

2020
Global Landscape Review of
Fishery Improvement Projects

SUMMARY REPORT



CONTENTS

About this report	1
2020 summary	2
Evolution of the model	5
Progress, impact, and effectiveness	7
Fisheries management	11
Market incentives	12
Social and business improvements	15
Conclusion	18
Bibliography	20

ABOUT THIS REPORT

This report summarizes findings from CEA Consulting's year-long investigation of fishery improvement projects (FIPs), conducted from January to December 2019. Previously, research about FIPs has relied on desktop analyses of publicly available datasets or case studies conducted on individual FIPs. CEA reviewed existing peer-reviewed and grey literature, conducted 239 key informant interviews, visited 28 FIPs in 11 countries, surveyed 53 seafood companies, and conducted a series of original data analyses in order to identify lessons learned and best practices from the field. We hope that this summary will provide an overview of the current FIP landscape and become a resource for the global FIP implementing community. Ultimately, we hope that this work advances discussions about the future of sustainable seafood and its collective impact.

This report summarizes observations and findings from five core research questions:

- What contributes to FIP progress, impact, and effectiveness?
- How do FIPs invest their resources?
- What market incentives motivate FIPs?
- How do FIPs advance fisheries management?
- What improvements are FIPs attempting to make beyond environmental improvements (e.g., social, business)?

About the authors

Max Levine, John B. Thomas, Sydney Sanders, Michael F. Berger, Dr. Antonius Gagern, and Mark Michelin of CEA Consulting (CEA) served as the principal investigators for this project. CEA was supported by an advisory panel of four experts: Dr. Jacqueline Berman (International Centre for Migration Policy Development), Jesse Marsh (Scaling Blue), Helen Packer (Anova Food), and Dr. James Sanchirico (University of California, Davis). This research and report were both commissioned by the David and Lucile Packard Foundation, the Gordon and Betty Moore Foundation, and the Walton Family Foundation. Questions or comments about this report can be directed to fips@ceaconsulting.com.

Disclaimer

The findings and conclusions in this report represent the interpretations of CEA and do not necessarily reflect the views of the study funders or expert stakeholders.

For more detail on these findings, as well as CEA's findings from the 2015 Global Landscape Review of FIPs, please see the following reports:

→ **2020 Global Landscape Review of Fishery Improvement Projects**

OurSharedSeas.com/FIPReview

→ **Summary findings from the 2015 Global Landscape Review of Fishery Improvement Projects**

OurSharedSeas.com/FIPReview-2015

The report is available in English, Spanish, Japanese, Chinese (Simplified), and Bahasa Indonesia.

2020 SUMMARY

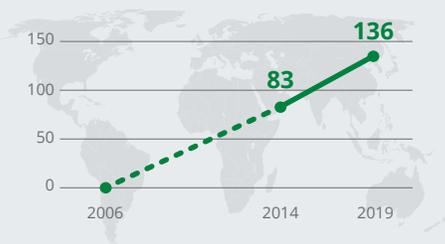
The FIP implementing landscape continues to grow and evolve. A FIP is a simple, replicable process suitable for engaging fisheries in vastly different geographic, governance, cultural, and ecosystem contexts. Today, FIP implementation engages every major seafood commodity in fisheries on every inhabited continent. Between 2014 and 2019, the annual number of FIPs in active operation grew from 83 to 136.¹ Fisheries engaged by FIPs account for nearly one in every ten pounds of fish caught worldwide, and this seafood is making its way to consumers' tables.

The global FIP landscape looks considerably different today than it did five years ago.

FIPs are growing in number and scope. CEA estimates that more than 270 FIPs have launched since 2006 when the model was created.

155 projects are currently active or successfully completed.

The number of active FIPs continues to grow worldwide, from 83 in 2014 to 136 in 2019.



The majority of active FIPs are located in the Americas and Asia. Southeast Asia—particularly Indonesia—has been the epicenter for FIP activity.

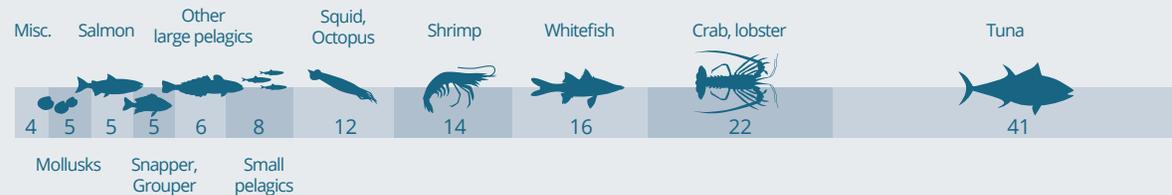
Asia has seen a rapid growth in FIPs, from five FIPs a decade ago to 57 active or completed projects across the region today.



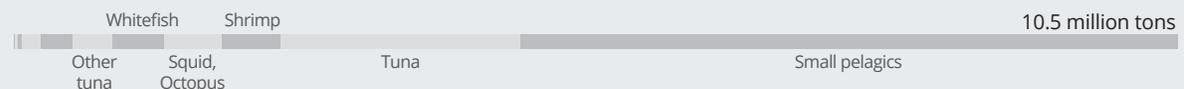
FIPs engage fisheries across all major seafood commodities.

Tuna, whitefish, crab, and shrimp FIPs are most common, with tuna accounting for 25% of active or completed FIPs. Commodities like octopus and squid have seen their first FIPs launch since 2015.

Number of FIP fisheries by species



Total seafood volume engaged in FIPs by species



1. CEA Consulting, *Summary findings from the Global Landscape Review of Fishery Improvement Projects (FIPs)*, 2015, <https://www.ceiconsulting.com/wp-content/uploads/Global-Landscape-Review-of-FIPs-Summary.pdf>. CEA estimates that there are at least an additional 40 self-declared FIPs operating at the time of this report that do not report to FisheryProgress. Most of these projects do not seek international market recognition and do not present legitimate 'greenwashing' risk to FIPs or to buyers.

The FIP implementer role is evolving.

Many original architects of the FIP model are moving away from implementation and toward more technical support of the global FIP community. For example, Sustainable Fisheries Partnership (SFP) and Ocean Outcomes have ceded most of their implementation to industry or local partners. World Wildlife Fund-US (WWF), however, remains committed to the tool but is reassessing how FIPs can be most influential across jurisdiction and environmental threats such as climate change.

Seafood companies now run more FIPs than any other third-party implementer. Implementers are supported by seafood companies throughout the supply chain. There are twice as many supply chain companies supporting FIPs through supply chain roundtables than in 2015.

Local non-governmental organizations (NGO) are increasingly adapting their existing work in fisheries to fit within the FIP model.

In Mexico alone, over a dozen projects are led by local organizations like *Comunidad y Biodiversidad A.C.* and *Pronatura Noroeste A.C.*, which have extensive experience in community-based fisheries reform but are new FIP implementers. Several well-known marine conservation organizations have recently included FIPs in their approaches, including The Nature Conservancy, Conservation International, Environmental Defense Fund, and the Marine Stewardship Council (MSC).

Since 2015, emergent strategies and social concerns have been reshaping FIP implementation.

Target 75² is an organizing framework used by the sustainable seafood market community.

In 2017, SFP published a near term vision for how the seafood market could work toward the goal of engaging enough fisheries to make sourcing sustainably an industry standard. This approach may be the only strategic plan developed to help the seafood industry identify and implement FIPs in a systematic way. It is facilitated by SFP's supply chain roundtables.

Global seafood market strategies and country-specific strategies are converging.

Historically, these two approaches have been independent—if not competing—strategies to reforming fisheries. In the last five years, market-based interventions like FIPs have increasingly recognized that directly engaging with government and supporting fisheries management capacity are critical for success. Traditional conservation organizations with decades of experience working in key production countries have also been recruiting seafood industry supporters and incorporating market-based tools into their work. This convergence is best reflected in the Conservation Alliance for Seafood Solutions' 2020-2024 Strategic Plan, which includes a commitment to work to, “harmonize market based and governance approaches employed by its members.”³

Some implementers are shifting their focus toward national and community-level engagement.

FIPs struggle to consistently drive sustainability improvements in fisheries in countries and regions with low governance capacity. Implementers see this common challenge, but generally arrive at two divergent solutions. Some believe FIP stakeholders across a commodity or country need to unite and speak with one collective voice to compel a national government to address common issues affecting all fisheries. Others see the need to engage fishing communities more explicitly and believe that community members should be involved in a direct, significant way. While both approaches may ultimately be needed, they reflect very different approaches to FIP implementation.

