Fishery Improvement Project (FIP) Scoping Document:
Guyana Artisanal Finfish Fishery

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Prepared in support of the implementation of Strategic Action Programme for the Sustainable Management of shared Living Marine Resources in the Caribbean and the North Brazil Shelf Large Marine Ecosystems (CLME+) as activity under the FAO-implemented CLME+ Shrimp and Groundfish Sub-Project

CLME+ Project
Caribbean & North Brazil Shelf Large Marine Ecosystems

Food and Agriculture Organization of the United Nations

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Executive Summary

A comprehensive diagnostic assessment for Environmental Sustainability, Social Responsibility and Economic Profitability was carried for the Artisanal Guyana Finfish Fishery in support of the implementation of the Strategic Action Programme for the Sustainable Management of shared Living Marine Resources in the Caribbean and the North Brazil Shelf Large Marine Ecosystems (CLME+) and financed by the FAO-implemented CLME+ Shrimp and Groundfish Project. The findings of these assessments, including a draft "business case for impact investment in fisheries sector infrastructure and value-chain of the Guyana groundfish fishery" were subsequently validated at a Stakeholder Engagement workshop with key sector stakeholders in Guyana on 10-11 September 2019, including with fishers and fishery supply-chain participants. The Stakeholder Engagement workshop also looked at solutions to address the fishery deficiencies, including identification of potential project partners and fishery stakeholders that could implement solutions/activities.

A shared understanding of the main fishery deficiencies are summarized below, and described in more depth in this Triple-Impact FIP Scoping Document.

Annex I in the Business Case describes the rationale for focusing the project efforts on the artisanal finfish fishery, rather than on Guyana's seabob and shrimp, snapper, or tuna fisheries. In-short, the artisanal finfish fishery reported landings of high volumes of fish and has significant socio-economic impacts in Guyana. The fishery also faces some of the most significant sustainability challenges, including target stock over-exploitation and strong impacts on Endangered, Threatened, and Protected (ETP) species, which illustrate the significant opportunity for improvement in the fishery. The six species chosen for the assessment are frequently landed fish in the fishery based on 2016 catch data provided in the Marine Fisheries Management Plan, and are also the species being assessed in a WWF-Guianas project[1].

Environmental Sustainability:

Challenge: The 6 main target species of the artisanal sector were assessed as being susceptible to heavy fishing mortality, and are likely over-fished; these artisanal finfish stocks are not regularly assessed however, and there is a lack of catch, fishing effort and other biological data necessary to conduct stock assessments and to subsequently implement science-based harvest control rules.

- Solution: Improve monitoring of catch and fishing effort, and use data to support stock assessments. It was noted during the workshop that more recent stock assessments are currently being finalized by WWF and partners, which will be presented at the end of 2019. It was also noted that Cooperative #66 (~20% of Guyana catches) gathers weekly data on pounds of fresh vs. spoil fish by species, and weekly number of vessels, which could be used to strengthen stock assessment. During the workshop, it was noted that the

[1] Fisheries Department (MOA, Guyana). 2018b. Marine Fisheries Management Plan 2013-2020.

implementation of FAO's 'Fishery Information System' may help with solving these data-gap issues.

Challenge: Lack of harvest control rules to achieve Fisheries Management Plan goal of maintaining key stocks at 50% of unexploited level or above. Currently, there are no fishing effort or catch limits for the artisanal sector, and no spatio-temporal fishing restrictions.

- Solution: Develop and implement harvest control rules that are informed by stock assessments. It was noted during the workshop that WWF and partners are currently finalizing an "Artisanal Fisheries Strategic Framework and Management Plan" that is expected to be presented by the end of 2019. It was also noted during the workshop that FAO and partners under the CLME+ Sub-Project are currently developing sub-regional and national Ecosystem Approach to Fisheries (EAF) management plans that are scheduled to be complemented by the end of 2020.

Challenge: Artisanal fishers are required to have a fishing license, but there is a significant lack of compliance with this requirement.

- Solution: Increasing fishing licensing compliance was identified as one of the most tangible and immediate solutions to begin to address Guyana's fishery information gaps, particularly related to fishing effort. One of the key initial targets to be achieved under a FIP would therefore be to increase compliance with the licensing requirements through a combination of the following: (1) create incentives for fishers to become licensed as a pre-requisite to joining the FIP; (2) increase the capacity of the Fisheries Department to further socialize the licensing requirements and to reach particularly under-represented regions; (3) prioritize Coast Guard and Police efforts to enforce the artisanal license requirements.

  The current challenge is associated with environmental sustainability given the direct links to MSC Principle 3, but it's worth highlighting that fisher licenses have important considerations for social security access and insurance purposes as well (see below).

Financial Profitability:

Challenge: Discrepancy in the US market value of finfish from Guyana compared to neighboring countries. It was noted during the workshop that this may be attributed to a larger proportion of higher value species like snapper in the overall catch of countries like Suriname. This is likely in-part due to ecological differences between the two countries, although it was also noted that Suriname and French Guyana have more robust fisheries management and enforcement mechanisms (i.e., larger mesh sizes) than Guyana. The market value discrepancy between these countries may therefore be a result of larger fish being caught and differentiated as being more sustainable, and therefore receiving a higher price in the U.S. market. Finally, it was noted at the Stakeholder workshop that some of Guyana's supply chains are commercializing product forms of lower value for these species, e.g., whole frozen (see Recommendation 13 below).

- Solutions: To determine the root cause of the difference in value, more work should be done to identify species for the export and domestic market as well as motivations for underreporting data. It was noted during the workshop that the Government of Guyana currently collects weekly Market Surveys for the local market, as well as species-level export data by product form, which would help further characterize the discrepancy in the market value of Guyana fish compared to neighboring countries. The export tax regime and assessment as compared to other countries should also be assessed. Finally, speaking with an importer in the US who sources from both Suriname and Guyana may help identify if the difference in value is real or merely reported.
- Solution: Improve sustainability of the fishery through a series of management measures (i.e. mesh sizes, traceability, etc.) to gain a competitive advantage through differentiation in high-value markets. Initiating a FIP would be a viable option for differentiation.
- Solution: Processing to create value-added products that better meet customer specifications.

Challenge: Poor quality finfish products lead to a relatively high number of US import refusals from Guyana compared to neighboring countries. At the fisher level, fishing practices and deficiencies in cold-chain in certain supply chains leads to lower quality that reduces market value and access.

- Solution: Ensure continuity of cold chain, including availability, access, and consistent use of high quality ice.
- Solution: Change fishing practices to target higher quality (but possibly lower quantities) that result in the same or higher profitability.

Social Responsibility:

Challenge 1: Geographic inequities around access to basic services, such as healthcare and education were identified in Guyana's rural and coastal regions. Rural regions suffer from lack of learning materials and resources, and trained teachers. Additionally, healthcare and access to services is inconsistent throughout regions. It was stated that mental health issues, such as addiction are prevalent in the artisanal sector, with lack of community resources to address them.

- Solution: Establish social programs or community workshops focused on mental health issues, such as addiction. Increase engagement with fishers on the importance of complying with fisher licensing requirements and increase enforcement to incentivize compliance (see environmental challenge above) given the important role of licensing in securing social security access and insurance.
- It was noted during the workshop that the StewardFish project[2] will focus on capacity building with several cooperatives and fishers in various regions (particularly as part of Component 1 – Developing organizational capacity for fisheries governance).

[2] Stewardfish - Developing Organisational Capacity for Ecosystem Stewardship and Livelihoods in Caribbean Small-Scale Fisheries

Challenge 2: Limited recognition of the role of women in the fisheries sector. Women are typically found in post-production activities or as boat owners, but are not represented in the sector. The role and prevalence of women continues to be poorly understood and documented.

- Solution: Conduct full assessment of gender in the sector. It was noted during the workshop that two gender assessments are ongoing, one conducted by the Fisheries Department and WWF, as well as a separate assessment by FAO.
- Increase participation of women in management and workshop activities.
- Encourage and/or improve cooperative systems to address issues related to marginalized groups, such as women.

Challenge 3: Possible incidence of child labor in the fisheries sector. Child labor in the fishery sector has not been assessed. During brief field visits to the cooperatives and landing sites in Regions 5 and 6, there were several children and teens working as fishers. Guyana has ratified International Labor Organization Conventions No. 138 (Minimum age of employment) and No. 182 (Elimination of worst forms of child labor), but adequate enforcement is lacking, and fines are low and do not deter violations.

- Solution: Increase enforcement on minimum age of employment and child labor.

Challenge 4: Fishers are not recognized in Guyana's workforce. Policies regarding minimum wage, working conditions, and occupational safety do not apply to fishers. Unorganized workers are reported to be paid less than the set minimum wage. In addition, there is no training in health and safety procedures.

- Solution: Ratify the International Labor Organization Work in Fishing Convention (No. 188). This would address issues related to unacceptable forms of work and establish necessary regulations around occupational safety, rest periods, written work agreements, and social security protection for fishers.
- Encourage and/or improve cooperative systems to address issues related to working conditions and benefits.

A full Social Responsibility assessment will be completed in 2020, which will further identify challenges and solutions within a single fishery supply-chain in Guyana.

