



Seafood Exporters’ Association of Sri Lanka

Sri Lankan Blue Swimming Crab Fisheries Improvement Project

Scoping Document

The Sri Lanka Seafood Exporters’ Association of Sri Lanka

The Seafood Exporters’ Association of Sri Lanka (SEASL) was established in 2000 to represent and promote the interests of Sri Lankan companies engaged in the export of seafood products from Sri Lanka. The SEASL provides a common platform for Sri Lankan seafood companies to discuss challenges and concerns affecting seafood exports, as well as issues affecting the fisheries industry as a whole in Sri Lanka. The SEASL acts as an important focal point for engagement between seafood companies and the Government of Sri Lanka. The SEASL lobbies and advises the government on policy and practices related to seafood exports, including inspection, licensing and certification of seafood products. The SEASL is also a forum for dialogue within the seafood community in Sri Lanka and between the Sri Lankan seafood sector and the international seafood community. The SEASL’s goal is to ensure the long term economic, social and environmental sustainability of the seafood sector in Sri Lanka. To achieve this goal, the SEASL and its member organisations work in close collaboration with producers and suppliers, as well as with the agencies and authorities of the Government of Sri Lanka. The SEASL promotes and seeks to improve the sustainable exploitation and management of Sri Lanka’s marine resources.

Fishery Improvement Projects

The aim of a fishery improvement project (FIP) is to bring together all those associated to a particular fishery - fishing communities, traders, seafood companies, regulators, scientists, civil society organisations and foreign importers, to create and implement a local plan that will improve the economic, social and ecological sustainability of the fishery. There are now more than 40 FIPs in operation around the world, including a FIP for yellowfin and bigeye tuna in Sri Lanka (also managed by the SEASL). The driving force behind the desire to improve local, national and international fisheries is the global concern about the long term future of fish stocks. Over 80% of the world’s fish stock are either fully or over exploited. When fish stock crash, everyone associated with the fishery is affected. The Sustainable Fisheries Partnership (SFP), a seafood business orientated non government organisation (NGO) based in the United States of America (USA), is at the forefront of encouraging FIPs. The SFP brings together representatives of fishing communities, national and international seafood companies, government authorities and researchers to generate and share information that can be used to improve local, national and international fisheries (*for more details visit www.sustainablefish.org*).

A FIP for the Sri Lankan Blue Swimming Crab

The decision to initiate a FIP for the Sri Lankan blue swimming crab (SLBSC) was made by the SEASL after receiving a request from representatives of Sri Lankan seafood companies, government authorities, researchers and civil society organisations associated with the SLBSC fishery in the north of Sri Lanka. An initial meeting of seafood companies, agencies and individuals associated with the SLBSC fishery met in Negombo in May 2013. The Negombo meeting was convened by the SEASL with the support of the National Fisheries Institute Crab Council (NFI CC). The NFI CC is an American NGO that comprises representative from the blue swimming crab industry in the USA. The NFI CC is dedicated to improving standards and practices that will enhance the seafood industry’s management of blue swimming crab fisheries around the world, based on sound ecological and economic principles. In August 2013 the SEASL commenced work on the first phase of the SLBSC FIP. A preliminary assessment of the SLBSC fishery was commissioned. The preliminary assessment included a field survey of the current opinions of representatives of fishing communities, traders, seafood companies, regulators, scientists and civil society organisations in four districts in the north of Sri Lanka, as well as in Colombo and Gampaha districts (see Annex A). The suggestions to improve the SLBSC fishery that presented for your comment and feedback below, are based on the information and data gathered by the SEASL during the field survey.

