant varieties, chemical inputs, agricultural advice, etc.). But faced with the increasing consumer demand for sustainable cocoa, the government has also multiplied support measures for the sustainability of the sector (geolocation projects for farming plots, advice on agricultural good practices, restoration of old cocoa plants, etc.). These measures were supported by various funding partners (including the EU and the Central African Forest Initiative – CAFI).

However, the forthcoming introduction of the EUDR means that the government will have to gradually strengthen the regulatory framework. As such, work on the national transcription of the African sustainable cocoa standard, ARS 1000, began in 2024. The Cocoa Talks multi-stakeholder initiative rolled out by the European Union in Cameroon in 2021 aims to clarify the distribution of roles between public and private stakeholders, and also serves as a base for the development of future regulations.

3.4.4. SUMMARY: OBSTACLES TO & DRIVERS OF MAINSTREAMING

Obstacles	Drivers
• Insufficient financing • Lack of scientific data • Political will focused on socio-economic development goals • Insufficient coordination between institutions responsible for developing sectoral policies and biodiversity • Influence of the informal sector and small-scale producers that lack the resources to change their practices • Low level of awareness of the connection between practices and pressures • Recent decentralisation creating legal grey areas • The need to boost the capabilities of law enforcement agents • Lack of mechanisms for sustaining and scaling up field experiments carried out by public and other stakeholders (NGOs, private sector, etc.). • Existence of commercial outlets in markets and countries with low environmental and social requirements	• Increased awareness of the rapid deterioration of ecosystems and the impacts on human societies • Increased environmental demands from consumers and import markets • Emergence of supra-sectoral coordination bodies for public action (Ministry of the Economy and Finance, Prime Minister, Presidency) • A leading international framework (Kunming-Montreal framework and strengthened multilateral funding mechanisms) • Funding partners' interest in biodiversity • Strengthened civil society • Development of country-led initiatives • Numerous framework laws being revised • Growing number of initiatives from the private sector

3.5. EXAMPLES OF SUCCESSFUL AND UNSUCCESSFUL MAINSTREAMING IN THE WORLD

Eight key areas of focus for mainstreaming have been identified, and can be applied to all countries and sectors: integrated territorial development, sustainable intensification, evidence-based policies, formalisation and aggregation of smallholders, co-management, participatory management, involvement of the downstream private sector, carbon finance and biodiversity.

For each of these areas, examples have been identified from a general literature review and interviews carried out by Altai. They cover the BIODEV2030 countries, as well as and especially other geographical locations where more advanced assessments have been conducted. Good practices (successes) were identified in **green**, while bad practices (failures) were identified in **orange**.

3.5.1. INTEGRATED TERRITORIAL DEVELOPMENT

Integrated territorial development involves organising the allocation of space to different activities and infrastructure (farming, housing, conservation, etc.) in a coordinated fashion, to limit conflicts of use and ensure these spaces are developed in keeping with coherent and appropriate vocations. The first challenge is to ensure the effective allocation of land, enabling functional units to be maintained from an economic point of view for farming areas (farmland, pastures, logging) and to avoid the fragmentation of land. This allocation should then be followed up with plans to develop the land (hydro-agricultural developments and other infrastructure) to maximise the productivity of a given space. Effective allocation such as this encourages the protection of areas of high ecological value and the associated biodiversity corridors that promote connectivity between these areas and the natural habitats.

The major issues of integrated territorial development are: i) political will and the available technical and financial resources; ii) sufficient preservation of conservation areas (in keeping with the Kunming-Montreal 30% targets) and connectivity corridors; iii) participatory development of spatial development plans to ensure the support of stakeholders; iv) implementation at various relevant scales (national, regional, local); v) implementation, which depends on political will, the level of effective stakeholder involvement and technical and financial resources.

Regional Nature Parks (PNR) in France: an example of an integrated conservation model

In France there are 60 or so PNRs, created from the 1960s and covering 17% of national territory^{xlv}. These territories aim to ensure a balance between economic development and conservation in areas of high environmental value. Each PNR is bound to a charter that sets out the spatial limits, goals concerned with protection, promotion and development, and management guidelines. Territorial and urban development plans must comply with the charter. They are managed by a joint association comprising the department, the local council, chambers of agriculture, trade, commerce, etc. In the event that the charter is not respected, the PNR risks losing its accreditation.

There are a number of other experimentations underway in the Global South, including:

- Gabon is developing a French National Land Allocation Plan (PNAT) as well as a national observation system for natural resources and forests, making it possible to allocate forest areas to different uses and to monitor the implementation of the PNAT, thanks to support from CAFI^{xlvi}.
- The DRC is developing an integrated policy for territorial development, as well as a dedicated regulatory framework, a national land use plan, seven provincial plans and local versions in partnership with communities and indigenous peoples, thanks to support from CAFI via the REDD+ fund^{xlvii}.
- Ecuador is developing local plans led by autonomous decentralised governments, that take on board criteria related to climate change and sustainable agriculture, thanks to the PROAmazonia project funded by the Global Environment Facility (GEF) and the Green Climate Fund (GCF).
- Ethiopia is developing a participatory territorial development project across three regions, with support from GIZ^{xlviii}.
- Senegal has just officially adopted its National Strategy for Integrated Coastal Zone Management, which promotes a range of effective instruments for the co-management of biodiversity (community marine protected areas) and natural resources (local small-scale fishing committees), to be incorporated into the Local Development Plans of local authorities.

3.5.2. SUSTAINABLE INTENSIFICATION

Sustainable intensification comprises all the measures to improve the productivity of a system, while ensuring its environmental sustainability over the long term, or even its positive contribution to protecting biodiversity. Drivers of intensification are: i) increased yield, thanks to improved inputs and

farming techniques (e.g. agroecology, agroforestry, crop-livestock association, effective irrigation⁶⁴, etc.); ii) reduced losses (post-harvest losses, damaged fish and forestry products, transformation losses, etc.); iii) increased sales price, via certification for example, modification of the value chain to increase the share of the sales price received by the producer, introduction of a price floor, etc.; iv) adding value to by-products (crop residues, secondary fishing catches, animal by-products from livestock farming and aquaculture).

To guarantee intensification over the long term, strict environmental safeguards must be put in place.

There are many examples of the intensification of activity that is harmful to biodiversity: the widespread acidification of soils in Kenya due to the excessive use of unsuitable chemical fertilisers, leading to the exploitation of new land; the transformation of juvenile fish into fishmeal in Senegal; the use of cyanide in processing residues from the gravity separation methods to remove mercury from gold ore in gold mining; the loss of varietal diversity linked to the distribution of imported improved and hybrid seeds. These safeguard measures can be incorporated into the approach used by public stakeholders (e.g. reserving the distribution of improved seedlings for plantations that need to be revitalised), into specifications validated by the stakeholders of a sector or established by a label, into territorial planning (see above), into regulations (e.g. banning certain practices, pricing policy for irrigation water), into technical guidelines (e.g. on the correct use of inputs and alternative solutions)⁶⁵, etc.

Failure of the organic farming reform in Sri Lanka: the challenge of progressiveness and support measures for producers

Sri Lanka's transition to organic farming was one of the campaign promises of President Gotabaya Rajapaksa, who was elected in 2019. In April 2021, the government therefore put a ban on importing and using chemical fertilisers and pesticides. In six months, rice production fell by 20%, leading to higher prices and a loss of rice self-sufficiency. The ban has also had a massive impact on tea production, the country's main export and source of foreign currency. In November 2021, the government partially suspended the ban for the main export crops (tea, rubber, coconut), which was then lifted definitively at the beginning of 2022 due to protests, inflation and the collapse of the Sri Lankan currency. A budget of \$200 million has been set aside to compensate farmers for their losses, as well as \$150 million in price subsidies for rice producers^{xlix}.

The main factors leading to the failure of the reform were the sudden ban in sectors highly dependent on chemical inputs, the lack of support for the development of alternative practices, and the challenging context of the end of the Covid-19 pandemic, which had already weakened the economy.

3.5.3. EVIDENCE-BASED POLICYMAKING

Research plays a crucial role in knowledge production to fuel political dialogue, build consensus and refine public policy guidelines. In sectors that rely on the extraction of natural resources (forestry, fishing, mining, pastoralism), research is used to assess the potential for extraction and the speed and conditions of renewal of natural resources (excluding mines). Forest inventories, fisheries assessments and studies on the carrying capacity of pastoral ecosystems (pastures, water resources, livestock numbers) are key documents that need to be revised on a regular basis (5 years maximum). They serve as the basis for sustainable management plans, the adaptation of extraction levels (licences, quotas) and the establishment of zones and periods where/when activity is limited (protected areas, biological resting periods, etc.). This data can also serve as the basis for indicators of biodiversity evolution and mainstreaming progress. Research can also be used to learn from experiments that support potential scaling-up. Finally, research helps to gain a better

⁶⁴ One of the co-benefits of developing irrigated plots is to stabilise farmers on specific plots and curb slash-and-burn farming techniques, which are major contributors to deforestation

⁶⁵ The Farmer Field Schools (FFS) is an innovative and effective initiative from the agricultural council, facilitating the implementation of agricultural best practices. This is a method of mutual practical learning, where a group of farmers from the same location conduct crop trials and exchange practices and local know-how, with the support of technicians. In Cameroon, for example, they have been used to promote good farming practices, including the reduction of pesticide use and the production of artisanal biopesticides ([source](#))

understanding of the economic value of ecosystems and the services they provide, as well as the costs associated with the deterioration of ecosystems. It also helps to shed light on political and economic trade-offs between conservation and degradation⁶⁶.

