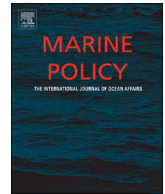




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Fisheries Improvement Projects and small-scale fisheries: The need for a modified approach

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ABSTRACT

Fishery improvement projects (FIPs) have recently emerged as a mechanism to assist fishery recovery. Yet successfully expanding the FIP model into small-scale fisheries (SSF) will require modifying its design in order that it might best work within these more complex social and economic environments. Drawing on a growing understanding of what contributes to successful SSF management, as well as other similar smallholder market-based instruments, this article distills a core set of recommendations for a revised “FIP +” approach. The ‘+’ denotes a broader set of integrated and complimentary interventions that recognize the complex social and economic landscape inherent within SSF, and that SSF reform will not occur through simply raising fishers’ income alone. In order to be successful the FIP + model will need to consider investing in the following: strengthening tenure and community governance; covering upfront opportunity costs; reducing fisher vulnerability to market shocks by supporting a broader livelihood portfolio; and relaxing credit, social and human constraints within the wider context of SSFs. In addition it should do so in a manner that is conditional on improving fisheries management.

1. Introduction

A growing demand for sustainably caught fish is shaping global seafood markets [1]. In the 1990’s, voluntary fisheries certification and eco-labeling emerged as an independent and market-driven alternative to ineffective regulation [2,3]. Between 2015 and 2016 Marine Steward Council (MSC) certified seafood had a market value of some US\$ 4.6 billion. MSC certified fisheries now account for ten percent of annual global wild-capture landings, and 25,000 products sold in more than 80 countries now bear the MSC stamp [4,5]. However, MSC and other certification schemes have struggled to penetrate small-scale developing country fisheries (DCFs). Poor data and large upfront costs associated with fisheries assessment and the fulfillment of detailed environmental and traceability standards limit the inclusion of many DCFs, and small-scale fisheries¹ (SSF) more generally [6]. To date, only 21 DCFs are MSC certified: nine percent of MSC’s total number [5]. Yet DCFs account for some 60% of global catch and 50% of seafood entering international trade [1,7].

Fisheries Improvement Projects (FIPs) have emerged as a valuable tool to supplement MSC supply, and in some cases to assist these fisheries in meeting their certification goals. FIPs differ from certification schemes in that market access is conditional on a fishery making progress towards sustainability, as opposed to meeting qualifying

environmental standards. As such, FIPs have the means to overcome many of the difficulties, and particularly the costs, faced by SSFs in accessing MSC [1].

Developed by nongovernment organizations and the private sector, FIPs make use of improved coordination and formalized agreements between stakeholders along the supply chain in order to address the sustainability challenges within a fishery. While fishers are rewarded with improved market access conditional on the uptake of more sustainable fishery practices, retailers and mid-chain actors fulfill sustainability commitments and maintain security of supply [4,6,8].

While FIPs vary in scale and scope, the broad consensus defines FIPs as “a multistakeholder effort to address environmental challenges in a fishery. These projects utilize the power of the private sector to incentivize positive changes toward sustainability in the fishery and seek to make these changes endure through policy change” [9]. More specifically FIPs rely on a five-stage approach. These are: Stage 1, the initial development of FIP including assessment of fishery, scoping and recruitment of stakeholders; Stage 2, a public launch of the FIP including stakeholder meetings and development of work plans at which stage fishers and processors gain access to major markets; Stage 3, the implementation of the work plan, practice reform, and progress reporting; Stage 4, improvements in fisheries practice and management such as vessel inspections or port data collection; Stage 5, on water

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¹ The diversity and dynamic nature of SSFs make them difficult to define, however more generally SSFs can be characterized as fishers operating in boats of 15 m or less, or without boats, generally using less energy-intensive fishing gear and operate close to shore. They often are self-employed and engaged both in directly providing food for their household and in commercial fishing, processing and marketing [14,93].

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improvements demonstrated, e.g. increases in biomass [9,10].