About Blue Swimming Crabs

The BSC *Portunus pelagicus* is a tropical marine crustacean that occurs in large shoals in shallow coastal water overlying sandy or muddy substrates, throughout the Indo-pacific region. BSC are common from the eastern coast of Africa, throughout South Asia, Southeast Asia and Australia, to the western coast of North and South America. Populations of BSC are also found in the Mediterranean Sea. The lifecycle of the BSC is short: crabs typically live for only three to four years. Adults reach a maximum size of around 190mm (carapace width) and a maximum weight of around 550g. Female crabs become sexually mature towards the end of their first year, at sizes ranging from 33mm to 177mm (body weight \approx 65g to 150g). Female crabs produce between 0.25 million to 1.1 million eggs at a single spawning, depending on their size. Larger female crabs produce proportionally more eggs than smaller female crabs. Females spawn once a year. Female crabs brood their eggs, incubating the eggs for five to seven days before the larvae hatch. BSC populations have a distinct, peak spawning season. In warmer climates a small number of individual spawn throughout the year. After hatching and joining the plankton, BSC larvae drift with the wind and tides. BSC larvae undergo a series of morphological changes over a period of 21 to 25 days before they become juvenile crabs, measuring 15 mm – 35 mm. BSC are voracious hunters and scavengers. BSC eat small shrimps and other crabs (including other BSC), finfish, cuttlefish, shellfish, squid and worms, as well as seaweed and dead and decaying matter. The growth of BSC is closely determined by water temperature. In warmer climates BSC grow quickly reaching close to their maximum size and weight by the end of their second year. A variety of pelagic and benthic fish species including jacks and bream are known to prey on BSC populations.

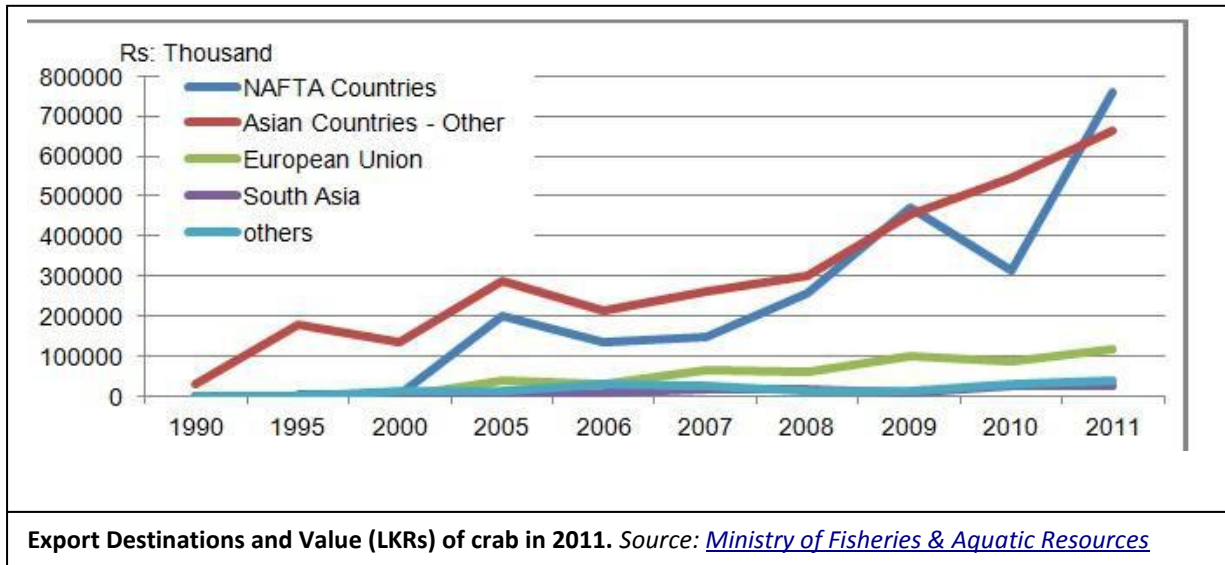
The Sri Lankan Blue Swimming Crab Fishery