Data feedback from stakeholders is crucial in monitoring the exploitation of resources. Several countries have introduced data sharing obligations for industrial stakeholders, but accessing data from semi-industrial segments and small-scale businesses is more difficult, often due to a lack of skills, incentives and enforcement of sanctions.

Using the Capture per Unit Effort (CPUE) index to manage seabob shrimp fishing in Guyana

While the application for MSC certification was pending for seabob shrimp fisheries, the fisheries department introduced CPUE monitoring in 2014. This index assesses the abundance of a species in a fishing zone, by measuring the quantity of fish caught in relation to a given factor (number of days at sea, number of boats, size of nets used, etc.). When the CPUE passes below a threshold that has been predefined by all stakeholders together, the number of days at sea is reduced and a period of fishing closure can even be introduced. The CPUE is calculated from unloading data that industrial vessels are legally obliged to share. However, the CPUE does not currently take into account small-scale fishing efforts.

3.5.4. AGGREGATION AND FORMALISATION OF SMALLHOLDERS

Small-scale producers represent a significant share, or even a majority share of total production in a number of countries and sectors, creating difficulties when it comes to regulating practices. Small-scale producers are characterised by fragmented production, a high level of informality and limited technical and financial resources to change practices. This fragmented production also often means that a great number of intermediaries are used, reducing the share of sales price received by the producer, and diluting the amount of income that could be paid to a taxation system. There are significant limitations to the regulatory approach in these cases (see section 3.4.3). The calibration of State support measures can also be hindered by difficulties of identification, the number and dispersion of beneficiaries (see examples for Kenya and Cameroon in section 3.4.2.2). To facilitate the introduction of effective regulatory measures (identification of requirements, distribution of subsidies, pooling technical support and infrastructure, enforcement of sanctions, group certification, etc.), a number of countries and sectors have rolled out formalisation initiatives by registering operators (producer licence, fishing boat registration, etc.) and organising them into professional groups (cooperatives, economic interest groups, etc.). Promoting these groups provides an interesting alternative from a social and environmental perspective, to encouraging major private investment and from the industrial segment, which often comes from non-local stakeholders that do not create employment.

The fragmentation of production also hinders access to markets, especially international ones which increasingly require compliance with standards. An increasing number of smallholders requires specific traceability and monitoring systems that are costly to roll out. Pooling operators into groups with shared specifications means that verifications can be carried out at group level, for example certification by group or geographical area (designation of origin, geographical indications), therefore allowing for economies of scale and facilitating access to an international consumer base.

Using agricultural clusters to promote organic farming in India¹: comparison with Ethiopia

In 2015, the Indian government launched the *Paramparagat Krishi Vikas Yojana* (PKVY) programme to promote organic farming by setting up 50- to 100-ha clusters that group together several farmers. These farmers benefit from financial support, bio inputs, a boost in capacity by rotating crops for example, and are

⁶⁶ However, the economic assessment approach should be taken with caution in the spirit of the “strong sustainability” principle, which argues that natural capital and monetary capital should be considered independently, and that natural capital is irreplaceable, has both financial and non-financial value and its degradation is irreversible.

also supported in setting up shared infrastructure (vermicomposting, worm breeding units). These clusters are then certified via a Participatory Guarantee System (PGS) - see section 3.2.2.2.

In Ethiopia, one of the priority focus areas of agricultural policy is the development of Agricultural Commercialization Clusters (ACC)^{li}. Nevertheless, the main goal of these clusters is to facilitate mechanisation and bulk purchases of inputs, as well as bundling practices for sales. Ethiopia could draw inspiration from the Indian approach and use clusters to promote good farming practices and encourage certification.

The Charcoal Producers Associations (CPA) overlooking charcoal production in Kenya: the adverse effects of a total ban on logging

The Forest (Charcoal) Regulation of 2009 introduced strict regulations on the production, transport and sale of charcoal, by making it mandatory for producers to be members of an association (CPA) for example, in order to be granted a production licence. These licences were issued by a management committee and regulate production zones, targeted species, the number of trees felled, production techniques and reforestation initiatives. Transporters needed a forest administration permit, and distributors needed to be supplied by authorised transporters.

But this largely pioneering regulation encountered major obstacles, including corruption of forestry officials and slow implementation of national regulations at county level. The 2018 logging ban finally made charcoal production illegal, revoking the application of the 2009 regulations and removing incentives for sustainable production.

3.5.5. CO-MANAGEMENT MECHANISMS

In addition to the State, there are a number of other stakeholders who influence production practices just as much, if not more, and play a decisive role in the implementation of public policies and innovative approaches, making it necessary to consider new hybrid, community-based or shared governance mechanisms. These stakeholders are mainly from the private sector and professional organisations, Community-Based Organisations (CBO), NGOs and CSOs, decentralised administrations and international cooperation. Co-management is the most well-developed approach to shared governance. Public-private partnerships can also be a valid option to address a specific issue (see the example of the timber sector in Gabon, section 3.2.2.2). Co-management can also take the form of a coalition of stakeholders at regional level (see the example of regional CSO colleges to supervise gold mining in Guinea, section 3.2.2.2).

There are, however, a number of determining factors to ensure effective co-management: i) the existence of legal provisions enabling public authorities to recognise and formalise frameworks for the co-management of natural resources and the corresponding value chains; ii) the representation and negotiation capacity of stakeholders, particularly those in the small-scale/food-producing sectors; iii) the distribution of roles and responsibilities with a view to optimising synergies between stakeholders.

Co-management of industrial shrimp fisheries in Madagascar

Madagascar Shrimp Farmers and Fishers' Group (GAPCM) is a professional organisation that was created in 1994, with the aim of encouraging sustainable management of shrimp resources and acting as spokesperson for the profession with the authorities. It comprises ten member companies. It defends the interests of its members and helps draw up regulatory texts. It participated in marking out fishing zones, freezing fishing efforts, introducing a fishing closure season, creating the Fisheries Monitoring Centre and setting up research and management assessment bodies within the sector^{lii}. This contribution was made formal in 2023 with the creation of the Fisheries Management Advisory Board (CCGP). The group also developed a collective label to guarantee the origin, quality and eco-friendly nature of the products marketed.

Efforts have also been made to improve representation of small-scale fisheries, with the Local and Participatory Management Advisory Board for Small-Scale Fisheries (OCCGL3P), also created in 2023.

Nevertheless, the structuring of stakeholders able to represent the small-scale fishing segment is ongoing. The MIHARI network, which was created in 2012 and comprises 200 Locally Managed Marine Area Networks (LMMAs) is one of the emerging stakeholders.

3.5.6. PARTICIPATORY MANAGEMENT MECHANISMS

Participatory management mechanisms also come under the co-management principle and encourage communities to get involved in sustainable management in their local areas. As long as they are correctly implemented, these mechanisms play a key role in the assimilation and implementation of laws. There are also a number of traditional resource management bodies (pastoral area management, *tombolomas* in gold mining, forestry committees, etc.), some of which need to be revitalised to adapt them to changing values and lifestyles, and whose roles and responsibilities need to be better recognised or even integrated into substantive law and its methods of enforcement. The involvement of these bodies then helps to develop participatory resource management plans, as well as community-based charters to incorporate the law into local context.

However, a few difficulties arise in implementing these mechanisms: i) their effectiveness depends on the context of each community (leadership, potential inter-community rivalries, etc.); ii) the need for substantial technical and financial resources to support communities in implementing and monitoring management plans, often requiring a coalition of stakeholders (CSOs, international cooperation, decentralized administrations, etc.) and improved knowledge of socio-economic activities (beyond their sole duty of monitoring and protection) for law enforcement officers.

Locally Managed Marine Area Networks (LMMAs) in Fiji^{liii}: positive results to work on

Fiji boasts the biggest LMMAs in the world, covering more than 10,000 km² and 350 coastal villages. LMMAs are coastal areas whose resources are managed by local communities, with support from partner organisations, on the basis of delegated responsibility agreements with State institutions. This community-based approach is particularly suited to Fiji because the nature of this 330-island archipelago makes centralised control operations virtually impossible, and justifies the delegation of management and participatory monitoring responsibilities to local community-based organisations.

In Fiji, the villages with LMMAs have rolled out resource management initiatives. They also benefit from better access to financing (subsidies from technical and financial partners, revenue from tourism, etc.) and infrastructure (electricity, roads, unloading docks, storage and transformation infrastructure, etc.). It is however necessary to make some improvements to the model to realise gains in terms of revenue, food security and protection of biodiversity. These gains include an increase in available resources, diversified value chains, improved management of conflict in access to resources, etc. They can be achieved thanks to more effectively combining endogenous knowledge and scientific knowledge, developing internal zoning and gradually increasing the level of protection granted to locally managed areas.

