COUNTRY ANALYSIS

GUYANA

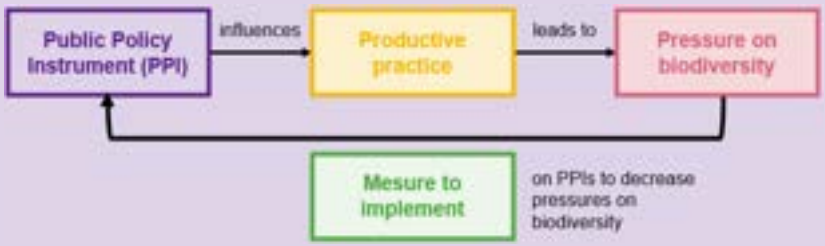
Sectoral public policies & pressures on biodiversity

Sector: Fisheries

2024

This analysis was produced by Altai Consulting as part BIODEV2030 Phase 2 project, financed by AFD, coordinated by Expertise France and implemented by IUCN and WWF in 15 countries (Benin, Cameroon, Republic of Congo, Ethiopia, Fiji, Gabon, Guinea, Guyana, Kenya, Madagascar, Mozambique, Senegal, Tunisia, Uganda and Vietnam). This analysis intends to feed the multi-stakeholder dialogue supported by BIODEV2030, to ultimately encourage the adoption of productive practices that are less harmful to biodiversity.

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 analysis prepared by altai consulting

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

Guyana is part of the Guiana Shield, a tropical zone with a rich biodiversity, both on land in the Amazon rainforest and at sea with its beaches and rocky seabed, home to fish, crustaceans and marine mammals (dolphins, turtles, etc.). 90% of the population is concentrated on the coast[i]. The **discovery of offshore oil** in 2015 and subsequent developments nevertheless transformed the country's economy, bringing new sources of revenues and new discussions on the pillars of the country's long-term prosperity. The country's biodiversity strategy is essentially described in the 2022 **Low Carbon Development Strategy**[ii], and is based on mainstreaming in the forestry, mining and maritime sectors, payments for ecosystem services and the development of protected areas, including marine areas[1]. **Development priorities for the ocean economy include tourism, mangroves, fish stock management and sea freight**. Guyana is also a member of several regional fisheries organisations, such as the Caribbean Regional Fisheries Mechanism (CRFM), following the Caribbean Community Common Fisheries Policy (CCCFP), the Latin American Organization for Fisheries development (OLDEPESCA) and the Western Central Atlantic Fishery Commission (WECAFC).

Fisheries

Sector context

Fishing accounts for around **2% of Guyana's GDP**[iii], and is the country's main source of animal protein. **Shrimp accounts for half of production**[iv]. Guyana is the world's leading producer and exporter of seabob shrimp, the main product sought by the **industrial trawler fishery**, which represents 30% of landings[v]. The shrimps are processed in Guyana before being exported to the United States and Europe[vi]. The sector is vertically integrated, with most trawlers owned by processors. However, stocks of key commercial species have been declining lately, due to overfishing, but also to worsening climatic factors (reduced rainfall, development of sargassum)[2,vii]. Offshore oil and gas production represents an additional risk factor. Nevertheless, Guyana's seabob shrimp fishery obtained **MSC certification** in 2019, 8 years after Suriname. The **artisanal fishery**, with around 1,000 boats[viii] and mainly inshore, represents more than 65% of landings. It plays a key role in supplying the domestic market with shrimp and fish. However, landings also dropped significantly since 2013[ix]. Finally, the **semi-industrial fishery** focuses on the red snapper and represents 5% of landings.

Pressure: Natural resources overexploitation

Harmful practice Increase in fishing effort

Degree of biodiversity mainstreaming

PPIs linked to this practice & associated challenges

► **Number of allocated fishing licenses and days at sea – To strengthen.** Licenses for industrial vessels and the number of days spent at sea are already capped. In the trap fishery, new entries are not permitted[x]. Some fisheries, like the MSC-certified seabob, also implement a Catch Per Unit Effort (CPUE) system[3] to complement these restrictions. **However, not all fisheries, particularly artisanal fisheries, are subject to these limitations.** Expanding these measures to all fisheries experiencing stock declines, including precautionary measures for species such as tuna, could be beneficial. Based on stock assessments, a reduction plan for the number of licenses in each fishery (e.g., penaeid shrimp, seabob, red snapper) could be discussed to align fleet capacity with sustainable exploitation levels, while also enhancing the economic viability of the remaining fleet. Implementing such measures should involve consultations with all stakeholders to ensure their engagement, and coordination with other ministries could help develop supportive measures for alternative livelihoods. Some pilot initiatives have already provided materials to fisherfolk for developing aquaculture and agriculture, which could be expanded.