The SLBSC fishery is located in the north of Sri Lanka. The fishery begins off the coast of Chilaw, at the southern tip of the North Western Province and continues up the northwest coast through Kalpitiya, Mannar and Poonaryn to Jaffna District in the far north. The fishery continues around the north coast of Sri Lanka and tapers off, off the coast of Pulmoddai, at the northern tip of the Eastern Province: a distance of approximately 600 km. The core of the fishery in terms of effort, production, purchasing, processing and export are the fishing villages located in the districts of Mannar, Kilinochchi and Jaffna, on the Sri Lanka side of the Palk Bay. The core area of the fishery was heavily affected throughout the 30 year long civil conflict in Sri Lanka. Fishing and fishing communities have undergone a resurgence following the end of the conflict in May 2009. SLBSC are caught throughout the year by Sri Lankan fishermen operating from traditional canoes (vallam) and fibre reinforced plastic (FRP) fishing craft. Larger vallam (27ft) and FRP boats (23ft) are powered by small outboard motors (e.g., 8, 9.9 and 15 hp). SLBSC are caught using bottom set nylon and monofilament gill nets. Mesh sizes range from 3½" to 6". Nylon nets are made of 2 to 6ply nylon twine. Each SLBSC gill net contains between 10 and 20 net pieces. A single fishing craft may set up to five nets per trip. SLBSC gill nets are set by fishermen at depths ranging from 3 to 5 fathoms, at distances of 2 km to 15 km from the shore. SLBSC gill nets are set in the evening and hauled after 10 to 12 hours. The bycatch from the SLBSC fishery includes assorted small finfish, shellfish, starfish, other crabs, lobsters, bits of coral, plants, algae and the occasional sea snake. Bycatch increases with decreasing mesh sizes. No endangered, threatened or protected species have been observed in the bycatch of the SLBSC fishery. The SLBSC fishery in the Palk Bay is currently restricted to operating only three days per week, due to illegal fishing operations conducted by Indian trawlers originating from the Indian side of the Palk Bay. The much larger and more powerful Indian trawlers destroy the gear and damage the craft of Sri Lankan fishermen. Indian Trawlers, along with their smaller Sri Lankan counterparts, also cause incalculable damage to the wider marine ecosystem on the Sri Lankan side of the Palk Bay.

The catch of SLBSC ranges from zero to a maximum of 150 kg per trip. The average catch during the peak season ranges from 20 kg to 50 kg. Both male and female crabs are caught using bottom set gill nets, including females with eggs. SLBSC range in size from 80g to around 450g. The night's catch is returned to the landing centre both dead and alive. The bulk of the catch is bought by local fish traders who supply national seafood companies. A small number of seafood companies have their own collection centres at the local level. The market price for SLBSC varies depending on a number of variables including global supply, demand from international buyers, the quantity of the local catch and the size and quality of the crabs caught. SLBSC are graded and sold according to size. The wholesale price of the smallest grade (80g – 100g) was around LKR 200 kg⁻¹ during the recent field survey. The wholesale price of the largest grade (male crabs >250g) was around LKR 650 kg⁻¹. Live crabs are processed for export as pasteurised crab meat (HS Code 03062410). Dead crabs exported as whole, head on or cut crabs, either frozen (HS Code 03062410) or chilled (HS Code 03062410).

BSC Production & Exports

The crab fishery in Sri Lanka has increased by 165% in the three years following the end of the civil conflict. The total catch of crabs¹ in the five coastal districts (*i.e.*, the full geographical range of the SLBSC) was 7,750 tonnes in 2012, compared to 2,930 t in 2009². The value of crabs exported from Sri Lanka increased from around LKR 1,000 million (US\$ 7.75 million) in 2009 to LKR 1,560 million (US\$ 12.09 million) in 2011. The increase in value of crabs exported from Sri Lanka (56%), is widely attributed to the increased catch and export of SLBSC³.



Why Improve the SLBSC Fishery?

The commercial fishery for the SLBSC has grown strongly since the end of the civil conflict in 2009, which profoundly affected fishermen in the north of Sri Lanka. The enormous improvements in security; the removal of restrictions on fishing activities and the rapid development of supply chains linking SLBSCs to national and international markets, have all contributed to the solid expansion of the fishery. The SLBSC fishery is now an important source of income and employment for fishermen and traders in the north and for national seafood companies based largely in the south. The SLBSC fishery has increased the economic and social status of fishing households and contributed to increased foreign exchange earnings for Sri Lanka. The opinion of fishermen, traders, seafood companies, regulators and academics is that the SLBSC is not currently overexploited. Direct observation and the limited independent data available suggest that this may be true. The average size of SLBSC is around 150 mm (>200g); individuals over 180 mm (>450g) are still caught by fishermen and fishing effort is restricted to three days per week due to illegal fishing by India trawlers. Compared to other BSC fisheries in South and Southeast Asia (*e.g.*, in India, Indonesia, Philippines and Vietnam) - where average crab size around 90mm (100g); where 120 g is considered to be a 'large' crab and where fishing takes place six or seven days a week - the indicators for the SLBSC fishery are currently favourable.