Abbreviations and Acronyms

CI	Conservation International
CLME	Caribbean Large Marine Ecosystem [Project]
CNFO	Caribbean Network of Fisherfolk Organizations
COFI	Committee on Fisheries
CRFM	Caribbean Regional Fisheries Mechanism
EAF	Ecosystem Approach to Fisheries
EMC	Environmental Management Consultants
EPA	Environmental Protection Agency
FAO	Food and Agriculture Organization [of the United Nations]
FDA	Food and Drug Administration [of the United States]
FIP	Fishery Improvement Project
IRR	Internal rate of return
IUCN	International Union for Conservation of Nature
IUU	Illegal, unreported and unregulated [fishing]
kg(s)	Kilogram(s)
lb(s)	Pound(s)
MARAD	Maritime Administration Department, Government of Guyana
MSC	Marine Stewardship Council
MT	Metric ton
NGO	Non-governmental organisation
PIs	Performance Indicators
PSI	Pritipaul Singh Investments
RFMO	Regional fisheries management organization
SDG	United Nations Sustainable Development Goal
SIMP	[United States] Seafood Import Monitoring Program
TBL	Triple-bottom line (referring to a business or project with not just a financial "bottom line" but also accounting for social and environmental outcomes)
UN	United Nations
VPHU	Veterinary Public Health Unit, Ministry of Health, Government of Guyana
WECAFC	Western Central Atlantic Fishery Commission

WWF World Wildlife Fund

Triple-Impact FIP Scoping Document

Environmental Sustainability

Introduction

The purpose of this FIP scoping document is to recommend strategies to address challenges associated with Guyana's artisanal finfish fishery. Within the 'Environmental Sustainability' section of the scoping document, the MSC performance indicators (PIs) will be prioritized to help guide the development of FIP actions. The goal of a comprehensive FIP is to move the fishery toward performing at a level consistent with an unconditional pass against the MSC standard. Comprehensive FIPs are designed to bring the fishery to at least an 80 score for each PI to ensure the fishery can pass an MSC full assessment. Scores for each PI are determined by conformance with MSC scoring guideposts (SGs) (i.e., the level of performance considered equivalent to numeric scores of 60, 80 or 100 for each PI).

The scoping document must be completed or audited by an entity experienced with applying the MSC standard. Dr. Jocelyn Drugan has this experience as a recognized MSC Technical Consultant.[3] The scoping document provides recommendations on the actions that may be taken to reach one or more of the MSC SGs, but is not meant to be prescriptive. It will recommend strategies to address the fishery's challenges, as identified in the Environmental Sustainability assessment. The final FIP work-plan activities should be agreed upon by FIP stakeholders.

Note that while the current Environmental Sustainability assessment of the fishery is benchmarked against the MSC Standard, all the principles evaluated are consistent with elements of the Ecosystem Approach to Fisheries (EAF), which was adopted by the FAO Committee on Fisheries (COFI) to implement the Code of Conduct for Responsible Fisheries. The EAF is a comprehensive approach to fisheries management that envisages participatory approaches and consideration of a broader set of issues that include impacts of fisheries on the ecosystem, as well as the social, economic and governance considerations that are important for sustainability. The Performance Indicator Categories of MSC Principles 1, 2, and 3 used in the current document are most closely related to the following EAF Principles:

- MSC Principle 1: Resource Scarcity, Maximum Acceptable Fishing Level, Maximum Biological Productivity, and Impact Reversibility.
- MSC Principle 2: Ecosystem Well-Being, Resource Scarcity, Impact Minimization, Ecosystem Integrity, and Species Interdependence.

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[3] See Technical Consultants list at https://www.msc.org/for-business/fisheries/developing-world-and-small-scale-fisheries/fips

- MSC Principle 3: Institutional Integration, Uncertainty, Risk and Precaution, Compatibility of Management measures, the Precautionary Principle and Precautionary Approach, Subsidiarity, Decentralization and Participation.

The current Triple-Impact FIP Scoping Document therefore also supports the CLME+ Project objective to identify opportunities to support implementation of the EAF in Guyana.

1. Definition of the FIP Unit of Assessment (UoA)[1]

Name of the fishery	Guyana artisanal finfish
Commodity group	Groundfish
Species common and scientific names	Bangamary (king weakfish, *Macrodon ancylodo*n) Sea trout (green weakfish, *Cynoscion virescens*) Butterfish (smalleye croaker, *Nebris microps*) Grey snapper (acoupa weakfish, *Cynoscion acoupa*) Gillbacker (gillbacker sea catfish, *Sciades parkeri*) Cuirass (crucifix sea catfish, *Sciades proops*)
The target stock(s)	Guyana coastal stocks (stock structure not clear for these species)
The fishing method or gear type(s) and/or practice	Focal gears: drift gillnet, Chinese seine Other gears used in artisanal fisheries: pin seine, caddell lines, anchor seine, circle seine
The fishing fleet or group of vessels, or individuals fishing operators pursuing that stock	Artisanal fishery using wooden vessels with outboard or inboard engines, 6-19 meters (m) in length
Country	Guyana
Continent	South America
FAO major fishing areas	31

[1] The FIP UoA identifies the full scope of what was assessed

This fishery was evaluated using the Environmental Rapid Assessment Tool in August 2019. The assessment identified nineteen performance indicators (PIs) that were expected to have a failing score under a full MSC assessment (SG <60), and four other PIs that were likely to require conditions (SG 60-79). The priority of addressing specific PIs is listed as high, medium or low depending on several criteria, including the MSC pre-assessment scores (PIs scoring <60 are considered high priority), sequencing of actions (output of one action needed to begin another action), and available funding for specific actions.

The scores for all PIs for each Principle are described below, including a summary description of the problems identified and discussed with stakeholders on September 10-11, 2019, as well as co-designed solutions to address the problems identified.

Principle 1

This section of the scoping document indicates the current performance of the fishery in terms of Principle 1, and provides more detail on the scoring issue level of each MSC PI that is likely to cause the fishery to either fail (SG <60) or pass with conditions (SG 60-79)[4].

The Performance Indicator Categories of Principle 1 are most closely related to the following EAF Principles: Resource Scarcity, Maximum Acceptable Fishing Level, Maximum Biological Productivity, and Impact Reversibility.

Problem Summary

PI Category		Scoring Range	Related PIs
1.1.1	Stock Status	20-39	1.1.2, 1.2.3, 1.2.4
1.1.2	Stock Rebuilding	<60	1.1.1
1.2.1	Harvest Strategy	<20	1.2.2, 1.2.3, 1.2.4, 3.2.1
1.2.2	Harvest Control Rules and Tools	<20	1.1.1, 1.2.1
1.2.3	Information and Monitoring	<60	1.2.1
1.2.4	Assessment of Stock Status	40-59	1.2.1

Finfish stocks are not regularly assessed, and the fishery has essentially no controls on fishing effort. Available information indicates that target stocks are overfished.

Recommendation Summary and Stakeholder Input

A brief description of the type of information and/or action that might help the fishery reach one or more scoring guideposts for Principle 1 is included below. The summary includes stakeholder feedback about the proposed recommendations, which can be used to inform the development of a FIP work-plan with specific stakeholders once a commitment to "FIP Launch" has been secured.

[4] See "Environmental Sustainability Assessment: Guyana artisanal groundfish fisheries" Report for an explanation of the scores and a full list of all PIs. For additional details, see the Rapid Assessment Tool.

Recommendation 1 – Maintain status of target stocks at sustainable levels

1.1.1 Stock status **1.1.2 Stock rebuilding** **1.2.3 Information & Monitoring** **1.2.4 Assessment of stock status**	**Stock status of each target species is regularly monitored and maintained at an ecologically sustainable level**	
Scoring Guidepost	SG 60	SG 80
Summary descriptions of relevant scoring issues	1.1.1. It is likely that the stock is above the point where recruitment would be impaired (PRI). 1.1.2. An appropriate rebuilding timeframe is specified. Monitoring is in place to determine effectiveness of rebuilding strategies within that timeframe. 1.2.3. Some relevant information related to stock structure, stock productivity, and fleet composition is available to support the harvest strategy. Stock abundance and UoA removals are monitored and at least one indicator is monitored with sufficient frequency to support the harvest control rule. 1.2.4. The assessment estimates stock status relative to generic reference points appropriate to the species category. It identifies major sources of uncertainty.	1.1.1. It is highly likely that the stock is above PRI and fluctuating around a level consistent with MSY. 1.1.2. There is evidence that the rebuilding strategies are working, or they are likely to work based on other evidence, within the specified timeframe. 1.2.3. Sufficient relevant information related to stock structure, stock productivity, and fleet composition is available to support the harvest strategy. Stock abundance and UoA removals are regularly monitored, and one or more indicators are monitored with sufficient frequency to support the harvest control rule. There is good information on all other fishery removals from the stock. 1.2.4. The assessment is appropriate for the stock and harvest control rule. It estimates stock status relative to reference points that are appropriate to the stock and can be estimated. It takes uncertainty into account and is subject to peer review.
Scoring Range and Rationale	Finfish stocks are not regularly assessed, and catch and fishing effort information are limited for artisanal fisheries. Productivity susceptibility analyses (PSAs) suggest that all six species are susceptible to heavy fishing mortality, a concern supported by reports that fishers need to travel farther offshore to catch fish. <u>Stakeholder input:</u> We confirmed that finfish stocks are not regularly assessed, and catch and fishing effort information are limited for artisanal fisheries. All six species are subject to heavy fishing mortality. The stock assessment results are yet to be published, but confidentially, they indicate overfishing on all of these species. Another issue is a lack of collaborations between stakeholder groups and training of data collectors. Stock assessment capacity is lacking in the Fisheries Department.	

Improvement Recommendations	Fundamentally, there is a need to improve monitoring of catch and fishing effort for all six species, from all sources of fishing mortality. The information should be used to regularly assess stocks, potentially by building off existing stock assessments, such as those being developed by WWF-Guianas. Stakeholder input: Develop stock assessment capacity in the Fisheries Department through trainings. Starting with registered vessels, conduct workshops to educate captains and boat owners on why data collection is important. Develop incentives for fishers to collect and share data. Compare the different sources of data relevant to stock assessment, including those from the Fisheries Department and potentially from the Environmental Resources Management (ERM) efforts being funded by ExxonMobil. Maintain data records that are available to the public. Conduct research on stocks, spawning, and biology. Maintain regular and appropriate frequency of data collection.
Priority	High
Potential Partners	Fisheries Department, WWF-Guianas, Fisher cooperatives

Recommendation 2 – Establish harvest strategy with harvest control rules (HCRs)

1.2.1 Harvest strategy 1.2.2 Harvest control rules and tools	**There is a robust and precautionary harvest strategy in place that includes well defined and effective HCRs for the fishery.**	
Scoring Guidepost	SG 60	SG 80
Summary descriptions of relevant scoring issues	1.2.1. The harvest strategy is expected to achieve stock management objectives reflected in PI 1.1.1 SG80. The strategy is likely to work based on prior experience or plausible argument. 1.2.2. Generally understood HCRs are in place or available that are expected to reduce the exploitation rate is as the point of recruitment (PRI) is approached. There is some evidence that tools used or available to implement HCRS are appropriate and effective in controlling exploitation.	1.2.1. There is a robust and precautionary harvest strategy in place. The strategy is responsive to the state of the stock and elements of the strategy work together towards achieving stock management objectives. The strategy may not have been fully tested, but evidence exists that it is achieving its objectives. 1.2.2. There are well defined and effective HCRs in place that ensure that the exploitation rate is reduced as the PRI is approached, and are expected to keep the stock fluctuating around a target level consistent with (or above) MSY. The HCRs are likely to be robust to the main uncertainties. Available evidence indicates that the tools in use are appropriate and effective.

