

## FIP SUMMARY 2019 (September)

### SRI LANKA

#### STAKEHOLDERS

<b>Private Sector:</b>	<b>Taprobane Seafood Group Pvt Ltd</b> <b>CM Blue Crab Pvt Ltd</b> <i>through the Seafood Exporter's Association of Sri Lanka (SEASL)</i>
<b>Management:</b>	Jaffna District Fishery Management Committee Kilinochchi District Fishery Management Committee Mannar District Fishery Management Committee Puttalam District Fishery Management Committee
<b>Government:</b>	Department of Fisheries & Aquatic Resources (DFAR) National Aquatic Research Agency (NARA)
<b>Civil Society:</b>	<b>Jaffna</b> Fishermen's Cooperative Societies & Unions (Kayts / Velenae / Neduntivu / <b>Karainagar</b> ) <b>Kilinochchi</b> Fishermen's Cooperative Societies & Unions (Pooneryn) <b>Mannar</b> Fishermen's Cooperative Societies & Unions (Manthai West, Mannar Town, Nanadan and Musalai) <b>Puttalam</b> Fishermen's Cooperative Societies (Wanathawilluwa, Puttalam, Kalpitiya)
<b>NGO / AID:</b>	<i>In chronological order</i> - UN-International Labour Organisation; International Organisation for Migration; FAO UN Bay of Bengal Large Marine Ecosystem Programme; The Asia Foundation, Santa Monica Seafood LLC / FishWise, Chicken of the Sea Frozen Foods; <b>CM Canning Pvt Ltd; Harbor Seafood LLC</b>
<b>FIP Manager:</b>	Steve Creech

#### SCOPE

Area:	Indian Ocean; Palk Bay (Bay of Bengal) and Gulf of Mannar
Gear:	4½" (114 mm) bottom-set nylon crab nets

## SUMMARY – TO SEPTEMBER 2019

**Overview:** On 19<sup>th</sup> December 2018, the Sri Lankan blue swimming crab fisheries in the Palk Bay and the Gulf of Mannar became the first fisheries in Sri Lanka and the only BSC fisheries in South and South East Asia to be recommended by the Monterey Bay Aquarium’s Seafood Watch Programme as a Good Alternative / Yellow Rating. The Palk Bay fishery scored 2.337 and the Gulf of Mannar fishery scored 2.208 (see table below)

Fishery	Gear	Rating	Overall	Target Species	Other Species	Management	Habitats
Palk Bay	Gillnets & Entangling nets (Unspecified)	<b>GOOD ALTERNATIVE</b>	2.337	3.318	1.00	3.00	3.00
Gulf of Mannar	Gillnets & Entangling nets (Unspecified)	<b>GOOD ALTERNATIVE</b>	2.208	2.644	1.00	3.00	3.00

The members of the FIP are now working to maintain and where necessary further the ratings of the two fisheries, to move the overall scores from GOOD ALTERNATIVE TO BEST CHOICE before the next assessment begins in June 2021.

### Stock Assessment

Five annual stock assessments (see below) have been completed covering each of the two management units (Palk Bay / Gulf of Mannar), using a length based approach to spawning potential (LB SP). The annual stock assessments were conducted by pelagikos pvt ltd and the Department of Fisheries & Aquatic Resources (DFAR), with financial support from members (i.e. Taprobane Seafood Group Pvt Ltd / Fresh Catch Pvt Limited) and partners of the FIP (i.e. NFI CC, UN-ILO / UN-IOM).

The results of the 5<sup>th</sup> annual stock assessment suggest that both fisheries are being maintained at a level equivalent to a sustainably managed crab fishery (SP = > 30%)

		2015	2016	2017	2018	2019
Palk Bay	LBSPR	0.32 (0.31 - 0.33)	0.44 (0.43 - 0.45)	0.47 (0.46 - 0.49)	0.45 (0.43 - 0.47)	0.42 (0.40 - 0.43)

		2015	2016	2017	2018	2019
Gulf of Mannar	LBSPR	0.31 (0.29 - 0.33)	0.46 (0.42 - 0.5)	0.41 (0.39 - 0.43)	0.37 (0.35 - 0.39)	0.57 (0.54 - 0.59)



The Taprobane Seafood Group (TSG) and the National Fisheries Institute Crab Council (NFI CC) co-financed the cost of conducting the 5<sup>th</sup> annual assessment of the status of the BSC stock in the Palk Bay and Gulf of Mannar fisheries in 2019.