Of the 130-odd FIPs worldwide DCFs account for nearly half [1]. While more accessible, the success of these FIPs in reaching their environmental goals, however, is questionable. A recent report by Ref. [1] found that nearly two-thirds of DCF FIPs that had obtained market access (stage 2) were not yet delivering fisheries improvements (stages 4 and 5). Of the 66 DCF FIPs, only 5 have specified a cap on total allowable catch. More generally, FIPs in SSFs struggle to deliver promised fishery improvements [11]. Yet these FIPs are being rewarded with market access based on de facto claims of sustainability, prior to any actual realized on the water improvements, or indeed implementation of a work plan. This continues to be problematic for both FIPs and certification schemes more broadly, promoting a race to the bottom in sustainability standards [1,6].

2. Challenges to the FIP model in SSFs

FIPs have been successful in addressing some of the difficulties faced by SSFs in accessing higher value markets, e.g. certified supply chains; namely they disperse those upfront costs across the lifecycle of the FIP project [1]. However beyond alleviating this initial barrier to entry, traditional FIPs, like previous market-based instruments such as MSC, do little to acknowledge the wider environment in which SSFs are embedded [12].

Traditional FIPs have largely invested into improving fishing methods and governance structures, with environmental improvements as the end goal. More often than not they focus solely on an improvement in one target fish stock. In reality, FIPs are not designed to directly benefit fishers beyond those benefits associated with a better performing, more sustainably managed fishery [11]. While this framework has proved viable in industrial fisheries, such narrow focus will fall short in generating the same results in SSFs.

SSFs are characterized by a number of constraints that make their management and subsequent recovery particularly complex, and more challenging than is seen in industrial fisheries. These include weak governance, insecure tenure, prevalent income and access poverty, intra-community inequality, as well as political and market disempowerment [12,13]. In addition, more often than not, these fisheries exist as effectively open access systems rooted within wider vulnerable community structures [14].

At the very least, FIPs will need to raise the welfare of fishing communities in a manner compatible with existing livelihood strategies and with an understanding of those external forces acting upon the fishery. Simply raising a fisher's income will not be enough. Poverty and overexploitation in the SSF sector is multifaceted and perpetuated by both endogenous and exogenous origins. Large labor pools, high labor mobility, low barriers to entry and low opportunity costs of labor mean that pressure on SSFs can grow rapidly where profits increase as a result of moving towards sustainability. In addition, complex livelihood strategies can be undermined as fishers move towards a less diversified portfolio, increasing individual and community vulnerability to outside shocks [15,16].

Successfully expanding the FIP model into SSFs will require modifying and expanding its design in order that it might best work within these more complex social and economic environments. The success of a traditional FIP rests on its potential to improve the long-term economic wellbeing of key stakeholders within the market-chain [17,18]. However, SSF FIPs may need to consider a wider set of stakeholders including those outside of the market chain. Where possible, it might also work towards strengthening the resilience of SSFs. Indeed, the SSF literature has long called for an integrated approach to fisheries reform, albeit due to this complex connectivity between fisheries and development within these environments. Yet interventions continue to be attempted in isolation, without understanding or dealing with the wider context in which these fisheries exist [12].

A balanced approach to interventions targeting SSFs is needed and

should draw insights from previous management tools and interventions. This article considers the scope for addressing these and related challenges in the design of an expanded FIP model for SSFs. To date, there has been little analysis of FIPs within the scientific literature. However, we draw on a growing understanding of what contributes to successful SSF management, as well as lessons learned from implementing other similar market-based instruments (MBIs) in small-holder low-income settings more broadly. Much has also been reported within the marine resource management literature relating to success of marine policy interactions and the promotion of support for these tools. Studies on conservation agriculture, agroforestry, microfinance, sustainable livelihoods and community based management initiatives in developing country settings also have insights to share. Facing similar challenges of imperfect market constraints and property rights prevalent in SSFs, these initiatives hold valuable insights in promoting FIP success and compliance.