Scoring Range and Rationale	A harvest strategy for target stocks is clearly needed. Guyana has a fisheries management plan which states a goal to maintain key stocks at 50% of unexploited level or above. However, there has been limited application of appropriate fishing controls to achieve such a goal. For artisanal fisheries, there are no official input or output controls. Although fishers are required to obtain access licenses and register their vessels, there are essentially no limits on vessel numbers, vessel power, fishing gear, or harvests. Stakeholder input: Stakeholders confirmed that there is no harvest strategy for artisanal fisheries, and no limits on the numbers of vessels that can be registered or fishing licenses that are issued. Nine fishing zones have been defined, and fishing licenses specify a specific fishing zone. However, there are no hard rules or enforcement of these zones, and fishers freely move between zones. There are no regulations for artisanal fishing gears, and fishers often switch between gear types to target different species. Guyana has many more fishing boats operating in its coastal areas than Suriname and French Guiana, which have stricter effort controls. Fishers repeatedly emphasized that there are too many fishing boats in operation.
Improvement Recommendations	An appropriate, science-based harvest strategy with HCRs should be developed and described explicitly. The strategy should be informed by available information on stock abundance. Stakeholder input: Develop an efficient fishing licensing process that includes limits on boat numbers, and move towards reducing the artisanal fleet size. Foster greater collaboration among agencies (e.g. Fisheries Department, MARAD, Coast Guard, and VPHU) in managing and enforcing controls, including vessel inspections. Implement closed seasons and/or areas in consultation with stakeholders, particularly fishers. Regulate gear. Limit vessel numbers, via licensing system, to reduce artisanal fleet size. Establish regulations to protect juveniles, spawning grounds and nurseries. Conduct research to determine what type of harvest strategy may be biologically and economically appropriate, such as a quota system. Inform fishers of the importance of sustainable fishing practices. Form a working group to supervise implementation of fishing controls and work towards incorporating regulations into legislation.
Priority	High
Potential Partners	Fisheries Department, Fisher cooperatives, MARAD (Guyana Maritime Administration Department), Coast Guard, VPHU (Veterinary and Public Health Unit)

Principle 2

This section of the scoping document indicates the current performance of the fishery in terms of Principle 2, and provides more detail on the scoring issue level of each MSC Performance Indicator that is likely to cause the fishery to either fail (SG <60) or pass with conditions (SG 60-79).

The Performance Indicator Categories of Principle 2 are most closely related to the following EAF Principles: Ecosystem Well-Being, Resource Scarcity, Impact Minimization, Ecosystem Integrity, and Species Interdependence.

Problem Summary

PI Category		Scoring	Related PIs
2.2.1	Other spp: Outcome Status	40-59	2.2.2, 2.2.3
2.2.2	Other spp: Management Strategy	<20	2.2.1, 2.2.3, 3.2.1
2.2.3	Other spp: Information/Monitoring	40-59	2.2.1, 2.2.2
2.3.1	ETP spp: Outcome Status	<60	2.3.2, 2.3.3
2.3.2	ETP spp: Management Strategy	20-39	2.3.1, 2.3.3, 3.2.1
2.3.3	ETP spp: Information/Monitoring	20-59	2.3.1, 2.3.2
2.4.1	Habitat: Outcome Status	20-59	2.4.2, 2.4.3
2.4.2	Habitat: Management Strategy	<20	2.4.1, 2.4.3, 3.2.1
2.4.3	Habitat: Information/Monitoring	<60	2.4.1, 2.4.2
2.5.1	Ecosystem: Outcome Status	60-79	2.5.2, 2.5.3, 1.1.1, 2.1.1, 2.2.1, 2.3.1, 2.4.1
2.5.2	Ecosystem: Management Strategy	40-59	2.5.1, 2.5.3, 1.2.1, 2.1.2, 2.2.2, 2.3.2, 2.4.2, 3.2.1
2.5.3	Ecosystem: Information/Monitoring	<60	2.5.1, 2.5.2, 1.2.3, 2.1.3, 2.2.3, 2.3.3, 2.4.3

Recommendation Summary and Stakeholder Input

A brief description of the type of information and/or action that might help the fishery reach one or more scoring guideposts for Principle 2 is included below. The summary includes stakeholder feedback about the proposed recommendations, which can be used to inform the development of a FIP work-plan with specific stakeholders once a commitment to “FIP Launch” has been secured.

Recommendation 3 – Monitor and manage fishery impacts on other stocks caught

2.2.1 Other spp: Outcome Status **2.2.2 Other spp: Management Strategy** **2.2.3 Other spp: Information/ Monitoring**	**UoA catches of other stocks are regularly monitored and managed so that the stocks are maintained at sustainable levels**	
Scoring Guidepost	SG 60	SG 80
Summary descriptions of relevant scoring issues	2.2.1. Main other species are likely to be above biologically based limits. Or if below limits, measures are in place to ensure that the UoA does not hinder rebuilding. 2.2.2. There are measures in place which are expected to maintain or not hinder rebuilding of main other species. The measures are considered likely to work. It is likely that shark finning is not taking place. There is a review of alternative measures to minimize UoA-related mortality of unwanted catch of other species. 2.2.3. Qualitative information is adequate to estimate the impact of the UoA on main other species with respect to status, or to estimate productivity and susceptibility attributes for main other species. Information is adequate to support measures to manage these species.	2.2.1. Main other species are highly likely to be above biologically based limits. Or if below limits, there is evidence of rebuilding or a demonstrably effective partial strategy in place such that the UoA does not hinder recovery. 2.2.2. There is a partial strategy in place for the UoA which is expected to maintain or not hinder rebuilding of main other species. There is some objective basis for confidence that the partial strategy will work, and evidence that it is being implemented successfully. It is highly likely that shark finning is not taking place. There is a regular review of alternative measures to minimize UoA-related mortality of unwanted catch of other species, and they are implemented as appropriate. 2.2.3. Some quantitative information is adequate to assess the impact of the UoA on main other species with respect to status, or to assess productivity and susceptibility attributes for main other species. Information is adequate to support a partial strategy to manage these species.

Scoring Range and Rationale	Catches of other species are not regularly monitored in Guyana's artisanal fisheries. Based on 2016 catch information in the Marine Fisheries Management Plan, we preliminarily identified sharks (e.g. C*archarhinus limbatus*), Spanish mackerel (*Scomboromorus brasiliensis*), and kingfish (*Scomboromorus cavalla*) as main other species. Stock assessments are not conducted for these species. PSAs suggested that Guyana's artisanal fisheries pose a medium risk to stock status of these species. The Fisheries Department conducts sampling of artisanal fishery landings, but discards are not recorded, and monitoring data are insufficient to estimate the impact of the UoA on individual species with respect to their stock status. Better information on fishing activity and life history (e.g. age and growth parameters) would strengthen PSA evaluation or stock assessment. Sharks are caught in these fisheries. They are reportedly brought in whole or dressed (without the head) rather than being finned. Although many landed sharks are reported as being blacktip sharks, it is likely that other species, including some of conservation concern, are caught as well. There are no management measures or regulations in place for other fish species being caught. <u>Stakeholder input:</u> Stakeholders confirmed that monitoring of catches of most species is limited. Although the Fisheries Department monitors landings sites, frequency of monitoring varies among sites. Regions vary regarding targeted species. Spanish mackerel and kingfish could be considered target species, and the Fisheries Department is required to report their landings. Information on discards is lacking. Some species are discarded as 'trash fish,' such as kokoari, tree tree, sometimes cuffum and cuirass if values are too low to merit selling at market. Some fishers fish in nursery areas and catch many juveniles. Chinese seines use ½ inch mesh and may be particularly prone to catching juvenile fishes (including weakfishes and sea catfishes), which spawn nearshore where phytoplankton and temperatures are better for juvenile growth. The lack of gear regulations and longer soaking times for nets may lead to increased catches of unwanted species. Few fishers currently target sharks because their economic value is low. However, they will land the sharks and sell the fins. Sharks are often landed without heads and fins and are difficult to identify at landing sites. WWF-Guianas attempted to pilot an on-board camera system for monitoring bycatch, but it was unsuccessful in part due to fishers' privacy concerns.

Improvement Recommendations	Monitoring and data collection for other species can be improved through methods such as catch logbooks or an observer program, possibly through collaborations with other organizations or research institutes. A management strategy based on evaluation of these data can then be developed and implemented. Information to confirm whether any shark finning is taking place should be collected. Stakeholder input: Add additional columns to data collection forms used by Fisheries Department staff to better capture information on other, non-target species caught. Try to collaborate with EMC (Environmental Management Consultants) and obtain data from monitoring efforts such ERM. Build on the efforts led by WWF-Guianas that developed an ETP Guide Booklet and other ETP species training and awareness campaigns, and similar to previous FAO efforts in the Caribbean. Develop incentives for accurate reporting, including of shark catches and releases (see Recommendation 4 below), which may involve awareness trainings. Support implementation of FAO's 'Fishery Information System' which would provide a centralized and transparent platform to address data-gap issues. Test gear modifications for reducing bycatch and phase out certain gears (e.g. pin seine) to reduce bycatch of juveniles. Tie gear regulations to licensing requirements. Conduct research on monitoring systems that could be practically implemented by fishers. Support strong fishery cooperatives so that they can better help with data collection and encourage less environmentally impactful fishing practices. Improve communications between fisheries cooperatives and the Fisheries Department.
Priority	Medium
Potential Partners	Fisheries Department, WWF-Guianas, Fisher cooperatives

Recommendation 4 – Monitor and manage fishery impacts on ETP species

2.3.1 ETP species: Outcome Status **2.3.2 ETP species: Management Strategy** **2.3.3 ETP species: Information/ Monitoring**	**UoA impacts on ETP species are regularly monitored and managed to not hinder species recovery**	
Scoring Guidepost	SG 60	SG 80