3.5.7. EMPOWER DOWNSTREAM STAKEHOLDERS IN THE VALUE CHAIN (PROCESSORS, EXPORTERS, RETAILERS)

Merchants, processors, exporters and retailers are usually the stakeholders in the value chain with the most significant technical and financial resources. They are also on the front line when it comes to the sectors' sustainability and documentation requirements. Indeed, exporters and retailers are faced with growing consumer demands, which they must ensure are reflected in their supply chains. Due to their size and resources, it is also easier to impose environmental obligations on them (reports and environmental impact studies, duty of care with regard to their supplies, traceability, etc.). While contractualisation models between small-scale producers and major corporations have already been set up by large companies to secure their supplies, these models are generally poorly supervised by governments and focus primarily on the regularity and predictability of quantities, price and sanitary quality, with limited consideration for environmental impact and insufficient support mechanisms for small-scale producers (capacity-building, access to financing,

infrastructure funding, etc.). However, voluntary initiatives from companies who give priority to their CSR, their image, reducing their environmental footprint and their contribution to sustainable development can take many innovative forms, sometimes with a significant impact on value chains. With suitable marketing practices, these stakeholders also play an important role in educating consumers and encouraging demand for more sustainable products.

Developing contract farming in organic aquaculture in Vietnam: Camimex

Camimex is the second largest shrimp processing company in Vietnam. The company works with 3,000 small-scale producers, including 1,500 organic producers. In response to growing vulnerability resulting from climate change in the Mekong delta, where most of the country's shrimp farms are, and to meet organic certification criteria, the company experimented with a shrimp farming model incorporated in the mangrove. With the support of NGOs and funding from international partnerships, Camimex was able to boost the capacities of its producers, establish internal control systems and replant mangroves. In 2024, this project was granted a \$15 million loan from the Dutch Entrepreneurial Development Bank (FMO) so that it could be rolled out on a broader scale.

Although there have been various frameworks for contract farming in aquaculture in Vietnam since 2002, they remain essentially based on quantity, price and quality criteria, with little consideration for the environment.

Failure to adopt contract farming in India

In May 2020, the Indian government announced three major agricultural reforms as part of an overall strategy to boost revenue for rural households: i) authorisation for producers to sell via channels other than those controlled by the government; ii) removal of mandatory stock for the main farming products (cereals, onion, potato, etc.), iii) implementation of a framework for contract farming. These liberalisation measures were designed to promote private investments in a sector where productivity is notoriously low. Widespread protests from farmers that lasted over a year led to negotiations between the protesters and the government, but they did not manage to reach a compromise. In January 2021, the Supreme Court temporarily suspended reforms, pending the negotiation of a consensus^{liv}.

There were several reasons for the failure of this reform^{lv}:

- Small-scale producers were not involved in drafting the law.
- Lack of trust in political powers, after several successive governments failed to keep their promises for reform.
- Fear of losing the benefits of the current system (the regulated single market allows for a support price, equality of taxes and regulations, conflict resolution, regular payments, maintaining family trade systems, etc.).
- Fear of additional gains for large groups in the food industry, that are not redistributed to producers.
- Resistance from certain interest groups (intermediaries, tax collecting governments, etc.).
- Political concerns between the current political party and opposing parties.

In keeping with the FAO's concept of responsible contract farming, improvements to the Contract Farming Act of 2020 include defining the rights and duties of each party, encouraging transparency, standardising contracts (fair prices, quality standards) and supporting sustainable agriculture. Alongside this legal framework that needs to be reworked, the government is promoting the creation of producers' organisations to improve their bargaining power vis-à-vis large corporations. However, improvements are still needed in terms of capacity-building for these producer organisations (legal aspects, access to financing, negotiation), conflict resolution mechanisms, traceability and ensuring that each party complies with their obligations.

3.5.8. MOBILISING CARBON FINANCE AND BIODIVERSITY

Various innovative financing tools are emerging to fund the safeguarding of ecosystem services.

These tools also play a key role in sharing the benefits derived from biodiversity with the local communities involved in its protection. The main ones are carbon finance (carbon credits, REDD+⁶⁷ financing), Payments for Ecosystem Services (PES), and more recently, biodiversity certificates. An increasing number of policy and regulatory frameworks are used to supervise the use of these instruments, and multiple stakeholders are involved (private sector, international cooperation, supervisory bodies, communities, etc.). At first these instruments were used to finance conservation initiatives, but there are now more and more schemes to finance changes in practice (financing for sustainable agriculture, improved cooking stoves, production of biogas, etc.).

The Payments for Forest Ecosystem Services (PFES) in Vietnam

Vietnam drafted the PFES into law in 2010 (decree no. 99/2010/ND-CP revised in 2016 by decree no. 147/2016/ND-CP). This policy is one of the only ones in the world to have been developed at national level and drafted into law. USAID funding made it possible to put this policy into operation in 2011. The law requires users of forest environmental services (hydroelectric power plants, municipal water services, ecotourism companies) to pay rural households for watershed protection.

This may have been a pioneering project, but improvements were deemed necessary to harmonise the rate of payments between regions, make them conditional on the quality of forest management, to boost sustainable management standards and streamline fund disbursement procedures, as well as increase community-based capacity building initiatives^{vi}.

USAID also funded the Sustainable Forest Management (2020-2025) project to introduce a tax on the CO₂ emissions of the country's biggest polluters (mainly cement works and coal-fired power plants), in accordance with a principle set out in the forestry act of 2017. While the amount of the tax is insufficient to encourage stakeholders to reduce their emissions (less than \$2/t versus \$40 to \$80 recommended by the IPCC), the main goal of the programme was to find new financing solutions for the restoration and expansion of Vietnamese forests^{vii}.

PES to reduce overgrazing in China: the challenge of ensuring long-term policies^{viii}

Overgrazing affects 90% of pastoral land in China and has led to the desertification of numerous spaces. Consequently, China rolled out several PES on a large scale. The Grassland Ecological Compensation Policy (GECP) (2011-2020) is the most significant global PES initiative devoted to pastoral land, with a total budget of 26.5 billion euros. Its goal was twofold: land restoration and poverty reduction. Specific zones were created where grazing is either forbidden or authorised, and payments were made to livestock farmers to reduce their herds and for fodder production. The initiative led to a noticeable restoration of greenery, but the socio-economic impacts were cause for concern. Challenges arose in terms of control, with unfair enforcement of corruption sanctions, and a decline in controls when the scheme ended. In addition, payments were calculated based on the grazing surface owned by households and so owners of bigger areas of land largely benefited. The policy also prompted herders to move towards the towns and cities, without sufficient support measures to adapt their lifestyle and subsistence. Almost all of them ended up returning to the pastures at the end of the scheme, as they had always relied on the PES for their livelihood.

⁶⁷ All the BIODDEV2030 countries are involved with the exception of Cameroon, Guinea, Senegal and Tunisia.

4. CONCLUSION AND RECOMMENDATIONS

4.1. CONCLUSION

This report provides a transversal analysis of the progress made in mainstreaming biodiversity in public policy for the 14 countries studied⁶⁸.

These countries share underlying causes for the loss of biodiversity. These 14 countries, including seven LDC (Benin, Ethiopia, Guinea, Madagascar, Mozambique, Senegal, Uganda) and seven developing countries (Cameroon, Fiji, Gabon, Guyana, Kenya, Tunisia, Vietnam), face the same challenges. They are confronted with great challenges in terms of socio-economic development (poverty, inequalities, health, education, lack of food security, etc.), which are all priorities for public action, but they also face financial difficulties (increased debt, difficulty in raising tax revenues, weight of public support for development). These countries also rely on the primary sector (agriculture, fishing, livestock, forest, mines) for employment, producing wealth and achieving a trade balance. However, the primary sector relies on the use of natural resources, which is putting an increasing amount of pressure on biodiversity, exacerbated by various factors (demographic growth, changes in production and consumption means, transformation of governance methods, climate change, etc.). And it is dependent on the ecosystem services provided by biodiversity (water cycle, soil formation, materials, etc.), even though these countries are home to some of the world's richest ecosystems (biodiversity hotspots).

Of the six sectors studied⁶⁹, the main pressures on biodiversity are the destruction and artificialisation of natural habitats (or changes in land use), pollution (mainly soil and water) and overexploitation of resources. These pressures are key contributors to the extinction of species and the degradation of ecosystem services.

The study revealed numerous similarities between countries in terms of the main harmful practices, particularly with regard to increased extractions, the conversion of natural environments into exploited areas (farming land, forest plantations, mines) and the use of chemicals. While there is a comparative consensus on the deterioration of ecosystems in the countries studied, awareness of the linkages between production practices and pressures on biodiversity remains limited.

After a period of disengagement from sectoral policies following the liberalism of the 1980s-1990s, governments are now stepping up their efforts, and gradually taking biodiversity into consideration. Their first priority is to improve the contribution of sectors to socio-economic development through growth and better revenue sharing. However, the growing number of international commitments and the rapid rate at which ecosystems are deteriorating are prompting governments to increasingly include the challenges of sustainable development into their general and sectoral policies, going beyond environmental policies alone and mobilising regulatory, economic, informational and other tools. Major efforts to update the policy and regulatory framework have been underway since the early 2010s and are still ongoing.

However, the integration of biodiversity into public policies remains largely insufficient, particularly in terms of regulating practices and implementation. Indeed, governments have focused their efforts primarily on downstream aspects (quality, marketing) rather than on production, particularly in export sectors that generate earnings in foreign currency. Implementation also remains a stumbling block in all the countries studied, due to a lack of political will, corruption, conflicts of jurisdiction between institutions, and above all a lack of resources for law enforcement (insufficient number of law enforcement officers, inadequately trained, equipped, etc.). In fact, the sectoral and environmental policies actually implemented in the countries studied remain largely incompatible.