A small yet growing number of FIPs are embedding social and economic dimensions into workplans.

A growing contingent of the implementing community believes adding social and economic improvements into FIPs is essential to meaningfully engage fisher communities. There are two different motivations for addressing the wider range of issues. Some see it as a means to an environmental end and suggest that working on social and economic needs provides near term incentives for stakeholders, who collectively work toward environmental sustainability in the medium and long term. Others believe social, economic, and environmental deficiencies all need to be addressed, and that improving social conditions of the fishery would make a FIP successful irrespective of its impact in the water.

2. For this initiative, SFP is focused on ensuring 75% of world seafood production in key sectors is, at a minimum, sustainable (e.g., certified by the MSC program or green-listed in SFP's Metrics System tool) or making regular, verifiable improvements.

3. Conservation Alliance for Seafood Solutions, “Strategic Plan: 2020–2024,” January 2020, <http://solutionsforseafood.org/wp-content/uploads/2020/01/Alliance-Strategic-Plan-2020-2024.pdf>.

Two new public data platforms now provide insights into how effective FIPs are.

FishChoice's FisheryProgress and the University of Washington and SFP's Fishery Improvement Projects Database (FIP-DB) provide businesses, conservationists, and researchers with data on the state of global FIPs, which was not available five years ago. FIP-DB is a static database, while FisheryProgress regularly updates data on a majority of FIPs operating globally. A peer-reviewed analysis that used FIP-DB data suggests that fisheries engaged by FIPs are more likely to achieve improvements in fishery management and overfishing than non-engaged fisheries.⁴

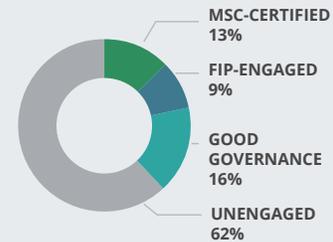
Most FIPs report improvements in the fishery within three years of launch, but a longer timeframe may be needed to improve the most serious challenges.

Ninety-four percent of all recorded improvements occur over the first three years, however, long-term environmental outcomes remain elusive for many FIPs. There have been fewer reported improvements in the water (e.g., increased biomass) and FIP completion has been slower than initially anticipated. This trend likely reflects the challenging on-the-ground reality of fishery reform in less developed countries—where roughly two thirds of FIPs are now located—rather than a failing of the model itself. Challenges include insufficient data, weak capacity for enforcement, and competing goals for fisheries managers.

FIPs may be considered more successful in transitioning fisheries to certification if the time horizon were expanded to a 10-year minimum engagement. Travaille et al. (2019) state their “results support recent estimates that fisheries may need up to 10 years to reach the minimum level of sustainability required for MSC certification.”⁵ The Bahamas lobster, Ecuador mahi, and Guyana seabob fisheries all entered MSC full assessment within this timeframe and Nicaragua lobster may as well.

Roughly one third of global seafood catch is engaged in sustainability. This includes regions with good governance capacity, namely the EU, US, Canada, Australia, and New Zealand.

FIPs as percentage of Global Catch (2017 Global Catch Volume)



Eighty percent of reported Stage 5 changes resolve uncertainties about the present health of a fishery, rather than new improvements on the water created by FIP activities.⁶

The most consequential changes that FIPs report are categorized as Stage 5 improvements that reflect changes in the health of a fishery's target species or associated ecosystem. Eighty percent of Stage 5 changes are reported within two years of launch. In theory, a FIP identifies deficiencies in a fishery through a structured assessment at the start of the project. Stakeholders create a workplan, then take actions to improve the fishery health or decrease ecosystem impacts and report them. In practice, however, most Stage 5 changes are reported when FIP activities are only leading to a better understanding of current fishery health or fishing practice, either through collecting new data (e.g., logbooks and observers), analyzing pre-existing data that was omitted from the initial fishery's assessment, or through technicalities associated with applying new methods for assessing fishery health (e.g., applying data-limited methods or a new version of the MSC standard). Having a more accurate understanding of the true state of a fishery is helpful, yet it represents a different type of change on the water than many expect.

4. James Cannon et al., “Fishery Improvement Projects: Performance over the Past Decade,” *Marine Policy* 97 (November 2018): 179–87, <https://doi.org/10.1016/j.marpol.2018.06.007>. CEA also replicated the methods of Cannon et al. and corroborated the findings.

5. Kendra L. Thomas Travaille et al., “Key Attributes Related to Fishery Improvement Project,” *Fish and Fisheries* 20, no. 3 (May 2019): 452–65, <https://doi.org/10.1111/faf.12357>.

6. CEA Consulting, “Summary findings from the Global Landscape Review of Fishery Improvement Projects (FIPs),” 2015, <https://www.ceacconsulting.com/wp-content/uploads/Global-Landscape-Review-of-FIPs-Summary.pdf>. Stage 5 refers to improvements on the water, such as an increase in stock biomass, reduction in fishing mortality, or reduced habitat impact.

EVOLUTION OF THE MODEL

The FIP landscape has only grown and become more complex since the 2015 review. The reasons for this change are intricate, but changing market incentives start to explain the FIP model's evolution from initial theory to a proliferation of new approaches.

INITIAL THEORY

→ PRACTICAL LIMITATIONS

→ NEW APPROACHES

NEAR TERM



FIP fishery

Buyers demand that fisheries form FIPs in order to maintain commercial relationships and market access while on the path to sustainability.

- Many newly engaged fisheries have a growing portion of final product going to non-engaged domestic or international markets.
- Non-engaged market demand (e.g., China) is displacing engaged market demand for many seafood products, diluting incentives for certain commodities.
- Many buyers bestow the same benefits to FIPs as certifications (i.e., market access), which reduces the incentive to pursue more formalized certification.
- Legal obligations for companies around sustainability are limited. Labor laws and human rights standards have more robust legal accountability mechanisms and may be stronger incentives.

- **Bottom-up FIPs** attract new commercial opportunities based on buyer demand.
- **Social and business FIPs** have additional actions and goals that deliver short-term benefits that address social, economic, and/or business deficiencies.
- **Creation of new market demand for sustainable seafood** with support from NGOs, expands domestic demand for sustainable seafood and increases incentives in key countries (e.g., an effort in Spain and Japan, and another in Mexico and Peru).
- **Recognition of non-market benefits** that elevate and recognize good performers who promote benefits like pride, honor, and sense of achievement.

MEDIUM TERM



MSC-certified fishery

Initial expectations were that fisheries would benefit from certification by accessing additional markets and then receiving price premiums.

- More than 12% of the world's best performing fisheries are MSC certified. Certified volumes continue to grow incrementally, but fewer and fewer readily certifiable fisheries remain.
- MSC is not consistently delivering price premiums across all commodities and products. Market access alone can often be achieved through FIP participation.
- Buyers are increasingly accepting other forms of certification, based on the Global Sustainable Seafood Initiative (GSSI) benchmarking or prescribed by aquaculture certification feed standards.
- MSC and other sustainable seafood certifications are not relevant for all markets. Depending on export destination, a fishery may not value certification.

- **Target 75** seeks to engage the mass-middle (rather than top performers) to make the pursuit of sustainability the norm, and disincentivize laggards.
- **Pursuit of alternative end goal** such as other certifications and ratings that may be more relevant to the fishery (e.g., IFFO RS, Fair Trade, Seafood Watch yellow/green).
- **Proliferation of new FIP-like interventions** such as the Asian Seafood Improvement Collaborative (ASIC).
- **Social responsibility in seafood is developing rapidly** with more than 40 organizations addressing human rights and labor conditions in fisheries. Many of these efforts exclusively focus on social improvements.

LONG TERM



Sustainable fishery

In theory, sustainable fisheries will provide stability and viability across the seafood supply chain, from producers to end buyers.

- Environmental sustainability alone may not deliver enough value to actors across the supply chain. The model was not built with producer well-being as an explicit goal.
- Awareness that benefits do not accrue equally or equitably across the supply chain is giving rise to an alternative, values-driven approach to seafood reform that is now motivating work to improve social as well as economic conditions of producers and their communities.
- **Continued march toward sustainable fisheries** as the dominant, long-term motivation and shared goal for the movement.
- **Human well-being considerations are on the rise.** While currently unclear how this may alter the sustainable seafood movement, if at all, recalibrating interventions to explicitly target human well-being would be a departure from the initially stated long-term vision for the movement.

Understanding incentives is critical to understanding behavior change.