Summary descriptions of relevant scoring issues	2.3.1. Where national or international requirements set limits for ETP species, the effects of the UoA are likely to be within the limits. Known direct effects of the UoA are likely to not hinder recovery of ETP species. 2.3.2. There are measures in place that minimize UoA-related mortality of ETP species, and are expected to be highly likely to achieve national and international requirements for the protection of ETP species. Measures are expected to ensure the UoA does not hinder ETP species recovery, and are considered likely to work based on plausible argument. There is a review of alternative measures to minimize UoA-related mortality of ETP species. 2.3.3. Qualitative information is adequate to estimate UoA related mortality on ETP species, or to estimate productivity and susceptibility attributes. Information is adequate to support measures to manage impacts on ETP species.	2.3.1. Where national or international requirements set limits for ETP species, the combined effects of MSC UoAs are known and highly likely to be within the limits. Direct effects of the UoA are highly likely to not hinder recovery of ETP species. Indirect effects have been considered and are thought to be highly likely to not create unacceptable impacts. 2.3.2. There is a strategy in place to manage the UoA's impact on ETP species, including measures to minimize mortality, which is designed to be highly likely to achieve national and international requirements for the protection of ETP species. The strategy is expected to ensure the UoA does not hinder ETP species recovery, and there is some objective basis for confidence that the partial strategy will work. There is some evidence that the strategy is being implemented successfully. There is a regular review of alternative measures to minimize UoA-related mortality of ETP species, and they are implemented as appropriate. 2.3.3. Some quantitative information is adequate to assess UoA related mortality and impact and determine whether the UoA may threaten protection and recovery of ETP species, or to assess productivity and susceptibility attributes. Information is adequate to measure trends and support a strategy to manage impacts on ETP species.

Scoring Range and Rationale	The ETP species that may be impacted by artisanal fisheries include sea turtles and potentially some shark species. Fishers report that birds and marine mammals are unlikely to be accidentally caught. There do not appear to be relevant national or international limits relating to ETP species impacts. Encounters and incidental mortality of ETP species are not monitored in artisanal fisheries, although WWF-Guianas has developed some projects to raise awareness and assist with ETP species monitoring. Thus the impact of the UoA on ETP species cannot be estimated quantitatively. However, information is adequate to estimate productivity attributes for ETP species, and there is some general information on the gear types to evaluate susceptibility. PSAs suggested that Guyana's artisanal fisheries pose a medium to high risk to ETP shark species. Monitoring information does not appear adequate to support measures to manage impacts on ETP species. There are no rebuilding strategies or protections in place for shark species, but some protective measures exist for sea turtles. Sea turtles are to be released with minimum harm when accidentally caught. <u>Stakeholder input:</u> Fishers confirmed that sea turtles, birds, and marine mammals are rarely caught. Rays are thought to be bad luck so are avoided but are sometimes still caught. Sharks are caught and landed, but monitoring is limited, and species identification is challenging. Stakeholders agreed that impacts on ETP species are not well monitored or managed. Accuracy of reporting is uncertain since fishers may fear being penalized for accidentally catching a threatened species.
Improvement Recommendations	Monitoring and data collection for ETP species can be improved through methods such as catch logbooks or an observer program, possibly through collaborations with other organizations (e.g. WWF-Guianas) or research institutes. A management strategy based on evaluation of these data can then be developed and implemented. Monitoring information should continue to be collected to determine whether the strategy is being implemented successfully. <u>Stakeholder input:</u> Add additional columns to data collection forms used by the Fisheries Department. Turtles are currently included; other potential ETP species are not. Conduct awareness activities and trainings, such as the existing efforts by WWF-Guianas, and develop incentives for accurate reporting. Working with fishers, WWF-Guianas developed a waterproof guide for identifying ETP species which is quite detailed. Conduct research on monitoring systems that could be practical to deploy. Strengthen legislation and guidelines relating to ETP species.
Priority	High
Potential Partners	WWF-Guianas, Fisheries Department, Fisher cooperatives

Recommendation 5 – Manage fishery impacts on habitats

2.4.1 Habitat: Outcome Status **2.4.2 Habitat: Management Strategy** **2.4.3 Habitat: Information/ Monitoring**	**UoA impacts on habitat are evaluated and managed to not cause serious or irreversible harm**	
Scoring Guidepost	SG 60	SG 80
Summary descriptions of relevant scoring issues	2.4.1. The UoA is unlikely to reduce structure and function of the commonly encountered and VME (vulnerable marine ecosystem) habitats to a point where there would be serious or irreversible harm. 2.4.2. There are measures in place that are expected to achieve the Habitat Outcome 80 level, and there are considered likely to work based on plausible argument. There is qualitative evidence that the UoA complies with management requirements to protect VMEs. 2.4.3. Types and distribution of the main habitats are broadly understood, or qualitative information is adequate to estimate them. Information is adequate to broadly understand the nature of the main impacts of gear use on the main habitats, including spatial overlap, or qualitative information is adequate to estimate the consequence and spatial attributes of the main habitats.	2.4.1. The UoA is highly unlikely to reduce structure and function of the commonly encountered and VME habitats to a point where there would be serious or irreversible harm. 2.4.2. There is a partial strategy in place that is expected to achieve the Habitat Outcome 80 level or above, and there is some objective basis for confidence that it will work based on UoA or habitats information. There is some quantitative evidence that the partial strategy is being implemented successfully and that the UoA complies with its requirements. 2.4.3. The nature, distribution, and vulnerability of main habitats are known at a level of detail relevant to the scale and intensity of the UoA, or some quantitative information is available and adequate to estimate main habitat types and distribution. Information is adequate to identify the main impacts of the UoA on the main habitats, and there is reliable information on the spatial extent of interaction and on the timing and location of fishing gear use. Or alternatively, some quantitative information is available and adequate to estimate the consequence and spatial attributes of the main habitats. Adequate information continues to be collected to detect any increase of risk to the main habitats.

Scoring Range and Rationale	Vessel activities are not mapped, and sea bottom habitats have not been mapped since the 1960s, making it difficult to determine overlap between fishing activity and types of bottom habitat. Nevertheless, artisanal fisheries are reportedly operated over soft, muddy or sandy bottoms, which are generally resilient. Impacts from the most common gear types used, gillnets and Chinese seines, are generally understood and expected to be temporary and related to anchoring of nets. Vulnerable marine ecosystems (VMEs) have not been studied but may include corals. Fishers probably avoid corals, grasses, or other structures that may interfere with the nets. Direct impacts from fishing gear on VMEs therefore appear unlikely, but there is no evidence to confirm this. There are essentially no management measures in place for ensuring that the UoA does not reduce structure and function of the commonly encountered and VME habitats to a point where there would be serious or irreversible harm. Regulations regarding waste disposal, including disposal of unwanted fishing gear, appear limited. Fishers in the CLME+ region have mentioned that data on land based pollution and habitat degradation, including the effects on fisher communities and fish populations, are lacking. Although it extends beyond the bounds of direct impacts from the UoA, plastic pollution in the environment is significant and merits some concern because it may harm habitats and contribute to ghost fishing. <u>Stakeholder input:</u> Fishers generally do not lose their gear unless a gear conflict occurs, such as a vessel driving through net lines that have been set. Recent gear developments are a concern, particularly the use of winches on artisanal boats. The winches have led to increased interactions with corals because nets can be placed deeper and hauled in even with broken corals and rocks. (Normally the coral would be avoided since the broken parts would be too heavy to haul in by hand, and fishers would have to cut the nets.) Some fishers have started to use 'ticklers,' which are bags filled with cement used to weigh down driftnets. Effects of these ticklers is unknown but may increase interactions with bottom habitats. Sometimes seagrass is brought up with the nets.
Improvement Recommendations	Collect additional information to determine risk to main habitats, particularly from gear loss and ghost fishing. To address the latter, review FAO's Voluntary Guidelines on the Marking of Fishing Gear (VGMFG), and consider supporting FAO's efforts to estimate the global amount of Abandoned, Lost and otherwise discarded fishing gears (ALDFG), by conducting a national survey using the global study methodology. Support initiatives to map sea bottoms and vessel activities, and investigate whether VMEs occur in fished areas. Develop and implement management measures for managing habitats and waste/gear disposal. <u>Stakeholder input:</u> Conduct awareness activities and trainings. Require vessels to carry GPS. Map out and analyze existing data on areas fished, which the Fisheries Department may have.
Priority	Medium
Potential Partners	Fisher cooperatives, Fisheries Department, WWF-Guianas

Recommendation 6 – Manage fishery impacts on the ecosystem

2.5.1 Ecosystem: Outcome Status **2.5.2 Ecosystem: Management Strategy** **2.5.3 Ecosystem: Information/Monitoring**	**UoA impacts on the ecosystem are managed to not disrupt key elements underlying ecosystem structure and function**	
Scoring Guidepost	SG 60	SG 80
Summary descriptions of relevant scoring issues	2.5.1. The UoA is unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be serious or irreversible harm 2.5.2. There are measures in place which take into account the potential impacts of the fishery on key ecosystem elements, and they are considered likely to work based on plausible argument. 2.5.3. Information is adequate to identify the key elements of the ecosystem. Main UoA impacts on key ecosystem elements can be inferred from existing information but have not been investigated in detail.	2.5.1. The UoA is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be serious or irreversible harm 2.5.2. There is a partial strategy in place which takes into account available information and is expected to restrain impacts of the fishery on key ecosystem elements to achieve the Ecosystem Outcome 80 level. There is some objective basis for confidence that the partial strategy will work based on UoA or ecosystem information, as well as some evidence of successful implementation. 2.5.3. Information is adequate to broadly understand the key elements of the ecosystem. Main impacts of the UoA on key ecosystem elements can be inferred from existing information, and some have been investigated in detail. The main functions of the components (e.g. target and other species, habitats) in the ecosystem are known. Adequate information is available on UoA impacts on these components to infer main consequences for the ecosystem, and data continue to be collected to detect any increase in risk level..