Considering the socio-economic conditions prevalent in SSFs, the article distils these insights into a core set of recommendations for a modified “FIP +” approach. Here the ‘+’ denotes an expansion to the current FIP model: a broader set of integrated and complimentary interventions aimed at the improving uptake and compliance within SSFs, as well as tackling some of the more inherent constraints which continue to challenge fisheries reform within SSFs. Acknowledging that FIPs, like all capture fisheries in the long-term, will require the removal of excess fishing capacity and the development of supporting institutions and/or incentive structures [19], the subsequent section distills the core elements of the FIP + model recommended for these projects moving forward.

3. Core elements of FIP +

3.1. Supporting local tenure and use rights

Interventions that allocate use-rights to common pool fisheries via quotas and territorial rights have successfully rebuilt stocks and improved fishers' profits in a number of SSFs. Indeed, ensuring that a specific group of fishers has secure and exclusive use rights is generally considered a primary step towards sustainable fisheries management. Past investments to increase industry profits that have not addressed the issue of access have simply served to draw in new individuals and push full and part-time fishers to devote more time and household resources to fishing [20–23]. FIP + proponents will need to either seek SSFs in which legitimate use-rights already exist, or support governance processes that move towards allocating such rights early in FIP + implementation. Clear use-rights will also play an important role in directing other elements of FIP + intervention described in the following sections.

Given the geographically dispersed and multi-species nature of many SSFs, FIP + s will likely also need to support some form of co-management structure.² In particular it will be necessary to support enforcement of use-rights to ensure management rules are followed, and that rights-holders and government authorities have the means to exclude other actors [24,25]. In the vast majority of SSFs, where tenure systems are missing or have been displaced, the challenge will be how to achieve the equitable devolution of user-rights and to what degree should a FIP + define the process. Co-management structures that devolve use-rights from the state to community groups may present a more viable option than many types of privatization promoted in industrial fisheries [26–30]. However, in the past these local institutions have often lacked the resources to administer and enforce community rules, including fishing rights [30–32]. Supporting institutional

² Co-management structures by design share management authority between user groups and a more recognized governing entity, such as established local government bodies.

capacity will be extremely important for the distribution of any community benefits and therefore the successful management of CPRs [33].

The past few years have seen the advancement of new instruments for ocean governance that transfer property rights to local communities. These include such examples as community-based management (CBM), ocean zoning, marine conservation agreements and territorial user rights-based fisheries (TURFs) [34]. When aligned with strong leadership and support, such community-based co-managed marine management arrangements have been shown to contribute to successful management and the sustainability of marine resources [35,36]. Furthermore, collaborative management has greater legitimacy with resource users and can inspire higher levels of compliance. Moral obligation, fears of local institutions and social influences have been shown to play an important role in improving compliance and reducing the uptake of unsustainable practices [37,38].

Moreover, given the inherent common pool nature of many SSFs, contracting with individual fishers seems an unlikely method in which environmental improvements will be maximized, in isolation from the wider community needs. Perhaps one of the most obvious ways forward in many SSFs will be the application of community contracts institutionalized under a co-management structure. Community contracts may be better placed to integrate preexisting community arrangements into the establishment of use-rights as well as reduce transaction cost through more localized monitoring and enforcement.

However, it must be acknowledged that the establishment of such new use rights does not guarantee fair and equitable cost and benefit sharing within communities. Marginalization and rent capture by elites is a common externality when assigning specific use rights to formerly open access resources [15,39,40], and can threaten both development objectives and the potential to move towards sustainable fisheries management [41]. Women, who comprise approximately half of the fisheries and aquaculture workforce globally, are particularly vulnerable to reforms in the fishery sector because they often lack a voice in decision-making and can be displaced as fishing becomes more lucrative [40,42]. FIP + engagement in the intra-community allocation of use-rights, benefits and rules should be approached with caution, but may be necessary to avoid unintended negative impacts to vulnerable members of society. Indeed, acknowledging that there will always be non-participating poor affected by community contracts highlights the need for careful FIP + design, including consideration of how design could mitigate such effects or even benefit a wider group of stakeholders.