The annual stock assessments were been conducted with technical assistance from Dr. Jeremy Prince (Biospheric Pvt Ltd / Murdoch University, Perth, Western Australia) and Dr. Adrian Hordyck (University of British Colombia, Canada). LB SP is a rapid and cost-effective stock assessment method that is intended to help fisher communities and formal fishery regulators (i.e., DFAR / NARA) to manage and monitor wild-caught resources. The Australian government's Department of Aid and Trade sponsored Dr. Prince and Dr. Hordyk to provide technical assistance to DFAR, NARA and the FIP on the LBSP approach and its application in the Sri Lankan BSC fishery, through the International Labour Organization of the United Nations (ILO UN) local empowerment through economic development (LEED) project, in 2015.

NARA, the national entity responsible for fishery science, completed the first ever scientific investigation of the population biology of the blue swimming crab in Sri Lanka in June 2016. Key information on the life history, biology and ecology of BSC in Sri Lanka is contained in the report. The officers and staff led by Dr. Sisira Haputhanthri – Head, Marine Biological Resource Division – presented four papers at the NARA Annual Scientific Sessions in June 2016.

## **Ecosystem Management**

**Non-Target Species:** The FIP completed a further **two** non-target species studies in the Palk Bay fishery and **four** new non-target species studies in the Gulf of Mannar fishery during the first semester of 2019. The total number of non-target species studies conducted now stands at eighteen (18) for the two fisheries. The ecological impact of BSC fishing on non-target species studies were conducted by undergraduate students from Uva Wellesa University, and Ocean University. Eight undergraduates have now contributed data to the FIP's study of the ecological impact of BSC fishing on non-target species in each fishery, with financial and technical support from the FIP, focusing on ecological impacts of the fishery. Technical Reports analyzing the new data and updating the reports written in 2018 (see below) will be completed in the 2<sup>nd</sup> Semester.

By the end of 2018 twelve (12) non-target species studies had been completed by the FIP sampling more than 1,250 BSC catches from the two fisheries. 121 non-target species have so far been identified in the catch of BSC fishermen from the Palk Bay, while 135 NTS have so far been recorded from the Gulf of Mannar fishery. According to an analysis of the data collected by students and pelagikos pvt ltd, there are no 'MAIN' primary species, so SG80 is met by default for all the MSC primary species Performance Indicators (PIs). The Productivity / Susceptibility Analysis (PSA) conducted by the FIP for 'MAIN' secondary species suggest that the conservation risk is low.

Work commenced in 2018 to address issues related to different stock scenarios for key NTS. According to the conclusions of the PSAs, species management is not required, but for

species which are discarded, the fishery is required at a minimum to review options for reducing unwanted catch of these species. This will be investigated further in 2019.

Information is available on the catch from sampling, sufficient to support a partial strategy if required, assuming that the NTS data will be updated periodically. Periodic updating of the data is ongoing. On the basis of the data currently available, the FIP concludes that the BSC fishery is 'highly unlikely' to hinder recovery and rebuilding of ETP species, notably turtle and dugong populations. 'Measures' in place (the nature of the fishing gear), are likely to work via 'plausible argument', but for the fishery to reach SG80 requires a strategy which should be specifically-designed to evaluate and minimise impacts on the species concerned (i.e. turtles and dugongs) (even if they are not actually concerned). Information is sufficient to determine with reasonable confidence that impacts are small and the measures in place (the nature of the fishery) does not require much information. Better information is required, however, to develop a 'strategy' (or to determine definitively that one is not required). This is underway, since the FIP is mapping dugong deaths in the Gulf of Mannar and will continue in 2019.

**Habitats & Eco-systems:** No new actions were implemented to improve the fisheries' score of ecological impact on habitats, beyond those already generated by Jeewantha Bandara, a final year undergraduate student at the Department of Zoology, Colombo University in 2017 / 2018. Jeewantha used satellite data and community maps of marine habitats and BSC fishing grounds to build a GIS platform on which to map the fishing activities of BSC fishermen. Jeewantha used the "*Net Finder*" app designed and developed by Dr. Sandaruwan and his team at LK Simulations Pvt Ltd and smartphones to track the fishing activities of BSC fishermen.