Fishermen, traders, seafood companies, regulators and academics are all well aware that there is a limit – as yet unknown - to the number of SLBSC that can be sustainably harvested from the fishery each year. To ensure that this limit is not exceeded fishermen, traders and seafood companies all agree that improvements to the fishery are necessary. If improvements are not introduced soon, the recent economic and social gains made by fishing households may be reversed. The foreign exchange earnings from seafood exports may decline. A number of suggestions to improve the SLBSC fishery proposed by fishermen, traders, seafood companies, regulators and academics are set out below. A brief explanation of each suggestion is given, together with options or choices for further discussion and comment.

¹ Note this data includes all crabs caught by fishermen, including the mud crab *Scylla serrata* and the three spot crab *P. sanguinolentus*

² Department of Fisheries and Aquatic Resource (DFAR)

³ The monthly Customs Reports compiled by the Department of Customs make no distinction between crab species. The mud crab *Scylla serrata* and the three spot swimming crab *P. sanguinolentus* are the other two main crab species caught / exported in Sri Lanka.

Suggestions to Improve the Blue Swimming Crab Fishery in Sri Lanka

The following 12 suggestions to improve the SLBSC fishery were made by representatives of fishing communities, traders, seafood companies, regulators, researchers and the Consultant during the course of the preliminary assessment of the SLBSC fishery commissioned by the SEASL's in August 2013 (see Annex A). The suggestions are presented in accordance with the SFP's overall framework for designing, planning and implementing a FIP and are intended to be used as the basis for further discussion and comment on the most appropriate measures that should be taken to improve the SLBSC fishery, through the SEASL's SLBSC fishery improvement project.

SFP FIP 4: Measurable and Positive Social and Economic Change

SFP FIP 3.2: Fishery Policy & Legal Framework

- Suggestion 1) ***To improve the SLBSC fishery policy and legal framework, the SLBSC FIP should..... provide technical support and financial assistance to increase the information and knowledge available about the SLBSC fishery***

There is an ever increasing body of scientific and technical reports describing BSC fisheries from Iran through India to Indonesia, the Philippines, Australia and the USA. In Sri Lanka, only one scientific study have been published about the SLBSC fishery and one more is under preparation. No technical reports have been published describing the operation and management of the SLBSC fishery. Information and knowledge gained from scientific studies and technical assessments are vital to make accurate and appropriate decisions regarding the measures that need to be taken to improve the SLBSC fishery.

A suitable time frame to implement this improvement would be

- within 6 months 6 months to 1 year after 1 year This improvement is not necessary

- Suggestion 2) ***To improve the SLBSC fishery policy and legal framework, the SLBSC FIP should..... lobby the government to take stronger action to enforce the regulation that prohibits the use monofilament nets in Sri Lanka***

The use, possession, import, transport, purchase and sale of monofilament nets is prohibited in Sri Lanka under the Fisheries and Aquatic Resource Act, No. 2 of 1996: Amendment 1454/33 (2006). The ban on monofilament nets is actively enforced by the Ministry of Fisheries and Aquatic Resources (MFAR) through the district offices and inspectors of the DFAR. Despite the law and its enforcement by the DFAR, fishermen continue to use monofilament nets to catch SLBSC, particularly in Kalpitiya (Puttalam District) and in Jaffna District. Monofilament nets allow fishermen to catch SLBSC at all times of the day and throughout the year, because crabs are unable to see and avoid the nets. Nylon nets can be seen (and avoided) by crabs during the day time and during the 'calm season' between the two monsoons. The higher catching efficiency of monofilaments, as well as their persistence in the environment (they are less biodegradable), are the two reasons why the use of monofilament nets is illegal in Sri Lanka.

