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ESSAY



The COVID-19 Pandemic, Small-Scale Fisheries and Coastal Fishing Communities

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ABSTRACT

The COVID-19 pandemic has rapidly spread around the world with extensive social and economic effects. This editorial focuses specifically on the implications of the pandemic for small-scale fishers, including marketing and processing aspects of the sector, and coastal fishing communities, drawing from news and reports from around the world. Negative consequences to date have included complete shut-downs of some fisheries, knock-on economic effects from market disruptions, increased health risks for fishers, processors and communities, additional implications for marginalized groups, exacerbated vulnerabilities to other social and environmental stressors, and increased Illegal, Unreported and Unregulated fishing. Though much of the news is dire, there have been some positive outcomes such as food sharing, the revival of local food networks, increases in local sales through direct marketing and deliveries, collective actions to safeguard rights, collaborations between communities and governments, and reduced fishing pressure in some places. While the crisis is still unfolding, there is an urgent need to coordinate, plan and implement effective short- and long-term responses. Thus, we urge governments, development organizations, NGOs, donors, the private sector, and researchers to rapidly mobilize in support of small-scale fishers, coastal fishing communities, and associated civil society organizations, and suggest actions that can be taken by each to help these groups respond to the COVID-19 pandemic.

KEYWORDS

COVID-19; coronavirus; small-scale fisheries; coastal communities; vulnerability and resilience

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Introduction: the spread and fallout of COVID-19

At the time of this writing (April 2020), it has only been a few months since the first alarm bells went off that COVID-19, a novel coronavirus infection, was rapidly spreading and altering life in China (Wang et al. 2020). As its health risks and high mortality became more apparent, first Wuhan city and then Hubei province in China implemented lockdowns and travel restrictions. Because this occurred during the Chinese New Year, demand for luxury seafood declined and markets collapsed for Canadian and American lobsters, Australian crayfish, Vietnamese shrimp and many other fisheries (Tester 2020; Dao 2020; Taunton and Cropp 2020; Johnson 2020). This was a harbinger of massive and life altering changes that were about to unfold in small-scale fisheries (SSF) and coastal fishing communities around the world.

Since then, the virus has spread to almost all countries, leading to millions of cases and thousands of deaths (JHU 2020). Most countries have implemented social distancing measures, or more stringent lockdowns, in efforts to slow the spread of the virus and “flatten the curve” of hospitalizations and deaths. Places of work, worship, education and socialization have closed. International and domestic travel has been restricted. National economies have taken a major hit and unemployment numbers have soared – with dire predictions that the economic effects could be as bad as the Great Depression (IMF 2020).

Some groups and sectors are highly susceptible and vulnerable to the rapid social and economic effects of the COVID-19 pandemic. In this editorial, we focus on the implications of the pandemic for small-scale fisheries (SSF), including fishing, marketing and processing aspects of the sector, and coastal fishing communities (hereafter referred to as the ‘SSF sector’). Globally, there are an estimated 32 million directly employed as small-scale fishers, an additional 76 million employed in post-harvest jobs, and 81% of catch is used for local human consumption (The World Bank 2012). While SSF vary substantially by region and country, some defining characteristics include smaller vessels and engines, simpler or more traditional gears, proximity to the coast, smaller crews, family or local ownership, and importance for local livelihoods and subsistence (Kittinger 2013; Smith and Basurto 2019). The short- and long-term effects of COVID-19 risk further marginalizing many SSF and coastal communities who are already vulnerable to a myriad of social and environmental changes (Bennett et al. 2016; Freduah, Fidelman, and Smith 2017). Further, we urge governments, development organizations, NGOs, donors, the private sector, and researchers to rapidly mobilize in support of small-scale fishers, coastal fishing communities, and associated civil society organizations, and suggest actions that can be taken by each to help these groups to respond to the COVID-19 pandemic.

Implications: the direct and indirect effects of the COVID-19 pandemic

Negative consequences

The drastic implications that COVID-19 is having for the SSF sector are becoming obvious. We use examples from journalism, policy organizations, and public sources to provide insights into the impacts that the SSF sector is experiencing around the world.

Many fisheries faced complete shutdowns at the onset of social distancing restrictions if they were not considered vital to national food supply systems (e.g. Namibia (Immanuel 2020)). Such indiscriminate lockdowns on fishing activities arguably reveal a preexisting tendency to underplay the role of fish in food systems (Béné et al. 2015). In India, for example, fisheries were entirely closed down initially (contrary to farming), and only after significant pressure from civil society pointing to their vital role in food provisioning was fishing allowed to continue operations within some bounds (Mohan 2020). Even in instances where fishing is deemed an essential service, social distancing measures have precluded many small-scale fishers from going fishing due to vessel size or trading in close quarters in local markets (Orlowski 2020).