Scoring Range and Rationale	Broader features of the ecosystem (North Brazil Shelf Large Marine Ecosystem) are understood. However, marine ecosystems, food web structure, and fishery impacts on ecosystem components are not well studied in Guyana. Information is therefore inadequate to identify key ecosystem elements and infer the main impacts of the UoA on these elements. Ongoing monitoring is insufficient for detecting increased risk to the ecosystem and managing ecosystem impacts. Climate change, pollution, and overfishing appear to be the threats most directly relevant to marine ecosystems in Guyana, and artisanal fisheries may contribute to overfishing. Fisheries directly remove fish from the ecosystem, and gear loss or improper disposal may also lead to ghost fishing. Artisanal fisheries are not operating on such a large scale that disruption of key ecosystem elements appears likely, but with the limited monitoring information, it is difficult to evaluate impacts. There is good awareness of the need for ecosystem management, as embodied by past and current efforts to implement an ecosystem approach to fisheries (EAF). However, relevant measures do not appear to have been implemented for artisanal fisheries. <u>Stakeholder input:</u> Stakeholders confirmed a lack of awareness and information on ecosystem impacts from fisheries. Fishing could be a significant threat to the ecosystem, so managing impacts may involve improving the registration and licensing processes to limit access to the fishery and benefit responsible fishers who provide adequate documentation.
Improvement Recommendations	Additional information for evaluating ecosystem impacts from the fishery should be obtained, potentially through collaborations with research institutes or other organizations. Based on that information, appropriate management measures can then be developed and implemented to ensure that the UoA does not cause serious harm to key ecosystem elements. <u>Stakeholder input:</u> Conduct awareness activities and trainings.
Priority	Medium
Potential Partners	Fisheries Department, WWF-Guianas, Stewardfish, Small Business Bureau and GO-Invest to support the vessel registration process.

Principle 3

This section of the scoping document indicates the current environmental performance of the fishery in terms of Principle 3, and provides more detail on the scoring issue level of each MSC Performance Indicator that is likely to cause the fishery to either fail (SG <60) or pass with conditions (SG 60-79).

The Performance Indicator Categories of Principle 3 are most closely related to the following EAF Principles: Institutional Integration, Uncertainty, Risk and Precaution, Compatibility of Management measures, the Precautionary Principle and Precautionary Approach, Subsidiarity, Decentralization and Participation.

Problem Summary

PI Category		Scoring	Related PIs
3.1.1	Governance and policy: Legal and/or Customary Framework	60-79	3.1.2, 3.1.3
3.1.2	Governance and policy: Consultation, Roles and Responsibilities	60-79	3.1.1, 3.2.2
3.1.3	Governance and policy: Long Term Objectives	80+	3.1.1, 3.2.1, 3.2.2
3.2.1	Fishery Specific Management System: Fishery-Specific Objectives	80+	1.21.,1.2.2, 2.1.2, 2.2.2, 2.3.2, 2.4.2, 2.5.2, 3.1.3, 3.2.2, 3.2.5
3.2.2	Fishery specific Management System: Decision-Making Processes	40-59	3.1.2, 3.2.1
3.2.3	Fishery Specific Management System: Compliance & Enforcement	20-39	1.2.3, 2.1.3, 2.2.3, 2.3.3, 2.4.3
3.2.4	Fishery Specific Management System: Monitoring and Management Performance Evaluation	60-79	3.2.1

Recommendation Summary and Stakeholder Input

A brief description of the type of information and/or action that might help the fishery reach one or more scoring guideposts for Principle 3 is included below. The summary includes stakeholder feedback about the proposed recommendations, which can be used to inform the development of a FIP work-plan with specific stakeholders once a commitment to “FIP Launch” has been secured.

Recommendation 7 – Build management capacity

3.1.1 Legal and customary framework	**Management has an adequate framework and capacity to effectively deliver sustainability outcomes**	
Scoring Guidepost	SG 60	SG 80
Summary descriptions of relevant scoring issues	There is an effective national legal system and framework for cooperation with other parties to deliver management outcomes consistent with MSC Principles 1 and 2. The management system incorporates a mechanism for the resolution of legal disputes. It has a mechanism to generally respect the legal rights of people dependent on fishing for food or livelihood.	There is an effective national legal system and framework and organized and effective cooperation with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2. The management system incorporates a transparent mechanism for the resolution of legal disputes which is considered effective. It has a mechanism to observe the legal rights of people dependent on fishing for food or livelihood.
Scoring Range and Rationale	Fisheries management in Guyana is governed by both regional and national frameworks, including the Western Central Atlantic Fishery Commission (WECAFC), the Caribbean Community (CARICOM) and the Caribbean Regional Fisheries Mechanism. Guyana actively participates in these regional frameworks, but the national management system lacks the capacity to cooperate effectively with other countries with regard to some aspects of fisheries management, such as collection and sharing of data for shared fish stocks. The management system includes mechanisms for resolving disputes and recognizing legal rights of stakeholders who depend on fishing for food/ livelihoods, including indigenous peoples. However, the national management framework may lack the capacity to effectively deliver sustainability outcomes consistent with MSC principles 1 and 2, i.e. (1) management of the stock to MSY and (2) minimizing impacts on other species, habitats and wider ecosystem components. Stakeholders and analysts have repeatedly observed that institutional frameworks could be strengthened. <u>Stakeholder input:</u> Stakeholders confirmed that the national management framework, including the Fisheries Department, has limited capacity. Capacity is growing, but there is a high rate of staff turnover. Fisheries Department activity and staff are not evenly distributed among regions. There is no centralized database to share information on compliance, registration, or fishery stock data, although WWF-Guianas is working with the Fisheries Department to develop one. Data that is collected may be inaccurate or is not regularly collected. Communication among government organizations and between stakeholders and government is very poor.	

Improvement Recommendations	Support capacity building efforts for Guyana's fisheries management system, including management of artisanal fisheries. This may involve development of community based management and collaboration with fishery cooperatives. Stakeholder input: Encourage the organization of cooperatives and support their effective functioning. Enhance co-management at local and national level. Enhance and operationalize national intersectoral committees (CLME+ objective). Fisheries should restructure their approach to communicating with other bodies and relaying information. The EPA is initiating a project titled "Integrated Coastal Marine Management (ICMM)" to partner with government agencies and private stakeholders to allow effective inter-communication and processing of data collected by each agency. See: EAF Principles: Institutional Integration
Priority	Medium
Potential Partners	Fisheries Department, EPA (Environmental Protection Agency), fisher cooperatives, WWF

Recommendation 8 – Improve consultation processes with regard to artisanal fishers

3.1.2 Consultation, roles and responsibilities	**Consultation processes regularly collect and consider information from fishers**	
Scoring Guidepost	SG 60	SG 80
Summary descriptions of relevant scoring issues	Organizations and individuals involved in the management process have been identified. Functions, roles, and responsibilities are generally understood. The management system includes consultation process that obtain relevant information from the main affected parties, including local knowledge, to inform the management system.	Organizations and individuals involved in the management process have been identified. Functions, roles, and responsibilities are explicitly defined and well understood for key areas of responsibility and interaction. The management system includes consultation process that regularly seek and accept relevant information from the main affected parties, including local knowledge. The management system demonstrates consideration of the information obtained.

Scoring Range and Rationale	Roles and responsibilities of organizations and individuals involved in management are generally clear, and the management system includes consultation processes to obtain relevant information from stakeholders. However, interactions with artisanal fishers appear to largely focus on landings samplings and vessel registration, and occasional educational workshops. The extent to which the Fisheries Department seeks and considers local knowledge from the fishers is unclear. Considering the existing capacity limitations, experts have suggested that Guyana adopt a co-management strategy for its artisanal fisheries, where fisher cooperatives would play a larger and more official role in governing their fisheries. Stakeholder input: Stakeholders confirmed that interactions with artisanal fishers appear to largely focus on landings samplings and vessel registration. The Fisheries Department has held some workshops but feel there is a lack of participation in activities or workshops. Landing samplings may occur as infrequently as once per month in some areas. The extent to which the Fisheries Department seeks and considers local knowledge from the fishers and fishery coops is unclear. Communication among government organizations and between stakeholders and government is very poor. There could be more frequent interaction between the Fisheries Department and fishers, especially in some regions.
Improvement Recommendations	The management system should consider regularly seeking information from artisanal fishers, beyond sampling landings, and use that information in management. Stakeholder input: Create and distribute training or teaching aids that are appropriate for existing literacy rates. Increase Fisheries Department media presence. Increase opportunities for training and workshops that include representation from a variety of stakeholder groups. Communicate benefits or importance of workshops or activities to improve fisher attendance. Conduct site visits more frequently, especially in areas where they occur only about once per month. See EAF Principles: Subsidiarity, Decentralization, and Participation
Priority	Medium
Potential Partners	Fishers, fisher cooperatives, WWF-Guianas, Fisheries Department

Recommendation 9 – Ensure effective decision-making processes are in place

3.2.2 Decision-making processes	**Effective and appropriate decision-making processes are in place**	
Scoring Guidepost	SG 60	SG 80