► **Registration and licensing of artisanal fishing – Limited enforcement.** While the 2002 *Fisheries Act* mandates that every boat owner hold a valid certificate of registration and a valid

[1] Guyana's protected areas cover 8% of its territory, but the country has no marine protected areas to date *(LCDS 2030, 2022).*
[2] The fishery used to target penaeid prawns, which have a higher market value, but stocks declined significantly in the 1990s (Tagliarolo, 2024).
[3] When the CPUE (Catch Per Unit Effort) index drops below a specified threshold, the fishing campaign is halted to protect fish stocks.

license, **non-compliance remains high**[xi]. Despite this, a significant portion of the artisanal sector remains registered[xii]. Many artisanal boats are not registered or do not carry their registration number, which complicates their identification and the enforcement of regulations. To date, just above 50% of the artisanal fleet has been issued a license[xiii]. Fishermen state that the license delivery process is too slow, and those who are registered but have missed annual payments must pay arrears, making it challenging for some to regain compliance. A more bottom-up approach and close communication between fishermen and Fisheries Department's (FD) officers on the ground would be beneficial. Incentives could also be designed to promote licensing, such as subsidies on fishing equipment or trainings for artisanal fishermen. On the other side, all industrial vessels are registered and licensed.

► **Other limitations of catch capability for all gear types – Absence.** Maximum net length, vessel size, engine power, number of hooks, minimum space between two seines (can be further regulated through a zoning plan) present **several instruments to limit the fleet capacity, which do not exist yet** and could be implemented in Guyana.

► **Research on the state of fish stocks – Inadequate.** Such data is essential to understand trends, reasons for decline and fine-tune management measures (number of licenses, number of days at sea, authorised gears, closed season, etc.). While assessments were conducted for the Seabob fishery's MSC certification, **data is lacking on other species and depends on international projects financing**[4]. **At national level, funding and human capacities are lacking**[xiv]. Though Guyana lacks a national institute dedicated solely to fisheries and marine research, the University of Guyana (UG) is gaining recognition in this field. In August 2024, UG launched the Institute for Marine and Riverine Ecologies and Economies (IMAREE). Funding for the institute could be sourced from a levy on fishing royalties collected by the FD, with support from regional mechanisms (CRFM, OLDEPESCA, etc.). These funds could be allocated according to a comprehensive research plan, ensuring that critical issues are addressed and advancing knowledge on Guyana's fisheries in an effective and targeted manner.

► **Data collection obligation – Limited enforcement.** All industrial and semi-industrial vessels are required to complete logbooks for each trip as well as an Endangered, Threatened and Protected (ETP) species log sheet for interactions with marine turtles, mammals, and sharks. **However, the semi-industrial fleet does not fill the required sheets, due to the limited training and sanctions**[xv]**.** Training sessions could be organised, in collaboration with the FD and NGOs, to raise awareness of the importance of such data in ensuring the sustainability of fishery. **Artisanal fisheries do not have to fill log sheets either.** Some data is collected by Fisheries Officers. Periodic surveys could be conducted to track artisanal fisheries' landings and interactions with ETP species. Redesigning data collection tools (log sheets, self-reporting) within the artisanal sector could be considered. Data are essential to support evidence-based policy making.

► **Fees and royalties – To repurpose.** Under the 2002 *Fisheries Act*, various actors along the fisheries value chain are required to pay fees, primarily for landing, high sea permits, and exporting fish. Currently, all revenue generated goes into the consolidated fund and is allocated based on government policy rather than directly supporting fisheries management. **A dedicated portion of the fees collected could be directly allocated to the FD to finance fisheries management, which may require exploring options such as transforming it into an autonomous or semi-autonomous entity.** Additionally, to enhance equity and sustainability, the fee structure could be reviewed to reflect the profit margins of each actor, ensuring a fairer tax distribution while providing sufficient resources for the FD to effectively oversee and manage the sector. without going through the Treasury.

Harmful practice Use of non-selective gears (capture of juvenile fishes and leads to discards)

Degree of biodiversity mainstreaming

PPIs linked to this practice & associated challenges

► **Mesh size regulation for artisanal fisheries – Absence.** Larger mesh sizes allow juvenile fishes to escape from the nets. But Chinese seines, the most commonly used fishing gear among artisanal fishermen, are smaller meshed than other gillnets[xvi], resulting in higher catches of smaller fish. **Guyana has no regulation on the mesh size of Chinese seines.** In comparison in Suriname, the minimum mesh size for the net is 8 inches, with an allowance for up to 30% of the net to have a 5-inch mesh size[xvii]. Guyana could gradually align its regulation with Suriname.

