



Systemic Change Story

Developing resilience and sustainability in Sri Lanka's Blue Swimming Crab system



The Change

The Blue Swimmer Crab (BSC) sector in Sri Lanka is showing signs of systemic change, having transformed from a locally caught and consumed seafood to a certified export commodity in the last decade. MDF has documented this collaborative success in a 2018 case study. More recently, MDF increased the resilience of the market system by enabling government departments to actively participate in responsible wild BSC stock management. The move ensures the sector's ongoing sustainability. A well-managed fishery (the only one of its kind on the island) has emerged from what began as an effort to stimulate market linkages and employment in the northern BSC sector.

In 2021, MDF organised a training and workshop series for Fishery Officers as part of the Fishery Improvement Project (FIP) in the northern districts of Mannar, Kilinochchi and Jaffna. The trained Fishery Officers are now helping communities understand the importance of adopting sustainable practices for the long-term resilience of their incomes.



Context

Post-conflict, the Northern Province experienced high rates of poverty, particularly for those engaged in farming and fishing, along with a high proportion of female-headed households. Generating entrepreneurial opportunities and jobs was crucial to address these challenges. In 2015, MDF started investing in expanding the seafood processing sector in region with the aim of creating new jobs for women. At that time, only a fraction of seafood caught in northern waters was processed locally despite the catch being reliable, high quality and of sufficient volume for export.

As existing processors expanded and new processors were established in the region, business dynamics changed significantly. The new work increased demand for BSC, which made sourcing crab more competitive and drove up the price from 2017 onwards. This financially benefitted 21,000 fishing households.

However, MDF's monitoring exercises indicated that the increased demand for crab meat was putting pressure on the wild crab stocks. Lucrative prices and increased demand from canned meat companies incentivised fishermen to catch immature BSC, threatening the sustainability of the catch.



Constraint

The primary constraint in the BSC system was limited local processing. Fresh seafood transported long distances deteriorated in quality while incurring greater cost, making export infeasible. When MDF started intervening in the BSC market, only one large processor-exporter existed in the Northern Province. Without significant competition, the price of crab remained low and the opportunity to increase exports and create new jobs remained unrealised.



Adopt/Adapt

MDF and other programs invested in the Northern Province, setting up new processing facilities, training workers and establishing sourcing networks that could maintain high quality. An export market for canned crab opened, creating intense demand for fresh crab among processors. With this demand, landing-site prices rose, benefitting thousands of fishing households.

MDF's initial partnership supported the second-mover seafood processor-exporter in the North in training their workers and establishing sourcing networks. With MDF's support, the partner was able to operationalise a defunct seafood processing facility. This indicated that the partner had adopted the intervention activities.

Although the intervention with Coolman initially focussed on sardines instead of BSC, the MDF partner adapted as sardine fishing became restricted. Coolman diversified into crabs, establishing links with a canned crab-meat buyer. This indicated that the partner was committed to the intervention beyond MDF's support and was continuing to innovate and invest.

Expand

MDF replicated this model with another partner to operationalise an additional seafood processing facility. By the time this intervention was up and running, the crab market was booming, with intense competition between exporters. As crabs are a wild-caught commodity, growth in the sector needed to be managed in a way that stock levels were not threatened.

MDF's analysis found that if there was price transparency across landing sites, strong international demand and competition among domestic processors, fishers would continue to receive high prices for their BSC catch. MDF planned to monitor these factors and not intervene unless a part of the system showed gaps.

Respond

The Seafood Exporters Association of Sri Lanka (SEASL) and the National Fisheries Institute's Crab Council began the FIP in 2013 to assess and bolster wild BSC stocks. The FIP successfully achieved a sustainability rating of 'good alternative,' becoming the only BSC fishery in the Asia Pacific with this certification.

However, MDF and other observers were concerned that the increasingly common practice of catching juvenile crabs would threaten long-term stock sustainability. The export market continued to grow, incentivising local processors to source as much as they could. The nature of the product – crab meat – offered few guardrails against irresponsible practices.

MDF assessed that the system, having increased incomes for thousands of households, lacked resilience. If juvenile crab continued to be caught, Sri Lanka not only risked losing its 'good alternative' certification but also the future availability of crab stocks to sustain the livelihoods of fishing households. This prompted MDF to understand gaps in the fishery management and design an intervention to strengthen the FIP.

MDF recognised the disconnect between the work done under the FIP and government authorities tasked with fishery management. The Fishery Officers were not systematically monitoring catching practices at landing sites and as a result, were not preventing the collection of juvenile crabs for sale. The private-sector-led FIP, at that point, lacked practical mechanisms to monitor and manage the fishery.

MDF diagnosed this as a capacity gap and invested in expanding the FIP. MDF supported capacity and skill building activities of Fishery Officials and other public officials working for the Department of Fisheries and Aquatic Resources (DFAR) as well as the National Aquatic Resources Research and Development Agency through the FIP. Individuals were trained on crab handling, crab carapace width measurement, crab identification, stock assessment and proper data management and analysis techniques. Thanks to these informative sessions, Fishery Officers were better able to draft and enforce relevant, effective regulations.



Current status

Fishery Officers in the North actively contributed to the annual BSC stock assessment in 2021, which also enabled authorities to make evidence-based decisions about fishery management. MDF witnessed Fishery Officers actively using the newly learned data analysis tools and stock identification skills. The insights gained were shared with fishermen and fishing communities to create awareness and educate them on the best size of crab to catch. Fishery Officers based in DFAR Jaffna have acknowledged that they are able to identify male and female crabs, analyse their breeding seasons and understand the technical reasons that result in stock depletion. MDF field visits indicate that sustainable practices are gradually being adopted as reports from Fishery Officers have confirmed that by the end of 2021, they observed less immature crab catch in landing sites.

On the regulatory front, DFAR drafted a regulation for BSC fishing in March 2021, which has been approved by the Minister of Fisheries and Aquatic Resources and submitted to the Attorney General's (AG) department in April. The new regulation proposes a minimum mesh size of 4.5 inches and a maximum six ply for BSC fishing and a minimum purchase weight (100g) for seafood exporters and their agents.

Despite a dip in prices due to COVID-19 in 2020, the sector recovered and gained momentum in 2021. Today, prices are above the 2016 baseline level statistics. Trading operations are back to the pre-pandemic level with continuous competition among processors to source crab.

MDF's work in BSC has been a journey, from creating market access to delivering improved fishery management. The work highlights that systemic change can be achieved through continuous monitoring and interventions that focus on behavioural change at grassroots level.