Summary descriptions of relevant scoring issues	There are some decision-making processes in place that result in measures and strategies to achieve the fishery-specific objectives. These processes respond to serious issues identified in relevant research, monitoring, evaluation, and consultation, in a transparent, timely, and adaptive manner. Some information on the fishery's performance and management action is generally available on request to stakeholders.	There are established decision-making processes in place that result in measures and strategies to achieve the fishery-specific objectives. These processes respond to serious and other important issues identified in relevant research, monitoring, evaluation, and consultation, in a transparent, timely, and adaptive manner. Decision-making processes use the precautionary approach and are based on best available information. Information on the fishery's performance and management action is available on request to stakeholders.
Scoring Range and Rationale	The Fisheries Act (2002) explicitly describes the overall framework and relevant processes for decision-making (Part II, Section 5). The Chief Fisheries Officer is responsible for preparing and reviewing fisheries management plans (FMPs), in consultation with local fishers, authorities, and other fishery stakeholders, including the Fisheries Advisory Committee. FMPs for specific sectors (industrial, semi-industrial, and artisanal) state objectives to be achieved and specify any management measures to be taken, and the plans are submitted to the Minister of Agriculture for approval. Established decision-making processes that result in strategies to achieve fishery-specific objectives are therefore in place. However, the effectiveness of these processes is limited, particularly for the artisanal sector. Fisheries Department officers regularly interact with artisanal fishers, but the department has limited staff capacity to collect information and respond to concerns regarding the fishery. For example, the Fisheries Department does not regularly analyze and present fishery data that would be useful to the fishers, or that could be used to support sustainability objectives. There is also limited evidence that decision-making processes use the precautionary approach. The need for improved capacity and efficiency in the administration of fisheries is considerable. <u>Stakeholder input:</u> Based on the June 2019 site visit and general feedback from workshop participants, the Fisheries Department and other government agencies are not especially responsive to fishers' concerns. Stakeholders confirmed that a precautionary approach is not used in management.	
Improvement Recommendations	Establish decision-making processes for artisanal fisheries that respond to issues identified in monitoring and research. Provide evidence that these processes use the precautionary approach and are based on best available information. Ensure that information on the fishery's performance and management action is available on request, and explanations are provided for actions or lack of action. <u>Stakeholder input:</u> Review and revise fisheries management plans more frequently. Ensure that stakeholders, particularly fishers, have opportunities to voice their opinions on management regulations that pertain to them, such as closed seasons and areas. Make data publicly available. See EAF Principles: Compatibility of Management Measures, Subsidiarity, Decentralization, and Participation, and Equity	

Priority	High
Potential Partners	Fisheries Department, WWF-Guianas, FAO

Recommendation 10 – Strengthen MCS mechanisms

3.2.3 Compliance and enforcement	**Monitoring, control, and surveillance (MCS) mechanisms are adequate to ensure compliance with regulations and minimize illegal, unreported, or unregulated (IUU) fishing**	
Scoring Guidepost	SG 60	SG 80
Summary descriptions of relevant scoring issues	MCS mechanisms exist and are implemented in the fishery, and there is a reasonable expectation that they are effective. Sanctions to deal with non-compliance exist and there is some evidence they are applied.	An MCS system has been implemented in the fishery and has demonstrated an ability to enforce relevant management measures or rules. Sanctions to deal with non-compliance exist, are consistently applied and thought to provide effective deterrence. There is no evidence of systematic non-compliance.
Scoring Range and Rationale	Guyana acceded to the Port State Measures Agreement in 2016, and under the CRFM (Caribbean Regional Fisheries Mechanism), has agreed to collaborate with other regional and multilateral partners to identify, prevent, and eliminate IUU fishing within the Caribbean and globally. The Coast Guard and Marine Police have the authority to enforce compliance with regulations, and they may be assisted by the Fisheries Department. However, surveillance capacity is limited, and much of the artisanal fleet is unlicensed. Penalties for non-compliance have been applied. During enforcement exercises conducted in 2018, seven artisanal vessels were each fined GYD 50 000 for not having licenses. Nevertheless, enforcement is generally considered weak, and the Legal and Inspectorate Unit under the Fisheries Department has difficulty conducting its work because vessel owners, processors, and fishers may not be responsive to their information requests. Considering the limited MCS capacity and oversight, IUU fishing is likely significant, and at the least, many artisanal catches are not reported. Available information indicates that compliance with regulations is poor, and monitoring is inadequate. <u>Stakeholder input:</u> Stakeholders confirmed that surveillance capacity to enforce management regulations is limited; for example, Guyana has few patrol craft within the Marine Police force, and VPHU has only about twelve inspectors for the entire country. There are few official regulations to enforce, and ‘rules’ such as the fishing zones are often not followed. Guyana has no authority to enforce regulations or settle disputes when fishing occurs in Suriname waters. Communication among government organizations and between stakeholders and government is very poor. The Fisheries Department has limited capacity to effectively monitor all regions. Enforcement policies in the Fisheries Act are outdated; for example, fines have not been adjusted for inflation.	

Improvement Recommendations	Increase MCS capacity and improve the licensing and registration system for fishing vessels. <u>Stakeholder input:</u> Make submission of vessel data and obtainment of fishing licenses mandatory. Develop official legislation regarding zoning for fishing vessels so that zoning can be enforced. Increase collaboration between the Fisheries Department, Marine Police, and the Coast Guard. Revise enforcement regulations and penalties for non-compliance in the Fisheries Act. Note that these activities should be coordinated by the Task Force (which includes FAO), to ensure that efforts are additive and not duplicated with on-going work by FAO focused on assisting the government with capacity building for implementation of the PSMA, MCS and other areas to combat IUU fishing. The activities should also be aligned with the RPOA-IUU, which was endorsed at the 17th Session of WECAFC in July 15-18 in Miami as the "Regional Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated (IUU) Fishing in WECAFC Member Countries (2019-2029).
Priority	High
Potential Partners	Fisheries Department, MARAD, Coast Guard, Marine Police, VPHU, FAO, WECAFC/CRFM/OSPESCA Working Group on IUU fishing

Recommendation 11 – Establish internal and external evaluation to ensure effective and improving management performance

3.2.4 Monitoring and management performance evaluation	**Transparent and accountable fisheries institutions and decision-making processes allow for on-going internal and external evaluation**	
Scoring Guidepost	SG 60	SG 80
Summary descriptions of relevant scoring issues	There are some mechanisms in place to evaluate some parts of the fishery-specific management system. The system is subject to occasional internal review.	There are mechanisms in place to evaluate key parts of the fishery-specific management system. The system is subject to regular internal and occasional external review.
Scoring Range and Rationale	Some reviews have taken place of key parts of the fishery management system, such as the collection of fishing effort and biological data. Guyana's legal and institutional frameworks have also been reviewed in recent years. The MFMP is required to be revised and updated regularly. Some internal review processes are in place, but external reviews have apparently not taken place for the most recent set of fisheries management plans. <u>Stakeholder input:</u> Legislation such as the Fisheries Act has not been revised in recent years. Internal reviews of the fishery-specific management system do not regularly take place.	

Improvement Recommendations	Carry out an institutional assessment for the organizational development of the Fisheries Department. Confirm whether mechanisms for regular internal and occasional external review of the fishery-specific management system are in place, and ensure that external review occurs. Stakeholder input: Improve transparency within the fishery-specific management system and make data publicly available. WWF-Guianas is collaborating with the Fisheries Department to develop a supplementary document to the current fisheries management plan, as informed by a workshop held in 2016.
Priority	Medium
Potential Partners	WWF-Guianas, Fisheries Department, FAO

Financial Profitability

Opportunity 1 - Operational Efficiency

This section of the scoping document outlines the current performance of the fishery in terms of Operational Efficiency. Attainment of high-quality product generally requires that products are adequately refrigerated during all stages of storage and transport through the chain of custody (i.e., the "cold chain"). In most cases,[5] judicious use of ice is required to ensure product quality and safety. This indicator is used to assess whether a cold chain is established to ensure the quality and safety of the target product.

Problem Summary

Poor operational efficiency leading to low quality product, limiting market access.

Recommendation Summary and Stakeholder Input

A brief description of the type of information and/or action that might help the fishery increase operational capacity is summarized below. The summary includes stakeholder feedback about the proposed recommendations, which can be used to inform the development of a FIP work-plan with specific stakeholders once a commitment to "FIP Launch" has been secured.

Recommendation 12 – Increase operational efficiency as related to cold chain and product safety.

Operational Efficiency	**Cold chain infrastructure is established to ensure the quality and safety of the target product.**
Summary descriptions of relevant issues	Poor quality finfish products from the artisanal sector lead to a relatively high number of US import refusals from Guyana compared to neighboring countries. At the fisher level, fishing practices and deficiencies in cold-chain in certain supply chains, particularly for smaller processors, as well as low organization and operational capacity leads to lower product quality that reduces market value and access.

[5] An exception is value chains where the product is shipped live, dried or preserved.

<table>
<tr>
<td>Rationale</td>
<td>The relatively high number of US import refusals from Guyana compared to neighboring countries indicates that quality of finfish products could be improved.

<table>
<tr><th>Country</th><th>US imports (MT)</th><th>Refusals</th></tr>
<tr><td>Guyana</td><td>9,637</td><td>408</td></tr>
<tr><td>Suriname</td><td>6,053</td><td>5</td></tr>
<tr><td>Venezuela</td><td>12,517</td><td>219</td></tr>
<tr><td>Brazil</td><td>18,736</td><td>923</td></tr>
</table>

At the fisher level, fishing practices and deficiencies in cold-chain in certain supply chains leads to lower quality that reduces market value and access (access, price and consistent use of ice).

<u>Stakeholder input:</u>
Participants confirmed that poor product quality may be due to low quality standards, particularly at some of the smaller processors.

If product quality is increased, and prices are higher as a result, there is a risk of making prices too high for the local consumers to be able to afford finfish. Participants noted that this may not be an issue since the species that are sold domestically are different than those being exported, regardless of price. Fisheries Department has data available for exports by species, product form, etc. This data can be compared to landings to determine which species are being exported and which are staying local.</td>
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Improvement Recommendations	Infrastructure and training investments to ensure continuity of cold chain throughout the individual supply-chains of FIP participants (fishers, supplier/buyers, processors, and processing workers), including availability, access, and consistent use of high quality ice. <u>Stakeholder Input:</u> Trainings should be continuous and ongoing, especially for processing workers where there is high turnover in processing facilities. Need to create a mechanism for ensuring the training is fully understood and incorporated into everyday systems. Also need to Increase cooperative capacity so they can help train fishers. Work with local NGOs and VPHU, although the latter will require additional staff and resources (laboratories) to conduct testing at each level of the value chain. Similarly, increase financial management and trade of smaller cooperatives, using co-op #66 and Ministry of Business to train others on auction system. Fishers in regions 2, 5, and 6 reported that while most fishers use ice while fishing, access to ice varies by landing site; these fishers also report fishing trips of 10 to 12 days in length for drift gillnet vessels that make maintaining quality challenging. Transparency: Need to correlate efforts of improvements in quality with improvement in pricing and/or increases in demand. Need to communicate prices and price cuts more transparently. Prices: Link prices to quality through grading system, i.e., higher quality gets better price (with VPHU). Ensure price increases are passed back to fishers and not just to seafood buyers (with Processors). Also consider the development of a local certification standard, possibly through a Fisheries Improvement Project, which could be supported through tax cuts if vessel owners are licensed, as well as with longer-term contracts with suppliers. As part of this process, require licensing or qualifications at each stage of the value chain, and create exclusive commercial agreements between local fishers participating in a triple-impact FIP and buyers, which will create the necessary financial incentives and compensation mechanisms for fishers to implement more sustainable practices (with MARAD). This will also require better regulation of landing sites so that only licensed vessels are allowed to fish - work with fishery cooperatives and Fisheries Department. Establish and enforce fines or other penalties for noncompliance at each level of the value chain - work with Fisheries Department and Police. Another potential action resulting from the assessments is to change fishing practices to target having higher quality products (but possibly lower quantities) that result in the same or higher profitability.
Priority	High
Potential Partners	Fisheries Department, MARAD, Coast Guard, Marine Police, VPHU, fishers, fishing cooperatives, processors, and middlemen