In 2018 Jeewantha joined the FIP as research associate and extended his field research to cover all BSC landing centres in both fisheries using both GPS and community based data on the location of critical marine habitats and BSC fishing grounds. His observations from the tracking GPS for the blue swimming crab fishery of the Gulf of Mannar and the recent collection of community-based fishing ground data shows low to very low potential overlap of bottom-set fishing gears with the marine habitats of the area.

The data and information collected to date by Jeewantha and the pelagikos pvt ltd suggests that the BSC fisheries in the Gulf of Mannar and in the Palk Bay has a low to no level of potential interaction with the three key marine habitats and well below the level of interaction associated with an ecological risk to the habitats concerned (>50% of the total area) for ecological sustainability.

## **Fishery Management**

The FIP was unable to make any new progress on the introduction of a regulation for BSC fishing, a schedule for the export / impact of BSC products or the fishery management areas discussed and proposed by members of the FIP in 2018, during the 1<sup>st</sup> Semester of 2019. The Director General refused to accept the regulation, due to the prohibition of collapsible traps to harvest crabs, even though the draft regulation has been approved by the Legal Draftsman at the Attorney General's Department in 2018. The FIP did not follow up on the export schedule or the fishery management areas declaration during the reporting period.

The FIP continue to support the District Fisheries Offices in the four districts to improvement compliance with the Fisheries Act No. 1 of 1996 and the voluntary Code of Conduct for blue swimming crab fishing, in the first semester of 2019. Boat and engine registration was completed in all landing centres. Fishery Inspector Division meetings were held in every Fishery Inspector Division, once during the 1<sup>st</sup> Semester of 2019. These meetings form the basis of bringing BSC fishery management down to the village level and were used as an opportunity to both explain the progress of the FIP to BSC fishermen and discuss issues affecting fisheries.

The FIP has continued to support BSC fishermen's efforts to end illegal fishing by Tamil Nadu trawlers in Sri Lankan waters first semester of 2019. The DFAR is now prosecuting Tamil Nadu trawlers arrested for IUU fishing in Sri Lankan waters under the amendment to the Fisheries (Regulation of Foreign Fishing Boats) Act No. 1 of 1979, which among other things changed the jurisdiction of the Act from the High Court to the Magistrate's Court. The Act was first used to prosecute Tamil Nadu trawlers in August 2018. Since then 15 vessels have been charged and prosecuted under the Act. Since then prosecutions have been successfully completed by the DFAR in Jaffna, Kilinochchi and Mannar Magistrate's Courts.

The FIP continued to support BSC fishermen's call for the implementation of the 2017 Act proscribing mechanized and motorized bottom trawling in Sri Lankan waters during first semester of 2019. The success of northern fishermen's campaign to end IUU fishing by Tamil Nadu trawlers in Sri Lankan waters has created an opportunity for local boat owners to start mechanized trawling in the areas vacated by the Tamil Nadu boats. Increasing numbers of local boat operating illegal trawl nets poses many threats to the BSC fishery, restricting access to BSC fishing grounds, increasing mortality of juvenile BSC caught in trawl nets and destroying key marine habitats such as seagrass beds. Destructive fishing practices like mechanized bottom-trawling have a 'knock on' effective on the wider fishing community. As the impact of destructive fishing is felt throughout the ecosystem, more and more small scale fishermen will be forced to use illegal methods, simply to make a living. The FIP will continue to lobby and campaigning for an end of destructive trawl net fishing in the grounds of BSC fishermen in the Palk Bay and Gulf of Mannar in second Semester.