The goal of the sustainable seafood movement is to shift production behaviors of the entire seafood industry toward more environmentally responsible practices—from producers, through the supply chain, up to retailers and, by extension, to consumers. Understanding incentives is critical to understanding behavior change.

Over a decade ago it became clear that MSC certification was unattainable for most fisheries when major grocery retailers, like Walmart, required a transitional model to meet their sustainable seafood commitments. Initially, the global sustainable seafood movement articulated a clear ladder of incentives to engage fisheries and encourage them toward long-term sustainability. In theory, increasing benefits encourages fishery stakeholders to change behaviors and progress along a performance standard, but in practice the incentives were insufficient and opened the door for alternative incentive structures to be developed and tested.

Changing roles for NGOs.

While demand for sustainable seafood underpins the FIP model's evolution, NGOs and foundations play an active role by helping shape buyer demand and supporting new approaches.

The private sector increasingly funds and runs traditional, supply chain-motivated (i.e., top-down) FIP implementation. Philanthropy now largely underwrites NGOs that are experimenting with the FIP model in different market and governance contexts, specifically for projects without international supply chain partners (i.e., bottom-up) or projects looking to incorporate social and/or economic elements into workplans. This approach supports innovation but has also generated confusion and some frustration among FIP implementers globally who wonder why certain projects receive direct grant funding and others do not.

Can a values-shift toward human well-being advance the ultimate goal of sustainable seafood?

The sustainable seafood community is also exploring existential questions around implications for human well-being. Some members of the sustainable seafood community have been examining the values and assumptions implicit in market-based approaches to conservation and their impacts on human well-being. FIPs were developed to protect and restore ecological sustainability to the world's fisheries, and were not designed to gather data on or address the socio-economic dynamics in fisheries or their implications for human well-being. As such, FIPs largely ignore these dynamics, but this raises the risk of potential unintended impacts on people's lives. FIPs also may miss opportunities to improve efficacy in places where social, cultural, health, governance, and economic aspects of human well-being contribute to resource exploitation.

FIP implementers are reckoning with their guiding values and how far foundations, NGOs, and the seafood industry are willing to go to incorporate these concerns into their work.

There is an infusion of mostly uncoordinated and reactive work (e.g., new tools, frameworks, and approaches) trying to grapple with the human well-being dimensions of fisheries. To date, the seafood industry largely remains reticent; many traditional FIP implementers do not feel that addressing "social" issues are necessarily in their capacity or mandate, and foundation strategies have not adapted to these new approaches. However, efforts within the last year suggest there is an emerging vanguard of industry, implementer, and foundation leaders prepared to address these issues in the near term.

"FIP progress and advancement is not [just] an issue of money; it's about what improvements need to be made in the fishery. If you have huge problems that are environmental and social and are complex and have lots of money, you still won't progress."

—INDUSTRY KEY INFORMANT, MEXICO

PROGRESS, IMPACT, AND EFFECTIVENESS

Factors beyond stakeholder control affect how successful a FIP is (or is perceived to be) and should be explicitly considered when evaluating FIP effectiveness.

In 2015, CEA sought to improve understanding about FIP implementation. From that research, CEA distilled four dichotomous characteristics and Theories of Change that helped differentiate projects by approach and rationale.⁷ While helpful, these frameworks largely ignored the context within which FIPs work.

Empirical analysis, expert opinion, and site visits all suggest a government's capacity to manage fisheries significantly alters the time a FIP takes to reach completion. When a FIP can advocate for management change within a functioning fisheries management system, it progresses faster. When a FIP must support the creation of or improvement toward a better functioning management system, or try to become a surrogate for formal management, it progresses slower. Moreover, a FIP in a relatively healthy fishery requires fewer changes to achieve certification and thus finishes more quickly and appears

more effective. These factors are independent of how a FIP is structured, what leverage the supply chain has, how engaged stakeholders are, or how well the project is funded, but affect the ability of a FIP to drive change in the water or achieve a certifiable level of performance for the fishery.

The way a FIP is implemented matters too, but appraising leadership and influence is difficult at the start of a project. Individual leadership is regularly cited by implementers and key informants as a critical factor that explains how well a FIP performs, yet it is difficult to distill characteristics of a successful FIP leader *a priori*, perhaps except for a preexisting relationship with relevant fishery managers. It is challenging to know which stakeholders will be able to influence fishery managers or community leaders before a project is underway, but having influential stakeholders participating in a FIP is essential for more efficient implementation.

OVERCOMING CHALLENGES IN LESS DEVELOPED COUNTRIES:

The Nicaragua Spiny Lobster FIP has slowly but surely executed its action plan.

"This has been a long process, and important progress has been achieved for fishery improvement.... There is no indicator scoring below the minimum accepted pass (<60)," (FIP Action Plan 2018, MRAG).

The spiny lobster FIP is an archetypical WWF FIP. The comprehensive FIP is an export-oriented fishery that primarily services the US and Europe, though an increasing portion heads to Asia. The national fisheries agency's (INPESCA) willingness and ability to improve management, monitoring, and enforcement is central to the FIP's success. INPESCA has taken numerous steps to improve the management of the lobster fishery, including mandating gear modifications and increasing

inspections both at landing sites and at pre-export checkpoints along major highways. Stakeholder impact extends beyond Nicaragua. The FIP has established a bi-national working group to coordinate improvement work with neighboring Honduras, which has the only other industrial lobster fleet in Central America. INPESCA staff also conduct capacity-building trainings in other Central American countries that fish the same lobster stock. Nicaragua has also significantly reduced the number of industrial dive boats operating in the fishery, a key social issue in the fishery, as industrial divers suffer high rates of maiming and mortality.



7. CEA Consulting, "Summary findings from the Global Landscape Review of Fishery Improvement Projects (FIPs)," 2015, <https://www.ceaconsulting.com/wp-content/uploads/Global-Landscape-Review-of-FIPs-Summary.pdf>.

FACTORS FOR FIP PROGRESS

Fishery dynamics external to the FIP will influence performance regardless of how a FIP is implemented:

Government capacity for fishery management

Enforcement: Governments' ability to enforce regulations is often the most critical barrier impeding recovery and effective fisheries management.

Stability: The greater the turnover in key management agencies, the more difficult it is for external stakeholders to motivate reforms. FIPs do however offer an external mechanism for retaining institutional knowledge that helps provide continuity across different political appointments.

Management goals: Fisheries' management agencies may prioritize other aspects beyond sustainability (output targets, livelihoods), making it harder for FIPs to deliver on environmental goals.

Science-informed management: If catch limits are established by non-scientific processes, overexploitation is more likely to persist.

Management domain: Fisheries that require coordinated management across relevant jurisdictions are more complex and take longer.

Initial fishery status

Fishery condition: Fisheries in better initial health tend to progress quicker. In 2015, CEA designated these as "celebratory" fisheries.

Unit of assessment size: If the unit of assessment is small enough, certain MSC performance indicators default to a passing score making it easier to complete the project.

Target species

Life history: Travaille et al. (2019) explain that certain species groups are better suited for FIPs based on life history characteristics. FIPs for long-maturing species will recover slower. They also found that very highly fecund species like shrimp and small pelagics can be challenging as they have wildly varying recruitment from year to year and measurement over time may be difficult to map to the FIP process.

Fleet type

Industrial vs. artisanal: Industrial fleets are more consolidated and have fewer actors to engage and regulate and report progress more quickly than artisanal fisheries. Fleet type appears to matter most in less developed countries, where FIPs in industrial fisheries report improvements more frequently than in artisanal fisheries.

FACTORS FOR FIP PROGRESS

FIPs can be more effective if they possess these key attributes:

Leadership

Pre-existing connections to fisheries managers or agencies: Government often needs to adopt some change for FIPs to succeed. Strong pre-existing relationships between FIP leaders and government staff are credited for regularly contributing to successful projects.

Strong technical understanding of FIP processes, targeted standard (e.g., MSC, IFFO-RS, Seafood Watch), and market dynamics: Leaders with a stronger command of FIP goals are more capable of guiding participants through the process of achieving them. Visibility into supply chain dynamics helps leaders engage other market stakeholders to aid implementation.

Local: Local FIP leads are quicker to build trust, are more vested in project success, and better understand context and were highlighted by informants as a key element for success.

Stakeholder management

Engaging the "right" stakeholders: FIP stakeholder groups need to match the scope of their aspirations. If a FIP needs to improve national management, it must have enough industry leverage or government relationships to credibly advance those activities. FIPs with less influential stakeholders can make the changes dependent on direct participant activity but should not be expected to drive larger scale changes.