Other notes:
Fishery Harvesters and Supply-Chain Stakeholder feedback at workshop on Subsidies:
o Unfair that industrial vessels receive subsidies
o Provide subsidies directly tied to quality improvements
· Streamline the certification process to save time, e.g., identify overlaps in efforts
· Remove taxes on the exporter to incentivize correct reporting and increased profitability of exports
· Remove VAT on fishing gear
· Promote coops to increase economies of scale to improve efficiency
· Some fishers, especially in Region 6, sell their high quality fish in Suriname, and only bring the low quality fish back to Guyana (See Opportunity 2 below)

In-depth landing site and value chain assessments would further help identify specific points for investment related to cold-chain and landing site infrastructure. Value chain assessments would also help identify product flows, pricing, etc. and make the value chain more transparent so that these efforts can be appropriately recognized (through increased prices and other incentives like contracts).

Need better data on price & demand by species for export vs. local market to determine if increased quality and thus higher prices risks making finfish too expensive for the local market (See Opportunity 2 below and Social Responsibility Assessment).

Opportunity 2 - Market Value

This section of the scoping document indicates the current performance of the fishery in terms of Market Value. The level and availability of processing partially determines, and is partially influenced by the level of market access. Where high value end markets are part of the value chain, processing facilities are more likely to have relevant certifications (local operating certificates, US-FDA, HACCP or equivalent). Maximizing commercial value through local processing, if the workforce is available, allows the local organizations to have greater autonomy and, typically, retain more of the revenue stream. All of these factors contribute to the profitability and, ultimately, to the success or failure of the organization. This indicator is used to assess whether the fishery organization has access to an appropriate processing facility with sufficient capacity and an operating strategy which maximizes commercial value of the product.

Problem Summary

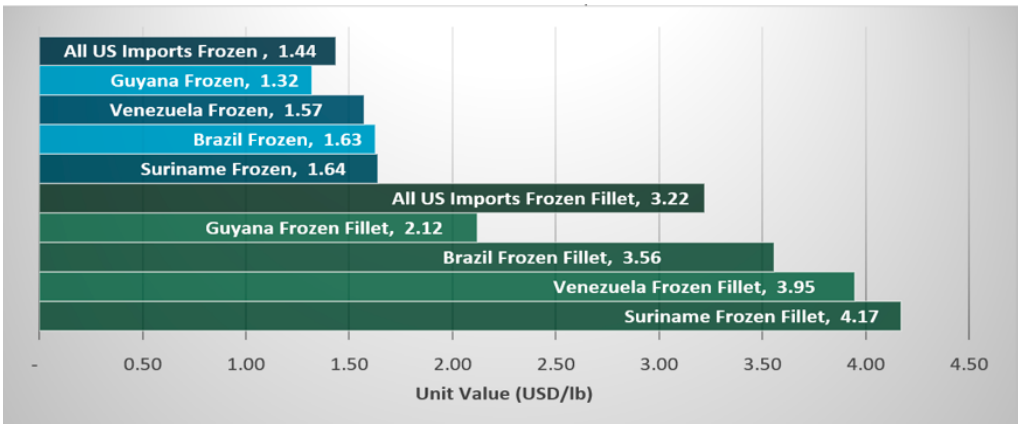
Low market value may lead to lower profitability for value chain participants, leading to the need to increase landings to maintain profitability and thus exacerbating overfishing.

Recommendation Summary and Stakeholder Input

A brief description of the type of information and/or action that might help the fishery increase market value is summarized below. The summary includes stakeholder feedback about the proposed recommendations, which can be used to inform the development of a FIP work-plan with specific stakeholders once a commitment to “FIP Launch” has been secured.

Recommendation 13 – Increase market value

Market Value	**Market value is affected by market access and differentiation, which is driven by product characteristics.**

Summary descriptions of relevant issues	Market value of the artisanal finfish is low relative to neighboring countries, which may be due to differences in species and fish-size catch composition mix, as well as to related sustainability deficiencies which impairs product differentiation in higher value sustainability markets. Low processing capabilities in certain supply-chains limits the potential for development of added-value products that better meets the specification of customers (i.e. filleting vs. whole).
Rationale	Discrepancy in the US import market value of finfish from Guyana compared to neighbouring countries, both for 'frozen' and 'frozen fillet' product categories:  <u>Stakeholder input:</u> It was noted during the workshop that the low market value may be in-part attributed to a larger proportion of higher value species like snapper in the overall catch of countries like Suriname. This could in-part be due to ecological differences between the two countries, although it was noted that Suriname and French Guyana also have more robust fisheries management and enforcement mechanisms (i.e. larger mesh sizes, shorter net soak-times) than Guyana. The market value discrepancy between these countries may therefore be a result of larger fish being caught and differentiated as being more sustainable, and therefore receiving a higher price in US markets. It was also noted that there may be some misreporting of price/lbs information due to stakeholder concerns around increases in taxes. Furthermore, in the case of Cooperative #66 (~25% of catches), these differences in price values are likely in-part due to higher quality fish being sold first in Suriname, with the remaining lower value fish then being brought back to Guyana for subsequent export (thereby deflating Guyana export market prices). It was also noted however that Guyana is likely commercializing product forms of lower value for these species (e.g., whole frozen). In previous conversations with end-buyers in Miami, it was found that finfish from Guyana is not perceived to be a high-value fish, highlighting opportunities for increased product branding and/or certification, including through the launch of a FIP. Relatedly, deficiencies in cold-chain in certain supply-chains, particularly for the smaller processors, were also highlighted as an important factor that lowers product quality and market value (see Opportunity 1). Finally, stakeholders explained that neighboring countries have more sophisticated processing capabilities, which enables them to create added-value products that better meets the specification of customers (i.e. filleting vs. whole).

Improvement Recommendations	Improve sustainability of the fishery (i.e. mesh sizes, soak-time, traceability, etc.) to gain a competitive advantage in high-value markets. The latter strategy can be under-taken as part of a certification or FIP, which will further distinguish Guyana's finfish in the market. Relatedly, one important intervention would be to conduct trials with different fishing gears and practices that help increase the capture of more valuable species, and of larger specimens that receive higher prices. Some fishers from Region 2 have already begun to implement these types of changes, which hold significant scalability potential. These efforts could also leverage the nascent work in Guyana to develop an FAO-supported Fisheries Statistics and Management Information System, which would help to meet the requirements of higher-value international markets. Improve processing to create value-added products that meet customer specifications, such as fillets; specifics to be further explored with processors that commit to working with the FIP. The value chain in Guyana's artisanal finfish fishery is currently opaque regarding the factors affecting price. The current conditions create dis-incentives for additional investments in better practices, since there isn't adequate confidence that implementing these changes (with associated costs) will result in improved market access and price increases. A mechanism for better price transparency is therefore recommended, such as those implemented by the Eco-Gourmet Program and/or through electronic traceability systems. Another key next step is to obtain more granular data about exports by species for each country in the region, in order to assess the relative effect of species composition, quality and branding on the price per pound; it was noted during the workshop that the Government of Guyana currently collects weekly local Market Surveys, as well as species-level export data by product form, which would help further characterize the discrepancy in the market value of Guyana fish compared to neighbouring countries; export data by species and form is reportedly also available from the Fisheries Department to carry out these more detailed analyses. The export tax regime and tax assessment as compared to other countries should also be assessed as it may be incentivizing reporting of artificially low export values.
Priority	High
Potential Partners	Fisheries Department, MARAD, Coast Guard, Marine Police, VPHU, fishers, fishing cooperatives, processors, and middlemen.
Other Notes: The swim-bladder of various species has recently become a major source of value in the fishery that is currently unreported. There are currently ~3 Chinese buyers for export. These market-pressures may be correlated with poor handling of fish. See work on this issue by WWF.	

Social Responsibility

Area of improvement 1 - Education

This section of the scoping document indicates the current performance of the fishery in terms of food nutrition, and livelihood security.

Problem Summary

The Ministry of Education defines education as an instrumental activity for supporting greater national development and reducing poverty. Education is free and compulsory for ages 5-16 years throughout the country. While Guyana's education indicators are acceptable, functional literacy rates are considered low due to poor infrastructure, lack of quality education and adequately trained teachers. Additionally, access to and quality of education is not evenly distributed around gender and region. Girls and women have higher rates of attendance at educational institutions than boys and men[6]. Guyana's rural regions suffer lack of learning materials and resources, and trained teachers.

Recommendation Summary and Stakeholder Input

Primary data collection, including observation, surveys, and interviews will be used to further evaluate distribution and inequities around education. Low literacy is common in the sector. It was stated that this is an ongoing challenge when working with the Fisheries Department in regard to licensing, workshops, and documents. The accessibility of documents, with appropriate literacy rates, needs to improve. Capacity building was also an area of focus. Several upcoming, long-term projects will focus on capacity building, such as StewardFish and other efforts by Conservation International, University of Guyana, and Arizona State University; these efforts should include initiatives to support the creation and/or strengthening of vocational school system/university course on fisheries, and informal training by NGOs, FD and fisher cooperatives.