⁶⁸ Congo is one of the countries involved in phase 2 of BIODDEV2030 but was not included in this study due to a change in the project approach in this country.

⁶⁹ Agriculture (11 countries), logging (6), fishing (6), mining operations (4), livestock (3), industry (1). For most countries, only some of these sectors were assessed.

Faced with these shortcomings in public policy, other types of stakeholders have stepped up to influence production practices. They include stakeholders from the private sector, particularly those involved in export products, professional organisations, civil society and international cooperation. The presence of these stakeholders, who sometimes have greater influence and means of action than the government, makes it necessary to consider mechanisms for shared sectoral governance. It is crucial to draw up a shared north-south agenda that combines biodiversity protection and socio-economic development, to encourage the involvement of governments from the Global South in this joint initiative.

General mainstreaming trends are observed for each sector:

- **Agriculture:** Support frameworks for sustainable agriculture (organic and agro-ecological farming in particular) are beginning to emerge, as are concerns about sustainable intensification (sustainable use of chemical inputs, efficient irrigation, etc.). But they remain relatively modest compared with the support measures for productivist agriculture based on chemical inputs, mechanisation and the development of agro-industry.
- **Logging:** Almost all BIODIV2030 countries boast an advanced political and legal framework devoted to the protection of forests, recently strengthened even further in light of climate/carbon issues. But there are still major obstacles to overcome in enforcing the regulations. Agro-forestry is a sector that is still insufficiently regulated, despite the opportunities that have arisen from recent EU decisions in the fight against deforestation and forest degradation.
- **Fishing:** While a great number of regulatory measures for fishing (mainly industrial fishing) have been introduced over the past 20 years in the majority of the countries, there are still shortcomings to address when it comes to the fight against IUU fishing, regulating small-scale fishing and the availability of data to guide management measures. The recognition of LMMAs and other means of shared governance and local co-management of fisheries would make it easier to roll them out effectively in many countries.
- **Extractive industries:** In the industrial sector, the States have mainly focused their efforts on sharing operating revenues. While mining codes are generally well-detailed, they are often not correctly implemented. International standards are increasingly significant in the practices of mining companies. For the small-scale sector, the regulatory framework is still not adapted to the fragmented, informal and increasingly mechanised nature of operations, and so it is not applied across the board. Formalising small-scale operators into groups and the research and scaling up of ore processing techniques without the use of toxic substances are top priorities.
- **Pastoralism:** Overall, this sector suffers from a lack of suitable policies in favour of agriculture, urban development and settlement for herders. Priorities therefore include recognising the value of pastoralism, securing land rights for herders and incorporating this into land use planning, in close coordination with farmers (to avoid or reduce conflicts), and the implementation of management tools that are based on the carrying capacity of ecosystems, to avoid significant herding movements in herds leading to overgrazing and considerable degradation of forage and forest resources.

In order to roll out these policies and the associated reform and adapt to different contexts, a policy mix approach is required, to combine regulatory, economic, informational instruments and others. The regulatory approach, based first and foremost on tightening regulatory requirements, has proven limited in many contexts, particularly when the weight of smallholders is significant, and when law enforcement resources are insufficient. The incentive-based approach, based on direct financial incentives (subsidies, taxes, etc.) and indirect incentives (certification leading to a premium on the sale price, public R&D, provision of technical advice, public infrastructure, etc.), is often more appropriate in BIODIV2030 countries, but takes a long time to implement and requires substantial financial capacities. Studying the political economy of reforms is crucial in fine-tuning the policy mix to be implemented (drivers to encourage different interest groups to get involved, support measures for alternative practices, etc.) and the timescale of reforms (incorporating the reform into a given social-political-economic context, possible need for progressive implementation).

Finally, there are now more and more mainstreaming experimentations making it possible to learn from the most effective public measures, but there are still numerous obstacles to overcome in scaling up these measures. Asia and Latin America have carried out more advanced studies, but still haven't achieved any form of systemic transformation. There are still many obstacles that could be the focus of future schemes.

This study therefore adds to existing literature on mainstreaming in various ways. It provides a multi-sector analysis including sectors other than farming, for 14 developing countries and LDC, and covers economic, regulatory, informational instruments and others. It highlights a range of best practices and areas to address, adding to the reflection on success and failure factors for reforms in the countries studied. Among other things, it provides an insight into the dialogue and capacity-development processes, particularly for small-scale producers. It could be relevant to look deeper into some of the areas of focus to improve the understanding of mainstreaming in these countries, including the social aspect (fair transition) and research the economic benefits of pro-biodiversity policies, with a view to supporting lobbying of public stakeholders^{lix}.

4.2. RECOMMENDATIONS

4.2.1. FOR MULTI-STAKEHOLDER PLATFORMS

The country and transversal analyses have pinpointed various positioning opportunities for BIODEV2030 to explore for multi-stakeholder platforms. These opportunities could be added to the goals and agendas in platform meetings already scheduled, leading to work meetings held simultaneously with relevant stakeholders.

Add to discussions by including feedback from other countries where more advanced studies have been conducted

With the exception of a few sectors, the vast majority of countries and sectors studied are still in the preliminary phases of mainstreaming biodiversity, particularly due to implementation difficulties. Bringing in the perspective of countries outside the BIODEV2030 zones that have experienced similar issues could add to the discussions on the platforms, to capitalise on best practices and avoid the pitfalls that other countries have encountered. In the case of gold mining for example, Ghana, Mali and Burkina Faso are the most advanced in terms of best practices and formalisation efforts, and they could help in drafting public policies in Guinea and Senegal.

BIODEV2030 could propose the organisation of capitalisation initiatives (apprenticeships, exchanges of experience, study visits, school sites, etc.) that could lead to various types of deliverables (recommendations, technical itineraries, practical guides, mainstreaming roadmaps, etc.).

Add mainstreaming issues to the NBSAPs being revised

Most NBSAPs are currently being revised to ensure they are aligned with the Kunming-Montreal Global Framework. The participation of CBD national focal points in steering platforms is a great way for BIODEV2030 to share the results of the work carried out and maybe even contribute to the revision of NBSAPs.

This contribution could take place at two levels:

- i) Formulation of the NBSAPs, particularly by looking into the correlation between the Kunming-Montreal targets and the role of sectors in reaching national targets;
- ii) Implementation of the NBSAPs, through reflection and support for the establishment and capacity-building of inter-sectoral coordination mechanisms and accountability of sectoral ministries.⁷⁰

⁷⁰ Vietnam and Ethiopia offer two interesting starting points. In Vietnam, the Ministry of Natural Resources and the Environment chairs a National Steering Committee for the NBSAP, and ministerial taskforces are responsible for its sectoral implementation (e.g. the Ministry of Agriculture). In Ethiopia, discussions are ongoing to assign the Kunming-Montreal targets to different ministries and allocate resources. Several of Ethiopia's ministries already have departments in charge of managing natural resources and the environment.

Add mainstreaming issues to sectoral policies that are either being revised or drawn up

Most policy and legal documents have to be updated regularly, and so it is crucial to take advantage of these windows of opportunity to make sure biodiversity issues are taken into account. Outside of these windows, or to increase visibility for a reform, governments can choose to draw up a new document. However, this can cause issues if it is not in keeping with existing frameworks. In Kenya for example, several sustainable farming frameworks have recently been developed (Kenya Climate Smart Agriculture Strategy 2017-2026, Agricultural Soil Management Policy in 2023, Draft Agroecology for Food System Transformation Strategy currently awaiting validation). But the main agricultural strategy, the Agricultural Sector Transformation and Growth Strategy 2019-2029, barely mentions sustainable farming and environmental issues are primarily addressed in terms of degradation risks, such as the depletion of water resources, soil degradation and climate change, rather than by considering integrated sustainability goals. Some experts therefore recommend combining all these texts under one single act that would reform agriculture.

As such, the work to be done beyond BIODEV2030 could be focused on three levels:

- i) Revising public policies, making sure to incorporate biodiversity into existing legislation;
- ii) Drafting new public policy frameworks devoted to biodiversity (e.g. organic farming policy);
- iii) Drafting legislation for new public policies that include biodiversity, to support the enforcement of these policies (for example Kenya's Agroecology for Food System Transformation Strategy awaiting validation or the Agricultural Policy Law adopted in Guinea in 2024).

There are shortcomings to address in terms of land tenure⁷¹, production regulations (see section 3.2.2.2) and certification⁷². In keeping with these avenues to be explored, here are two examples of approaches adopted by other projects (COMBO and BIOFIN) that aim to influence the formulation of public policies related to the environment - and biodiversity in particular - that we could possibly learn from.

The COMBO project in Guinea

Funded by AFD and the FFEM, the COMBO/COMBO+ ("Conservation, Mitigation and Biodiversity Offset") project has been rolled out in six countries (Guinea, Madagascar, Uganda, Mozambique, Laos and Burma). In Guinea, it was implemented by Biotope and Guinée Ecologie, under the aegis of the Ministry of the Environment and Sustainable Development, with the aim of ensuring biodiversity is better integrated into public policies and private practices. COMBO takes a similar approach to BIODEV2030, but mainly targets large-scale infrastructure projects (mines, energy).

There are four areas of focus within the project: institutionalisation (incorporating biodiversity in legislation); developing knowledge tools for biodiversity (maps, landscape scale guides, etc.); strengthening capacities (command of biodiversity loss indicators, identification of critical habitats, etc.); development of good practice case studies.