Effort level

Continuity: Successful implementers work on FIPs for several years, maintain project momentum, and provide consistency for stakeholders.

Sufficient funding: Funding is a regulating factor for effort. Maintaining enough funding to continue implementation is essential for progress.

Third party implementer: Dedicated capacity focused on FIP implementation is key to making progress more quickly.

Market leverage

Supply chain structure: Shorter, more direct supply chains can more easily transmit the demand for reform. Vertically integrated supply chains are most effective. Supply chains with many actors, even if highly consolidated, are more challenged to transmit clear signals to producers whose actions need to change.

Market destination: Fisheries with a significant share of production destined for engaged markets with sustainability commitments have stronger incentives to make progress than comparable fisheries supplying markets without sustainability commitments.

However, some influential factors can be identified up front. Certain short, consolidated, or vertically integrated supply chains are more effective at transmitting buyer demand and motivating FIP progress. Similarly, greater effort by FIP stakeholders leads to more progress over time, and FIP structure (e.g., comprehensive vs. basic⁸), budget, and lead implementer can serve as proxy measures for effort. Many successful FIPs share these common characteristics (e.g., Morocco sardines, Ecuadorian mahi, Nicaragua lobster, Western and Central Pacific handline tuna).

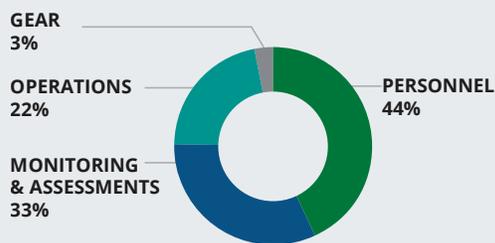
A country's fishery management capacity is a key determinant of FIP rate of progress and time to completion. Several studies have tried to determine how the country context affects a FIP.⁹ CEA's results confirm that a country's management capacity has a significant impact on a FIP's progress. The strongest predictor of higher FIP stage achievement is the country's fisheries management capacity, as measured by the Fisheries Management Index.¹⁰ These results suggest creating change in the near

or medium term is more difficult for FIPs in countries with low fisheries management capacity.

Different values and goals that guide fisheries resource management affect FIP implementation. Less developed countries may seek to manage fisheries, at least in part, to maximize output to contribute to economic growth (e.g., Indonesia and Peru), to use fisheries policy to remedy past historical injustices (e.g., South Africa), to optimize for local food security (e.g., India, Bangladesh, Mozambique), as part of political tactics (e.g., Senegal and Mexico), or to maximize rent extraction to generate foreign currency (e.g., Parties to the Nauru Agreement countries and West African countries). Fisheries in these regions are likely not managed to achieve long-term ecological sustainability. Aligning with government management priorities—or explicitly aiming to shift priorities—appears to be a commonly overlooked strategy that hinders a FIP's ability to engage government agencies more effectively, and thus reduces the likelihood of success.

BREAKDOWN OF A PROTOTYPICAL FIP BUDGET:

FIPs spend nearly half (44%) of their budget on personnel, reflecting the important role individuals play in facilitating the multi-stakeholder process. Personnel costs include implementation staff, consultants, overhead and strategy development.



Monitoring and assessment costs include research and analysis on the fishery, annual assessment against the MSC performance indicators, and monitoring activities.

Operations include the standards expenses needed to run multi-stakeholder processes, including travel, hosting workshops and meetings, and stakeholder outreach.

A very small portion of FIP budgets are allocated to funding gear modification or improvements, such as replacing circle hooks with J hooks in longline fisheries.

CEA analyzed 25 anonymized FIP budgets to inform this expenditure breakdown.

8. Conservation Alliance for Seafood Solutions, "Guidelines for Supporting Fishery Improvement Projects," Revised August 2019, http://solutionsforseafood.org/wp-content/uploads/2019/09/FIP_report_screen-final_revised_september.pdf.
9. G. S. Sampson et al., "Secure Sustainable Seafood from Developing Countries," *Science* 348, no. 6234 (May 1, 2015): 504–6, <https://doi.org/10.1126/science.aaa4639>; Kendra L. Thomas Travaillle et al., "Key Attributes Related to Fishery Improvement Project," *Fish and Fisheries* 20, no. 3 (May 2019): 452–65, <https://doi.org/10.1111/faf.12357>; Karen T. Villeda, "Fishing for Market Solutions: Measuring the Global Performance of Fishery Improvement Projects" (University of Washington, 2018), <http://hdl.handle.net/1773/43084>.
10. Michael C. Melnychuk et al., "Fisheries Management Impacts on Target Species Status," *Proceedings of the National Academy of Sciences* 114, no. 1 (January 3, 2017): 178–83, <https://doi.org/10.1073/pnas.1609915114>.

Strong individual leadership contributes to FIP success perhaps more so than an implementer's organizational affiliation. Site visits and key informants consistently highlighted the importance of individuals committed to driving a project forward. This is consistent with findings from literature examining co-management interventions.¹¹ These individuals tend to be locals with pre-existing relationships with fisheries managers, or are ex-government officials that have strong technical understanding of FIP and MSC components and are engaged in the fishery over multiple years.

Fisheries engaged by FIPs are generally improving, but there is not enough data to know whether they are improving more than non-FIP fisheries. Cannon et al. (2018) found that fisheries engaged by FIPs are, in general, improving the health of fisheries.¹² CEA attempted to test if FIPs could claim to be the causal factor for the improvements in management and stock health inferred by Cannon et al.'s findings, but data were too limited for non-FIP fisheries to produce conclusive results. The lack of data for non-FIP fisheries limits the ability to compare fisheries engaged by FIPs to those that are not. An investment in more complete data is needed to understand if FIPs are causing these observed improvements.

GOVERNMENT ENGAGEMENT:

The Ecuadorian mahi FIP worked collaboratively with the Ecuadorian government to transform fisheries management.

Started in 2009 in response to major US and German buyer interest, the WWF mahi FIP was completed in 2019 after making major reforms to the management of mahi mahi in Ecuador. WWF worked closely with the management authority (SRP) at the onset to centralize all FIP activities within the government. They worked collaboratively to develop a National Plan of Action that was totally aligned with the FIP workplan, and provided funding and technical support to the government to implement the actions. The FIP resulted in improvements to data collection and analysis (including a traceability and satellite monitoring system), the establishment of an on-board observer program, changes to fishery regulations

including a closed season and minimum landing size, and a range of other changes to national and international management of mahi. The model of using a National Action Plan as the basis for a FIP workplan has since been adopted by other FIPs in the country, including the small pelagics FIP and the tuna FIP.

The FIP has entered MSC assessment, and experts expect it to pass with conditions as there are ongoing concerns around fish aggregating devices (FADs) and stock assessments at the Inter-American Tropical Tuna Commission (IATTC) level. Given the success of this FIP in making significant changes in an artisanal fishery over time, it could be a model for other artisanal FIPs in Latin America or elsewhere.



“Industry leadership [and] ownership of FIPs is essential to FIP progress...from a long-term funding perspective, it's needed.”

—NGO KEY INFORMANT, UNITED STATES

“The most [important determinant] has to be having the government on board [in] the process. Comparing mahi mahi FIPs in Ecuador and Peru, the major difference is the level of involvement of the Ecuadorian authorities...and it has paid off, as [the Ecuadorian FIP is] soon to enter [MSC] full assessment.”

—NGO KEY INFORMANT, PERU

11. Nicolás L. Gutiérrez et al., “Leadership, Social Capital and Incentives Promote Successful Fisheries.” *Nature* 470, no. 7334 (February 2011): 386–89. <https://doi.org/10.1038/nature09689>.

12. James Cannon et al., “Fishery Improvement Projects: Performance over the Past Decade,” *Marine Policy* 97 (November 2018): 179–87, <https://doi.org/10.1016/j.marpol.2018.06.007>.

FISHERIES MANAGEMENT

Improving effective fisheries management is essential for sustainable fisheries and government engagement is necessary for almost any FIP to succeed.

For most FIPs, success is contingent on government making changes. Government bears responsibility for managing a country's natural resources, but in many countries in which FIPs operate, current efforts to manage fisheries are insufficient to sustain resources. The growing consensus among FIP implementers is that while FIPs effectively supplement fishery management in some ways, they must help compel government to improve as well. FIPs employ a few different strategies to engage government, but none appears to be consistently more successful than another. Significant progress can be made where government interests align with FIP goals and capacity exists to act (e.g., Ecuador, Morocco, Nicaragua). Where FIP goals misalign with government fishery objectives or where capacity for management and enforcement is insufficient, progress is typically limited to changes that participants can make on their own, and impact on the water is often minimal.