Area of improvement 2 - Healthcare

Problem Summary

A comprehensive assessment of the Guyana health system was completed in 2010 by the United States Agency for International Development (USAID) and the Guyana Ministry of Public Health[7]. Prominent issues were identified, such as significant geographic inequities in access to health care, particularly in rural locations. Physical health is a critical asset to fishers. Due to the nature and intensity of their work, physical health, as well as mental health issues are prominent. Fishers, like other resource-dependent occupations, are exposed to uncertainties and will continue to be as environmental changes become more prevalent. Fishers have been linked to

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[6] Ministry of Education (2014). Guyana Education Sector Plan. Government of Guyana.

[7] Health Systems 20/20 and the Guyana Ministry of Health. (2011). Guyana Health System Assessment 2010. Bethesda, MD: Health Systems 20/20, Abt Associates Inc.

depression, anxiety, self-harm, and suicide[8]. During a field visit, a cooperative member indicated that drug and alcohol use is a prevalent issue, and they have no outlet or resources to address it. Mental health care is a widespread concern in Guyana. Violence and intentional self-harm, and suicide, have become more prevalent. The current mental health care system is poorly resourced and fragmented. There has not been revisions to legislative framework that protects the civil and human rights of those with mental disorders. This has resulted in inequity in the financing, organization, and distribution of adequate mental health care.

Recommendation Summary and Stakeholder Input

Primary data collection, including observation, surveys, and interviews will be used to further evaluate distribution and inequities around education and healthcare. Social programs or community workshops can be conducted to address issues of concern, such as drug and alcohol use. This will require other groups to partner and facilitate this work, such as the Ministry of Health or the Ministry of Social Protection.

Area of improvement 3 - Gender

This section of the scoping document indicates the current performance of the fishery in terms of equality and equitable opportunity to benefit.

Problem Summary

Equity and equal distribution of benefits has been an ongoing development challenge in Guyana. Guyana law prohibits discrimination based on race, gender, disability, language, social status, or citizenship. Unfortunately, the government, historically and currently, does not actively enforce the law and penalties are insufficient and do not deter violations. Discrimination in employment with respect to women continues to occur with frequency in Guyana[9]. Guyana recognizes its responsibility to remove legal gaps and eliminate discrimination around sexual orientation, gender, and race. The equal participation of women and men in spheres of life and development will be imperative to successfully achieve an "equitable and prosperous society."[10] Economic and institutional reforms will be necessary to assure distribution for marginalized and vulnerable groups.

With regards to Guyana's artisanal fisheries, there is evidence of inequity based on gender. Women are not commonly found participating in harvesting in the fisheries sector. While they do

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[8] Woodhead, A., Abernethy, K.E., Szaboova, L., Turner, R.A. (2018). Health In Fishing Communities: A Global Perspective. Fish Fish. https://doi.org/10.1111/faf.12295

[9] United States Department of State. (2018). Country Reports of Human Right and Practices for 2018 - Guyana. Bureau of Democracy, Human Rights and Labor. Available at: https://www.justice.gov/

[10] United Nations Committee on the Elimination of Discrimination Against Women (CEDAW). (2018). Ninth periodic report submitted by Guyana under article 18 of the Convention, 2016: Committee on the Elimination of Discrimination against Women. Guyana. Available at: https://tbinternet.ohchr.org/Treaties/CEDAW/

not participate in primary production, women are typically found in processing, distribution, and retail.

Recommendation Summary and Stakeholder Input

Primary data collection, including observation, surveys, or interviews, will be used to further assess gender and opportunity to benefit.

Stakeholders indicated that females "should not" be participating in harvesting due to the intensity of labor and activities. It was confirmed that women are occasionally boat owners, and make up the majority of processing labor and retailers; there were no women from these groups present at the workshop. Increasing the participation of fishers in management and planning was a common recommendation for several indicators. This should also include female representatives. Cooperatives may be a good approach to promote social inclusion and gender equality. Understanding the role of women in the seafood industry is the focus of several upcoming assessments conducted by the Fisheries Department and WWF, as well as FAO.

Area of improvement 4 - Child Labor

This section of the scoping document indicates the current performance of the fishery in terms of human rights, dignity, and access to resources.

Problem Summary

In 2017, the ILO's Rapid Assessment of Child Labor was conducted for Guyana. This assessment determined that children continue to engage in the worst forms of child labor, including mining and commercial sexual activity. Child work is a common feature across sexes, age groups, ethnicity, and regions. This cultural norm can be "a pervasive phenomenon" that sometimes takes the shape of child labor and hazardous work. Child labor prevalence in Guyana for children ages 5-17 was reported at 18.3 percent[11]. This is significantly higher than the rates of other Latin American and Caribbean countries. This assessment found that children living in Guyana's rural areas, whether coastal or interior, are more likely to be engaged in labor than other children. These areas experience approximately 30 percent higher rates of child labor than urban areas. Children and teenagers are commonly found working in the sector while going to school part-time. Fishing and related activities were determined by the national law as hazardous and therefore relevant to the ILO's Rapid Assessment, but not specifically assessed.

Guyana has ratified International Labor Organization Conventions No. 138 (Minimum age of employment) and No. 182 (Elimination of worst forms of child labor)[12]. Historically, the government has not enforced child labor laws effectively. Gaps exist in operations of the

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[11] International Labor Organization (ILO). (2017). Rapid assessment of child labour in Guyana. Available at: https://www.ilo.org/

[12] International Labor Organization (ILO). (2019). Ratifications of ILO conventions: Ratifications for Guyana. Available at: https://www.ilo.org/

Ministry of Social Protection to hinder adequate enforcement, and fines are low and do not deter violations.

Recommendation Summary and Stakeholder Input

Primary data collection, including observation, surveys, or interviews, will be used to further assess the sectoral risk for child labor.

Area of improvement 5 - Earnings, benefits, and working conditions

This section of the scoping document indicates the current performance of the fishery in terms of human rights, dignity, and access to resources.

The Area of improvement 5 is most closely related to the following EAF Principles: Human Well-being and Equity.

Problem Summary

Guyanese law provides a national minimum wage for private-sector employees. Regulations prohibit overtime, and this overtime work should be paid according to any collective bargaining agreement where workers are unionized[13]. Because fishers are not represented in the workforce, these policies do not apply. Moreover, unorganized workers were reported to be paid less than the set minimum wage. In addition, enforcement of minimum wage legislation is not effective, and the Ministry of Social Protection lacked the resources to enforce this adequately.

Guyana has not ratified the ILO Convention No. 188 Working in Fishing. This convention establishes binding requirements to address the main issues concerning work on fishing vessels, including occupational safety, rest periods, written work agreements, and social security protection at the same level as other workers in the nation.[14] The convention helps prevent unacceptable forms of work and provides necessary regulations around investigating complaints and disputes for fishers.

Recommendation Summary and Stakeholder Input

Primary data collection, including observation, surveys, or interviews, will determine sectoral risk.

Ratify the International Labor Organization Convention No. 188, Working in Fishing. Cooperatives can address issues such as written work agreements, occupational safety. and settling disputes. Some stakeholders were skeptical of cooperatives due to the legal requirements and binding agreements.

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[13] United States Department of State. (2018). Country Reports of Human Right and Practices for 2018 - Guyana. Bureau of Democracy, Human Rights and Labor. Available at: https://www.justice.gov/

[14] International Labor Organization (ILO). (2019). Ratifications of ILO conventions: Ratifications for Guyana. Available at: https://www.ilo.org/

Area of improvement 6 – (Youth Unemployment)

This section of the scoping document indicates the current performance of the fishery in terms of livelihood security.

The Area of improvement 6 is most closely related to the following EAF Principles: Human Well-being and Equity

Problem Summary

Unemployment, particularly high youth unemployment and emigration rates due to economic stagnation in Guyana. Underemployment, low wages and social factors lead to emigration of skilled people in particular; some estimates suggest that an average of 70-80 percent of tertiary level graduates emigrate annually, the highest rate of human capital flight in the Caribbean Community (CARICOM).[15] ILO (2018) cites an analysis that estimated that from 1980 to 20121, 43 percent of secondary school graduates and 89 percent of university graduates left the country.

The most extensive examination of training and skill needs as Guyana pursues sustainable development is provided by ILO (2018), which contains the following summary:

This transition is requiring a qualified pool of professionals with new skillsets and expertise to drive green growth and meet anticipated labour market demands. The education sector within Guyana is readily responding in this regard. Both public and private education institutions, e.g. the University of Guyana and Technical and Vocational Education and Training (TVET), have carried-out extensive reviews and revisions of their curricula to better prepare graduates for the requirements of transitioning the economy and sustaining green growth.

Skills for green jobs in key sectors such as mining, forestry and agriculture have been prioritized due to environmental and climate change impacts they have. Moreover, Guyana is investing in skills for new green occupations, in priority areas including renewable energy, nature and eco-tourism and ecosystems services. It needs to be recognized that although a strong foundation is being laid and positive actions being demonstrated, more work is needed to fully align skills requirements and policy. An example of this is the need to produce time-series labour market information and to include labour policies in the green policy framework to ensure the labour response is data and policy driven

Over a third of employment is in the agriculture sector, while the unemployment rate hovers around 10-12.5 percent (the World Bank estimates that youth unemployment may be nearly 30%,

15 ILO 2018.

while the Department of Youth believes the figure may be as high as 40%).[16] While fisheries in Guyana are oftentimes overlooked as a sector that could help fill this gap in a significant way (i.e. currently only accounts for ~2% of GDP), there remain significant opportunities for the sector to make tangible contributions in youth employment, given the favourable conditions for a dynamic seafood and fisheries industry in Guyana. Limited current opportunities in the fisheries sector however, as well as a lack of interest by Guyana's youth in joining this work-force, remain significant barriers.

Recommendation Summary and Stakeholder Input

The results of the full social assessment will help inform the CI-led GRO* Project, which includes the following as one of its two objectives:

> "*Investments in education and training programmes that will produce the next generation of Guyanese business, government and civil society leaders*".

Fisheries are one of the main sectors included under this project component, which will be supported through a range of capacity building activities, including:

1. Invest in teaching, training and skill building that respond to sustainable development needs in Guyana's labor market.
2. Engage and enable local actors to better fulfil their roles in relation to green jobs and the maintenance of natural capital.

The latter efforts will be coordinated through the recently created Task Force in order to ensure that all activities led by different partners are additive and not duplicative.

16 https://guyanatimesgy.com/40-of-guyanese-youths-unemployed/