The main outcomes of the project (confirmed and ongoing) are:

- The notion of environmental offsetting and mitigation hierarchy have been added to the Environmental Code.
- A decree has been drafted to apply these notions to mining projects.
- Environmental assessment decrees have been revised and the capabilities of the monitoring institution strengthened.

⁷¹ In the majority of the countries studied, the existing land tenure system does not provide adequate security of land rights, particularly for smallholders and pastoral communities, due to a lack of recognition of customary law versus substantive law. This land tenure insecurity not only fails to protect communities against land grabbing, but also prevents the creation of long-term conditions conducive to sustainable land management (tree planting, soil fertility improvement, erosion prevention schemes, hydro-agricultural schemes, sustainable grazing, etc.).

⁷² With the support of EU funding, CIRAD and CICC carried out a study and workshop on the definition of an "agroforestry cocoa" norm in Cameroon, with a view to transposing the ARS1000 African sustainable cocoa standard into national law, and potentially leading to better integration of agroforestry systems in the EUDR.

- The National Committee for Offsetting Impacts on Biodiversity and Ecosystems (CN-CIBE) was created.
- Support was provided to create a Code for Protected Areas and to revise the Forestry Code and Wildlife Protection Code.
- Plans were developed to draft addenda to sectoral policies that concern mining, energy, fishing and agriculture.
- A trust fund was created to provide funding for offsetting programmes.

The BIOFIN programme

The Biodiversity Finance Initiative (BIOFIN) was launched in 2012 by the UNDP and the European Commission with the aim of allocating more funding to biodiversity (Kunming-Montreal target 19). The approach has been adopted by 41 countries and was extended to 91 new countries following the adoption of the Kunming-Montreal framework.

There are four steps to the initiative, led by a national technical team and a national steering committee (Ministries of the Environment, Finance, Planning, etc.):

- 1) Policy and institutional review, providing recommendations for the legal framework and the necessary capacity building
- 2) Biodiversity expenditure review, including direct and indirect financing from public stakeholders, the private sector, civil society, etc.
- 3) Financial needs assessment to reach the targets of the NBSAPs; comparison between 2) and 3) to calculate the remaining financing gap
- 4) Biodiversity finance plans, to identify the most suitable financing mechanisms among 400 solutions identified by BIOFIN, to bridge the gap in accordance with the national context
- 5) Implementation of the finance plan by the government, with support from technical and financial partners.

Support the implementation of permanent bodies for co-management of sectors

The majority of professional stakeholders involved in this study expressed a desire to move towards more dialogue between public authorities and sector stakeholders, or even co-management. This was also reflected in several documents that were consulted. This notion of dialogue has arisen particularly due to the increasing role that many types of stakeholders (private sector, professional organisations, civil society, international donors, etc.) are driven to play due to the lack of public action (see section 3.2.2.2). Coordination between these stakeholders is crucial in ensuring synergies and coherence. In Cameroon for example, there are two relatively similar projects that both introduce a cocoa traceability system, one is led by the Cocoa and Coffee Development Fund (FODECC) and financed by the CAFI, and the other is led by the Cocoa and Coffee Interprofessional Council (CICC) and funded by the European Union.

The sectoral discussion platforms developed by BIODEV2030 already unite the majority of these stakeholders and could potentially be the first step in setting up co-management platforms.

Support the implementation of mechanisms to link local experiments, endogenous knowledge and public policies

A great number of experiments on sustainable practices have been conducted at regional level for decades now, whether through international cooperation, civil society or professional organisations. For example, the first experiments on participatory forest management in Ethiopia were conducted in the 1990s by GIZ, JICA and the NGO FarmAfrica. But many initiatives have not been properly taken on board by public authorities, making long-term adoption and scaling up difficult.

Added to these experiments are local knowledge and traditional institutions that could be replicated in other areas with similar conditions. This is the case for agriculture and pastoralism for example. It therefore seems necessary to boost cooperation between stakeholders, to encourage institutionalisation in good practice public policies.

4.2.2. FORMULATING LOCAL PROJECTS

Alongside multi-stakeholder platforms, phase 2 of BIODDEV2030 aims to develop a local project to implement sectoral best practices for biodiversity.

A great number of experiments have already been conducted on mainstreaming issues in BIODDEV2030 countries or in countries facing similar issues. **It therefore appears particularly relevant to incorporate a review of past and ongoing experiments into the design phase of local projects, to capitalise on lessons learned and synergies. Wherever possible, the aim should be to scale up and include this in public policies.**

The country analyses have highlighted a certain number of recurrent shortcomings in mainstreaming strategies, and it seems relevant to base the development of local projects on these, while maintaining a link with public policies.

4.2.2.1. Supporting law enforcement

The most significant shortcoming is law enforcement, and this could be used as a guideline for project activities. With this in mind, there are several types of possible activities:

Capacity building for those in charge of law enforcement (forest rangers, coast guards, phytosanitary inspectors, etc.)

Several additional efforts could also be considered:

- Recruit new officers
- Improve their equipment (vehicles, digital technology)
- Capacity building⁷³
- Improved incentives to combat corruption
- Strengthening the applicability of sanctions (review of amounts - to be adapted to suit small- and large-scale stakeholders, development of administrative sanction mechanisms - withdrawal of operating permits, temporary suspension of activity, fines - alongside legal sanctions which are often unenforceable, clarification of the legal framework on the hierarchy of norms and sanctions⁷⁴).

Making operators aware of the regulations

There are many challenges in terms of accessibility and comprehensibility of regulations, which operators are not always aware of, for a number of reasons (illiteracy, lack of translation into local languages and clear instructions on practices, absence of clearly marked-out protected areas, etc.). Communication efforts can take a variety of forms: translation of the law into local languages; theoretical or practical training sessions; development of media to disseminate the law (signs, leaflets, etc.); installation of zoning signs, etc. Local stakeholders (community leaders, NGOs, professional organisations, cooperatives, etc.) and decentralised

⁷³ This topic is particularly significant for forest rangers, who are often recruited and trained for protection-related duties (in Guinea for example, forest rangers are members of a paramilitary unit that groups together diverse profiles including veterans, curators, young professionals, etc.). Yet, to support the sustainable management of forests, they all need to have the necessary knowledge of sustainable forestry techniques, know how to develop forest management plans and develop activities that will generate a lasting source of income (sustainable charcoal production, exploitation of non-timber products, beekeeping, etc.).

⁷⁴ In Madagascar, the application of sanctions in the event of infringement of community regulations (*dinas*) for locally managed fishing areas is limited, because *dinas* are not recognised by the courts, the fact that these *dinas* overlap with other types of resource management regulations, and their lack of applicability to non-community members.

public administrations and services (technical advisors, local employees from ministries, etc.) may be asked to get involved⁷⁵.

Capacity building for sustainable alternative practices

As well as efforts to communicate on existing regulations, which will highlight illegal practices, it is crucial to promote alternative practices and encourage change. Extra work is needed in this respect to support the adoption of new practices:

- Promoting awareness of the impact that certain practices can have on the environment and human health
- Training to help stakeholders acquire the necessary skills, based on the Farmer Field Schools approach for example, or with the support of agricultural colleges.^{ix}
- Access to financing – the solutions put forward have to be adapted to the limitations of producers (informality, low collateral capacity, isolation, potentially long transitional period, e.g. for the introduction of agroecology) and may require groups to be formalised beforehand.⁷⁶
- Insurance solutions to cover the risks of transition, such as parametric insurance (pre-defined payment triggered when an indicator crosses a given threshold, e.g. rainfall level, temperatures, etc.)

To ensure long-term access to these services, it is crucial to work with local stakeholders and public services.

4.2.2.2. Support the drafting of public policies

In countries with the identified shortcomings in existing public policies, local projects could also be used in drafting public policies.

Data production

Data has a key role to play in guiding public policies (see section **Erreur ! Source du renvoi introuvable.**). However, significant shortcomings in relation to data have been identified in some of the BIODEV2030 countries⁷⁷. The BIODEV2030 project could support research in different ways^{ixi}:

- Direct funding to help conduct a study
- Capacity building for national researchers
- Support in developing a multi-annual research programme and in seeking out financing

Support the drafting of public policies

As suggested in the previous section, the local project could also include improvements to public policies, in terms of framework documents, legislation or regional expansion in the case of decentralisation policies. In-depth analyses of the legal framework and its shortcomings could therefore be conducted on a national and regional scale.

⁷⁵ In Guyana for example, the Commission on Protected Areas and the Fisheries Department work together to inform anglers and install signs around areas where fishing is prohibited during turtle breeding season.

⁷⁶ In Guinea, the PlanetGold project, funded by the GEF and led by UNDP, includes the creation of a finance product devoted to funding best practices in gold mining, in partnership with local banks.

⁷⁷ Study of shrimp stocks and their evolutionary dynamics in Madagascar, studies of stocks of the main commercial species and their behaviour (dynamics, breeding areas and periods, habitats, etc.) in Guyana, update of the forest inventory in Guinea, study of the carrying capacities of pastoral ecosystems in Ethiopia, etc.