FIPs can effectively supplement certain aspects of fishery management by providing additional resources and capacity. FIPs can supplement and sometimes operate in place of fishery managers, by conducting fishery research (e.g., data collection, stock assessments, science-based recommendations for management policy), developing policy (e.g., development of fisheries management and recovery plans), implementing monitoring apparatuses (e.g., increasing observer coverage, deploying electronic monitoring, improving documentation), and providing extension services (e.g., capacity building and community engagement). These findings

echo emergent findings in literature on FIPs and fisheries governance.¹³

FIPs are limited in their ability to enforce compliance with regulations and sustainability norms, which are perhaps fishery managers' most critical role. FIPs cannot effectively and consistently replace two essential functions of government, without which overexploited fisheries will likely be unable to recover: FIPs cannot adopt new government, and FIPs cannot enforce rules and regulations upon nonparticipants. The possible exception is when a FIP engages all relevant stakeholders affecting a fishery. For example, Fair Trade and MDPI are largely able to operate a surrogate government in small fishing communities in the Maluku Islands of Indonesia given the unique nature of handline tuna fisheries, the small island community dynamics, and sufficient incentives to ensure ongoing compliance with better fishing practices.

The "right" officials or agencies to engage for FIP success will vary by context. No two countries have the same institutions, accountability structures, technical capacity, underlying fishery resources, motivations, trade relationships, or capacity for enforcement. Moreover, CEA identified seven types of government entities that currently engage FIPs.¹⁴ Understanding these structures is critical to understanding how FIPs can or cannot implement needed changes, especially in fisheries with weaker fisheries governance. This complexity underscores the importance of dedicated and well-connected leadership for FIP success.

"The more allies we have for the FIP, the better, because our recommendations for the government will have more weight."

—NGO KEY INFORMANT, PERU

13. Beatrice Crona, Sofia Käll, and Tracy Van Holt, "Fishery Improvement Projects as a Governance Tool for Fisheries Sustainability: A Global Comparative Analysis," ed. Sergio Villamayor-Tomas, *PLOS ONE* 14, no. 10 (October 1, 2019): e0223054, <https://doi.org/10.1371/journal.pone.0223054>.

14. The seven types of government entities CEA identified engaging FIP were: fishery management agencies; national oceanographic research institutes; fisheries monitoring, control, and enforcement agencies; administrative planning agencies; rural development agencies; military and police; and multilateral institutions. For more information, see the 2020 Global Review of Fishery Improvement Projects full report.

MARKET INCENTIVES

The global seafood supply chain is highly complex, ranging from multinational vertically integrated companies to disaggregated supply chains with more than a dozen interim transactions before seafood reaches its destination. For simplicity, this report addresses the seafood supply chain in three segments: end buyers, mid-supply chain, and local industry.

End buyers:

Companies that sell seafood directly to individual consumers (e.g., grocery retail, food service, and restaurants)

End buyer demand shapes market incentives, motivates supply chain action, and influences FIP structure and goals. Market access is still the most prominent market benefit and sustainability commitments determine who have access. There are now multiple examples of FIPs converting from basic to comprehensive in response to buyers ratcheting up their sustainability requirements (e.g., Gulf of Mexico shrimp, Mexico artisanal shrimp). Given this role, retailers are most effective when their sourcing policies are clearly articulated and consistently communicated to suppliers.

Retailers' direct engagement with FIPs can be deepened through regular engagement with suppliers. Retailers are essential for FIPs as they create the demand for sustainable seafood that drives supply chain activity and motivates FIP creation. Yet, aside from articulating what meets their requirements for sustainability, key informants suggest they provide limited funding to FIPs (with exceptions), demand action from their suppliers without requiring proof of engagement or ensuring product provenance, and rarely engage directly with FIPs beyond an occasional joint letter.

SUPPLY CHAIN PARTICIPATION:

Gulf of Mexico Shrimp FIPs illustrate the beneficial influence business commitments and supply chain participation can have on fishery improvement.

The formerly unified Gulf of Mexico shrimp FIP split into state-based projects in response to buyers demanding different types of engagement from their suppliers and harvesters. The Louisiana and Texas FIPs have transitioned from basic to comprehensive projects because their grocery retailer customers now have sourcing policies that require seafood products to be certified or in a comprehensive FIP. Key informants credit the Gulf of Mexico shrimp supply chain roundtable with compelling the Louisiana state government to make needed policy changes, where the state passed turtle excluder device and tow time reforms and is helping commission a bycatch study. These changes should allow the fishery to enter MSC full assessment. Meanwhile, the Alabama and Mississippi FIPs remain as their buyers do not require similar specifications.



“The rise of these retailers is of central importance to the rise of so-called market-based forms of seafood governance because of their buyer-driven control over value chains.”

—BUSH AND OOSTERVEER, 2019

Simon R. Bush and Peter Oosterveer, “Governing Sustainable Seafood,” 1st ed. (Milton Park, Abingdon, Oxon; New York, NY: Routledge, 2019. Series: Earthscan food and agriculture: Routledge, 2019), <https://doi.org/10.4324/9781315780429>.

Mid-supply chain companies:

All companies that buy and sell seafood from the primary processor to end buyers (e.g., exporters, importers, and distributors)

Mid-supply chain companies feel pressure to engage with FIPs both from customers and based on their need to maintain supply. Supply chain companies report feeling pressure from both ends of the chain, but low margins and competition limit what mid-chain suppliers are willing to do. In some cases, they are unwilling or unable to put additional pressure on fishers to implement reforms for fear that they will lose their supply entirely.

The ability of most mid-supply chain companies to motivate FIP progress is unclear. Only the largest volume and vertically integrated companies appear to exert meaningful influence.

Vertically integrated companies and those that buy significant volumes perceive themselves to have more power in the supply chain. One representative of such a company told CEA, “The mid-level supplier has an immense amount of power and can engage with the local suppliers, especially when things are vertically integrated.” One vertically integrated supply chain company stated, “What do you do to motivate FIPs? Tell them to do better.... We buy a lot.” But most mid-supply chain companies report feeling marginalized, with little ability to drive behavior change. Until they can pass along costs to their customers, supply chain companies will remain hamstrung.

BUSINESS IMPROVEMENT:

To combat low prices, US FIPs are promoting a higher-value, lower-volume strategy. For Gulf of Mexico shrimpers, higher-quality shrimp come from shorter trawl times, which also reduce bycatch mortality. Besides Gulf shrimp, North Carolina blue crab and Maine blue mussel fisheries are also trying to differentiate themselves in the domestic market as high quality and sustainable.

Supply chain roundtables are the predominant precompetitive platform supporting FIPs and organize mid-supply chain engagement by commodity or geography. Sixteen supply chain roundtables now engage 69 FIPs globally. Company participation in supply chain roundtables has more than doubled since 2015, from 71 to 151 in February 2019. Supply chain roundtables aggregate buyer influence through coordinated engagement and are gaining popularity within the seafood market community as the means for organizing the supply chain to engage FIPs globally. Yet, activities vary considerably by roundtable. They are widely viewed as effective platforms for informing and engaging supply chain companies. Some roundtables fund FIPs and apply coordinated pressure on FIPs. However, there were as many tepid perspectives as there were positive ones on their overall efficacy. An informant involved with supply chain roundtable operation said, “Supply chain roundtables are deliberately a loose association, because rigor and formality disincentivizes industry,” and their effort level reflects participants’ desire to engage, which may be as limited as attending one to two calls or meetings a year.

Verifying that products are sourced from FIPs is exceedingly difficult and rarely required.

For non-vertically integrated seafood companies, ensuring product provenance is near-impossible in the absence of traceability systems. Some supply chain companies require evidence that products came from participants named in a FIP, some companies simply “demand” that their product comes from a FIP, but most often supply chain companies cannot verify whether a product came from a FIP, except through the use of full-chain traceability tools which are not required and are rarely deployed in FIPs.

“I’m interested in the FIP for sustainable resources. Also because of the [American market]. Retail and supermarkets need it.”

—KEY INDUSTRY INFORMANT, INDONESIA

Local stakeholders:

Individuals and companies that buy and sell seafood from the point of catch through primary processing, assuming it takes place locally (e.g., cooking stations, local middlemen, and primary processors)

In-country stakeholders are the linchpin to FIP effectiveness and fisheries improvement.