FIP TABLE

FIP ACTIVITY	OBJECTIVES	COMPLETED	NEXT	PARTNER/S
<b>Stock Assessment</b>				
<b>Gulf of Mannar Fishery</b> <i>LBSP 2019</i> LBSP 2018 LBSP 2017 LBSP 2016 LBSP 2015	<ul style="list-style-type: none"> <li>• Harvest Strategy/Mgmt inputs</li> <li>• Harvest Control Rules</li> <li>• Target Ref. Points</li> <li>• SPR Stock Status</li> <li>• Conduct rapid fishery assessment for data-deficient, small-scale fisheries.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>5 x SPR Assessments</i></li> <li>• <i>Harvest Strategy/Mgmt inputs</i></li> <li>• <i>Harvest Control Rules</i></li> <li>• LBSPR Reference Points established</li> <li>• Data collection</li> <li>• Proposal/Work Plan/Budget</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Address industry demand for very small / immature crabs issue with fishermen, manufacturers and regulators</i></li> </ul>	<ul style="list-style-type: none"> <li>✓ IOM</li> <li>✓ NFI CC</li> <li>✓ ILO UN</li> <li>✓ Taprobane Seafood Group Pvt Ltd</li> <li>✓ Fresh Catch Pvt Ltd</li> </ul>
<b>Palk Bay Fishery</b> <i>LBSP 2019</i> LBSP 2018 LBSP 2017 LBSP 2016 LBSP 2015	<ul style="list-style-type: none"> <li>• Scientific basis for Management</li> <li>• Catch/Effort</li> <li>• Stock Status</li> <li>• Biological baseline info</li> </ul>	<ul style="list-style-type: none"> <li>• <i>5 x SPR Assessments</i></li> <li>• <i>Harvest Strategy/Mgmt inputs</i></li> <li>• <i>Harvest Control Rules</i></li> <li>• LBSPR Reference Points established</li> <li>• Data collection</li> <li>• Proposal/Work Plan/Budget</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Address industry demand for very small / immature crabs issue with fishermen, manufacturers and regulators</i></li> </ul>	<ul style="list-style-type: none"> <li>✓ NFI CC</li> <li>✓ ILO UN</li> <li>✓ Taprobane Seafood Group Pvt Ltd</li> <li>✓ Fresh Catch Pvt Ltd</li> </ul>
<b>Palk Bay Fishery</b> Scientific Study of SLBSC Population Biology NARA (2014 - 16)	<ul style="list-style-type: none"> <li>• Four scientific papers</li> <li>• Final Report</li> <li>• Mid-year report</li> <li>• Data Collection</li> <li>• Proposal/Work Plan/Budget</li> </ul>	<ul style="list-style-type: none"> <li>• Stakeholder review of results and management inputs</li> <li>• Complete data collection</li> </ul>	<ul style="list-style-type: none"> <li>✓ NFI CC</li> </ul>	

FIP ACTIVITY	OBJECTIVES	COMPLETED	NEXT	PARTNER/S
<b>Ecosystem Management</b>				
<p><b>Palk Bay</b> GPS Habitat Study Non Target Species Studies</p> <p><b>Gulf of Mannar</b> GPS Habitat Study Non Target Species Studies</p>	<ul style="list-style-type: none"> <li>Determine whether management <i>strategies</i> needs to be considered for <i>habitats</i> and non-target species</li> <li>Assess vulnerability of by-catch, retained and ETP specie <i>and habitat</i> interactions for crab net fisheries</li> <li>Establish pragmatic and efficient methods to assess bycatch, retained, and ETP <i>and habitat</i> interactions</li> </ul>	<ul style="list-style-type: none"> <li>Habitats Research Report (pelagikos)</li> <li><i>Updated NTS Survey Research Report (pelagikos)</i></li> <li>Habitats Survey Research Report (pelagikos)</li> <li>NTS Survey Research Report (pelagikos)</li> <li>Dissertation VIII (UWU - Dilukshini)</li> <li>Dissertation VII (OU - Hasmini)</li> <li>Dissertation VI (UWU - Subaha)</li> <li>Dissertation V (OU - Sangeetha)</li> <li>Dissertation IV (OU - Mihiri)</li> <li>Dissertation III (OOC - Jeewantha)</li> <li>Dissertation II (OU - Eranga)</li> <li>Dissertation I (UWU - Wathsala)</li> </ul>	<ul style="list-style-type: none"> <li>Review current available information</li> <li>Determine if management <i>strategies are needed</i> for <i>habitats</i> and non-target species</li> </ul>	<ul style="list-style-type: none"> <li>✓ NFI CC</li> <li>✓ Santa Monica Seafood / FishWise</li> <li>✓ Uva Wellasa University (UWU)</li> <li>✓ Ocean University (OU)</li> <li>✓ University of Colombo (UOC)</li> </ul>

