

Sectoral public policies & pressures on
biodiversity

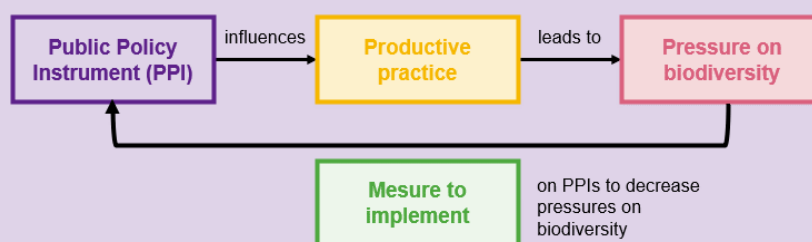
Sectors: Aquaculture; Forestry

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It highlights the linkages between the pressures on biodiversity that are caused by the sectoral production practices and the main sectoral, economic and trade public policy instruments (PPIs) shaping these practices. These instruments can be of several kinds: regulatory, economic and financial, informational, etc. They have been categorized according to the extent to which they take biodiversity into account: ● blind to biodiversity; ● taking biodiversity into account. Several priority measures to be implemented have been identified and are presented below: **reform** (repurpose, strengthening or abolition) of an existing instrument; **enforcement of an** existing instrument; **introduction** of a new instrument.



The main harmful productive practices, the PPIs shaping these practices and associated gaps, as well as the priority measures that could be implemented were identified through a literature review and interviews with experts. We used the DPSIR framework (Driver – *here the harmful practices*; Pressure; State; Impact; Response – *here, priority measures that could be implemented*). Detailed data on the consequences for biodiversity (State) and for Humans (Impact) are available in the [diagnoses](#) carried out in phase 1 of the BIODEV2030 project. The classification of pressures on biodiversity is based on the IPBES categorization.

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Country context: National biodiversity targets & progress of biodiversity mainstreaming in public policies

With over 50,000 species spanning across all ecosystems, Vietnam is ranked 16th among the most biodiverse countries in the worldⁱ. In addition to sectors such as agriculture, forestry, and fisheries that directly depend on natural resources, Vietnam's biodiversity and ecosystems also play a role in attracting tourism. In recognition of biodiversity importance, the Government has issued many pivotal laws in the field of natural resource management since the 2000s, including the 2008 *Biodiversity Law* which creates the basis for co-management and benefit-sharing with local communities. It also created state agencies responsible for financing biodiversity conservation, such as the Vietnam Environmental Fund and the Vietnam Wildlife Conservation Fund. Ecosystems degradation has nonetheless continued to be rampant, driven by population growth and resources overexploitation due to illegal practices. To curb this, Vietnam updated its **National Strategy and Action Plan on Green Growth 2021-2030**, which include several actions on biodiversity protection (ecosystem restoration, sustainable agriculture, blue economy development, etc.). The NBSAP to 2030 is currently under review to align to the Kunming-Montreal framework.



Aquaculture (fish and shrimp)

Sector context

With its coastline spanning 3,000 kilometres and an extensive network of rivers, Vietnam benefits from optimal natural conditions for the expansion of its aquaculture sector. **Thanks to an average annual growth rate of 13%, it contributes 4-5% to the GDPⁱⁱ with a yearly production of 5.4M tonsⁱⁱⁱ**, supported by favourable policies and long-term strategies of the government. **Vietnam ranks as the world's 3rd largest seafood exporter^{iv}**, offering a diverse range of products including frozen shrimp and fish fillets. It plays a pivotal role in ensuring food security, job opportunities (both in production and processing) and foreign exchange earnings thanks to seafood exports. **Aquaculture in Vietnam is divided into three key sectors:** brackish water aquaculture (66%^v), focused on shrimp and highly concentrated in the Mekong Delta; freshwater aquaculture (29%), focused on catfish like pangasius, which is highly organized for export due to strong ties between high-productivity small-scale farms and processors/exporters; and marine aquaculture (5%), including marine fish such as grouper, snapper, and sea bass. **Shrimp and marine fish aquaculture caters to both export and local markets but remains fragmented, relying on traditional techniques and lacking economies of scale¹.**

The National Aquaculture Development Program 2021-2030 aims at producing 7M t/year by 2030 (+30%), with the objective to develop from small-scale fisheries to large, sustainable commodity production. **The national policy frameworks always link aquaculture development with biodiversity conservation, although progress on implementation must be made².** Vietnam's policy also largely remains **quantity- rather than quality-based**. In the second half of the 20th century, aquaculture expansion contributed to the conversion of large natural areas, including mangroves, to farms and ponds. Having exhausted this land potential, the government is now turning its attention to marine aquaculture, to develop it further offshore. Yet, the sector is encountering several challenges, considering climate change³, ecosystems conservation, the spread of diseases, global economic competition, the collapse of natural aquatic resources and pressures from economic and tourism activities. **Increasing requirements from importing countries are also strongly pushing the sector towards greener practices.**

¹ Small-sized shrimp farming establishments accounts for 65% of the farmed shrimp area, as many households are engaged in small-scale farming (Tran Dai *et al.*, 2022). However, high-tech shrimp farms now represent over 70% of total output (WWF).

² 2017 *Fisheries Law*, Scheme for environmental protection in fishery sector in the 2021 – 2030 period, Strategy for development of Vietnam's fisheries by 2030, with vision towards 2045, Scheme on marine aquaculture development through 2030, with a vision toward 2045, National master plan for shrimp industry by 2025, etc.