[4] FAO conducted a preliminary stock assessment of five important target species of the coastal gillnet fishery in Guyana and Suriname in 2023 (source). It does not include species targeted by the offshore fishery.

► **Establishment of minimum landings size – Absence.** By law, relevant species below a minimum size should be released. **However, most unwanted catch would be dead when released[xviii], emphasizing the need for more selective gears**. Priority should be given to minimizing juvenile bycatch as much as possible. For the remaining bycatch, discarding at sea should be avoided. Instead, damaged fish could be repurposed into fishmeal and fish oil, provided that all feasible measures to prevent bycatch have been implemented.

► **Tax exemption for various fishing items – Blind to biodiversity.** Under the *Customs Act*, fishing companies with fishing licenses are eligible for custom duty exemptions on spares, packaging materials, fishing nets, floats, etc. Small fishing establishments are also eligible for the zero rating of the VAT[xix], as other small businesses. **There is no favourable rate for high-selective gears**. A bonus-malus system could be implemented, with lower rates for highly selective gears.

► **Research on selective trawling – Inadequate.** Bycatch Reduction Devices (BRD) and Turtle Excluder Devices (TED) are compulsory for industrial vessels (Fisheries Regulations 2018). However, a lot of juveniles are still caught by trawlers[xx]. Potential research areas include determining the optimal mesh size, improving trawl design and other types of BRDs**. But Guyana lacks sufficient research capacity** (see above). Close cooperation should be established with regional initiatives, such as the project Strategies, technologies and social solutions to manage bycatch in tropical Large Marine Ecosystem Fisheries (REBYC-III CLME+), financed by the GEF. The project seeks to reduce bycatch and discards in the region, especially for trawling fisheries.

► **Bycatch landing requirements – Conflict between regulations.** Prawn trawlers are required to land 15 tons of by-catch each year, and seabob trawlers seek to land finfish to augment earnings. These landing requirements are designed to reduce wasteful discards and to supply the local fish market and ensure food security. **This requirement is conflicting with the measures aiming at reducing bycatch** (see above). While stricter monitoring of discarding operations at sea should be enforced, the landing requirements for bycatch could be reduced.

► **Plan to phase out unselective gears – Limited enforcement / To extend.** Traps are used for the red snapper fishery[xxi]. In the bangamary fishery, monofilament nets are still authorized, although they are forbidden in several countries, including Suriname[xxii]. These gears are considered unselective and are often lost at sea, leading to "ghost fishing". **The FD already has some plans to phase out of monofilament nets, but they have not been implemented yet**. These plans could also be expanded to other non-selective fishing gears, such as traps, alongside strategies to gradually reduce the use of Chinese seines. It would be essential to implement supportive measures for fishermen to transition to new, more selective fishing techniques.

Harmful practice Fishing in spawning areas (capture of juvenile fishes)

Degree of biodiversity mainstreaming

PPIs linked to this practice & associated challenges

► **Depth limit between the artisanal and trawling zones (no-trawl zone) – Limited enforcement.** Due to the decrease of fish stocks, competition between artisanal and trawling fisheries is increasing. **This zoning is weakly enforced,** partly due to the lack of patrol vessels in the last years[xxiii]. Artisanal fishermen go further offshore, and trawlers encroach into the no trawl zone beyond the 8-fathom depth limit[xxiv]. A discrepancy seems to exist between fisherfolk's and the Coast Guards' understanding of the correct set of coordinates from which regulations apply[xxv]. Some pilot trials are currently equipping artisanal boats with Vessel Monitoring Systems (VMS). A new offshore patrol vessel also recently entered into service.

► **"No fishing and no netting" zones – To strengthen.** These zones were first implemented during the annual turtle nesting season in the Shell Beach Protected Area in 2000 and are now regulated by the Protected Areas Commission (PAC). During the season, large gill nets are prohibited, to prevent turtle entanglement. Commercial fishing is prohibited in the no netting zone, while subsistence fishing is allowed, highlighting the need for regular compliance check-up. Signage and communication with fishermen could also be enhanced.

► **Marine Protected Areas (MPA) – Absence.** Protected areas preserve key zones for spawning and nursery. They are regulated through the *Protected Areas Act* of 2011, which provides for coastal PAs but not MPAs. The Shell Beach Protected Area is the only coastal protected area. A Marine Spatial Planning (MSP) initiative, funded by the EU until 2021, conducted an evaluation for establishing MPAs. However, the outcomes of this project are yet to be materialized. Given the

increase in traffic associated with oil and gas exploitation and its currently uncertain effects on fisheries, the efforts surrounding MSP are likely to become increasingly important.