FIP ACTIVITY	OBJECTIVES	COMPLETED	NEXT	PARTNER/S
<b>Fishery Management</b>				
<p><b>Palk Bay Fishery</b> Establish a collaborative fishery management mechanism supported by formal regulations to ensure the sustainable exploitation of BSC in the Palk Bay fishery</p> <p><b>Gulf of Mannar</b> Establish a collaborative fishery management mechanism supported by formal regulations to ensure the sustainable exploitation of BSC in the Gulf of Mannar fishery</p> <p>End IUU fishing by Tamil Nadu trawlers in Sri Lankan waters</p> <p>End destructive trawl net fishing in by Sri Lankan boats in Sri Lankan waters.</p>	<ul style="list-style-type: none"> <li>• Est. collaborative and inclusive fishery management body</li> <li>• Identify management goals</li> <li>• Est. fishery management framework based on good science</li> <li>• Petition for sovereignty of Sri Lankan waters with regard to Tamil Nadu trawler issues</li> </ul>	<ul style="list-style-type: none"> <li>• A regulation for BSC fishing in Sri Lanka has been drafted and approved by fishing communities, seafood exporters, the department of fisheries, <i>Attorney General's Department - but yet to be sent to parliament</i></li> <li>• A BSC Import / Export Schedule has been drafted and approved by fishing communities, seafood exporters, <i>the department of fisheries, Attorney General's Department - but yet to be sent to parliament</i></li> <li>• Fisheries Committees have</li> </ul>	<ul style="list-style-type: none"> <li>• Review data collection regimes, potential management implications, and set fishery management goals.</li> </ul>	<ul style="list-style-type: none"> <li>✓ NFI CC</li> <li>✓ Chicken of the Sea Frozen Foods</li> <li>✓ <i>Harbor Seafood LLC</i></li> </ul>

FIP ACTIVITY	OBJECTIVES	COMPLETED	NEXT	PARTNER/S
		<p>formed at the Fishery Inspector Division level.</p> <ul style="list-style-type: none"> <li>• Fisheries Management Areas have been proposed and agreed at the district level</li> <li>• District Fisheries Management Committees to be formed following the publication of a gazette for each Fishery Management Area</li> <li>• An amendment to the Fisheries (Regulation of Foreign Fishing Boats) Act to end IUU fishing by Tamil Nadu trawlers in Sri Lankan waters was passed in 2018 <i>and is being implemented since</i></li> </ul>		

FIP ACTIVITY	OBJECTIVES	COMPLETED	NEXT	PARTNER/S
		<p><i>January 2019</i></p> <ul style="list-style-type: none"> <li>• Lobbying to end IUU fishing by Tamil Nadu trawlers in Sri Lankan waters, <i>continues.</i></li> <li>• An amendment to the Fishery Act to proscribe bottom trawling in Sri Lankan waters was passed in 2017, but has yet to be implemented.</li> <li>• Lobbying to end destructive trawl net fishing by Sri Lankan vessels in Sri Lankan waters, <i>continues.</i></li> <li>• Development of BSC Fishery District Fishery Management Plans and Fishery Management</li> </ul>		

FIP ACTIVITY	OBJECTIVES	COMPLETED	NEXT	PARTNER/S
		<p>Meetings</p> <ul style="list-style-type: none"> <li>• Fishery Management planning commenced in 2016/2017 with the formulation of a Code of Conduct for Responsible.</li> <li>• Draft Harvest Control Strategy, Rules and Tools</li> <li>• Stakeholder meetings</li> <li>• Establish fishery steering committee with DFAR, NARA, SEASL, and Fisheries Co-ops</li> </ul>		

## RECENT PROGRESS

### MSC PRINCIPLE 1: STATUS OF THE STOCK

#### PROGRESS POINT 01 2019 STOCK ASSESSMENT - PALK BAY

The results of the 5<sup>th</sup> annual stock assessment conducted between March & May 2019 suggested that the fishery was currently being fished at or above a level consistent with a sustainably managed fishery (LBSPR = 0.2). A key issue highlighted by the stock assessment was the increase in very small (< 99 g) in the catch in the Palk Bay fishery, particularly in Kilinochchi District (38%). The 6<sup>th</sup> annual stock assessment in the Palk Bay fishery will commence in April and May 2020.

#### PROGRESS POINT 02 2019 STOCK ASSESSMENT - GULF OF MANNAR FISHERY

The results of the 5<sup>th</sup> annual stock assessment conducted in May and June 2019 suggested that the fishery was currently being fished at or above a level consistent with a sustainably managed fishery (LBSPR = 0.57). A key issue highlighted by the stock assessment was the increase in very small (< 99 g) in the catch in the Gulf of Mannar fishery, particularly in Puttalam District (15%). The 6<sup>th</sup> annual stock assessment in the Gulf of Mannar fishery will commence in April and May 2020.