³ Leading to rising sea levels, saltwater intrusion (threatens freshwater farming), droughts, and extreme weather

⚠ Pressure: Pollution

Harmful practice Inappropriate use of drug, chemicals and antibiotics (combined to improper treatments of wastewater and sludge)

PPIs linked to this practice & associated challenges

Degree of
biodiversity
mainstreaming

► **Land- and sea-use change policies – To strengthen.** Regarding sea-use change, the *Decree 26/2019/ND-CP* and *Decree 11/2021/ND-CP* (in application of the 2017 *Fisheries Law*) establish the framework for the licensing of marine aquacultural activities and allocation of marine surface area. In practice, localities need to be consistent with the Marine Spatial Planning (MSP) which gives specific instructions for implementation^{vi}. Before granting licenses, it is therefore necessary to integrate designated farming areas into MSP, which was reviewed in June 2024 to offer a direction for sustainable exploitation of the seas. **MSP should ensure alignment with environmental carrying capacity.** The placement and density of aquaculture cages must be carefully managed to prevent issues such as disease outbreaks, pollution, and seawater eutrophication in surrounding areas, as well as encroachment by other sectors.



Regarding land-use change, conversion of agricultural lands affected by saline intrusion to aquaculture presents an interesting adaptation measure to climate risks. **But it lacks appropriate policies.** Such guidelines could be integrated in the National Land Use Plan and in the integrated master plan for sustainable development of the Mekong Delta, in application of the 2017 *Resolution No. 120/NQ-CP*.

► **Incentives to investment in infrastructure and green technologies – To strengthen.** Existing waste treatment measures are often costly and/or insufficient. Large production companies are at the forefront of experimenting with sustainable production models (Recirculating Aquaculture System – RAS, use of probiotics, use of biological products to settle sludge on the pond bottom, nature-based filtering systems, valuation of waste into fertilizer, etc.). **These initiatives could receive additional state support through economic incentives such as grants or tax credits, along with strengthened partnerships with public research institutions.** To scale up these innovations, the government could incorporate targeted support schemes for shared infrastructure development in farming areas designated for concentrated commodity production. This includes investments in wastewater treatment facilities and coordinated disease response systems, ensuring sustainability and resilience in farming operations. Increased resources would be necessary to facilitate technology transfers from other major seafood-producing countries. **But synergies lack among coastal localities to invest and upgrade infrastructures and technical capacities of local public agencies in charge of monitoring practices^{vii}.** The state could provide guidelines for better collaboration across localities. Plans to create concentrated and high-tech farming areas should be synchronized with investments in adequate infrastructures. **Moreover, when smallholders are excluded from the planning and construction phases of infrastructures, they often feel less ownership over the issues and infrastructures^{viii}.** Better frameworks for communities' involvement and feedback, as well as awareness campaigns, could be designed. Some committees and farmer unions already exist but need support to become more effective.



► **National standards and certifications of sustainable practices – Lack of enforcement.** To promote the adoption of international certifications like *Aquaculture Stewardship Council (ASC)*, *Best Aquaculture Practices (BAP)* and *Global Good Agricultural Practices (GlobalGAP)*⁴, Vietnam launched its own certification system, *VietGAP*, in 2011, focusing on product quality, food safety, and environmental impact assessments. *Decision 1617/QĐ-BNN-TCTS* outlines guidelines for key aquaculture species under VietGAP, and the government has issued various standards covering veterinary hygiene (authorized products and precautions for use), biosecurity, food safety, and environmental protection. **However, small and medium-sized farmers struggle with the financial and technical requirements to meet these standards. They also face challenges in terms of traceability as they typically sell to traders and not directly to exporters.** To address this, cooperatives should play a bigger role in enabling small farmers to participate more fully in the supply chain through group certification. Further, developing cost-sharing mechanisms would help smaller producers meet certification requirements. Additionally, **VietGAP products currently do not command a price premium**, as importing countries require other certifications. VietGAP should be harmonized with international standards to make the switch to other standards easy and cost-



⁴ ASC is an independent labelling organization, covering 12 species and founded in 2010 by WWF and IDH.

effective. Even more stringent standards like organic farming should also be promoted. Few establishments are certified for organic shrimp standards to date, with traditional rice-shrimp farming techniques offering potential for further certification. However, land-use rights which were often granted only for agricultural purposes need to be reviewed to integrate aquaculture activities and allow for certification. Greater focus could be placed on increasing market demand for certified products. **Although large efforts have been made to develop standards and promote certification for shrimp, emphasis could now be placed on other species, especially on organic standards.** Additionally, penalties for non-compliance with chemical use regulations could be increased for larger entities, which are the main users of chemicals given the cost.

► **Standards on fish density in cages and spacing between cages – To strengthen.** High fish densities and inadequate wastewater treatment significantly contribute to the spread of diseases within and between aquaculture farms. Lowering fish density in cages and increasing the spacing between them, supported by stricter standards and improved spatial planning, could help mitigate pathogen transmission and reduce the reliance on drugs. Standards depend on species and regions. **Information campaigns to raise awareness on the risks associated with very high stocking density and promote the benefits of reduced density are lacking.** To ensure economic viability while promoting sustainability, policies encouraging Integrated Multi-Trophic Aquaculture (IMTA) are needed. IMTA systems combine species such as fish or shrimp with bivalves and seaweed, creating a balanced ecosystem that reduces waste. Combination with mangroves and agriculture (e.g. rice-fish) also have the potential to reduce both the use of feed for farmed species and the use of fertilizers for agricultural products. Many private actors and research institutions, such as the National Research Institute for Sustainable Development (IRD), are leading experimentations on IMTA in Vietnam that could be scaled up. Research efforts could focus on the shrimp value chain, which remains relatively unexplored within the context of IMTA techniques. Some local governments already introduced some policies related to IMTA that could guide the development of national policies.