A suitable time frame to implement this improvement would be

- within 6 months 6 months to 1 year after 1 year This improvement is not necessary

Suggestion 3) *To improve the SLBSC fishery, the SLBSC FIP should.... lobby the government to introduce a regulation specific to the SLBSC fishery*

The MFAR has introduced fisheries management and export regulations, in the form of amendments to the Fisheries and Aquatic Resource Act, No. 2 of 1996, for several economically, socially and ecological important fisheries in Sri Lanka. These include the Lobster Fisheries Management Regulations (2000; 1601/36 – 2009); the Sea Shells Fisheries Management and Export Regulations (1188/3 – 2001); the Chank Fisheries Management and Export Regulations (1298/1 – 2003); the Regulations for the Fishing of Cuttlefish Fishing Operations (1733/23 – 2011). The introduction of a regulation for SLBSC, in the form of an amendment to the Fisheries and Aquatic Resource Act, No. 2 of 1996 would improve the SLBSC fishery.

A suitable time frame to implement this improvement would be

within 6 months 6 months to 1 year after 1 year This improvement is not necessary

Suggestion 4) *To improve the SLBSC fishery, the SLBSC FIP should.... lobby the government and advocate on behalf of all participants in the Sri Lankan seafood sector to stop Indian trawlers from fishing illegally in Sri Lankan waters*

Every Monday, Wednesday and Saturday evening more than 1,500 Indian trawlers cross the International Maritime Boundary Line (IMBL) in the Palk Bay and fish illegally in Sri Lankan Waters. Indian trawlers fish for up to 8 hours, often within 200m of the shore. Indian trawlers use heavy bottom trawls to harvest flower prawns (*Peneaus semisulcatus*), sea cucumbers (Holothurioidea) and SLBSC. In the process of fishing the trawls indiscriminately scoop up thousands of tonnes of bycatch - mostly juvenile fish and crustaceans. The trawls also destroy vast areas of the seabed and multiple marine habitats. For three days each week Sri Lankan fishermen in the north of Sri Lanka are denied the opportunity to earn their livelihoods from fishing, because of the risk of losing their nets and the threat of damage and loss of life caused by collisions with Indian trawlers. Indirectly, the Indian trawlers deprive Sri Lankan fishermen, traders and seafood companies of thousands of tonnes of Sri Lanka marine production and billions of rupees worth of income and foreign exchange from the harvest and export of seafood products. The prevention of Indian trawlers from fishing in Sri Lanka waters is fundamental to improving the SLBSC fishery in the north of Sri Lanka.

A suitable time frame to implement this improvement would be

Now 6 months to 1 year after 1 year This improvement is not necessary

Suggestion 5) *To improve the SLBSC fishery, the SLBSC FIP should.... lobby the government and advocate on behalf of all participants in the Sri Lankan seafood sector for the enforcement of the regulation that prohibits / controls mechanised trawling by Sri Lankan fishermen*

Around 300 Sri Lankan mechanised trawlers operate from fishing harbours and anchorages in Kalpitiya (≈30), Mannar (≈90) and Jaffna (≈200). The Sri Lankan trawlers use small bottom trawls to harvest mainly flower prawns (*Peneaus semisulcatus*), sea cucumbers (Holothurioidea), cuttlefish (Cephalopoda) and SLBSC. In the process, the trawls indiscriminately catch hundreds of tonnes of bycatch - mostly juvenile fish and crustaceans. The trawls also destroy the seabed and other marine habitats.

Although mechanised trawling is prohibited / regulated in Sri Lanka, Sri Lankan trawlers continue to operate in shallow inshore waters, within the prohibited 12 nautical mile limit, in all three districts. Sri Lankan trawlers often trawl to within 200m of the shore. Sri Lanka trawlers cause damage and or destroy other fishing gears, including SLBSC fishing gears and deprive other Sri Lankan fishermen, traders and seafood companies of hundreds of tonnes of Sri Lanka marine production and millions of rupees worth of income and foreign exchange from the harvest and export of seafood products. The enforcement of the regulation that prohibits / regulates Sri Lankan trawlers is critical to the improvement of the SLBSC fishery.