Other harmful practices **Loss and dumping at sea of fishing gears and debris** (ghost fishing); **Wasteful practices** (cutting of fish bladders and shark fin)

ECONOMIC POLICY

Degree of biodiversity mainstreaming

The Guyanese economy is growing very rapidly, supported by the oil sector expansion. The government's primary focus for public investments is on building, infrastructure (roads) and agriculture, as the country aims to plan for price volatility and to become the breadbasket of the Caribbean region.

- **VAT exemption for the purchase of fresh, chilled or frozen shrimp, prawns, fish, salted fish – Blind to biodiversity.** Under the *VAT Act Chapter 81:05*[xxvi], several fish products are exempted from VAT to support domestic consumption. This broad tax exemption could be replaced by targeted tax breaks on less popular species to shift consumer demand, alleviate pressure on overexploited, high-demand species, and use the whole catch.
- **Natural Resource Fund (NRF) – To leverage.** The Natural Resource Fund (NRF) is a sovereign wealth fund created to manage Guyana's natural resource revenues sustainably, primarily funded by revenues from oil and gas production. Given the potential environmental impacts of oil and gas drilling on the fisheries sector, the NRF could be used to fund programs that enhance the sustainable management of fisheries.

TRADE POLICY

Degree of biodiversity mainstreaming

Seafood is one of the main export products of Guyana, after gold, rice and bauxite[xxvii]. Seafood's key export markets are the US and the EU. Guyana is also part of the CARICOM free trade area.

- **International market standards – To comply with.** Access to the US market is conditioned to the use of Bycatch Reduction Devices (BRD) and Turtle Excluder Devices (TED)[5]. The EU also has stringent regulations on Illegal, Unreported and Unregulated (IUU) fishing and traceability. Lastly, retailers are increasingly adopting sustainable purchasing policies, such as GlobalGAP[6].

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
Natural resources overexploitation	Improve the co-management mechanisms of fisheries, with better participation of fisherfolks through the reinforcement of cooperatives or other relevant fishermen's organizations.	Sectoral	Other	Strengthen
	Enhance the Fisheries Department's ability to enforce laws and apply penalties through increased staff on the ground and political support.	Sectoral	Regulatory	Strengthen

[5] In the US, importers have to comply with the Marine Mammal Protection Act. It conditions seafood s Sectoral ales to the US on the prevention of capture of dolphins, whales, turtles, etc.

[6] GlobalGAP (Good Agricultural Practices) is a standard created by a coalition of European supermarket chains that requires their partners to adhere to principles of economic, social, and environmental responsibility.

	Formalize an agenda for coordinated policy actions at the regional level, involving Suriname and French Guiana, with an emphasis on law enforcement, enhancing fishing practices, and conducting research.	Sectoral	Cross-cutting	Strengthen
	Evaluate and discuss plans to reduce fleet capacity in fisheries experiencing stock declines, including in artisanal fisheries; and collaborate with other ministries to develop alternative livelihoods.	Sectoral	Cross-cutting	Strengthen
	Facilitate more direct interactions between fishermen and the Fisheries Department (FD) officers to improve communication and foster greater collaboration on sustainable fishing practices.	Sectoral	Other	Strengthen
	Collaborate with stakeholders to establish catch capability limitations for all gear types (such as net length, vessel size, and spacing between gears), prioritizing those targeting the most severely declining fish stocks, including Chinese seines' mesh size.	Sectoral	Regulatory	Introduce
	Develop a comprehensive multi-year research plan for Guyanese fisheries to effectively channel funds from fisheries, donors, and regional organizations, while providing direction for national research institutions and retaining talents.	Sectoral	Other	Introduce
	Enforce data collection requirements for industrial and semi-industrial fisheries and conduct periodic surveys to track artisanal fisheries' fishing effort to support evidence-based policy making.	Sectoral	Regulatory	Enforce
	Reevaluate the fee structure to identify potential opportunities for increases and establish mechanisms to ensure that these revenues are effectively utilized to support sustainable fisheries management, rather than being allocated to the general budget.	Sectoral	Economic	Repurpose
	Reassess the VAT exemption on fishing gear to implement a bonus-malus system, offering reduced rates for selective fishing methods.	Economic	Economic	Repurpose
	Implement the plans to phase out monofilament nets and expand these initiatives to other non-selective gear types (such as traps and Chinese seines), while including provisions for the involvement of fishermen's organizations to assist in enforcement efforts.	Sectoral	Cross-cutting	Enforce-Strengthen
	Implement Marine Spatial Planning to create a framework for Marine Protected Areas and adopt a precautionary approach regarding the potential impacts of oil & gas production on fisheries.	Sectoral	Regulatory	Introduce-Enforce
	Reassess the VAT exemption on seafood purchases to introduce a bonus-malus system that raises rates for overexploited, high-demand species while lowering rates for those with healthy stocks.	Economic	Economic	Repurpose
	Leverage the NRF to finance the sustainable management of fish resources.	Economic	Other	Repurpose
	Focus on policy interventions to ensure access to key markets, like the US and EU, which have progressively stricter sustainability requirements.	Trade	Regulatory	Enforce