3.2. Direct and in-kind incentives

Fishers in developing country SSFs are typically poor and averse to putting their livelihoods at perceived risk by changing fishing methods. Therefore, in addition to generating economic improvement for participants over the long term, FIP + must be structured to reduce typically significant short-term adoption costs as fishing effort is reduced to allow stocks to recover.

Direct payment incentive programs, including Payments for Environmental Services (PES) and Conditional Cash Transfer (CCT) schemes, have now been implemented in fields including farming, forestry, health and education. These experiences demonstrate that direct payments can increase participation in activities that reduce income, overcoming an analogous barrier to that faced by the upfront decision to reduce catch in order to increase fishery sustainability [43–48]. Provision of direct payments to fishers in initial years of FIP + implementation can help overcome temporarily foregone income. These can then be phased out as returns from more productive fisheries increase. Such an arrangement has been shown to be effective in promoting transition to more profitable and biodiverse-friendly (but more upfront capital intensive) agricultural practices in many places including Costa Rica, Nicaragua, and Colombia [49,50].

Despite the potential to control costs by making payments to fishers

for a limited period, direct incentives in SSFs could still prove more costly than in terrestrial models. Among the reasons are significant opportunity costs to reduced catch in the short term, potentially costly monitoring and enforcement, and that legitimate (and vulnerable) actors further up the supply chain may also be impacted by lower catch, for example women involved in fish processing. On conservation and equity grounds, it may be necessary to include longer-term payments to these actors, as well as to fishers who move out of the fishery as part of agreements to reduce fishing effort.

However, in SSFs the question of who should benefit is always difficult as multiple resource users are the norm; behavioral changes need to occur across communal seascapes. Financial incentives work well on private lands but are more likely to generate problems associated with equity and legitimacy if benefits are not widespread. As previously mentioned, perceived fairness, equity and legitimate benefit-sharing mechanisms will be key to the long-term success of any FIP + within an SSF, and ultimately determining compliance with any rules established to reform the fishery [18,38,51]. Indeed [38] suggests that PES success can be related/correlated to high levels of perceived fairness of payment distribution [38].

Research also makes clear that the design of direct payment programs is an important determinant of the incentive created. In the case of FIP + s in SSFs, where behavior changes are required in communally owned or communally managed resources, design is especially vital, as previously mentioned. Financial incentives work well on private lands but are more likely to generate problems associated with equity and legitimacy if benefits are not widespread. In addition, care must be taken to complement existing pro-social incentives for sustainable management, and avoid undermining or displacing them with monetary ones.

Positive in-kind incentives may decrease conflicts and lower program costs overall if they are seen as more legitimate. In-kind incentives also have the potential to target the wider community and as well as fishers or community members not directly benefitting from the FIP + . Indeed, the provision of in-kind benefits has been shown to be an important determinant of adoption in a number of MBIs, and can be particularly important when financial benefits may not be secured or are not substantial as has been the case in numerous certification schemes [52–56].

In fact, research indicates that in-kind incentives may be both more valued than the cost of their provision and less likely to undermine intrinsic incentives [53–55,57]. A study in Tanzania that compared multiple potential designs of a PES program aimed at reducing deforestation (an annual cash payment to individual farmers, an annual cash payment to a village fund, and upfront provision of multi-year manure fertilizer) found that the in-kind benefit received the highest support from participants [54]. Similarly, families surveyed about their preferences for incentives to reduce deforestation in the *Trans*-Amazon highway region revealed that incentives oriented to improving production systems (including technical assistance, capacity building and improvements in community infrastructure) were preferred to direct financial payments [58].

Such non-cash benefits can also be particularly useful when attempting to target stakeholders without formalized property rights as well as bringing additional benefits to a wider group of non-participating stakeholders. Communal benefits such as local development funds, investments into infrastructure, and training can reinforce pro-social incentives to manage sustainably SSFs and reduce the appropriation of benefits by local elites [18,59–61].