A suitable time frame within which to implement this improvement would be

within 6 months 6 months to 1 year after 1 year This improvement is not necessary

SFP FIP 3.3: Improving Social & Economic Equity

Suggestion 6) *To improve the social and economic equity of the SLBSC fishery, the SLBSC FIP should....ensure that the FIP Steering Committee set up to improve the SLBSC fishery fairly represents the interests of key participants in the fishery .*

The SLBSC fishery extends from Chilaw on the southwest coast to Trincomalee District on the east coast, with the core fishery located in Puttalam Lagoon and the Sri Lankan half of the Palk Bay. Fishing communities in four districts – Puttalam, Mannar, Kilinochchi and Jaffna – together with five to ten seafood companies and the MFAR are the key participants in the SLBSC fishery. In addition a number of CSO organisations, including both national and UN agencies are currently providing assistance to fishing communities in the all four districts, while two universities are engaged in research on SLBSC. It is suggested that membership of the SLBS FIP should be restricted to representatives of the fishing community, seafood companies and the government of Sri Lanka who are directly engaged in the exploitation, export and management of the SLBSC fishery. Members will be responsible for designing, implementing, monitoring and evaluating the SLBSC FIP. FIP members will have access to all FIP documents and data.

Fishing Community	4 representatives (1 per district?)
Seafood Companies	3 representatives (fresh, frozen, canned?)
Government	3 representatives (DFAR, NARA and MFAR)

Any organisation that undertakes to support a member organisation of the SLBSCFIP FIP members and or undertakes to implement activities set out in the Annual Implementation Plan of the SLBSC FIP can apply to become a partner of the SLBSC FIP. FIP will have access to public FIP documents only.

Suggestion 7) *To improve the social and economic equity of the SLBSC fishery, the SLBSC FIP should.... provide technical support and financial assistance to increase data and information describing the social and economic status of the SLBSC fishery.*

Very little data or information is available regarding the social and economic status of the SLBSC fishery. The data and information that is available has not been collated and analysed into a form that can be used by the SEASL (and other members of SLBSC FIP) to formulate indicators for immediate and intermediate outcomes associated with SFP FIP 4: Improving social and economic equity.

Key data and information collection that could be collected and analysed include:

- Social demographic indicators describing fishing households and communities
- Household economic data describing fishing households and communities
- The role, importance and impact of formal and informal credit in the SLBSC fishery
- The role, importance and impact of political patronage in the SLBSC fishery
- The application of Decent Work Standards in the SLBSC fishery
- The Potential for Premium Brand Status for SLBSC

Suggestion 8) *To improve the social and economic equity of the SLBSC fishery, the SLBSC FIP should.... provide technical support and financial assistance to encourage and promote producer organisation involvement in marketing and post harvest processing of SLBSC.*

A small number of local traders and national seafood companies currently control the marketing and post harvest processing of SLBSC. The initial fishery assessment suggests that the prices paid to fishermen for very large, large and medium sized crabs are favourable. By increasing competition for SLBSC, diversifying supply chains and establishing business partnerships between northern producers and southern processors, further economic equity will be encouraged. Ensuring that the economic benefits arising out of the end of the civil conflict are shared fairly between northern producers and southern businesses is crucial to ultimate successful transition from conflict to peace in Sri Lanka.

SFP FIP 3.4: Improving Fishing Practices

Suggestion 9) *To improve the SLBSC fishery, the SLBSC FIP should..... support the introduction of a minimum mesh size for the SLBSC fishery*

The mesh size used by fishermen determines the size of SLBSC caught in the fishery. Fishermen targeting SLBSC are currently using mesh sizes ranging from 3½" to 6" to catch crabs. As the mesh size of the fishing gear gets smaller an increasing number of small sized crabs are caught. The bycatch of unwanted species also increases as mesh size decreases.

The most appropriate minimum mesh for crab fishing is

3½" 4" 4½" 5" 5½" 6"

A suitable time frame to implement this improvement would be

within 6 months 6 months to 1 year after 1 year This improvement is not necessary

Suggestion 10) *To improve the SLBSC fishery, the SLBSC FIP should.... lobby the government and advocate on behalf of Sri Lankan trawler owners with civil society organisation to explore alternative fishing gears that can be adapted for use by Sri Lankan trawlers*

The conversion of Sri Lankan trawlers to other types of less environmentally damaging fishing, such as long lining using collapsible cages for SLBSC, would further improve the SLBSC fishery.