Local processors are the closest to producers, and, while they do not have direct sway over producer actions, their activities provide the strongest signal for change on the water: “[We have our] own fleet of lobster vessels and can force our own vessels to comply with all of the rules. We refuse to buy the illegal lobsters at landing sites,” explained a processor. CEA also heard several instances where government was more open to sustainability messages from local industry rather than importers or large multinational retailers from other countries.

Some local stakeholders see reform as their responsibility or even an opportunity, while others feel an abiding sense of “unfairness” at being asked to shoulder the burden of fisheries improvement, often with little support and few options if exporters or importers switch to other sources or sourcing regions. While sentiment varies by country or even by FIP, local industry does not necessarily feel supported by the end buyers demanding engagement. In Indonesia, local industry representatives felt this challenge strongly: one FIP lead suggested that, “The buyer doesn’t appreciate that the biggest challenge for improvement is here. Buyers are also buying from non-FIP sources. Buyers are not going out of their way to source FIP product.

“We can’t wait for the government. As industry we need to be doing this proactively.”

—INDUSTRY KEY INFORMANT, INDONESIA

“[Benefits of the FIP are] communication with other companies, [the] opportunity to give input to government about the resource, [and to] educate stakeholders around sustainability of crabs.”

—KEY INDUSTRY INFORMANT, INDONESIA

FIP product is not traced very well in the market.” That frustration may be, in part, due to lack of differentiation for local industry’s efforts in the market and a lack of financial support. Local industry almost always hopes for access to new buyers, new markets, or premium prices as a result of engaging in a FIP, but few have seen those benefits emerge beyond market access and customer continuity. There are few examples of price premiums associated with FIPs, except for Fair Trade sites and a handful of companies that pay fishers more to encourage them to participate in the FIP. One FIP lead said that, “Benefits don’t seem to reach that much to fishers, and this is something worrisome for me. Benefits may be indirect and are long term, while fishers’ expectations are short term.” Lack of support emerges as a consistent trend.

Producer participation in the FIP process itself is infrequent, but fishers are increasingly engaged in the sustainable seafood movement more broadly, with some referencing exchanges to other countries and participation in efforts like Brussels and the Boston Seafood Show as formative experiences. Five years ago, CEA’s site visits to FIPs only found fishers to be aware of the FIP in the MDPI/Fair Trade tuna fishery in Indonesia. That is no longer the case, as we surfaced multiple examples of fishers being aware of FIP processes and advocating for their interests. In some cases, they were active participants and felt ownership in their FIP (e.g., Chile stone crab). Many producers cited exposure to trade shows and exchanges with other countries as leading to improved awareness and a desire to pursue certifications.

“A lot of the cost of the FIP ends up falling on the worst-off people in the chain. Fishers are paying with their time. That is so unfair when you think about money in the chain. Beneficiaries of the FIP are the exporters and the international buyers, and it’s the fishers that have to do all the work.”

—NGO KEY INFORMANT, PERU

SOCIAL AND BUSINESS IMPROVEMENTS

Seafood production creates jobs, feeds people, and supports well-being and a way of life for millions of people around the world. Yet seafood production can also result in social inequities and, at worst, human rights violations. FIPs largely do not consider these socio-economic and political dimensions of the places in which they operate.

The sustainable seafood movement is expanding to incorporate different values and objectives.

FIPs and the sustainable seafood markets work are principally focused on environmental improvement. Motivation for industry to engage in these efforts to address resource sustainability stems in part from the belief that conservation can support long-term value creation, or at least, preservation. The implicit assumption made by many is that long-term value created through sustainability improvements will be good for society in general.

Until recently the seafood markets community has not questioned whether sustainable seafood is better for all parties and whether the distribution of benefits is or will be fair. Several factors are now challenging this paradigm. First, the majority of

FIPs are now operating in less developed countries and increasingly in small-scale fisheries. As a result, these FIPs face competing objectives for fisheries management (e.g., output, livelihoods, food security, and equity) and value-driven rationales for reform. Second, growing coverage of human rights abuses in seafood by mainstream media outlets¹⁵ is providing traction for long-running efforts by human rights organizations to address human rights abuses in globalized supply chains and is initiating new activity to ensure legal compliance and remedy identified abuses. Finally, some of the traditional marine conservation organizations are more explicitly prioritizing human well-being outcomes as a motivation for conservation and private foundations are increasingly exploring the diversity, equity, and inclusion dimensions of their grantmaking.

WHAT DO WE MEAN BY “SOCIAL”? DIMENSIONS OF HUMAN WELL-BEING AND THEIR RELATIONSHIP TO FIPS

This figure lays out one framework to understand the dimensions of human well-being encompassed by the term *social*. *Social outcomes* would reflect changes to any of these factors. FIPs have historically focused primarily on economic contributions to well-being in the form of employment, material assets, and economic wealth that may result from sustain-

ably managed fisheries (indicated with *). Areas indicated with ** are considered under the requirements to achieve MSC certification (PIs 3.1.1.1 and 3.2.2). Source: Kaplan-Hallam, Maery and Nathan Bennett. “Policy Brief: Social Science and Humanities Research Council of Canada.” October 2017.



15. Urbina, Ian. “The Outlaw Ocean.” The New York Times, July 25, 2015, sec. World. <https://www.nytimes.com/interactive/2015/07/24/world/the-outlaw-ocean.html>; Hodal, Kate, Chris Kelly, and Felicity Lawrence. “Revealed: Asian Slave Labour Producing Prawns for Supermarkets in US, UK.” The Guardian, June 10, 2014, sec. Global development. <https://www.theguardian.com/global-development/2014/jun/10/supermarket-prawns-thailand-produced-slave-labour>.

REACTIVE APPROACH

Identifying social risks and mitigating them is required to sell to a specific buyer or access a certain market.

Motivations:

- Compliance with national labor laws
- Ensuring legality
- Public pressure and negative publicity

Examples:

Pacific tuna—longline: To address the Withhold Release Order for Tunago 61. Key Traceability conducted a social audit that found no labor rights violations.

OPAGAC tuna FIPs: To ensure compliance with EU regulations and International Labour Organization (ILO) Code of Good Practice 180. OPAGAC members have developed the AENOR standard for social responsibility and seek to comply.

PROACTIVE APPROACH

Addressing social issues can create value for fishers, communities, and companies. These incentives can stimulate progress. Also, it is the morally right thing to do.

Motivations:

- Promise of access to new markets or price premiums
- Desire to improve quality of life for fishers and fishworkers
- Belief that addressing social issues can accelerate environmental awareness and progress.

Examples:

WCPFC headline tuna: Anova has a reputation as a “first mover” in sustainability and social responsibility. They pay for Fair Trade implementation and partner with philanthropy and multilateral aid.

Mexico artisanal blue shrimp: Del Pacifico Seafood wants sustainability credentials in the marketplace. The CEO seems to genuinely care about well-being of fishers. Economic motivations may contribute.

FIPs do not operate in a vacuum; fisheries are inextricably linked to many facets of human well-being. As a result, it is likely that FIPs are having unanticipated effects on well-being.

Fisheries are responsible for many positive contributions to society including food and nutritional security, employment, economic development and growth, government revenues, and community and social cohesion.¹⁶ Yet, our understanding of the relationship between FIPs and these dimensions are limited both in terms of the benefits that FIPs could provide as well as potential negative impacts. FIPs do not gather the kind of data that would shed light on these issues, nor has there been any significant peer-reviewed literature on the topic.

There are examples of positive, negative, perverse, and ambiguous unintended consequences of FIPs on social, economic, cultural, governance, and health dimensions of human well-being. Inequitable distribution of costs and benefits and non-tariff barriers to trade appear to be the most concerning negative impacts of FIPs on human well-being, but this area would benefit from intentional further study as CEA identified only one peer-reviewed paper looking at the unintended

consequences associated with a specific FIP.¹⁷ The following examples were identified through key informant interviews and site visits.

DOCUMENTED NON-ECOLOGICAL IMPACTS OF FIPS

Examples come from key informant interviews and FIP site visits, unless otherwise cited.