In SSFs, support in securing legitimate use-rights in itself may be a particularly appropriate form of in-kind incentive. Strengthening use-rights has been shown to be an important incentive for uptake in a number of conservation initiatives, including within fisheries [21,62–65].

3.3. Overcoming context-related constraints

The effectiveness and attractiveness of any FIP + will be influenced by its ability to interact with the broader socio-economic context surrounding each SSF. This context includes existing markets, access to credit, investment opportunities and supporting infrastructure [64,66,67].

It will be important that market, credit and infrastructure-related institutions develop simultaneously. The reasons are two-fold. First, direct benefits of the MBIs have sometimes failed to significantly improve fisher welfare, stifled by wider societal problems and poverty [52,68]. The problem is that benefits can only be reinvested into existing markets that are currently constrained by human capital and institutional failures, thereby limiting any potential benefits to those stemming from fishery recovery alone [69,70]. Indeed, interventions that solely focus on increasing fishing profitability can actually increase fisher vulnerability. A FIP in isolation will likely incentivize a shift into the production of higher value species, perhaps concentrating on only one or two species. Such programs risk promoting a growing dependence on specific fish species and their markets, and reduce the incentives to continue a diversified livelihood model, making fishers more susceptible to global market shocks. Second, actors who do not currently fish but whose opportunity costs of labor are low due to lack of diversity in the local economy, will tend to rapidly increase their fishing effort as fish stocks increase, thereby undermining recovery [71–75].

Addressing these issues will likely require FIP + proponents to take a broad view of any package and intended purpose of conditional benefits. Interventions that develop locally appropriate alternative markets and human capital as well as diversify current production and commercial channels will serve to improve the effectiveness and efficiency of these MBIs [52]. Possible areas of broader investment include the involvement in credit markets, in education and health care initiatives, and into improving livelihood alternatives. Indeed, in acknowledging their limitations, many FT cooperatives and organizations have begun experimenting with the allocation of a price premium to microcredit programs, school fees, health insurance and technical assistance, often to the benefit of the wider community. Attention has also been focused on the potential of using this premium as collateral for saving and credit facilities for community loans or for co-investing and leveraging public and NGO funding to improve local infrastructure [76]. Numerous CCT and PES interventions now also include co-benefits such as support for livelihood protection and additional investments into regional development [48,77]. A study in Nicaragua found that complementing CCT payments to farmers with a grant to improve non-agricultural activity resulted in increased diversification into more profitable activities. Furthermore, when the CCT program ended, improved consumption levels for households that received the complementary grant remained stable, whereas they declined for those who received the CCT only [78]. Combining investments and policies that can reduce constraints, improve human and social capital and decrease disempowerment has, in some cases, been found to reduce the payment premium required for the adoption of new schemes [52,64,66,79].

Furthermore, FIP + design should be conscious of these complex livelihood diversification strategies within SSFs and only promote fishery intensification within a wider program of risk-mediating programs. While the intention of any FIP is to improve the resource base, it cannot undo the inherent riskiness prevalent in SSFs or for that matter the external shocks (and shifting preferences) within global markets. Therefore the development of additional markets will reduce fisher vulnerabilities to environmental and market shocks relating to these high-value species. In the same vein, promoting high-value species can shift production away from more locally relevant species and reduce supply; developing additional local fish markets can reduce the potential impacts of FIPs on local food security.

Incentives at the community level also have the potential to benefit those not directly sharing in the fishery related income resulting from a

FIP +. Negative reactions from those who feel treated unfairly by incentive programs can significantly undermine the positive effect of the incentive [80]. Focusing on ensuring perceived fairness, equity and legitimacy of incentive mechanisms will help avoid this backlash. Furthermore, non-fishers sharing in benefits conditional on respecting FIP + conditions are less likely to shift their labor into the fishery as profit margins increase under successful FIP + implementation [38,51,73]. From a pro-poverty viewpoint, community incentives can also benefit the non-participating poor, who within SSF communities often represent some of the most vulnerable stakeholders such as women and children.