A suitable time frame to implement this improvement would be

within 6 months 6 months to 1 year after 1 year This improvement is not necessary

SFP FIP 5: Measurable and Positive Biological and Ecological Change

Suggestion 11) *To improve the SLBSC fishery, the SLBSC FIP should..... promote appropriate measures to reduce the number of small crabs caught by fishermen / purchased by traders and seafood companies*

Catching and buying small crabs, before they have had an opportunity to reproduce, will eventually affect the economic and social benefits currently being generated by the SLBSC fishery. Female BSC become sexually mature during their first year, at sizes ranging from 33mm to 170mm (\approx 50 g – 150g). The actual minimum size at maturity and the point at which a given percentage of the female BSC population attains sexual maturity depends on local conditions such as temperature, availability food, salinity and fishing activities. All female BSC are mature by the end of their first year. Informal observations suggest that female SLBSC begin to mature around 100mm (70 g). The majority of females appear to mature by 120 – 150g (\approx 120 – 135mm): towards the end of their first year. The current minimum size caught by SLBSC fishermen and purchased by traders and seafood companies is between 80g and 100g.

The most appropriate minimum size for catching / purchasing / exporting SLBSC is

80g 100g 110g 120g 130g 140g 150g >150g

A suitable time frame to implement this improvement would be

within 6 months 6 months to 1 year after 1 year This improvement is not necessary

Suggestion 12) To improve the biology and ecology the SLBSC fishery, the SLBSC FIP should..... reduce the impact of catching and buying female crabs with eggs

Catching and buying female crabs with eggs will eventually affect the economic and social benefits currently being generated by the SLBSC fishery. SLBSC breed throughout the year. The peak breeding season lasts from February to June, depending on the district. Fishermen are unable to avoid catching females with eggs, because bottom set gill nets catch both male and female crabs. Fishermen cannot remove live females with eggs from their nets and return them to the sea because of the time involved, the loss of income caused to fishermen and because many of the females are already dead. Traders and seafood companies cannot refuse to buy females with eggs from fishermen because fishermen will simply remove the eggs from live and dead crabs before selling them. The use of sea cages, onshore hatcheries and a closed season are all measures that could reduce the impact of catching and buying females crabs with eggs.

The most appropriate measure to reduce the impact of catching / buying female crabs with eggs is

Mitigation

Enhancement

Sea Cages

A Closed Season

The fishery should be closed for

1 – 4 weeks

Onshore Hatchery

1 – 2 months

A period decided by research and agreed by all participants

A suitable time frame to implement this improvement would be

within 6 months

6 months to 1 year

after 1 year

This improvement is not necessary

SFP FIP 3.6: Bycatch Reduction

No specific suggestions are proposed to reduce bycatch from the SLBSC fishery. This concern is dealt with adequately in Recommendation 09 (Mesh Size) and Recommendation 10 (Crab Long Line) above.

Although a wide variety of species including ETP species are caught in the bycatch of the SLBSC fishery, the actual quantities of bycatch are relatively low and the majority of species include ETP species are rarely caught. Bottom-set gill net fishing is an environmentally friendly harvesting strategy in comparison to bottom trawling, the most common means of harvesting BSC in the majority of fisheries in South and Southeast Asia.



SFP FIP 3.7: Other Environmental Concerns

No specific suggestions are proposed to reduce other environmental concerns arising from the SLBSC fishery

The environmental impact of bottom-set gill net fishing is negligible compared to other harvesting strategy, particularly bottom trawling, which is the principal means of harvesting BSC in the majority of fisheries in South and Southeast Asia.

Annex A: A list of the agencies, organisations and individuals who generously contributed information, comments and suggestions to improve the blue swimming fishery in Sri Lanka