Knock-on economic effects from market disruptions have further impacted small-scale fishers' ability to pursue their livelihoods through 'twin disasters' of reduced demand and attendant collapse of prices. Export-oriented SSF have faced a vast reduction in demand (particularly from Asia, United States, and Europe), port closures, loss of access to cold storage, and cessation of shipping and air freight (Orlowski 2020). SSF geared at local markets are also affected. In the Philippines, slashed prices due to reduced demand from local restaurants and hotels have drastically reduced fishing activity, and factories are closed or operating at reduced capacity (Ocampo 2020). Around Lake Victoria, access to cold storage is more important now than ever to reduce fish waste and loss and maintain local food security (Kibiti 2020). In Fiji, the temporary closure of interisland ferry transport minimized the spread of the disease to rural areas, but has cut off access for some to urban and semi-urban markets (author knowledge, SJ & SM).

Fishers, processors and sellers also face risks of COVID-19 spread and infection, and thus have to make difficult decisions – feeding their families or risking exposure. Fishing communities and ports could potentially become “hotspots” for rapid infection due to the migratory nature of fishers and frequency of international visitors (FAO 2020). Access to health services in rural fishing communities is difficult even under normal circumstances (Orlowski 2020), and thus these locations likely have a harder time accessing testing, treatments, and sanitation supplies needed to adequately address COVID-19 spread and infection (CFFA 2020a).

Existing vulnerabilities of some groups or individuals, related to global structural, social and economic inequality, can exacerbate the health, economic, and other impacts of COVID-19. For example, migrant fishers face combined stress from lost income, inability to support families, shortage of basic necessities and exclusion from government relief schemes. Reports from India indicate many migrants are stranded on vessels or in harbors, unable to return home, living in cramped living conditions without adequate water or food (Pandey 2020). In SSF, women comprise 80–90% of the post-harvest sector (Holmyard 2020), and work in close proximity in processing facilities and retail, putting them at higher risk for COVID-19 (International Organization for Women in the Seafood Industry 2020). In processing plants worldwide, women tend to occupy temporary and lower-paid positions, do not have access to social protections after losing their jobs, and are more likely to be laid off (Orlowski 2020, International Organization for Women in the Seafood Industry 2020) Furthermore, in humanitarian crises like COVID-19, gender-based violence increases (Harper et al. 2020). Children

may be vulnerable to increases in child labor and abuse, as schools close, formal economies are restricted, and parents fall ill (Kundu 2020; Harvey 2020). Finally, rural and isolated Indigenous communities are particularly at risk as they may have reduced immunity and access to healthcare. More than a dozen Indigenous groups have confirmed COVID-19 cases across the Americas, and many have opted to close access to their reservations (Turkewitz 2020).

Political, economic, social, environmental and climatic conditions intersect to exacerbate effects of COVID-19, particularly for the most vulnerable (North African Food Sovereignty Network 2020). COVID-19 is a ‘crisis within a crisis’ in food insecure countries (UN News 2020). Some predict that the number of people worldwide affected by food insecurity will double as a direct result of the pandemic (Welsh 2020). Communities across West Africa now face the combined effects of COVID-19, chronic hunger, conflict, and climate change (Africa Press Office 2020). Tropical Cyclone Harold (category 4–5) hitting the Solomon Islands, Vanuatu, Fiji, and Tonga in April 2020, has raised issues related to the opening of evacuation centers without adequate sanitation or social distancing capacity (Du Parc and Spieth 2020) and access to international aid with closed borders (Gunia 2020).

There are also likely reverberating impacts on the marine environment. Decreased human observer coverage and lapses in monitoring and enforcement may be leading to increased occurrence of Illegal, Unreported and Unregulated (IUU) fishing and incursions into areas used by SSF (Thomson 2020; CFFA 2020c). In both Argentina and Indonesia, for example, there are reports of heightened illegal fishing activity by foreign vessels, as government priorities have shifted toward pandemic control, which could have direct impacts on fish stocks and indirect impacts on SSF (Gokkon 2020, Watts 2020). Furthermore, in many places such as the Caribbean that are highly dependent on tourism, declines in global travel will have devastating impacts on local livelihoods and likely lead to increased pressure on local resources to meet food and livelihood needs (Hoffman 2020).