### MSC PRINCIPLE 2: ECOLOGICAL IMPACT OF THE FISHERIES

#### PROGRESS POINT 03 NON TARGET SPECIES STUDY NO. 7 / 8 -PALK BAY FISHERY (PELAGIKOS PVT LTD)

Two more non target species were conducted in the Palk Bay fishery at Chettipalam and Velaipaddu by *Subaha Vijayakumaran* formerly an undergraduate student from Uva Wellessa University, working as a research assistant for pelagikos pvt ltd. The results of the two new studies will be added to the previous six non-target species studies in the second semester. The Palk Bay Non Target Species Report will be updated against the MSC Fishery Standard and the Seafood Watch Standard for Fisheries by *Subaha Vijayakumaran* in the second semester.

#### PROGRESS POINT 04 NON TARGET SPECIES STUDY NO. 6 / 7 / 8 / 9 -GULF OF MANNAR FISHERY (PELAGIKOS PVT LTD)

Four more non target species were conducted in the Gulf of Mannar fishery at Thalupaddu, Vankalai / Pookulam / Palugahathurai by *Subaha Vijayakumaran* formerly an undergraduate student from Uva Wellessa University and Jeewantha Bandara formerly an undergraduate student from Colombo University, working as a research assistants for pelagikos pvt ltd. The results of the four new studies will be added to the previous five non-target species studies in the second semester. The Gulf of Mannar Non Target Species Report will be updated against the MSC Fishery Standard and the Seafood Watch Standard for Fisheries by *Subaha Vijayakumaran* in the second semester.

**PROGRESS POINT 05 PALE-EDGED STINGRAY STUDY NO. 2 - MANNAR DISTRICT / GULF OF MANNAR FISHERY (UVA WELLESA UNIVERSITY)**

The pale-edged stingray (*TELATRYGON ZUGEI*) is one of the most common NTS observed in the catch from the bottom-set nets used by fishermen to harvest BSC in the two fisheries. The pale-edged stingray is rated **'Near Threatened'** on the International Union for Conservation of Nature's Red List<sup>1</sup>, even though there is no scientific data (e.g. age at maturity, longevity, average reproductive age, gestation time, reproductive periodicity, average annual fecundity, annual rate of population increase, natural mortality, growth rate, fishing mortality and population trend) to support this rating across any of its range. The species' distribution extends from the east coast of India throughout the Bay of Bengal and South East Asia to Japan. In Sri Lanka the pale-edged stingray is targeted by Sri Lankan fishermen in the Gulf of Mannar and Palk Bay using 5½" and 6" bottom-set nets. These nets also catch BSC.

Dilukshani Gayathry, also an undergraduate student from Uva Wellessa University, researched the stock status and size on maturity of the pale-edged stingray (*Dasyatis zugei*) at Thaluppadu landing centre in Mannar Town DS Division (Mannar District / Gulf of Mannar fishery) for her final year dissertation in 2018/19. Dilukshani sampled 1,404 pale-edged stingrays from the landings of BSC fishermen. 57% of the samples were female. Female disc width ranged from 93 mm to 260 mm. The average size was 172 mm. Size at first maturity was 164.3 mm. 95% of females were mature at 194.3 mm. The maximum fecundity observed was three embryos. Embryo size ranged from 57 mm to 75 mm.

**PROGRESS POINT 06 PALE-EDGED STINGRAY STUDIES 3 / 4 / 5 / 6 / 7 / PALK BAY & GULF OF MANNAR FISHERIES (PELAGIKOS PVT LTD)**

After completing her thesis studies, Gayathry joined pelagikos pvt ltd as a research assistant and collected more data on pale-edged stingrays from locations in the Palk Bay - Chettipalam and Velaipaddu - and Gulf of Mannar - Thalupaddu, Vankalai - fisheries. Jeewantah Bandara collected similar data for on pale-edged stingrays at Pookulam and Palugathurai in the Gulf of Mannar fishery. The data collected by Gayathry will be analysed by the FIP in and a technical report will be written in the second semester

<sup>1</sup> <https://www.iucnredlist.org/species/60160/104082989>

## MSC PRINCIPLE 3: MANAGEMENT OF THE FISHERIES

### PROGRESS POINT 08 DRAFT REGULATION FOR BSC FISHING

The draft regulation for BSC fishing approved by the Attorney General's Department in 2018, was rejected by the Director General Department of Fisheries & Aquatic Resources in April, following concerns about the prohibition of baited traps to harvest crabs in the regulation. The concern was raised by a seafood exporter piloting an octopus trap, unconnected with the crab fishery, but the DG refused to approve the draft regulation in its current form.