Representative	Agency / Organisation	Name	Designation	Telephone No.
Govt. Authority	Depart. of Fisheries & Aquatic Resources	Nimal Hettiararachchi	Director General	0112 973 138
Govt. Authority	Depart. of Fisheries & Aquatic Resources	Nuwan Gunawardane	Assistant Director: Fishery Industry Division	0112 329 539
Govt. Authority	Depart. of Fisheries & Aquatic Resources	M. Ganeshamurthi	Acting Director Jaffna District	0212 222 532
Govt. Authority	Depart. of Fisheries & Aquatic Resources	-	Office Clerk Kilinochchi District	021-2285964
Govt. Authority	Depart. of Fisheries & Aquatic Resources	(Mrs) P Nageswaran	Management Assistant Mannar District	023-2222173
Govt. Authority	Depart. of Fisheries & Aquatic Resources	-	FI Kalpitiya Islands / FI Kalpitiya Puttalam District	0322 265 295
Govt. Authority	National Aquaculture Development Authority	J. M. Asoka	Director: Coastal Aquaculture Development	0112 786 578
Govt. Authority	National Aquatic Resources & Research Agency	Dr. H S S K Haputhanthri	Head: Marine Biological Resources Division	0112 521 914
Fishing Com.	Janasaviyapuram, Kalpitiya	-	Fishermen & Women	-
Fishing Com.	Palikuda, Kalpitiya	-	Fishermen & Women	-
Fishing Com.	DFF Kalpitiya	Cammilus Perera	President	0717 085 966
Fishing Com.	Pesalai, Mannar	-	Fishermen & Women	-
Fishing Com.	Vidaththaltivu, Mannar	-	Fishermen & Women	-
Fishing Com.	DFF Mannar	Justin Soyza	President	0756 716 945
Fishing Com.	DFCSU Mannar	Arlum	President	0717 622 111
Fishing Com.	Irainamadanagar, Kilinochchi	-	Fishermen & Women	-
Fishing Com.	Pallikuda, Kilinochchi	-	Fishermen & Women	-
Fishing Com.	DFF Kilinochchi	Joseph Francis	President	0772 806 712
Fishing Com.	DFCSU Kilinochchi	P. Muhundun	President	0779 599 511
Fishing Com.	Mandaitivu, Jaffna	-	Fishermen & Women	-
Fishing Com.	Venalai, Jaffna	-	Fishermen & Women	-
Fishing Com.	DFF Jaffna	Ponambulam	President	0779 594 813
Fishing Com.	DFCSU Jaffna	Emiliyam Pillay	President	0779 741 182
Exporters	SEASL	Roshan Fernando	President	-
Exporters	SEASL	Col. (Rtd) C. Weerantunga	Secretary	0112 598 831
Exporters	Alpex Marine Pvt Ltd	Janaka Mayakaduwege Indika Mayakaduwege	Director Director	1122 934 75
Exporters	Ceylon Foods (Pvt) Ltd	Joe Fernando	Director	0112 339 314
Exporters	P.N. Fernando & Co (Pvt) Ltd	Nihal Fernando	Managing Director	0112 237 105
Exporters	Phillips Foods (Pvt) Ltd	Bhashini Perera	Quality Assurance Manager	0176 837 473
Exporters	Prawn Ceylon (Pvt) Ltd	Oshini Perera	Director	0322 253 876
Exporters	Taprobane Seafood Pvt Ltd	Tim O'Reilly	Director	0234 920 649
Exporters	Western Lanka Aquatic (Pvt) Ltd	Sunil Wanasinghe	Managing Director	0114 814 974
Fish Traders	Agent	Wasantha Kumar	Fish Trader	-
Fish Traders	Agent	Arul	Fish Trader	-
Fish Traders	Agent	Kingsley	Fish Trader	-
Fish Traders	Agent	Ravi	Fish Trader	-
Fish Traders	Annai Seafoods	Amaladasan	Director	0777 574 481
Academics	University of Jaffna	Prof. (Mrs.) S. Kuganathan	Head Department of Fisheries	0212 222 307
Academics	Wyamba University	Dr. Dileepa de Croos	Depart. Aquaculture & Fisheries	0718 129 806
CSO	Centre for Poverty Analysis	K. Romeshun	Team Leader: SLCR Project	0112 676 955
CSO	Food and Agricultural Organisation UN	Beth Crawford	Representative	0112 04 672
CSO	International Labour Organisation UN	Joe Connelly	Chief Technical Adviser	0773 082 204
CSO	International Organisation for Migration	Priyantha Kulatunga	Programme Manager: AVRP	0115 325 300
CSO	National Fisheries Solidarity Organisation	Herman Kumara	National Organiser	0773 184 532
CSO	PARC Inter Peoples Cooperation	J. A. Britto	Regional Director	0212 227 897
CSO	UN Development Programme	Asitha Koddituwakku	G LED Specialist	0112 596 722

Steve's Reference: 11th October September 2013