3.4. Conditionality

It will be important that the FIP + model does not make the same mistake as previous integrated community development projects (ICDPs). In the past, interventions in SSF reform that invested in the development of non-fisheries related economic activities for fishers have met with limited biological and social success. A central reason is that instead of reallocating their efforts to new activities, poor households frequently choose to both fish and work in new sectors. There are also frequently limited options for reinvesting profits outside of the fisheries sector, such that increased non-fishery income can drive further investment into the sector and greater fish catch [81–83].

Benefits provided under a FIP + as described in the preceding sections should be linked as tightly as possible to compliance with agreed-upon management rules targeting sustainability. In particular, contracts with fishing organizations or communities should include a conditionality clause ensuring that benefits depend upon sustainable behavior. Conditionality is central to MBIs such as PES and CCT schemes, and has been shown to increase desired household behaviors such as school attendance and improved health practices, as well as enhancing human capital within poorer societal circles [44,84]. However, to date it has not been as common in developing world coastal management interventions [31,83,85].

Conditionality should also include sanctions in the event of non-compliance. While in the past this action was often seen as undesirable from a development standpoint, graduated sanctions for violation of community rules have proved effective in the local management of traditional common pool resources (CPRs) and, more recently PES [86,87]. Indeed, in SSFs, self-enforcing mechanisms such as penalties imposed by strong operational rules designed and enforced by local fishers have been shown to significantly contribute to the success of co-management initiatives [35].

FIP + sanctions could include the graduated removal of FIP + specific investments such as higher-tech equipment, technical assistance as well as the gradual scaling-back of use rights and/or access to fishing areas, the specifics of which will depend on the particular FIP + design.

Integrating some level of fisher liability into these projects will improve overall compliance and reduce incentives to ‘opt out’ at a future date or in response to sanctions [88]. Cost-sharing initiatives that spread liability across stakeholders increase fisher investment into FIP + s as well as ownership of the project. This could simply represent up-front investment costs, although in SSFs this may make targeting of low-income fishers more difficult. More recently, micro-financing institutions have been exploring the possibility of varying interest rates dependent on resource users commitment to improved environmental stewardship, e.g. access to credit as well as loan interest rate is linked to the production of environmental services [89].

Such sanctions and liability should be institutionalized under a co-management platform. These collaborative management structures have greater legitimacy with resource users and inspire higher levels of compliance and have been shown to promote higher levels of local investment [38,86].

3.5. Collective action

The sections above argue that FIP + proponents must broaden the scope of benefits delivered directly as part of the agreement. However, the scope of challenges in SSFs mean that FIP + s will also benefit from a set of coordinated interventions that are likely beyond the scope of rational investment by private sector actors in the supply chain. Fomenting a collective impact approach³ that engages organizations beyond those working solely to promote sustainable fisheries, can spread costs across agencies with a more diverse mandate and portfolio of interventions. The concept of collective action has successfully been used to address other social issues such as education and health, as well as by large private sector companies who wish to improve the livelihoods of small scale actors in their supply chains [90].

In the case of SSFs, poverty-alleviation organizations frequently have a strong presence in and around vulnerable coastal areas. Drawing these additional stakeholders into the FIP + process could ultimately improve incentive structures for all stakeholders involved in working towards a common goal of improved livelihoods. For example, working with local, reputable non-profit agencies can compliment the FIP + model with additional incentive programs outside of their expertise, as well as strengthen their perceived legitimacy within any community. Of particular interest may be engagement of micro-financing, micro-savings and insurance institutions, due to the role of financial services in reducing reliance on fisheries in times of stress [91]. As with any intervention, partnering with the right locally-viable organizations will be key and, of course, based on prior site conditions and relationships.