► **Incentives for contract farming in shrimp and marine fish value chains – To strengthen.** The Vietnamese government has implemented various policies to promote contractual relationships between farmers and enterprises. **But linkages among farmers, input supply enterprises and processing and export enterprises differ depending on farm species.** While the catfish value chain is highly concentrated vertically, shrimp and marine fish value chains are lagging behind. **Moreover, contract farming mainly focuses on price, quantity and product quality, with often few considerations for capacity building and environmental aspects.** Lessons can be learned from past experimentations: contract farming between Pangasius farmers and Vinh Hoan Aquatic Product Export Company in Dong Thap, contract farming between shrimp farmers and Minh Phu Seafood Corporation in Ca Mau in organic shrimp farming through the adoption of mangrove-shrimp integrated farming systems^x. Moreover, as public agents and extension officers lack resources to cover all smallholders, better collaboration with the private sector could help bridge the gap.

► **Framework for Public-Private Partnerships (PPPs) – To scale up.** Vietnam began exploring public-private partnerships (PPPs) several years ago to promote the development of aquaculture in an environmentally and socially responsible manner. This approach harnesses the innovation, expertise, and financial resources of the private sector, bringing together various stakeholders to commit to sustainable aquaculture practices^x. The PPP Fish launched in 2018 is a prominent example of PPP promoting sustainable aquaculture in the Mekong delta. It was co-chaired by the Vietnam Directorate of Fisheries (D-Fish), the Vietnam Association for Seafood Exporters and Producers (VASEP) and the NGO IDH^{xi}. However, restructuring within D-Fish affected the continuity of public sector representation^{xii}. **These initiatives remain fragmented, with a lack of clearly defined roles for each stakeholder involved in policy implementation.** To ensure the success of new regulations and policies, a stronger emphasis on PPPs could be beneficial. International buyers and retailers from key consumer markets should also be included, similar to their involvement in other PPPs like those in the pepper and coffee sectors.

► **Support to research and distribution of pathogen-free breeds – To strengthen.** Intensive aquaculture practices, such as inducing spawning multiple times per year or at a young age, can result in weaker resistance to pathogens. To address this issue, PPPs focused on research and investment in breeding centres for high-quality, pathogen-free stock could be key. These partnerships would help establish a domestic seed production network that provides healthier breeds requiring less drug intervention. However, such research should focus on selective breeding, rather than Genetically Modified Organisms (GMOs).

⚠ Pressure: Natural resources overexploitation

Harmful practice Use of wild-caught low value trash-fish as food for marine farmed fish (fishmeal and fish oil)

PPIs linked to this practice & associated challenges

Degree of
biodiversity
mainstreaming

► **Regulations on the use of low valued fish/fishmeal from natural fisheries – Absence.** The total amount of low-value or trash fish used for aquaculture in Vietnam is estimated to range between 243,600 and 348,000 tons^{xiii}. Current marine fish farming in Vietnam, which is dominated by small-scale producers using traditional techniques, continues to heavily depend on fish-based feed. Farmers perceive fish-based feed as more cost-effective and beneficial for growth performance compared to industrial feed^{xiv}, which is typically utilized by larger, more industrialized farms. **The limited adoption of industrial feeds among smaller farmers stems from cost concerns and a lack of technical support**, creating a gap in feed efficiency that could be bridged with better access to resources and incentives. **Moreover, there is no regulation on the use of fish and fishmeal in aquatic feed.** The rising demand for aquaculture feed is one of the key drivers behind illegal, unreported, and unregulated (IUU) fishing in Vietnam, as Vietnamese fishing vessels increasingly operate illegally in neighboring countries' exclusive economic zones. In response to these issues, the EU issued a Yellow Card to Vietnam in 2017, urging stronger regulatory measures to address IUU fishing (see trade policy). To mitigate the environmental impact of aquaculture growth on marine resources, additional demand-side regulations on feed sourcing could be beneficial. **Although no national regulations currently mandate sustainable feed use, private certifications such as ASC, BAP, and GlobalGAP enforce standards on maximum fishmeal percentages and responsible feed sourcing**, which influence farming practices considerably. Developing collaborative frameworks between private certifications and public policies could further encourage sustainable practices across the industry.



► **Research for substitution of fishmeal in feed – To strengthen.** Annual domestic feed production in Vietnam is approximately 40,000-50,000 tons per year, while an additional 140,000-150,000 tons of feed for grow-out farming is imported, primarily from Thailand, Hong Kong, and Taiwan^{xv}. Most industrial feed is produced and imported by international companies such as CP Group, Uni-President, Proconco, Cargill, and De Heus. With increasing global demand for aquafeed and declining natural fish stocks, producers and researchers are exploring alternative protein sources such as algae, insect meal, and plants. **Despite ongoing trials, commercially viable alternatives, especially for shrimp farming, remain scarce. Moreover, policy incentives to reduce fishmeal usage are limited, as policies primarily focus on reducing costs.** As feed constitutes a significant portion of aquaculture production costs, and prices are rising due to the dwindling availability of wild fish, research could play a pivotal role in finding both sustainable and cost-effective alternatives. However, in the framework of the government's circular economy policy, the use of agriculture and livestock by-products could be promoted. Strengthening collaborations between international and Vietnamese research institutions could help tailor innovations to local conditions. Promoting the adoption of improved feeds through extension services and farmer education is also crucial for shifting towards more sustainable feeding practices.



► **Support to the development of herbivorous/omnivorous breeds – To strengthen.** Species like tilapia and Chinese carp, which are herbivorous or omnivorous, require little to no fishmeal, making them more sustainable options. **The tilapia farming plan 2016-2020 set the target of tilapia output to 400,000 tons in 2030 (+160%) but Vietnam is facing stiff competition from China on international markets.** The plan could be updated to identify relevant strategies and necessary investments to increase competitiveness. Supply-side policies should be complemented by demand-driven initiatives that encourage consumers to opt for more environmentally sustainable species, fostering wider market adoption.