The President of the SEASL will now take the matter up with the DG in a meeting to discuss the regulation, the export schedule and the declaration of fishery management areas in the second semester.

### PROGRESS POINT 10 DRAFT SCHEDULE FOR BSC EXPORTS

There was no progress with regard to approving the draft schedule for BSC exports was submitted to the Attorney General's Department by the Department of Fisheries in 2018. The final draft has not yet to be returned to the AG's Department. Once the schedule is approved by the AG's department, the President of the SEASL will now take the matter up with the DG in a meeting to discuss the regulation, the export schedule and the declaration of fishery management areas in the second semester.

### PROGRESS POINT 10 DRAFT GAZETTE REGULATIONS FOR THE DECLARATION OF FISHERIES MANAGEMENT AREAS IN THE GULF OF MANNAR (MANNAR AND PUTTALAM DISTRICTS)

Gazette regulations for the demarcation of **TWO** Fisheries Management Areas for the Gulf of Mannar (Puttalam / Mannar) have been drafted by the FIP on behalf of the Fisheries Management Division of the DFAR. The draft FMAs have been discussed and agreed with the Assistant Directors in each district and with representatives of BSC fishing communities. The draft gazettes have been submitted to the Legal Officer of the DFAR.

The President of the SEASL will now take the matter up with the DG in a meeting to discuss the regulation, the export schedule and the declaration of fishery management areas in the second semester.

### PROGRESS POINT 11 DRAFT GAZETTES FOR THE DECLARATION OF FISHERIES MANAGEMENT AREAS IN THE PALK BAY (MANNAR, KILINOCHCHI AND JAFFNA DISTRICTS)

Gazette regulations for the demarcation of **THREE** Fisheries Management Areas for the Palk Bay (Jaffna / Kilinochchi / Mannar) have been drafted by the FIP on

behalf of the Fisheries Management Division of the DFAR. The draft FMAs have been discussed and agreed with the Assistant Directors in each district and with representatives of BSC fishing communities. The draft gazettes have been submitted to the Legal Officer of the DFAR.

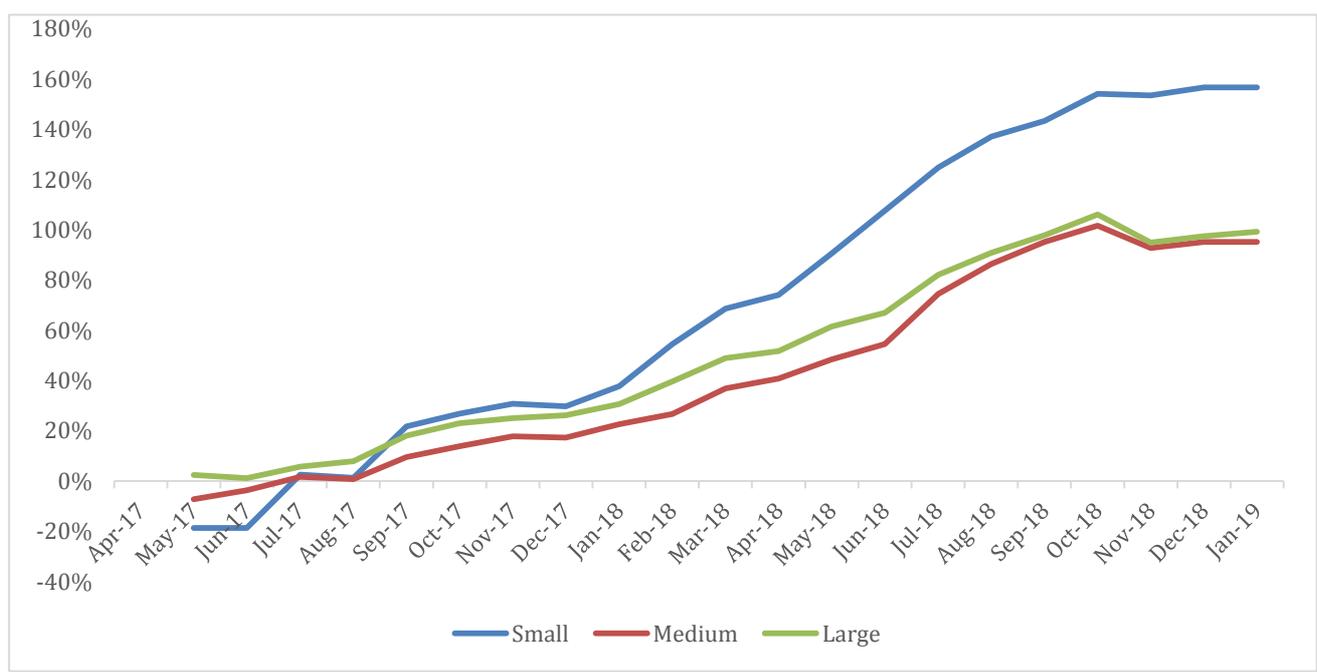
The President of the SEASL will now take the matter up with the DG in a meeting to discuss the regulation, the export schedule and the declaration of fishery management areas in the second semester.