Positive initiatives and outcomes

While most of the news is dire, there are some bright spots as the SSF sector and their allies have taken action to respond. There are numerous examples of food sharing, as SSF focus their resources and capacity to make food security contributions within their communities. In Oaxaca, Mexico, local fishers are contributing their time and boats to provide 50–60 tons per week of free seafood for their communities (Ramirez 2020). In Indigenous communities on the British Columbia coast, people are turning to the sea and land for food for themselves and to share (Wood 2020). In Hawaii, the local food movement has grown substantially (Miles and Merrigan 2020), with fishers helping to supply vulnerable populations (elders) and food banks to bolster local food security (Moore 2020). And strong existing social networks in the Pacific Islands have facilitated food sharing since the onset of COVID-19 (Dacks et al. in press).

Worldwide, local food networks and community-supported fisheries (CSFs) have emerged to fill some of the gaps left by COVID-19 related market disruptions. As demand for direct delivery to households is increasing, SSF have been able to adapt

their distribution models to keep their production stable, creating and strengthening direct connections with local household consumers (Smith 2020). ABALOBI, a South African social enterprise that seeks to help empower small-scale fishing communities through the fisher-driven development of technology, has adapted its traceability platform and marketplace, to facilitate product sales and delivery to households in cities and in the fishing communities. It is fast-tracking further development of its platform for use in CSFs globally (ABALOBI 2020). In Maine, the CSF 'Local Catch Network' has seen an uptick in membership and sales, and consumers can consult a public registry of local fishers from whom they can buy seafood directly (Hollowell 2020). Smartfish, Inc., a sustainable seafood marketing enterprise in Mexico, has seen an increase in sales in recent months due to its ability to pivot primarily from supplying restaurants to home delivery and online sales (pers. comm., J. Van Cauwelaert/H. Peckham). In addition, Smarfish currently provides the only market opportunity for some of their partner cooperatives and remarkably they are able to maintain important price premiums. Nascent local market initiatives are also emerging to weather the crisis. For example, home delivery systems and online fish selling platforms have emerged in Seattle (Hama Hama 2020), Ghana (CFFA 2020b), and the UAE (Shaaban 2020). Furthermore, in Sri Lanka fisher cooperatives sought and found international support to step-up efforts to use the lock-down to rebuild local supply chains as imports have fallen and private traders' mobility is curbed (author knowledge, JS).

Strong collective action within and across small-scale fishing communities has manifested in several ways. Fishers have acted collectively to reassert their rights to food, livelihoods, or safe working conditions, pushing back against government response to COVID-19, and have leveraged relationships and collaborations with their government counterparts to continue fishing. For example, following a week of negotiations with the Department of Fisheries, the South African Small-scale Fisheries Collective successfully advocated for migratory small-scale fishing activity to resume amidst lock-down measures (CFFA 2020d). In Newfoundland, Canada, the Fish, Food, and Allied Workers Union facilitated a blockade to divert out-of-province crab from entering the local processing plant, until safe working conditions were guaranteed and fair prices negotiated (CBC News 2020). And the Fijian Government has recognized the importance of SSF to local food security, allowing the sector to fish during curfew hours (Deo 2020).

Finally, while in some places there is evidence of increasing IUU, in other places declines in fishing pressure, particularly by legal industrial fleets, may allow fish stocks with more resilient life histories to recover, with important indirect effects for the small-scale sector. For example, the combination of decreased demand, lower prices, and lockdowns on fisheries in many places means that boats are staying in port and fishing is reduced by as much as 80% (Korten 2020). If this continues, COVID-19 could be a *de facto* moratorium on heavily fished stocks similar to what happened after World War II (Holm 2012). For small-scale fishers, this could potentially allow for recovery of stocks they otherwise compete over with the industrial sector. For instance, the lock-down and labor shortages have caused a contraction of the Indian trawler and fishmeal industry, providing at least some relief to marine ecosystems and possibly benefits for SSF in the longer run (Jigeesh 2020; John 2020).