Other harmful practices Installation of pens in natural areas (mangroves, rivers, ponds, etc.) leading to habitat conversion (better managed recently than in past decades) and disease and parasite transmission from farmed animals to local wild species; **Use of wild shrimp broodstocks; Genetic selection to improve breeds** which affects genetic diversity; **Discharge of plastic waste in oceans; Use of groundwater in shrimp farming** (mixed with seawater).

ECONOMIC POLICY

Degree of biodiversity
mainstreaming

Vietnam's aquaculture policy primarily aims to boost production and exports through cost reduction and increased competitiveness. A key strategy involves promoting vertical integration across various aquaculture sectors, particularly to support small farmers' organization. But Vietnam faces higher seafood production costs compared to its competitors, largely due to elevated expenses for feed, veterinary medicine, labor, and transportation. Aquaculture also faces growing competition for public investments, labor and land from industries like tourism, infrastructure development, and oil and gas exploration.

- ▶ **Tax breaks for aquaculture and aquatic feed production – Blind to biodiversity.** The government provides a variety of incentives, including lower tax rate, corporate income tax exemption and reduction, especially in areas with socioeconomic difficulties^{xvi}. However, these incentives are not tied to any environmental condition.



Degree of biodiversity
mainstreaming

TRADE POLICY

Vietnam exports seafood to approximately 100 countries, positioning itself among the top global seafood exporters. To maintain access to high-value markets like the EU and US, which enforce strict standards, sustainability has increasingly become a key focus. Faced with stiff competition from other major exporters such as China, India, and Ecuador, Vietnam must continuously enhance product quality and boost added value to remain competitive.

- ▶ **Non-tariff barriers of importing countries – To comply with. Most key export markets for Vietnamese seafood have high non-tariff barriers, mainly focusing on traceability and food safety, including drug and chemicals residues.**



EU – Vietnam Free Trade Agreement (EVFTA): Under the EVFTA, Vietnam's seafood exports to the EU must comply with stringent traceability requirements, but the current domestic supply struggles to meet export demands. Given the use of wild-caught fish in aquaculture feed, the sector is also subject to the EU's regulations on Illegal, Unreported, and Unregulated (IUU) fishing. Vietnam has been under an **IUU Yellow Card** since 2017 and must implement measures to avoid a potential export ban to the EU.

US: In 2024, the US initiated an antidumping investigation on Vietnamese frozen shrimp, assessing subsidy programs that may lead to the imposition of countervailing duties on imports. Additionally, a growing number of U.S. importers now require shrimp suppliers to hold Best Aquaculture Practices (BAP) certification.

Japan: The country enforces rigorous product labelling requirements, particularly for the traceability of sources, ingredients, and processing details, addressing sustainable sourcing and limiting the use of harmful substances.

Suggested priority measures to implement to align public policies (sectoral, economic and commercial) and biodiversity conservation

The suggested measures presented below were drawn up based on a literature review and interviews with experts. They summarize the suggested measures presented in the previous paragraphs on PPIs, in response to their current content and the gaps identified in terms of biodiversity mainstreaming

Pressure on biodiversity	Suggested priority measures	Type of policy	Type of PPI	Type of measure
Cross-cutting	Strengthen the framework for PPPs in aquaculture, with clearly defined roles for each stakeholder – public agencies, private sector, NGOs, communities, etc. – in policy implementation.	Sectoral	Other	Strengthen
	Build cooperatives' capacity on improved farming practices.	Sectoral	Other	Strengthen

Pollution	Ensure the MSP is aligned with environmental carrying capacity, to support the sustainable growth of marine aquaculture.	Economic	Regulatory	Strengthen
	Revise land use policies to support the conversion of agricultural lands affected by saline intrusion to aquaculture, to enhance communities' resilience to climate change.	Economic	Regulatory	Repurpose
	Enhance financial incentive programs for the development of wastewater treatment infrastructure and green technologies and promote collaborations between private actors and public research institutions to scale up pilot projects.	Sectoral	Economic	Strengthen
	Develop a collaborative framework among localities to drive investment in upgrading infrastructure and enhancing the technical capacity of local public agencies.	Sectoral	Other	Introduce
	Create a framework that actively involves smallholders in infrastructure planning and construction, and assess the potential of leveraging existing structures, such as local committees and farmer unions.	Sectoral	Other	Repurpose-Strengthen
	Promote group certification through financial incentives and information campaigns.	Sectoral	Informational	Strengthen
	Gradually harmonize VietGAP with international standards to make the switch to other standards easy and cost-effective.	Sectoral	Informational	Strengthen
	Allocate more resources to the implementation of policies on more stringent standards, including organic farming.	Sectoral	Cross-cutting	Enforce
	Revise penalties for non-compliance with chemical use regulations for larger entities and strengthen law enforcement capacities.	Sectoral	Regulatory	Strengthen
Natural resources overexploitation	Create a contract farming framework that incentivizes companies to incorporate capacity-building initiatives and environmental standards into agreements with small-scale suppliers.	Sectoral	Regulatory	Repurpose
	Allocate more resources to extension officers to promote the use of sustainable and improved feed.	Sectoral	Other	Strengthen
	Develop and progressively align national standards for the maximum percentage of fishmeal in aquaculture feed, as well as sustainable sourcing, with leading private certifications such as ASC, BAP, and GlobalGAP.	Sectoral	Regulatory	Introduce
	Strengthen collaborations between international and Vietnamese research institutions to tailor innovations to local conditions.	Sectoral	Other	Strengthen
	Develop demand-side policies to encourage consumers to shift towards herbivorous and omnivorous species.	Sectoral	Cross-cutting	Introduce