Positive:

- Higher prices for producers
- Data and information to improve fishing practices
- Increased knowledge and environmental stewardship
- Government attention and resources

Negative:

- Non-tariff barriers to trade
- Uncompensated time
- Reductions in prices for producers
- Supply chain greenwashing

Perverse:

- Poorly implemented management changes
- Exacerbating over-exploitation
- Reduced product volume associated with legal compliance

Ambiguous:

- Inequitable benefit distribution
- Value chain reorganization¹⁸

16. Edward H. Allison, “Aquaculture, Fisheries, Poverty and Food Security,” (WorldFish Center, 2011).

17. Bailey, Megan, Simon Bush, Peter Oosterveer, and Laksmi Larastiti. “Fishers, Fair Trade, and Finding Middle Ground.” *Fisheries Research* 182 (October 2016): 59–68. <https://doi.org/10.1016/j.fishres.2015.11.027>.

18. Bailey et al., 2016.

CEA identified 26 FIPs seeking to address human well-being dimensions of fisheries through information self-reported on FisheryProgress, of which six appear to meaningfully engage producers and communities.¹⁹ Reporting across FIPs that self-report “Social Impact” is highly inconsistent and is primarily documented through an unstructured comment field on FisheryProgress. These FIPs appear to be motivated by two main objectives: (1) compliance with labor laws, or (2) a desire to improve human well-being. For the first group, the expressed goal is to meet the requirements to maintain a license to operate. For the second group, the focus is on improving well-being as a means of improving sustainability outcomes, or as an end goal in and of itself. Many of these efforts are new. There is little alignment on underpinning values and objectives and disparate efforts are uncoordinated—even with the existence of the Monterey Framework.²⁰

Implementation is just beginning, and it is too early to infer about effectiveness or opportunity cost. It will likely be at least five years before this work can start to be reasonably evaluated given the lack of baseline data on socio-ecological dynamics in FIP-engaged fisheries, inconsistencies in reporting, and the early stage of development and implementation of most efforts. Investments in socio-ecological

data collection, as well as improved reporting on FisheryProgress, could greatly improve our understanding of the kinds of human well-being impacts FIPs have, and how to implement solutions.

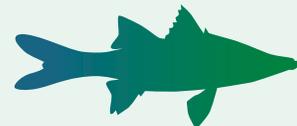
Even more recently, efforts to incorporate a “triple-bottom line” approach to FIPs have emerged. The notion of aligning economic, social, and environmental improvements to create near term incentives for producers is emerging as a means to motivate behavior change. There are few concrete examples to learn from in the fisheries space; only a few implementers are testing such models (e.g., SmartFish, Blue Ventures). The best situations for this model to be applied are ones wherein changes in fishing methods inherently increase product value and total revenue for fishers while simultaneously decreasing pressure on the target stock or impacts on the ecosystem. Other scenarios where business or economic improvements in or around the fishery (e.g., cold chain improvement) that then link to other actions through workplans, agreements, or contracts to improve the environmental outcomes are more fraught and even have the potential to exacerbate exploitation. Triple-bottom line FIPs offer an enticing set of incentives to engaged local stakeholders but must avoid increasing pressure on fisheries while working to install safeguards and reforms.

HOW FIPS CAN ADDRESS HUMAN WELL-BEING:

White snook production in Marismas Nacionales Park in Nayarit State, Mexico

Pronatura Noroeste A.C. worked closely with a subset of the fishing cooperatives in the *Marismas Nacionales* reserve to design and launch a FIP around the Pacific white snook. Fishers had been noticing declining catches, but their production was too low to trigger management actions by CONAPESCA, so they launched the FIP to try to encourage government participation and secure resources and management activities (such as gear changes, closed seasons, and protected fishing areas). One of their ultimate goals is to sell sustainably produced fish domestically, but they need improvements in cold chain infrastructure

to do so. Fishers participate regularly in FIP meetings and activities, and progress against well-being objectives (such as infrastructure improvements) are reported publicly on FisheryProgress under “Social Impact.” *Pronatura Noroeste A.C.*, *SmartFish A.C.*, and the fishing cooperatives have been successful in bringing government resources and attention to the FIP in the form of local fisheries extension groups, rural development agencies, and Mexico’s National Parks agency who are now co-leads in the FIP.



19. The six FIPs that appear to meaningfully engage producers and communities are the following: (1) Indonesia blue swimming crab; (2) Mexico Sinaloa artisanal blue shrimp; (3) Indonesia Western and Central Pacific Ocean yellowfin tuna; (4) Mexico Marismas Nacionales white snook; (5) Mexico Bahía de Los Angeles octopus; and (6) Mexico North Pacific barred sand bass. These six FIPs were selected based on baseline information, activities, and progress with respect to social issues and outcomes being public and transparent; work on community engagement being consistent with one or more of the principles identified in peer-reviewed literature on effective community engagement; and key informant interviews being able to independently verify performance against these criteria during CEA site visits.

20. Conservation International, “Driving Commitments to Social Responsibility in the Seafood Sector,” March 2019, https://fishwise.org/wp-content/uploads/2019/03/MontereyFramework_CL.pdf.

CONCLUSION

“FIPs must continue to evolve to achieve greater impact across a diversity of scenarios and will need to be paired with other efforts and approaches to secure this broader impact. It is clear, however, that FIPs will continue to play a valuable role as part of a larger conservation strategy based on the ability to recruit and align private enterprise within the conservation movement in a way that no other approach can.” —2015 Summary findings from the Global Landscape Review of Fishery Improvement Projects (FIPs).

FIPs’ greatest strengths and most fundamental challenges are largely the same today as they were five years ago. Turning the tide of overfishing globally is a monumental task. FIPs provide a unique mechanism to recruit businesses, communities, civil society, and governments to address these challenges together. FIPs face considerable challenges as a result of working in harder conditions. In response, the FIP model and its multi-stakeholder community is adapting and evolving.

The FIP model’s greatest values are its wide-reaching applicability, relative low cost, and scale of deployment. Many conservation efforts are limited by the ability to scale. This is not the case for FIPs; no fisheries reform intervention has a broader geographic reach. The model will be judged by time and its ability to support fisheries reform and create environmental improvements across different commodities and countries. While there are intermediary signs that FIPs are making inroads in many difficult contexts, real questions as to the role FIPs can and should play in driving fisheries toward sustainability globally remain.

Questions of effectiveness and impact, as well as new values and worldviews, are permeating the conversation, posing questions to the FIP model. After almost 15 years of implementation, there is not yet a clear narrative around FIPs’ impact in the water. This reflects the complexity of regenerating fisheries, the diversity of governance and markets contexts, and the varying approaches taken to implement FIPs. FIPs in more developed countries have more consistently improved. Yet, as FIPs have increasingly been applied in less developed countries—with most projects in these regions having been initiated in the last five years—these projects are confronting a range of new challenges, and are progressing slower than expected relative to earlier successes in more

developed countries. A FIP’s time to success is governed by external fishery dynamics, possibly more so than effective implementation. These challenges to progress are encouraging implementers to intervene at the national and community levels as well as test new Theories of Change related to social and business improvements that divert attention from environmental improvements.

Fortunately, there is now more capacity, interest, and support than ever to find the answers. Reforming fisheries globally is a herculean undertaking requiring knowledge, participation, and leadership across the scientific community, civil society, the seafood industry, and government. The FIP implementing community continues to grow in response to this challenge, with more leaders across all sectors bringing money, attention, expertise, and ideas into fisheries management. Scientific understanding and technical expertise among academics and NGOs continues to expand, and FIPs are playing a critical role in understanding the nature of fishery resources. The financial resources available to support FIP implementation have grown, with increased investment by industry, multilaterals, and governments, and continued investments from NGOs and private foundations. There are more implementers with capacity and leadership working in more places, developing creative solutions to persistent and novel problems. There is a growing movement seeking to ensure that the seafood industry can contribute to a healthy ocean and human well-being long into the future.

The next five years are critical to prove out this model. This review highlighted several best practices, including engaging governments, cultivating and empowering local leaders, remaining committed to projects over time, and continuing to build connections with markets that reward produc-

ers and fisheries for their investments in sustainability. Building on what works is essential to ensuring investments in sustainable seafood deliver intended outcomes. With the growing quality and availability of data, the next five years will offer the first opportunity to test the effectiveness of this market-based strategy to reform fisheries globally. At the same time, there are several fundamental questions that the sustainable seafood movement needs to address to deliver on this promise:

- Can FIPs deliver change in the water, over time, for any commodity in any geography? If not, what are the implications for implementation?
- How does the seafood markets community continue to build the political will between industry and government to reform fisheries?
- On a spectrum of “doing no harm” to “improving outcomes,” what responsibility does the sustainable seafood movement have to address human well-being, and what is the role of FIPs in delivering on that vision?

Our hope is that this report provides a foundation for the FIP implementing community and the sustainable seafood movement to address these questions and achieve its shared goals around healthy oceans, now and into the future.