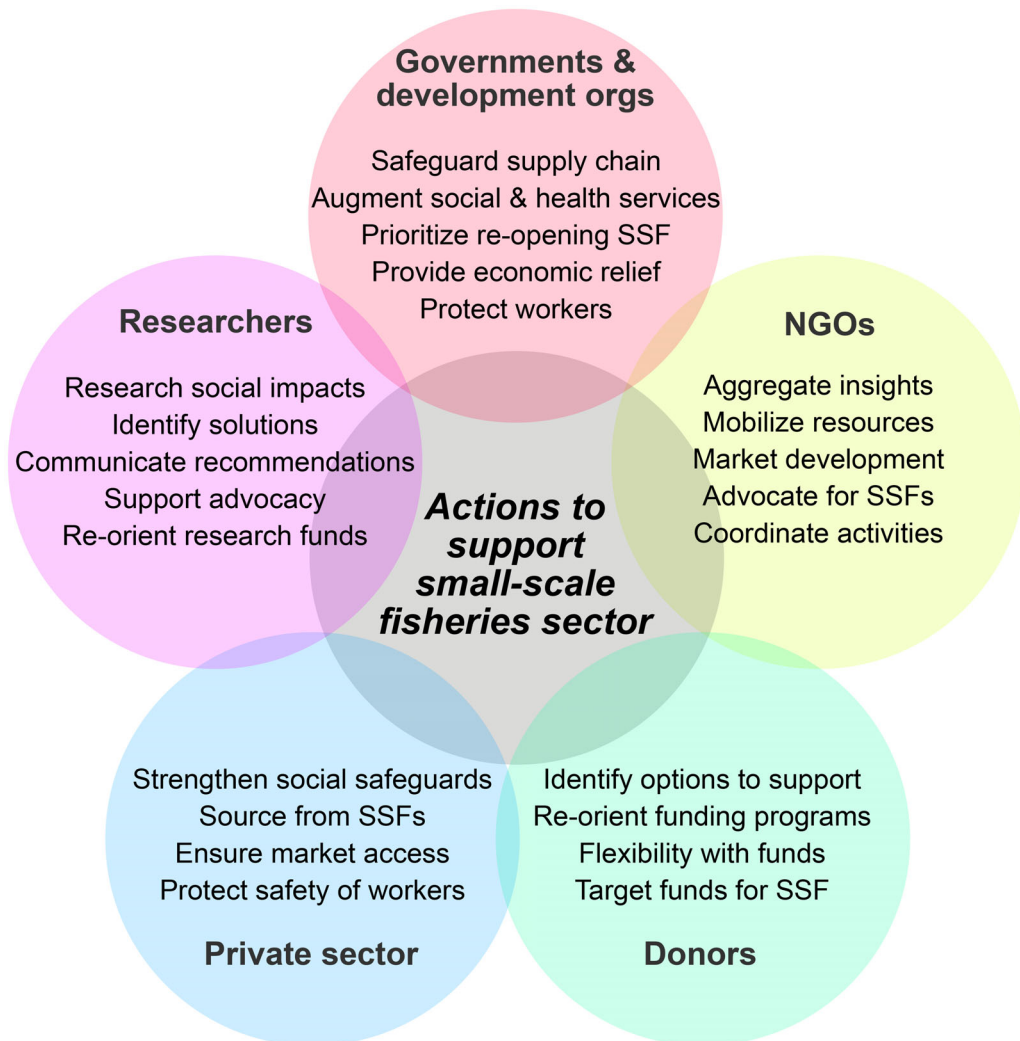


Figure 1. Examples of actions that governments and development organizations, NGOs, donors, the private sector, and researchers can take to support the small-scale fisheries sector.

These positive initiatives provide opportunities upon which to build. Yet, the COVID-19 pandemic is a long way from over and these anecdotes from around the world do not paint the full picture of what is currently happening or the longer-term effects in the months and years ahead.

Action: mobilizing in support of SSF and coastal communities

While our understanding of the implications of the pandemic is still incomplete, there is an urgent need to coordinate, plan and implement effective short- and long-term responses to this unfolding crisis. The foundation for this is already present in existing and new efforts by multilateral and international organizations, such as the United Nations Food and Agriculture Organization's (UN FAO) SSF Program, the

International Labor Organization's provisions for protecting laborers under COVID-19 (ILO 2020), by civil society organizations (e.g. International Collective in Support of Fishworkers (ICSF); World Forum of Fisher Peoples (WFFP)) and research consortia (e.g. the Too Big To Ignore research initiative; Seafood Nutrition Partnership). Civil society groups (e.g. ICSF, WFFP, Locally Managed Marine Area Network) and researchers are reaching out to their members and partners, identifying urgent issues and advocating for immediate actions by governments. International NGOs are coordinating with coastal community partners and local organizations to aggregate stories and mobilize relief efforts. Some governments have identified measures that the SSF sector can take to stay safe and remain in operation, created financial programs to support the seafood sector, or extended unemployment programs for fishers. Yet, we remain concerned that the collective response thus far is insufficient to meet the scale of the impacts that are being experienced by the SSF sector.