Forestry

Sector context

Vietnam stands out as a success story in forest restoration, with its forest cover increasing from 28% to 42% over the past three decades^{xvii}. This achievement was driven by government-led reforestation initiatives in the wake of the Vietnam War, which involved extensive defoliant use by US forces. While natural forests account for 70% of total forested land^{xviii}, plantations have been expanding at more than double the rate of natural forests since the 1990s^{xix}. Production forests (including both natural forests and plantations) account for 53%, protection forests (in watershed and coastal areas) for 32%, and special-use forests (protected areas) for 15%^{xx}. **Vietnam was an early participant in the REDD+ initiative⁵, leading the way in channelling payments for environmental services (PES) to local communities⁶.** Producers are split into state-owned companies, private companies and smallholders, with households owning 23% of the country's total forest and land area^{xxi} and representing 60-70% of supply from plantations^{xxii}. Provincial governments, businesses, local communities, and NGOs are also often involved in forest management. **However, there has been an overall net loss of natural forests^{xxiii}**, driven by conversion to plantations⁷, to commodities (coffee, rubber, sugarcane), illegal logging and infrastructures improvements. **Most newly planted forests consist of fast-growing commercial species** like acacia and bamboo, which offer limited support to natural ecosystems^{xxiv}. Moreover, 80% of plantation supply comprises small diameter wood suitable only for wood chips and medium density fibreboard^{xxv}. **While forestry contributes a mere 0.65% to the national GDP^{8,xxvi}, the country ranks as the world's fifth-largest exporter of wood and forest products^{xxvii}** (pellets⁹, veneer sheets, non-timber forest products, furniture, etc.). Consequently, the Forest Development Strategy 2021-2030 seeks to enhance the economic contribution of its forestry sector through the sustainable management and utilization of forest resources, and the improvement of the productivity, quality, and added value of these forest products, including environmental services.

⚠ Pressure: Land-use change

Harmful practice Conversion of natural forests into monoculture plantations of exotic fast-growing varieties (acacia, eucalyptus, pine, rubberwood, etc.)

PPIs linked to this practice & associated challenges

Degree of
biodiversity
mainstreaming

► Zoning and guidelines on forest conversion – **Lack of enforcement.** In Vietnam, forest conversion designates the switch of protected and special-use forests to production forests and vice versa. *Directive 38/2005/CT-TTg* and *Circular 24/2009/TT-BNN* provide guidance on such operations. **Although regulations dictate that only degraded forests should be eligible for conversion, weak law enforcement has led to the conversion of natural forests as well^{xxviii}.** Between 2006 and 2020, protection forest area dropped by 12% and special-use forest remained stable, while production forest increased by 45% (MARD, 2021). In addition to stabilizing forest cover at around 42% of its territory, the government should prioritize maintaining protection and special-use forests at approximately 50% of forest cover (47% as of 2020)^{xxix}. This should be accompanied by efforts to enhance the quality of natural forests, as planned in the *Forest Development Strategy*.



► Economic incentives to support the development of long-rotation production forests – **Inadequate.** Smallholders, who manage roughly a quarter of the nation's forests, often need to harvest trees prematurely due to financial pressures and have limited access to improved tree varieties and suitable techniques. But younger trees lack the qualities needed for high-value products



⁵ This United Nations' Forest protection program provides financial support to countries that put a formal plan in place to reduce carbon emissions from deforestation and forest degradation.

⁶ Vietnam launched the Payments for Forest Environmental Services (PFES) Program in 2011, thanks to USAID funding, and wrote it into law. It requires hydropower plants, municipal water and ecotourism companies to pay rural households for watershed protection.

⁷ Between 2006 and 2020, protection forests declined from 41% to 32% of total forested land, and special-use forests decreased from 17% to 15%. Meanwhile, production forests expanded significantly, growing from 43% to 53%. (MARD, 2021)

⁸ This modest figure is largely due to traditional calculation, which only considers afforestation and timber harvesting activities.

⁹ Pellets export has increased significantly from 175 tons in 2013 to 3.2 million tons in 2020, mostly for thermal power production in Japan and South Korea ([source](#)).

like furniture. **The lack of policies supporting longer harvest cycles exacerbates this challenge.** The state could address the liquidity gap by offering guaranteed premium price, low-interest loans, or risk insurance to support smallholders during the timber growth cycle. Additionally, the government could encourage land consolidation by promoting forest owners' groups or creating platforms to connect small producers, facilitating their integration into regional supply chains with furniture manufacturers. Under strict conditions to ensure co-benefits with large trees, the cultivation of Non-Timber Forestry Products (NTFP) in plantations (tea, cinnamon, coffee, etc.) could be supported to provide early and stable income to forest owners.

► **Forest leasing to private companies – To introduce.** Private companies own only 1.72 million hectares of forest, compared to the 6.3 million hectares under state control, with management rights allocated to state-owned enterprises, local communities, and cooperatives^{xxx}. **It is thus difficult to leverage private capital to finance the transition towards longer rotations.** Currently, the state provides financial support of VND 8 million per hectare to forest planters, along other incentives (*Decision No. 38/2016/QĐ-TTg of the Prime Minister*). Additionally, the Ministry of Agriculture and Rural Development has proposed a policy to the government, which would allow forest planters to access loans specifically aimed at establishing large-timber forests^{xxxi}. *Resolution No. 337/2021/NQ-HĐND* in Quang Ninh province stipulated several such policies. It could be completed by policies that encourage forest leasing, with favourable terms for private investors as well as requirement of planting large-timber species, which could drive private sector involvement. State enterprises also play a leading role in piloting large-timber plantation models and demonstrate their economic and environmental efficiency.

► **Support to high quality seedlings production and purchase – To strengthen.** Most forest planters, notably smallholders, face barriers to accessing high quality seedlings of both exotic and native varieties, due to the lack of technical capacity at the provincial level. In addition to increasing the budget for research, production, and distribution of seedlings, the government could offer subsidies for the purchase of seedlings to forest owners who are interested in establishing large timber plantations. Native species could receive special support, as they are in demand by the domestic furniture sector^{xxxii} and current supplies often come from countries with high-risk of associated deforestation (see trade policy).