5. APPENDICES

5.1. STUDY SCHEDULE

Stage	June-24	July-24	August-24	Sept-24	Oct-24	Nov-24
Phase 1: Framework						
Framework meeting						
Preliminary review of documentation & gathering resources						
Framework interviews						
Pre-identification of experts						
Drafting the framework note						
Discussing the framework note with the steering team						
Phase 2: Collecting and analysing data						
Literature review						
Identification of and interviews with experts						
Semi-structured interviews						
Data analysis						
Intermediate monitoring meeting						
Phase 3: Drafting and disseminating deliverables						
Drafting country analyses						
Drafting the transversal report						
Presenting country analyses to Kinomé for TA training						
Discussing the report with the steering team						
Finalising the report and drafting the summary						
Results presentation meeting						
Recording of video presentations						

5.2. LIST OF PEOPLE QUESTIONED

Country	Surname	First name	Structure	Role
BIODEV2030 steering team	Vergez	Antonin	IUCN	BIODEV2030 Coordinator
	Hosteint	Camille	WWF	BIODEV2030 Coordinator
	Bessis	Esther	WWF	Head of international programmes
Global	Ducastel	Christophe	AFD	Head of Forestry team
	Henry	François	Consultant	Fishing and aquaculture specialist
	Debade	Xavier	FFEM	Head of Forests/Agriculture
	Hallosserie	Agnès	IDDRI	Biodiversity Director
	D'Anfray	Amélie	CIRAD	Agro-ecology Project Manager
	Gobert	Helène	AFD	Ocean, Fishing and Aquaculture team leader
	Emmenegger	René	NewTree	Programme Coordinator
	Lanfranco	Pierre	UNDP - BIOFIN	Global Environmental Finance Analyst
	Barois	Hervé	UNDP - BIOFIN	Senior Technical Advisor
	Ripoche	Aude	CIRAD	Co-facilitator of CTS Biodiversity

	Caron	Alexandre	CIRAD	Co-facilitator of CTS Biodiversity
	Leclerc	Christian	CIRAD	Co-facilitator of CTS Biodiversity
	Milhorance	Carolina	CIRAD	Researcher
Bénin	Akambi	Is Deen	IUCN	AgeReB (ex-AT phase 1) Project Coordinator
	Sinsin	Brice	Abomey Calavi University	Professor
	Berthon-Dumurgier	Alexandre	AFD - TAZCO	Director of project teams
	Ouorou Ngobi	Agathe	AFD - TAZCO	Agriculture Project Manager
	Konnon	Dieudonné	Cabinet COTEF	Consultant
Cameroon	Kum	Elvis	WWF	TA
	Ngiado	Alphonse	WWF	Forest and Climate Coordinator
	Lachaux	Cécile	WWF	Global Lead of Cocoa
	Nlend Nkott	Jean-Pierre	WWF	Senior Expert Cocoa
	Keutcheu	Joseph	Dschang University	Professor
	Lescuyer	Guillaume	CIRAD	Researcher
	Maledy	Omer	CICC	Executive Secretary
	Mouyakan	Elvis	JMN Consultant	Forest Expert
	Botna	Boniface	CELDIE	Consultant
	Sonkoue	Michelle	RRI Francophone Africa	Program Facilitator
	Temple	Ludovic	CIRAD	Researcher
Ethiopia	Robi	Abdeta	IUCN	TA
	Samson Shimelis	Jemaneh	Ethiopia Biodiversity Institute	Researcher
	Tefera Tadesse	Genet	Ministry of Agriculture	Natural Resources Management Director
	Mekbebe Eshetu	Tesema	/	Consultant
	Berihun	Tesfaye	Addis Ababa University	Researcher
	Tadesse	Wubalem	CIFOR-ICRAF	Researcher
	Gebeyehu	Lemane	Jimma University	Researcher
	Mengist	Wondimagegn	Debre Berhan University	Researcher
Fiji	Luisa	Tavenisa	IUCN	TA
	Banuve	Amena	Ministry of Agriculture	Director of Land Resource Planning Division
	Kocovanua	Talei	I Taukei Affairs Board	Senior Conservation Officer
	Qica	Etiga	IUCN	Regional Project Officer
	Gaunavu	Jimmy	Ministry of the Environment	Senior Environment Officer
	Nand	Krishneel	Ministry of the Environment	Acting Principal Environment Officer
Gabon	Ndong	Eugène	WWF	TA
	Lachaux	Cécile	WWF	Global Lead of Cocoa
	Engonga	Nathaniel	CAISTAB	Researcher for the general manager
	Ndjewe	Ismaël	ACRAM	Co-manager
	Essono Ondo	Protet	/	Consultant
	Ayimambenwe	Jonathan	Kakaomundo	Founder
	Ayimambenwe	Sébastien	Kakaomundo	Founder
	Ndjimbi	Franck	National Assembly	MP - Forest Expert
Guinea	Kourouma	Martin Luther	IUCN	TA
	Diallo	Ibrahima	Guinea Centre for Environmental Law (CGDEM AEDD)	Consultant
	Camara	Ansoumane	National Federation for the Timber Industry	President
	Marc	Marine	Biotope – COMBO	Branch Manager
	Thouzeau	Alexandre	Biotope	Director of Studies
	Weyland	Ingrid	Insuco	Consultant

	Faber	Jean-Luc	Strategy and Development Bureau of the Ministry of Agriculture	Ex-Head of Department
	Kourouma	Cheick Bandian	UNOG	Board Member
	Kourouma	Sidiki	OGUIB	General Manager
	Gbonamou	Michel	IRAG	Deputy Managing Director
	Bah	Amadou	Action Mines Guinée	President
	Rodriguez	Iñaki	UNDP – PlanetGold	Task manager
Guiana	Fernandes	Diana	WWF	TA
	Tremolet	Marie	WWF	Guiana Shield Regional Cooperation Manager
	Williams	Aiesha	WWF	Conservation Manager
	Denzel	Roberts	Fisheries Department	Chief Fisheries Officer
	Amsterdam	Mikhail	Legal and Inspectorate Unit, Fisheries Department	Head
	Keus	Bert	/	Consultant
	Kalichran	Leana	University of West Indies	Professor
	Thompson	Ivana	Protected Areas Commission	Senior protected areas officer
Kenya	Bourguignon	Pierre	AFD	Paramaribo, Suriname and Guyana office manager
	Mungai	Catherine	IUCN	TA
	Liambila	Robai	Agrochemicals Association of Kenya	Researcher
	Muma	Mathew	KIPPRA	Senior Policy Analyst
	Ogali	Claire	USAID	Biodiversity and Policy Expert
	Kinnyua	Ivy	CGIAR	Senior Research Associate
	Kaigongi	Margaret	State Department of Forestry	Expert
	Mullah	Jared	KEFRI	Chief Research Scientist
Madagascar	Salim	Samora	KEFRI	Forest Expert
	Andriamanalina	Lie Haar	WWF	TA
	Ndriamanja	Jérémie	WWF	Fishing Specialist
	Rananavoson	Eulalie	GAPCM	General Secretary
	Andriamanohisoa	Miora	Ministry of Sustainable Development	CBD marine spokesperson
	Célestin	Guy	MIHARI Network	Executive Secretary
	Ioniarilala	Rado	FAO	Fishing Programme Coordinator
	Rasoloniriana	Rindra	FAO	Fishing Specialist
Mozambique	De Cupertino	Chantal	UA-BIRA	Fisheries scientist and oceanographer
	Matediane	Maria	IUCN	TA
	Nhamtumbo	Elisio	/	Freelance Consultant
	Abbas	Mariam	Observatório do Meio Rural (OMR)	Researcher
	Sandramo	Paulino	Angonia University	Deputy Head of the Agricultural Sciences Faculty
	Chongo	Jose	UNDP – BIOFIN	Environmental Finance Specialist
	Jaime	Augusto	Technoserve	Agriculture program director
	Cungara	Benedito	Michigan State University	Agro-economist
Ouganda	Lifanica	Gervasio	Lokus consulting	Founding partner
	Cavane	Eunice	/	Consultant
	Alinyo	Francis	IUCN	TA
Ouganda	Aguti	Caroline	Uganda Association of impact Assessment and an Environment and Natural Resource Specialist	Ex-Director

	Uwimbabazi	Moreen	National Forestry Institute	Team Manager
	Kavuma	Dennis	Uganda Timber Growers Association	General Manager
Senegal	Dramé	Aby	IUCN	TA
	Diedhiou	Youssouph	IUCN	Country Director
	Diarra	Karamoko	Environmental Centre for Research and Training	Director
	Ndiaye	Pauline	Enda Pronat	Project Manager
	Sow	Mamadou Abdoulaye	Enda Pronat	Agronomist
	Sall	Moussa	ISRA	Agro-economist
	Ngom	Mor	ISRA	Head of Research
	Samb Soh	Mody Ameth	/	Freelance Consultant
	Baldé	Houleyamatou	Gorée Institute	Project Manager - Governance of mineral resources
	Sall	Abdou Karim	Joal Fadiouth MPA local management committee	President
Tunisia	Nehdi	Yosr	WWF	Former TA
	Guellouz	Saba	WWF	Conservation Manager
	Khemira	Yosra	General Directorate for Water Resources	Hydrologist
	Ben Belgacem	Hatem	Ministry of the Environment	Assistant Director-General of Economic and Environmental Studies
	Ben Dhiab	Adel	/	Consultant
	Lassoued	Faten	Banking and Finance Advisor	CSR Manager
Vietnam	Nguyen Bich	Hang	WWF	TA
	Nguyen	Kim Thanh	Kim Delta	Founder
	Nguyen	Ba Thong	IDH	Aquaculture Program Manager
	Nghia	Tran Dai	Institute of Policy and Strategy for Agriculture and Rural Development	Researcher
	Quyen	Cao Le	Vietnam Institute of Fisheries Economics and Planning	Researcher