4. Conclusion

While traditional FIPs have been shown to be effective in improving management of industrial fisheries, SSFs are more complex and adaptation to the model is needed to enable successful and equitable inclusion of millions of low-income fishers. A well-implemented FIP will empower fishers and promote sustainable fishing practices. However, present FIP models that focus solely on increasing fisher profits will have limited impacts and could hinder fisher welfare by increasing livelihood vulnerability. Additions to the FIP model (“FIP+”) will increase the likelihood of adoption within SSFs, along with improvements in both ocean health and fisher livelihoods. The proposed FIP + simply builds upon the current FIP model. In order to better effect SSF reform, the model need not change, just expand its focus. Whereas a traditional FIP leverages private sector involvement, and investment, into fisheries reform, the FIP + includes additional and necessary partners and considers ecological and social sustainability. In doing so, the FIP + model acknowledges what has long been known by those working in SSFs, that reforms will require investment into collective action, strengthened civil society and the empowerment of poorer fishing communities [92].

Project proponents will need to combine careful design with upfront financial commitment, and engage a wider set of stakeholders, including from non-fishery related sectors. In order for a FIP + to maximize its impact on fishery and human well-being in SSFs it will need to invest in the following:

1. Proponents ensure a foundation of legitimate and equitable local-use rights as a means to shift fishers' incentives towards sustainable management, and prevent entry by outsiders into the fishery as stocks increase.

2. FIP + s provide well-designed incentives at least in the short-term. These must draw on growing understanding of how to ensure that strong incentives are generated, and take a broad view of scope and type, potentially including investment in infrastructure, community development funds, and diversifying livelihoods.
3. Benefits from FIP + must be conditional on fisheries improvement.
4. Lastly, FIP + proponents should foment collective action around sustainable development of coastal communities, incorporating relevant non-fishery organizations into the process.

Some aspects will be relatively straightforward (although still not necessarily easy). These include building on significant global experience with provision of market-based incentives to provide short-term benefits that outweigh fishers' short-term costs and reduce risks of adoption. In the context of communally owned fisheries in particular, evidence suggests that provision of in-kind incentives at the community level may be best suited to generate meaningful benefits and avoid pitfalls related to distribution and impact. Another key step is making appropriate and conditional investments into strengthening diversified livelihoods and improving access to credit and other services for participating communities. Interventions will need to go beyond rehashing the previous alternative occupations model and work to develop locally relevant markets and livelihoods and invest in human capital.

Other necessary steps are not so straightforward, but likewise cannot be overlooked. Strengthening local tenure has long been a challenge in many SSFs, yet this will need to be one of the first components of any FIP+. From an investment perspective, it will be a necessary condition for reducing risk. Recent years have seen the generation of a number of new initiatives that transfer property rights to local communities. Lessons from TURF and customary tenure systems highlight some positive results, with governments in many developing countries actively supporting the implementation of decentralized approaches.

FIP + s can bring benefits beyond those seen in previous instruments. In the first instance, SSF reform will require a complex set of complimentary interventions; a well-designed FIP + provides collaborative interface for private and social groups to work together to address intertwined ecological and development needs inherent in SSFs. In linking objectives and rewards, as well as budgets and agendas, stakeholders can push a more inclusive community fisheries reform agenda, as well as reduce the private and social risks associated with fisheries investment. The FIP + model can also contribute to institutionalizing secure marine property rights, considered the most critical reform in fisheries policy by the [92]. Still considered controversial in SSFs, reform and regulation will require buy-in from local and national governing entities. FIP + can create incentives across all levels to support local use-rights and regulation, and promote locally relevant designs. In addition, the FIP + model can improve the success of complimentary development interventions through the provision of long-needed incentives and conditionality.

The FIP + model has the potential to transfer numerous benefits to SSFs. What is more, the magnitude of these fisheries in global fish provision and the sheer numbers of fishers they employ means they simply cannot be ignored. While each intervention will need to tailor itself to local conditions, the FIP + model should draw on the good practices learned in a range of fields and coordinate action at a major scale, bringing together companies, development and donor organizations with fishing communities and local governing institutions.

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³ Collective impact as defined by the Collective Impact Forum, brings people and organizations together in a structured manner in order to achieve social change. Parties come together to collectively define a problem and create a shared vision to solve it (Collective Impact Forum, 2016).

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