⚠ Pressure: Overexploitation of natural resources

Harmful practice Overlogging

PPIs linked to this practice & associated challenges

► **Ban on logging in natural forests – Lack of enforcement.** The government has imposed a partial logging ban in most natural forests since 1993 to halt forest degradation. It was extended nationwide in 2017. **But monitoring is insufficient, further complicated by the fragmentation of forestlands across individual households in remote areas. Case handling is ineffective, and local authorities lack incentives to address the issue^{xxxiii}.** Management by adjacent communities has proven effective in Northern regions and could be promoted more widely^{xxxiv}, alongside promotion of alternative revenues to logging (NTFP collection, PFES hydro-power plants' watersheds, forest protection payment, etc.).

► **Requirements for the preparation of Sustainable Forest Management (SFM) plans – Lack of enforcement.** *Circular 28/2018/TT-BNNPTNT* requires the development of SFM plans for the three types of forests (special use, protection and production forests). The plan shall contain a biodiversity assessment and a biodiversity conservation plan, including a plan for protection of endangered indigenous floral and faunal species. For production forest, the economic objectives of the plan should also include value from PFES, carbon storage and other services. **However, smallholders' fragmented land with few mixed forests makes it difficult to apply SFM, and resources are lacking to support smallholders in the development of such plans.** As a result, most tree plantations are not sustainably managed nor are yields optimized. **Moreover, there are no detailed regulations for forest areas managed by Commune People's Committees.** These Committees, which are the lowest level of state administration, are responsible for managing forests that have not been allocated or leased by the State (~3 million hectares^{xxxv}). Some of these forests are thus managed without SFM plans. Provisions could be added on simplified SFM plans adapted to smallholders and areas managed by Commune People's Committees (templates, guidelines, etc.).

Degree of
biodiversity
mainstreaming

► **National standards for SFM and forest certification – To support.** Vietnam Forest Certification Scheme (VFCS) was established under 2018 Decision No 1288/QĐ-TTg, as part of the Programme for the Endorsement of Forest Certification (PEFC). It aims at saving time and cost in forest certification to expand the accessibility of Vietnam's forest products to the international market (see trade policy). Forests can also receive the international Forest Stewardship Council (FSC) certification. As of September 2023, nearly 500,000 hectares of forest have achieved both VFCS and FSC certifications^{xxxvi}, with the Forest Development Strategy aiming to expand this figure to 1 million out of 4.4 million hectares of plantation forests by 2030. **Although specific requirements have been developed for groups of small forest owners, the number of certified smallholders remains low.** Private sector buy-in should be supported, as most manufacturers are hesitant to handle a large number of small suppliers. However, some companies have recently begun collaborating with smallholders to boost their supply of certified timber and align with growing market demands. To effectively develop group certification, the state could first promote the establishment of forest owners' groups through awareness campaigns, support in administrative procedures and financial incentives such as low-interest loans, grants and facilitating contracting with large companies. While the certification of national forests is well on the way, more effort must now be placed on imported wood (see trade policy).



► **Payments for Forest Environment Services (PFES) policy – To strengthen.** Vietnam's PFES policy is one of the few national-scale PES programs worldwide and was anchored in law in 2010 (Decree No. 99/2010/ND-CP and Decree No. 147/2016/ND-CP). It requires users of forest environmental services, such as water cleaning, to pay suppliers of these services. Hydropower plants therefore pay communities to sustainably manage forests on watersheds. **But PFES rates for forest protection vary significantly across regions and are not linked to the quality of the forests. This disincentivizes forest owners from making efforts to improve or maintain high-quality forests.** It is also often disbursed slowly, in a time that is not suitable for financing forest enrichment activities^{xxxvii}. Guidelines could be strengthened on calculation rules for PFES rates, and a criterion on quality could be introduced. Work is currently underway to strengthen forest management standards in the PFES scheme, along with better training^{xxxviii}.



► **Fees/royalties – Absence.** The Vietnamese forest sector taxation system does not require any fee or royalty based on forest area nor timber volume. A bonus-malus system could be implemented to tax uncertified forests and reward certified forests, thus promoting certification.



Other harmful practices Inappropriate use of agrochemical inputs during the afforestation phase (pesticides, fertilizers, etc.)

ECONOMIC POLICY

Degree of biodiversity
mainstreaming

The forestry sector holds significant economic importance for many Vietnamese ethnic minorities, particularly those living in remote and mountainous areas where forestry provides crucial livelihoods. Nationally, Vietnam is not only a major producer of timber but also serves as a prominent regional processing hub. This dual role in production and processing underpins Vietnam's strong position in the global timber market, which has been increasingly supported by government economic policies. These policies include promoting sustainable forest management, encouraging private sector investment in large-timber plantations, and enhancing value-added processing to strengthen its role as a key exporter of wood products.

- **Tax exemption in income of cooperatives engaged in forestry in difficult socioeconomic areas – Blind to biodiversity.** Beside areas with socioeconomic difficulties, such exemption could be extended to areas at risk of extreme weather events to support resilience building.
- **Personal Income Tax exemption – Blind to biodiversity.** Such full exemption on income of households and individuals engaged in forestry could be replaced by a degressive rate depending on the implementation of sustainable forest management standards.
- **Support to consumption of local wood – Absence.** Pushing domestic consumers to switch to products that use sustainable, locally grown timber instead of imported tropical hardwoods could help solve many problems related to deforestation-related hardwood imports (see below). Such policies could include subsidies and marketing campaigns.