5.3. TYPE OF PPIS USED FOR THE STUDY

	Instruments			
	Economic	Regulatory	Informational	Others (Programmes/Support)
Description Type of policy	Based on market mechanisms, modifying the parameters of the rational economic calculation of economic agents (maximising the difference between revenues and cost).	Change the “rules of the game” by authorising/prohibiting	Increase the transparency of actions and the accountability of stakeholders to society	Create a framework that encourages virtuous practices
Sectoral policy (agricultural, forest, mining policy, etc.)	• Taxes (on harmful practices/products) • Subsidies (for favourable practices/products) • Price controls (price floor, guaranteed minimum income, etc.) • Payments for Ecosystem Services	• Protected areas and other land use planning and zoning regulations • Products/practices prohibition/authorisation • Quotas/licences on the exploitation of resources • Pollution quotas • Impact assessment obligations • Norms	• Promotion of favourable practices / Criticism of harmful practices • Certification • Environmental report obligation • Standards and certifications and environmental performance (auditing procedures, standardised documents, indicators, etc.) • Advisory forums and conferences to exchange best practices	• National sectoral plans/strategies • Support for R&D on favourable practices (e.g. agronomic research on agroecology) • Support for training in favourable practices • Voluntary agreements
Economic and fiscal policy	• Taxation regulations/exoneration of company revenue/profits • VAT rate • Pollution-related levies (polluter-pays principle)	• Authorisations to produce/market		• National general plans/strategies
Trade policy	• Existence and level of customs duties on imports • Export taxes	• Quotas/licences (on imports or exports)	• Environmental labelling on marketed products	

5.4. ASSESSMENT OF THE STRENGTHS AND WEAKNESSES OF THE MAIN SPPI

Type of PPI	Main instruments	Strengths	Weaknesses/areas to be considered
-------------	------------------	-----------	-----------------------------------

Economic	Subsidies (financial or in kind)		• High political and social acceptability • Strong incentive as changes in practice reduce costs and financial risks • Creates leverage for more investment from private stakeholders	• Budgetary cost • Targeting of beneficiaries and support measures (e.g. Fertiliser and seeds subsidies mainly granted to medium-sized and large farms) • Sustainability in the case of subsidies financed by technical and financial partners for programmes
	Taxes (sectoral taxes, VAT, customs duties, pollution tax)	Exemption	• High political and social acceptability • Strong incentive as changes in practice reduce costs and financial risks • Creates leverage for more investment from private stakeholders	• Loss of earnings for the government • Mainly targets large companies, barely granted to small-scale/food production sector which are highly informal • Wealth from natural resources already insufficiently taxed in certain countries^{lxii}
		Increase / Introduction	• Strong incentive as the cost of non-sustainable practices is increased • Generates additional revenue that can be channelled towards sustainable management of the sector • Possibility of introducing a bonus/penalty system whereby the tax rate changes according to the level of sustainability	• Risk of political and social acceptability • Mainly targets large companies, barely granted to small-scale sector which is highly informal • Requires solid governance to be implemented effectively^{lxiii} • Requires allocation mechanisms to direct a share of revenues to sustainable management of the sector • Harmonisation of domestic taxation policies and customs duties to avoid distortion of competition
	Financing solutions/subsidised loans (preferential rate, government-backed, etc.)		• Limited budgetary cost • Creates leverage for more investment from private stakeholders • Targets investment expenditure which encourages long-term changes in practice, compared to subsidies which most often fund operational expenditure (e.g. farming inputs, fishing boat supplies, etc.)	• Need for finance products suited to informal stakeholders or the need to combine with a formalisation policy (producers' cooperative for example) • Can be combined with campaigns to promote good practices and capacity building to boost commitment (e.g. the use of improved ovens for charcoal production)
	Price controls (price floor, guaranteed minimum income)		• No budgetary cost • Help stabilise producers' incomes, even in times of market volatility, and therefore encourages the adoption of good practices over the long term. • Protect consumers from unfair competition from less expensive non-sustainable products	• Predominance of policies aimed at capping prices for consumers, especially regarding food products • Contrary to the liberalisation policies that have prevailed since the 1990s • Risks to the competitiveness of exported products on international markets • Few examples of price controls conditional on compliance with good practices, and lack of synergies with private initiatives (premium guaranteed by environmental certifications). • Supervision of profit distribution along the value chain to increase income for small-scale producers • Need to align trade policy (to avoid competition from cheaper imported products)

	PES, carbon credits and biodiversity credits	- No budgetary cost - Leverage private-sector financing (e.g. Hydroelectric power plants, water treatment agencies, CSR policies of multi-national companies, etc.)	- Regulatory framework not yet stabilised at international level (particularly in terms of guaranteeing the quality of credit granted and amounts paid) - Regulatory framework complex to apply at national level and communicated to communities - Profit sharing regulations, particularly with communities - Carbon finance highly dependent on international market trends
	Insurance solutions	- Help support regulatory changes - Development of parametric insurance (triggered by a quantified indicator, e.g. rainfall) to simplify coverage for small-scale producers	Coordination required with the private sector and/or NGOs capable of scaling up and sustaining such products.
Regulatory	Zoning and land use planning	- Limited budgetary cost - Enable efficient land use and reduce conflicts of use and risks of encroachment in sensitive areas thanks to integrated long-term planning	- Zoning compliance dependent on political priorities - Issue of consistency between zoning (production/conservation zones) - Recent decentralisation, lack of guidelines at national level and financial and technical resources to roll them out at local level - Lack of scientific data to guide zoning (high conservation value areas, soil fertility maps, etc.)
	Authorised/prohibited practices	- No budgetary cost - Potentially immediate impact - Send a clear signal to stakeholders - Facilitate the enforcement of sanctions in the event of non-compliance	- Risk of political and social acceptability - Require solid governance (political will, fight against corruption) and sufficient control and sanction capacities to effectively enforce the law - Prohibition needs to be accompanied with education on the harmful effects of the practice - Support for alternative practices (awareness-raising, R&D, training) required, and even alternative means of subsistence in the event of that any form of activity is suspended - Can draw on the revitalisation of EU customary institutions to ensure compliance at local level (e.g. pastoralism, fishing)
	Licences/permits and quotas	- Source of budgetary revenue if licensing is conditional on payment of a fee - Licensing is a means of controlling the number of operators - Quotas are a means of controlling the level of levies - Possibility of making the granting and renewal of licences conditional on compliance with environmental specifications	- Must be based on scientific data (stock inventory) and a sustainable resource management plan - Require solid governance (political will, fight against corruption) and sufficient control and sanction capacities to effectively enforce the law - Small-scale sector often not covered by licence and/or quota systems - Can draw on the revitalisation of EU customary institutions to ensure compliance at local level (e.g. pastoralism, fishing)

	Norms	• No budgetary cost • Harmonise practices between stakeholders • The adoption of internationally recognised norms secures access to export markets. • They can target downstream activities in the value chain (exporters, processors) as a priority, because this is where compliance of the supply chain is managed.	• Require solid governance (political will, fight against corruption) and sufficient control and sanction capacities to effectively enforce the law (auditors need to be trained) • Support measures targeting small-scale producers are required, to ensure that norms are widely applied and that they are not excluded from the market
Informational	Certification and standards	• No budgetary cost • The adoption of internationally recognised standards secures access to export markets • Can help improve the sales price	• Based on voluntary commitment • Instrument mainly managed by the private sector, requires the development of synergies with public action • Transcription needs to be aligned with the requirements of international norms but adapted to the national context • Supervision of profit distribution along the value chain to increase income for small-scale producers
	Reporting standards, including Environmental and Social Impact Assessment (ESIA)	• No budgetary cost • Used as a basis for the Environmental and Social Management Plans (ESMP), including measures to mitigate, offset and find solutions to negative effects • Increased project transparency	• Need for nationally harmonised guidelines on the content of studies and on offsetting and repairing environmental damage • Need for sufficient control and sanction capacities to enforce offsetting measures effectively (auditors need to be trained) • The biodiversity dimension is often not understood as well as the social dimension • The challenge of making the documents produced available
Other	Public R&D (knowledge production, pilot projects)	• Helps to guide evidence-based policymaking • Helps support regulatory changes by making alternative practices more effective (e.g. research into pest-resistant varieties, treatment for gold that doesn't contain toxic substances, etc.).	• Budgetary cost • Coordination with progress made in research on a national level, and adaptation to the national context. • Issues linking with the private sector and producers to scale up
	Public infrastructure (roads, storage, processing, sales outlets, etc.)	• Helps support regulatory changes • Concentrates production passing locations and enables better monitoring of practices (e.g. fishing unloading docks, cocoa drying plants, etc.). • Leverages the involvement of other non-public stakeholders (NGOs, professional groups, technical and financial partners, etc.)	• Budgetary cost • Coordination between central and decentralised administrations • Coordination with infrastructures built by non-public stakeholders (particularly sustainability and scale-up of experimentations)