Abbreviations

AFD	French Development Agency
BRD	Bycatch Reduction Device
CCCFP	Caribbean Community Common Fisheries Policy
CRFM	Caribbean Regional Fisheries Mechanism
ETP	Endangered, Threatened and Protected
FD	Fisheries Department
IMAREE	Institute for Marine and Riverine Ecologies and Economies
IUCN	International Union for Conservation of Nature
IUU	Illegal, Unreported and Unregulated (fishing)
MSC	Marine Stewardship Council
MSP	Marine Spatial Planning
MPA	Marine Protected Area
NRF	National Resource Fund
OLDEPESCA	Latin American Organization for Fisheries Development
PAC	Protected Areas Commission
PPI	Public Policy Instrument
SPPI	Sectoral Public Policy Instrument
TED	Turtle Excluder Device
UG	University of Guyana
VMS	Vessel Monitoring System
WECAFC	Western Central Atlantic Fishery Commission
WWF	World Wildlife Fund

[i] WWF Guianas, 2022, Integrating Biodiversity into Development - National Report Summary Phase One. BIODEV2030 Guyana
[ii] Guyana's Low Carbon Development Strategy 2030, 2022, p. 1-48 (link)
[iii] WWF Guianas website, Fisheries, consulted on 09/09/2024 (link)
[iv] FAO, 2019, Fishery and Aquaculture Country Profiles – Guyana, consulted on 09/08/2024 (link)
[v] Guyana Marine Fisheries Management Plan 2022-2027, p. 17
[vi] FAO, FISH4ACP, Unlocking the potential of sustainable fisheries and aquaculture in Africa, the Caribbean and the Pacific – Guyana, consulted on 09/08/2024 (link)
[vii] Willems, T., E. Liverpool and M. Hiwat, 2023, A Preliminary Assessment of the Spawning Potential Ratio of Five Target Species of the Coastal Gillnet Fishery in Guyana and Suriname. Gulf and Caribbean Research 34 (1): 29-42 (link)
[viii] Guyana's Low Carbon Development Strategy 2030, p. 36
[ix] Guyana Marine Fisheries Management Plan 2022-2027, p. 20
[x] *Ibid.*, p. 69
[xi] *Ibid.*, p. 37
[xii] Interview with the Fisheries Department, 19/03/2025
[xiii] *Ibid.*, p. 37
[xiv] Interview with the University of Guyana, 04/10/2024
[xv] Guyana Marine Fisheries Management Plan 2022-2027, p. 43
[xvi] Dr. Jocelyn Drugan, 2019, Environmental Sustainability Assessment: Guyana artisanal groundfish fisheries, Ocean Outcomes, p. 12 (link)
[xvii] Guyana Marine Fisheries Management Plan 2022-2027, p. 75
[xviii] Dr. Jocelyn Drugan, *op. cit.*, p. 12
[xix] Guyana Revue Authority, Exemptions – Fishing Industry, consulted on 02/09/2024 (link)
[xx] Dr. Jocelyn Drugan, *op. cit.*, p. 12
[xxi] Guyana Marine Fisheries Management Plan 2022-2027, p. 45
[xxii] *Ibid.,* p. 74
[xxiii] Pramod, G., 2021, Global evaluation of fisheries monitoring control and surveillance: Guyana – Country report. IUU Risk Intelligence., p. 3 (link)
[xxiv] *Ibid.*, p. 12
[xxv] Guyana Maritime Economy Plan, 2021, Commonwealth Marine Economies Programme, p. 29 (link)
[xxvi] Vatupdate, Policy 17 – VAT and Fishing Sector, consulted on 02/09/2024 (link)
[xxvii] UN Trade & Development, 2021, Trade policy framework of Guyana: A national trade strategy, p. 25 (link)