TRADE POLICY

Degree of biodiversity
mainstreaming

Previously, locally sourced wood met Vietnam's manufacturing needs, but the 2016 nationwide ban on logging in natural forests compelled manufacturers to seek alternative supplies. Vietnam processes wood imported from over 80 countries; particularly tropical hardwood used in the furniture industry. Continued timber imports from regions from deforestation hotspots in Africa and Asia could undermine Vietnam's access to international high-value markets (EU, US). Eliminating illegal timber from the country's supply chains is therefore a priority for the government, also as regulatory risks result in a struggle of the forestry sector to attract investments. Finally, high domestic demand for tropical hardwood is also a major driver of imports.

- ▶ **Vietnam Timber Legality Assurance System (VNTLAS) – Lack of enforcement.** The state introduced a new due diligence requirement in 2020 to verify the legality of imported timber, but reduction of high-risk imports is slow^{xxxix}, given the number of origins, importing companies and high volumes. Compiling documentation clearly proving the legality of the wood is a challenge for importers, given the opacity of regulations in many supply countries and the risk of counterfeit documents. In addition, Vietnam has started to open bilateral dialogues with authorities in supply countries. These VNTLAS rules will ultimately help Vietnam comply with the Voluntary Partnership Agreement (VPA) on Forest Law Enforcement, Governance, and Trade (FLEGT), which was signed with the EU in 2018. This agreement stipulates that only verified legal timber can be exported to the EU. 
- ▶ **EU Deforestation Regulation (EUDR) – Lack of enforcement.** Announced in 2021, the EUDR was due to come into force on 30 December 2024 (however, in early October, the EU Commission proposed an additional 12 months of phasing-in time to ensure the proper implementation of the new regulations, pending approval from other European institutions^{xl}). It will ban imports into the EU of agricultural products that have caused deforestation. Seven commodities are targeted: soy, beef, palm oil, rubber, cocoa, coffee and wood. They must be traceable (geolocation of plots), zero deforestation (not from deforested land after 31/12/2020) and legal. In Vietnam, wood, coffee and rubber should be affected by the regulation. Thanks to the FLEGT VPA, the wood value chain is well advanced in aligning with EUDR requirements, though further efforts are still needed to achieve full compliance. 
- ▶ **Trade agreement with the US on sustainable wood products – Absence.** Amid the ongoing trade tensions between the US and China, Vietnam has emerged as an attractive alternative supplier for the American market. This presents a significant opportunity for Vietnam to negotiate trade agreements that include provisions for financial and technical support aimed at transitioning plantations to longer rotation periods, while also ensuring stable long-term market access. The US does not have specific regulations targeting the sustainability of imported wood. The 2008 *Lacey Act* only focuses on the legality of wood imports. While the law does not directly address sustainability, its enforcement indirectly promotes sustainable practices, as illegal logging is often linked to environmental degradation. Sustainability in wood imports is primarily market-driven, with increasing demand for certifications like FSC and the Sustainable Forestry Initiative (SFI). 
- ▶ **Export taxes – Blind to biodiversity.** Export taxes are higher for large-timber products (logs, sawn wood, railway sleepers) than for low-value products (wood chips, parquet flooring). A bonus-malus system could be introduced to incentivize further high-value and sustainably produced wood products. 
- ▶ **Memorandum of understanding on timber trade with Malaysia – To strengthen.** Malaysia is committed to develop its sustainable timber industry. It wants to benefit from the advanced state of Vietnam's furniture manufacturing and its access to the EU market^{xli}. Vietnam's efforts in greening its processing industry could therefore also support the transition of other neighbouring countries. 

Suggested priority measures to implement to align public policies (sectoral, economic and commercial) and biodiversity conservation

The suggested measures presented below were drawn up based on a literature review and interviews with experts. They summarize the suggested measures presented in the previous paragraphs on PPIs, in response to their current content and the gaps identified in terms of biodiversity mainstreaming

Pressure on biodiversity	Suggested priority measures	Type of policy	Type of PPI	Type of measure
Land-use change	Stabilize forest coverage rate around 42%, with a special focus on stabilizing protection and special-use forest areas through effective enforcement of regulations on forest conversion and increased resources allocated to forest restoration activities.	Sectoral	Regulatory-Economic	Enforce
	Develop national policies to support the development of long-rotation production forests, mixing direct economic incentives (low-interest loans, risk insurance, subsidized inputs, etc.), and support better production and trade linkages through forest owners' groups.	Sectoral	Economic-Other	Introduce
	Assess the feasibility of sustainable co-production of NTFP products and large-timber trees to provide smallholders with early and stable incomes.	Sectoral	Regulatory-Economic	Introduce
	Support state enterprises in playing a leading role in piloting large-timber plantation models to demonstrate their economic and environmental efficiency; and leverage private investments through increased concessioning to non-state companies.	Sectoral	Other-Regulatory	Strengthen
	Support the research, production, and distribution of certified seedlings, including endogenous species.	Sectoral	Other	Strengthen
Overexploitation of natural resources	Develop incentives for local authorities to better enforce the law, notably the ban on logging in natural forests, and upscale the implication of communities in forest management and monitoring.	Sectoral	Other	Enforce
	Adapt the requirements for SFM plans to smallholders and forests managed by Commune People's Committee.	Sectoral	Regulatory	Enforce
	Support group certification through grants and technical support, alongside partnerships with manufacturers and exporters.	Sectoral	Economic	Enforce
	Introduce a minimum PFES rate, with a bonus-malus system depending on the quality of sustainable management practices implemented by communities.	Sectoral	Economic	Strengthen
	Develop policies to promote the consumption of local certified wood instead of tropical hardwood imported from high-risk countries.	Economic	Economic-Regulatory	Introduce
	Continue efforts on bilateral dialogues with timber supply countries' authorities to reduce importations of illegal wood.	Trade	Regulatory	Enforce
	Leverage on trade agreement negotiations with key consumer markets, such as the EU and the US, to incorporate provisions for financial and technical support aimed at promoting sustainable forest management.	Trade	Other	Strengthen