	Training and technical support (e.g. technical agricultural advice)	• Helps support regulatory changes • Leverages the involvement of other non-public stakeholders (NGOs, professional groups, technical and financial partners, etc.)	• Budgetary cost • Coordination between central and decentralised administrations • Coordination with non-public stakeholders offering capacity building
--	--	--	--

-
- ⁱ IPBES, 2019, The global assessment report on biodiversity and ecosystem services, p. 12 ([link](#))
- ⁱⁱ World Economic Forum, 2020, Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy, p. 8 ([link](#))
- ⁱⁱⁱ Rankovic, A., Jouve, M., Landry, J., 2021, Strengthening biodiversity mainstreaming in other sectors: Options – for and after – COP15 ([link](#))
- ^{iv} Nyeck, C. (2014). Politique publique. In: Nicolas Kada ed, Dictionnaire d'administration publique (pp. 384-385). FONTAINE: Presses universitaires de Grenoble
- ^v Tremblay-Racicot, F., & Mercier, J. (2017). Chapter 5. Les instruments de politique publique. In A. Chaloux (ed.), L'action publique environnementale au Québec (1–). Presses de l'Université de Montréal
- ^{vi} Alternatives Economiques dictionary ([link](#))
- ^{vii} Guillochon, B., Peltrault, F. & Venet, B. (2020). Chapter 5. Politiques commerciales. In: B. Guillochon, F. Peltrault & B. Venet (Dir), Économie internationale (pp. 127-165). Paris: Dunod.
- ^{viii} Institut des Politiques Publiques ([link](#))
- ^{ix} Bemelmans-Videc, M.-L., Rist, R.C. & Vedung, E., 1998, Carrots, sticks, and sermons: Policy instruments and their evaluation. Transaction, New Brunswick, pp. 21-58. ; Lascoumes, P., Le Gallès, P., 2004, « Gouverner par les instruments », Paris, Presses de Sciences Po ; OECD, 2021, Biodiversity, Natural Capital and the Economy: A Policy Guide for Finance, Economic and Environment Ministers
- ^x UNCTAD, 2023, The Least Developed Countries Report ([link](#))
- ^{xi} World Bank data, 2023 ([link](#))
- ^{xii} World Bank data, 2022 ([link](#))
- ^{xiii} World Bank data, 2023 ([link](#))
- ^{xiv} UNDP, 2024, Rapport sur le développement humain 2023-2024, p. 15 ([link](#))
- ^{xv} World Bank data, 2023 ([link](#))
- ^{xvi} World Bank data, 2023 ([link](#))
- ^{xvii} World Bank data, 2021 ([link](#))
- ^{xviii} Benitez, J.C., Mansour, M., Pecho, M., Vellutini, C., 2023, Renforcer la capacité fiscale dans les pays en développement. IMF, p. 4-5 ([link](#))
- ^{xix} OECD, Statistics on External Development Finance Targeting Environmental Objectives Including the Rio Conventions, consulted on 28/10/2024 ([link](#))
- ^{xx} Altai calculations. World Bank data, 2022 ([link](#))
- ^{xxi} Conservation International, Biodiversity hotspots – Critical Ecosystem Partnership Fund ([link](#))
- ^{xxii} Secretariat of the Convention on Biological Diversity, 2011, Mainstreaming Biodiversity: concept and work under the Convention ([link](#))
- ^{xxiii} World Bank, 2023, Repurposing environmentally harmful subsidies ([link](#))
- ^{xxiv} OECD, 2008, Report on Implementation of the 2004 Council Recommendation on the Use of Economic Instruments in Promoting the Conservation and Sustainable Use of Biodiversity, p. 15 ([link](#))
- ^{xxv} FAO, 2024, Repurposing domestic public support to agriculture. Policy brief 1 ([link](#))
- ^{xxvi} Deere Birkbeck, C., 2021, Greening International Trade: Pathways Forward
Global Governance Centre and the Forum on Trade, Environment & the SDGs (TESS): Geneva ([link](#))
- ^{xxvii} Keane, J., Agarwal, P., Mendez-Parra, M., Debowicz, D., 2024, Avoiding a 'green squeeze': supporting Least Developed Countries navigate new greening trade measures. ODI Working paper ([link](#))
- ^{xxviii} Secretariat of the Convention on Biological Diversity, 2011, NBSAP training modules version 2.1 – Module 3. Mainstreaming biodiversity into national sectoral and cross-sectoral strategies, policies, plans and programs
- ^{xxix} OECD, 2021, Biodiversity, Natural Capital and the Economy: A Policy Guide for Finance, Economic and Environment Ministers, OECD Environment Policy Paper n. 26 ([link](#))
- ^{xxx} Eldridge, M., Milner, J., Williams, J.L., 2020, Translating Policy Intent into Action: 15 Factors for Determining the Implementability of Agricultural Policies in Africa. Urban Institute. World Bank diagram (Repurposing agricultural support policies for sustainable food systems Toolkit)
- ^{xxxi} World Bank, 2023, *op. cit.*, p. 250 ([link](#))
- ^{xxxii} WWF, 2024, Turning harm into opportunity: Repurposing agricultural subsidies that destroy forests and non-forest natural ecosystems, p. 9 ([link](#))
- ^{xxxiii} FAO, 2024, *op. cit.*

-
- xxxiv European Commission, 02/10/2024, Commission strengthens support for EU Deforestation Regulation implementation and proposes extra 12 months of phasing-in time, responding to calls by global partners ([link](#))
- xxxv EDGAR (Emissions Database for Global Atmospheric Research) Community GHG Database, 2024 ([link](#))
- xxxvi Cirad, ISRA-Bame, 2022, L'intégration de l'agroécologie dans les politiques publiques du Sénégal ([link](#))
- xxxvii Pirard, R., Pacheco, P., Romero, C., 2023, The role of hybrid governance in supporting deforestation-free trade ([link](#))
- xxxviii Forest News, 19/03/2020, Produire un cacao légal, durable et sans déforestation au Cameroun ? Pas si facile... La filière cacao pourrait tirer des leçons des expériences du secteur forestier ([link](#))
- xxxix Guidance note for the harmonisation of existing PGSs in Benin, Mali, Nigeria, Gambia and Senegal ([link](#))
- xl PROJEG, 2018, L'or en partage, la participation des orpailleurs au développement local ([link](#))
- xli ODI, 2024, Avoiding a 'green squeeze': supporting Least Developed Countries navigate new greening trade measures ([link](#))
- xlii CBD dashboard, consulted on 24/10/2024 ([link](#))
- xliii Bemelmans-Videc, M.-L., Rist, R.C. & Vedung, E. (1998), Carrots, sticks, and sermons: Policy instruments and their evaluation. Transaction, New Brunswick, pp. 21-58.
- xliv Ministère de la Pêche et de l'Economie Bleue de Madagascar, 2022, Annuaire statistique de la pêche et de l'aquaculture 2019-2022, p. 33 ([link](#))
- xlv Regional Nature Parks in France ([link](#))
- xlvi CAFI, Land use planning and forest monitoring - Gabon ([link](#))
- xlvi UN-REDD, 2022, Info Brief Global – Land-use planning and integrated approaches to reducing emissions from deforestation and forest degradation, p. 6 ([link](#))
- xlvi GIZ, 2023, Integrated Land Use Planning in Ethiopia ([link](#))
- xlvi Foreign Policy (2022), In Sri Lanka, Organic Farming Went Catastrophically Wrong, consulted on 16/07/2024 ([link](#))
- i Ministry of Agriculture and Farmers Welfare of India, 2017, Guidelines for model organic cluster demonstration and model organic farm under PKVY scheme ([link](#))
- ii Ethiopian ATA, Agricultural Commercialization Clusters, consulted on 30/10/2024 ([link](#))
- iii GAPCM website, consulted on 29/10/2024 ([link](#))
- iii T. O'Garra, S. Mangubhai, A. Jagadish, M. Tabunakawai-Vakalalabure, A. Tawake, H. Govan & M. Mills, 2023, National-level evaluation of a community-based marine management initiative. Nature Sustainability ([link](#))
- liv R. Vos, W. Martin, D. Resnick (2022), The Political Economy of Reforming Agricultural Support Policies. IFPRI
- lv World Bank (2023), Repurposing environmentally harmful subsidies, p. 247
- lvi Tran Dai N, Cao Le Q, Phan Thi Ngoc D, Tran Thi Thu H. Trinh Quang T. Le Trong H, Hoang Van C, Pham Khanh C, Nguyen Thi N, Nguyen Thu H, 2022, Analysis of economic characteristics and impacts on biodiversity of Forestry and Aquaculture sectors in Vietnam. WWF-Vietnam
- lvii Mongabay, 13/03/2020, Vietnam's new conservation plan prioritizes trees and people. Emissions? Not so much ([link](#))
- lviii Zhou, T., et al., 2023, China's grassland ecological compensation policy achieves win-win goals in Inner Mongolia ([link](#))
- lix World Economic Forum, 2020, New Nature Economy Report II: The Future of Nature and Business ([link](#))
- lx See "Supporting the Agroecological Transition in Cotton Zones" (TAZCO) project in Benin, funded by AFD
- lxi See the methodology for the SWIOFISH2 project in the Indian Ocean
- lxii OECD, 2015, "Les recettes fiscales, moteur du développement durable" (Tax revenues driving sustainable development), in the Development Co-operation Report 2014: Mobilising Resources for Sustainable Development, p. 104 ([link](#))
- lxiii *Ibid.*