Thus, we urge governments, development organizations, NGOs, donors, the private sector, and researchers to rapidly mobilize in support of small-scale fishers, coastal fishing communities, and associated civil society organizations (Figure 1). Below, we highlight examples of actions that can be taken by each group to help respond to the COVID-19 pandemic.

- Governments and development organizations have a substantial role to play in: creating targeted economic relief packages, aid and loan forgiveness for SSF and fishworkers in the post-harvest sector; providing support to local social organizations and bolstering local food networks; maintaining health services and augmenting supplies in rural areas; prioritizing the re-opening of SSF and production facilities to provide food security and livelihoods to coastal populations (when deemed safe); protecting workers from COVID-19 and exploitation, and supporting efforts to safeguard supply chains, purchase seafood for institutional use (e.g. hospitals, prisons, schools), and increase local sales (e.g. direct marketing initiatives, door-to-door deliveries, community supported fisheries).
- NGOs can: aggregate insights from across field sites and country programs; engage and advocate for the needs of civil society organizations; mobilize resources and funding to support coastal community partners; assist in monitoring impacts to SSF; and support responsible market development for fishers and communities to provide economic and subsistence security. NGOs should coordinate activities and leverage collective platforms (i.e. NGO SSF Forum), because current efforts are fragmented.
- Donors (public and private) need to: rapidly identify how they can support the sector during this time of change; allow flexibility with already allocated funds; re-orient future funding portfolios to mitigate the short-term impacts of the crisis and build long-term resilience to future shocks; decrease application requirements and turn-around times to release funds; and ensure that funding is actually reaching the organizations and groups that need it.
- The private sector can help support SSF and coastal communities. Seafood businesses have the responsibility to ensure the health and safety of workers along the supply chain, and should strengthen social safeguards in times of crises such

as disease pandemics, particularly for those vulnerable to exploitation. Specifically, buyers should stay engaged with suppliers sourcing from SSFs, working to maintain existing relationships. Distributors should ensure trading patterns are maintained or transformed in a way to ensure SSF can have market access to move their products. And, as prices have collapsed for many seafood commodities due to loss of demand, producers should work to position themselves for relief funds and other aid programs.

- Researchers working with SSF and in coastal communities, can use their expertise, resources and networks: to conduct research on the immediate economic, social and food security impacts of the pandemic (while following university and community research and social distancing protocols to respect community safety) (e.g., COBI, 2020); communicate about the issues and put forward recommendations via different avenues (e.g., policy briefs, media outreach, editorials, blogs, podcasts); support the advocacy efforts of civil society and community-based organizations; consider how research funding might be re-oriented to support the COVID-19 response; and, identify solutions and contribute insights to planning effective and appropriate policy, programmatic, and funding responses. There will be a need for longer-term and more reflexive research - including topics such as: residual socio-economic impacts, implications for long-term food security, factors leading to resilience or vulnerability, effects on resource management and the environment, and lessons for future pandemics. However, the immediate priority should be action-oriented research that meets needs identified by community partners (Chevalier and Buckles 2019). In the short term, this may need to occur remotely – for example, via phone interviews, online surveys, or virtual focus groups – unless deemed safe to do otherwise.

Key considerations for all organizations and individuals aiming to support appropriate and effective responses include: ensuring we are not placing additional burdens or risks on these groups; engaging and prioritizing the voices of local SSF and communities in designing responses; providing specific support to vulnerable and often neglected groups; ensuring that responses respect and do not undermine Indigenous and local people's rights to harvest, consume and sell fish from their waters (WCS 2020), and ensuring reforms are not oversimplified solutions based on preexisting agendas or worldviews that do not align with local contexts. Lastly, it will be important to consider the medium and long-term impacts of short-term responses. In the long run, cross-sectoral action will be needed to help rebuild capacity and resilience of SSF and coastal fishing communities.

Conclusion

Our analysis suggests that the COVID-19 pandemic presents major challenges for the SSF sector globally. While there are some positive initiatives and outcomes, these are likely far outweighed by the negative consequences, especially for groups that are most vulnerable to these changes. Furthermore, the crisis is far from over. The short-term impacts that we have highlighted here are likely to be followed by long-term crises

related to economic hardships and global food crises. Globally, the SSF sector plays a vital role in food and livelihood security. Thus, we emphasize the need for rapid mobilization by all parties in support of the SSF sector. Short-term responses must be swift and targeted to the most vulnerable. In the longer-term, there is a need to develop a coordinated response and support network to transform existing institutions, supply chains, and food systems in ways that improve conditions and resilience of the SSF sector.

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