Abbreviations

AFD	French Development Agency	NBSAP	National Biodiversity Strategy and Action Plans
ASC	Aquaculture Stewardship Council	NTFP	Non-Timber Forest Product
BAP	Best Aquaculture Practices	PEFC	Programme for the Endorsement of Forest Certification
D-Fish	Directorate of Fisheries	P(F)ES	Payment for (Forest) Environmental Services
EUDR	EU Deforestation Regulation	PPI	Public Policy Instrument
EVFTA	EU – Vietnam Free Trade Agreement	PPP	Public-Private Partnership
FLEGT VPA	Voluntary Partnership Agreement on Forest Law Enforcement Governance and Trade	RAS	Recirculating Aquaculture System
FSC	Forest Stewardship Council	SFI	Sustainable Forestry Initiative
GMO	Genetically Modified Organism	SFM	Sustainable Forest Management
IMTA	Integrated Multi-Trophic Aquaculture	VASEP	Vietnam Association for Seafood Exporters and Producers
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services	VietGAP	Vietnam Good Agricultural Practices
IUCN	International Union for Conservation of Nature	VFCS	Vietnam Forest Certification Scheme
IUU	Illegal, Unreported, and Unregulated	VND	Vietnamese Dong
MARD	Ministry of Agriculture and Rural Development	VNTLAS	Vietnam Timber Legality Assurance System
MSP	Marine Spatial Planning	WWF	World Wildlife Fund

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ⁱⁱ Aquaculture Vietnam 2024, 10/05/2024, Vietnam's aquaculture industry unlocking potential, moving towards sustainability, consulted on 26/09/2024 ([link](#))

ⁱⁱⁱ *Ibid.*

^{iv} FAO, 2022, The State of World Fisheries and Aquaculture ([link](#))

^v 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 Viet Nam. WWF-Viet Nam, p. 133

^{vi} 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, Le Van M., 2022, Policy brief for sustainable forestry and aquaculture development while protecting nature and biodiversity. WWF-Viet Nam, p. 13

^{vii} Tran Dai N. *et al.*, 2022, *op. cit.*, p. 13

^{viii} Interview with [Kim Delta](#), 29/10/2024

^{ix} World Bank, 2017, An Overview of Agricultural Pollution in Vietnam: The Aquaculture Sector ([link](#))

^x WWF, 10/09/2015, Signing ceremony of public private partnership cooperation agreement to support responsible fisheries and aquaculture in Vietnam ([link](#))

^{xi} IDH, 2019, IDH Aquaculture program in Vietnam ([link](#))

^{xii} Interview with IDH, 05/11/2024

^{xiii} Tran Dai N. *et al.*, 2022, *op. cit.*, p. 161

^{xiv} Tran Dai N. *et al.*, 2022, *op. cit.*, p. 159

^{xv} *Ibid.*, p. 159

^{xvi} Acclime, 07/08/2024, Deciphering tax and business incentives in Vietnam ([link](#))

^{xvii} World Economic Forum, 2022, Forests for Climate - Vietnam: from quantity to quality, consulted on 08/10/2024 ([link](#))

^{xviii} Timber Trade Portal – Vietnam. MARD 2020, consulted on 08/10/2024 ([link](#))

^{xix} FAO, 2020, Global Forest Resources Assessment, p. 149, 156

^{xx} *Ibid.*

^{xxi} Tran Dai N. *et al.*, 2022, *op. cit.*, p. 6

^{xxii} FLEGT Independent Market Monitor, Country Profiles – Vietnam, consulted on 10/10/2024 ([link](#))

^{xxiii} FAO, 2020, The State of the World's Forests, p. 102 ([link](#))

^{xxiv} World Economic Forum, 2022, *op. cit.*

^{xxv} FLEGT Independent Market Monitor, Country Profiles – Vietnam

^{xxvi} Trieu, V. H, Pham, T.T., Dao, T.L.C, 2020, Vietnam Forestry Development Strategy - Implementation results for 2006–2020 and recommendations for the 2021–2030 strategy. CIFOR. p. 10 ([link](#))

^{xxvii} World Economic Forum, 2022, *op. cit.*

^{xxviii} WWF's Wood Risk Tool – Vietnam, consulted on 10/10/2024 ([link](#))

^{xxix} Tran Dai N *et al.*, 2022, *op. cit.*, p. 48

^{xxx} Tran Dai N *et al.*, 2022, *op. cit.*, p. 103

^{xxxi} Saigon News, 27/11/2023, Vietnam strives to have 1 million hectares of large wood with certifications, consulted on 10/10/2024 ([link](#))

^{xxxii} Vietnam National Trade Repository, 27/06/2022, *op. cit.*

^{xxxiii} Vietnam National Trade Repository, 27/06/2022, Vietnam's Timber Industry: Overview, Challenges, and Opportunities for Foreign Investors ([link](#))

^{xxxiv} Tran Dai N *et al.*, 2022, *op. cit.*, p. 82

^{xxxv} Tran Dai N *et al.*, 2022, *op. cit.*

^{xxxvi} Bao Chinh Phu, 05/03/2024, Viet Nam targets to plant additional 500,000 hectares of forests by 2030, consulted on 10/10/2024 ([link](#))

^{xxxvii} *Ibid.*, p. 91

^{xxxviii} Vietnamese Academy of Forest Sciences, 09/08/2024, National Workshop on the Integration of an Improved Forest Management Standard into the Vietnamese Payments for Forest Environmental Services (PFES) Scheme ([link](#))

^{xxxix} Mongabay, 02/02/2022, Vietnam's timber legality program not making a dent in risky wood imports, consulted on 11/10/2024 ([link](#))

^{xl} 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](#))

^{xli} Vietnam National Trade Repository, 27/06/2022, *op. cit.*