**PART B: ISSUES / CHALLENGES**

**TARGETING OF IMMATURE BSC FOR EXPORT AT SOME LANDING CENTRES**

The issue of companies targeting very small crabs (< 99g) was highlighted again during the 2019 stock assessment. . in 2019 four US based seafood companies – Chicken of the Sea Frozen Foods, Phillips, Harbor Seafood, and Blue Star were sourcing crab meat from the two fisheries, working in partnership with / sourcing from Sri Lankan seafood companies to purchase, process and export pasteurized BSC products.

Increased competition between Sri Lankan seafood companies to purchase, process and export pasteurized BSC products has increased pressure on the bottom-end of the fishery, with companies deliberately encouraging fishermen to target small size, < 120 mm crabs, by offering relatively higher price percentage price increase for small (see below) and very small crabs, compare to increased prices offered for medium and large crabs since 2017. The majority (>60%) of very small (< 99g) are re immature. The increased incidence of immature crabs at some landing centres in both the Palk Bay and Gulf of Mannar fishery is a concern to the status of BSC stocks in both fisheries.



## PART C: CURRENT PROGRAMS TO ADDRESS THOSE ISSUES

### NEW EXPORT SCHEDULE FOR BSC PRODUCTS

The FIP will continue to work with the Quality Control Division and the Fishery Management Division of the DFAR to introduce an export schedule that will prevent seafood companies exporting BSC products from offering incentives to fishermen to target immature crabs.

A seminar was held in November 2018 at the department for all BSC exporters to discuss both the regulation and the export schedule with the leading Sri Lankan BSC exporters. No objections were raised by the exporters to either the regulation or the export schedule, so long as the regulation was enforced fairly and implemented by all seafood exporters.

## PART D: KEY ACHIEVEMENTS/BEST PRACTICES THAT CAN HELP YOUR FIP FORWARD

The Key achievement of the SLBSC FIP is becoming the first fisheries in Sri Lanka and the only BSC fisheries in South and South East Asia to be recommended by the Monterey Bay Aquarium's Seafood Watch Programme as a Good Alternative / Yellow Rating. The Palk Bay fishery scored 2.337 and the Gulf of Mannar fishery scored 2.208 (see table below)

Fishery	Gear	Rating	Overall	Target Species	Other Species	Management	Habitats
Palk Bay	Gillnets & Entangling nets (Unspecified)	<b>GOOD ALTERNATIVE</b>	2.337	3.318	1.00	3.00	3.00
Gulf of Mannar	Gillnets & Entangling nets (Unspecified)	<b>GOOD ALTERNATIVE</b>	2.208	2.644	1.00	3.00	3.00

## PART E: LESSONS LEARNT

The deliver incremental improvements to a BSC fishery the FIP's design needs to be based on results based management approach, benchmarked every six months against the Fishery Standard (MSC / SW) score that the fishery is trying to achieved.

Given that both these standards are data dependent / evidenced based, it is impossible for a FIP to make improvements and reach a level equivalent to a sustainably managed fishery against either Standard without collecting and analyzing data for stock status, ecological impacts and fishery management.