“Ten years ago, [NGO] work was completely focused on environmental changes, but we’ve learned that to be relevant we needed to integrate livelihoods and community work.”

—NGO KEY INFORMANT, UNITED STATES

“We should be setting realistic timelines on all of the elements of the workplan. It’s important to have a goal you’re moving towards, but it doesn’t need to be a certification, and it doesn’t need to be within five years.”

—NGO KEY INFORMANT, UNITED STATES

BIBLIOGRAPHY

- Allison, Edward H. "Aquaculture, Fisheries, Poverty and Food Security." WorldFish Center, 2011.
- Bailey, Megan, Simon Bush, Peter Oosterveer, and Laksmi Larastiti. "Fishers, Fair Trade, and Finding Middle Ground." *Fisheries Research* 182 (October 2016): 59–68. <https://doi.org/10.1016/j.fishres.2015.11.027>.
- Barr, Rhona, Aaron Bruner, and Scott Edwards. "Fisheries Improvement Projects and Small-Scale Fisheries: The Need for a Modified Approach." *Marine Policy* 105 (July 2019): 109–15. <https://doi.org/10.1016/j.marpol.2019.02.053>.
- Blaikie, Piers. "Is Small Really Beautiful? Community-Based Natural Resource Management in Malawi and Botswana." *World Development* 34, no. 11 (November 2006): 1942–57. <https://doi.org/10.1016/j.worlddev.2005.11.023>.
- Bush, Simon R., and Peter Oosterveer. *Governing Sustainable Seafood*. 1st ed. Milton Park, Abingdon, Oxon; New York, NY : Routledge, 2019. Series: Earthscan food and agriculture: Routledge, 2019. <https://doi.org/10.4324/9781315780429>.
- Cannon, James, Pedro Sousa, Isidora Katara, Pedro Veiga, Braddock Spear, Douglas Beveridge, and Tracy Van Holt. "Fishery Improvement Projects: Performance over the Past Decade." *Marine Policy* 97 (November 2018): 179–87. <https://doi.org/10.1016/j.marpol.2018.06.007>.
- CEA Consulting. "Summary findings from the Global Landscape Review of Fishery Improvement Projects (FIPs)," 2015. <https://www.ceiconsulting.com/wp-content/uploads/Global-Landscape-Review-of-FIPs-Summary.pdf>.
- Cinner, Joshua E., W. Neil Adger, Edward H. Allison, Michele L. Barnes, Katrina Brown, Philippa J. Cohen, Stefan Gelcich, et al. "Building Adaptive Capacity to Climate Change in Tropical Coastal Communities." *Nature Climate Change* 8, no. 2 (February 2018): 117–23. <https://doi.org/10.1038/s41558-017-0065-x>.
- Cohen, Philippa J., Edward H. Allison, Neil L. Andrew, Joshua Cinner, Louisa S. Evans, Michael Fabinyi, Len R. Garces, et al. "Securing a Just Space for Small-Scale Fisheries in the Blue Economy." *Frontiers in Marine Science* 6 (April 18, 2019): 171. <https://doi.org/10.3389/fmars.2019.00171>.
- Conservation Alliance for Seafood Solutions. "Guidelines for Supporting Fishery Improvement Projects," Revised August 2019. http://solutionsforseafood.org/wp-content/uploads/2019/09/FIP_report_screen-final_revised_september.pdf
- Conservation Alliance for Seafood Solutions. "Strategic Plan: 2020-2024," January 2020. <http://solutionsforseafood.org/wp-content/uploads/2020/01/Alliance-Strategic-Plan-2020-2024.pdf>.
- Conservation International. "Driving Commitments to Social Responsibility in the Seafood Sector," March 2019. https://fishwise.org/wp-content/uploads/2019/03/MontereyFramework_CI.pdf.
- Crona, Beatrice, Sofia Käll, and Tracy Van Holt. "Fishery Improvement Projects as a Governance Tool for Fisheries Sustainability: A Global Comparative Analysis." Edited by Sergio Villamayor-Tomas. *PLOS ONE* 14, no. 10 (October 1, 2019): e0223054. <https://doi.org/10.1371/journal.pone.0223054>.
- Friedman, Rachel S, Elizabeth A Law, Nathan J Bennett, Christopher D Ives, Jessica P R Thorn, and Kerrie A Wilson. "How Just and Just How? A Systematic Review of Social Equity in Conservation Research." *Environmental Research Letters* 13, no. 5 (May 1, 2018): 053001. <https://doi.org/10.1088/1748-9326/aabcde>.
- Gruber, James S. "Key Principles of Community-Based Natural Resource Management: A Synthesis and Interpretation of Identified Effective Approaches for Managing the Commons." *Environmental Management* 45, no. 1 (January 2010): 52–66. <https://doi.org/10.1007/s00267-008-9235-y>.
- Gutiérrez, Nicolás L., Ray Hilborn, and Omar Defeo. "Leadership, Social Capital and Incentives Promote Successful Fisheries." *Nature* 470, no. 7334 (February 2011): 386–89. <https://doi.org/10.1038/nature09689>.

- Kaplan-Hallam, Maery, and Nathan J. Bennett. "Adaptive Social Impact Management for Conservation and Environmental Management: Social Impact Management." *Conservation Biology* 32, no. 2 (April 2018): 304–14. <https://doi.org/10.1111/cobi.12985>.
- Hodal, Kate, Chris Kelly, and Felicity Lawrence. "Revealed: Asian Slave Labour Producing Prawns for Supermarkets in US, UK." *The Guardian*, June 10, 2014, sec. Global development. <https://www.theguardian.com/global-development/2014/jun/10/supermarket-prawns-thailand-produced-slave-labour>
- Mansuri, Ghazala, and Vijayendra Rao. "Community-Based (and Driven) Development: A Critical Review." *The World Bank Research Observer* 19, no. 1 (2004): 1–39. <http://dx.doi.org/10.2139/ssrn.501663>.
- Melnychuk, Michael C., Emily Peterson, Matthew Elliott, and Ray Hilborn. "Fisheries Management Impacts on Target Species Status." *Proceedings of the National Academy of Sciences* 114, no. 1 (January 3, 2017): 178–83. <https://doi.org/10.1073/pnas.1609915114>.
- Merton, Robert K. "The Unanticipated Consequences of Purposive Social Action." *American Sociological Review* 1, no. 6 (December 1936): 894. <https://doi.org/10.2307/2084615>.
- Ostrom, Elinor. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press, 1990.
- Purcell, Steven W., Beatrice I. Crona, Watisoni Lalavanua, and Hampus Eriksson. "Distribution of Economic Returns in Small-Scale Fisheries for International Markets: A Value-Chain Analysis." *Marine Policy* 86 (December 2017): 9–16. <https://doi.org/10.1016/j.marpol.2017.09.001>.
- Sampson, G. S., J. N. Sanchirico, C. A. Roheim, S. R. Bush, J. E. Taylor, E. H. Allison, J. L. Anderson, et al. "Secure Sustainable Seafood from Developing Countries." *Science* 348, no. 6234 (May 1, 2015): 504–6. <https://doi.org/10.1126/science.aaa4639>.
- Schipper, E. Lisa F., Jessica Ayers, Hannah Reid, Saleemul Huq, and Atiq Rahman. *Community-Based Adaptation to Climate Change: Scaling It Up*. Routledge, 2014.
- Teh, Lydia C. L., Richard Caddell, Edward H. Allison, Elena M. Finkbeiner, John N. Kittinger, Katrina Nakamura, and Yoshitaka Ota. "The Role of Human Rights in Implementing Socially Responsible Seafood." Edited by Heather M. Patterson. *PLOS ONE* 14, no. 1 (January 25, 2019): e0210241. <https://doi.org/10.1371/journal.pone.0210241>.
- Thomas Travaille, Kendra L., Larry B. Crowder, Gary A. Kendrick, and Julian Clifton. "Key Attributes Related to Fishery Improvement Project." *Fish and Fisheries* 20, no. 3 (May 2019): 452–65. <https://doi.org/10.1111/faf.12357>.
- Urbina, Ian. "The Outlaw Ocean." *The New York Times*, July 25, 2015, sec. World, <https://www.nytimes.com/interactive/2015/07/24/world/the-outlaw-ocean.html>.
- Villeda, Karen T. "Fishing for Market Solutions: Measuring the Global Performance of Fishery Improvement Projects." University of Washington, 2018. <http://hdl.handle.net/1773/43084>.

