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Indian Seafood industry and post WTO – A Policy Outlook

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Introduction

India plays a major role in the global seafood export among the Asian countries. The marine products exports from India reached 8 lakh tonnes worth 2.8 billion US $ in 2010-11 and registered an impressive double digit growth rate since 2007-08. India exports frozen shrimp, squids and finfish in dried, live and chilled forms to different destinations. With the current demand pattern of major seafood markets and with modern machinery for freezing and processing, several exporting firms have started development and exports of processed value added products. Among the different items exported, frozen shrimp and frozen fin fish accounted for about 75 per cent of the total volume of sea food exports from India. Even though frozen shrimp contributed only 19.24 per cent of the total volume of seafood exports, its share in the total value was 41.62 per cent in 2010-11. Frozen fish occupies prime position in terms of quantity, however its share in the total value is only 20.38 per cent showing low unit value realization (Rs. 84.16 per kg) (MPEDA, 2011). The seafood export trade performed well in the past decades amidst stringent trade liberalization measures and economic recession which affected many Indian buyer countries. In India storage, processing and transport, grading and quality control facilities are mostly oriented towards the export market even though more than 80 per cent of the fish production is channeled in the domestic markets. Seafood trade influences the domestic markets significantly by way of affecting the supply -demand situation of many high valued fishes, competition for small scale traders and rise in prices in the domestic markets

The sector is poised for a robust growth of one million tonnes and an anticipated forex earning of 4 billion dollars during 2011-12 .This assumes significance during the period of continued recession among the major buyers. The major buyers including the US, EU and Japan are affected with severe recession related economic indicators like lack of investment, lower purchasing power, acute unemployment etc. Amidst the impressing performances the export sector is grappled with demand and supply side constraints. The export sector is facing constraints on account of timely availability of raw material, low capacity utilization; high cost of production on account of heavy price of raw materials, high cost of compliance for meeting the quality standard of the buyer countries, incidence of alert and rejections and continued trade impediments.

On the brighter side there exists a huge domestic demand evident from the high domestic prices and consumer's preferences towards fish and fish related products. The

export markets are buyer driven with buyers being the 'price makers'. In the context of numerous trade limiting impediments and stringent quality control, the continued spurt in domestic demand would definitely increase the options available with the exporters to harness on added revenue with minimal transaction cost.

The paper analyses the Indian seafood industry in the wake of WTO with the emerging paradigms and different perspectives by analyzing the seafood trade in terms of performance and highlights the various bottlenecks facing the sector. The paper also suggests guidelines for the future through an efficient value chain model incorporating the domestic markets

Data and Methodology

SWOL analysis

SWOL analysis (Strengths, Weaknesses, Opportunities and Limitations) was done to assess the strengths, weaknesses, opportunities and limitations of fisheries trade in India which would give the present status and help in prediction of the future potentials of fisheries trade. The SWOL ultimately help in enhancement of trade domains and to exploit diversified commodities and with newer trade partners. The Strength and weakness are inherent to the system and showcase the present state of affairs whereas the opportunities and limitations highlight the future. The analysis of the strengths, weaknesses, opportunities and limitations are very important to upgrade the capacity of the export trade sector, since it helps in problem identification, planning, decision making, appropriate technology implementation, precautionary measures for accelerating fish production at sustainable level etc. The analysis of the strengths, weaknesses, opportunities and limitations are very important for improving, upgrading and revamping the fish trade scenario since it helps in problem identification, planning, decision making, adoption of appropriate technologies and developing measures for long term sustenance of the sector.

Different types of data consisting of time series data for marine product exports collected from MPEDA, cross sectional data on exporter's responses and panel data for domestic prices of marine fishes were collected. Appropriate econometric tools were employed to substantiate the results.

Reflections and Perspectives :

The reflections and perspectives under the SWOL framework is discussed under the following heads . The strengths, weaknesses, opportunities and limitations of fish trade in India based on various econometric analysis and observations are discussed in this section.

Strengths	**Weakness**
(i) Resource abundance / endowment (ii) Increased commodity diversification (iii) Improved geographic concentrations (iv) Strong institutional support and linkages	(i) Exorbitant cost of production (ii) Low capacity utilization (iii) Constraints in value addition (iv) Deficiencies in the value chain constituents
Opportunities	**Limitations**
(i) Emergence of candidate species (ii) Augmented domestic market (iii) Changed world economic order	(i) Unsustainable fishing practices (ii) Technological constraints in aquaculture

(iv) Ecolabelling and certification	(iii) Continued trade impediments (iv) Poor market information system

A. Strengths

i) Resource abundance /endowment

India possesses abundant and varied resources both in marine and inland sectors. The fish production in the country has increased from 0.75 million tonnes (1950-51) to 7.85 million tonnes (2010-11) with increase in production of cultured fish and shrimps (Figure 1). The marine fisheries sector indicates a tropical environment with multi species-multi - gear fishery. The marine fisheries landings increased from 3.73 lakh tonnes in 1947-48 to 3.32 million tonnes in 2010 .The contribution analysis of the landings indicated that the West coast contributed 67 per cent and the East coast at 33 per cent. The contribution from the four regions indicated that the North East contributed 11.4 per cent , South East 22.0 per cent ,South West 35.2 per cent and North West at 31.40 per cent .The species wise contribution indicated that the pelagic fin fishes constitute 55 per cent followed by demersals (26 per cent) , crustaceans (15 per cent) and molluscans (4 per cent).

The aquaculture sector of the country also witnessed boom with increased production of *P.monodon* and introduction of exotic species like *P.vannamei*. Eventhough the export market was initially oriented towards shrimps, lobsters and cephalopods, commodity and market diversification opened up opportunities for exports of finfishes. Groupers, mackerels, tunnies, barracudas, pomfrets, seerfishes, ribbon fishes and other fresh water fishes found a place in the export market and the finfish exports now occupy around 40 per cent of the total export volume. Expansion of fishing grounds with advancement in harvest technologies and possible fishing down the web led to capture and marketing of new varieties like puffer fish (*Lagocephalus inermis)*, yellow fin tuna and some varieties of sharks with good export potential.

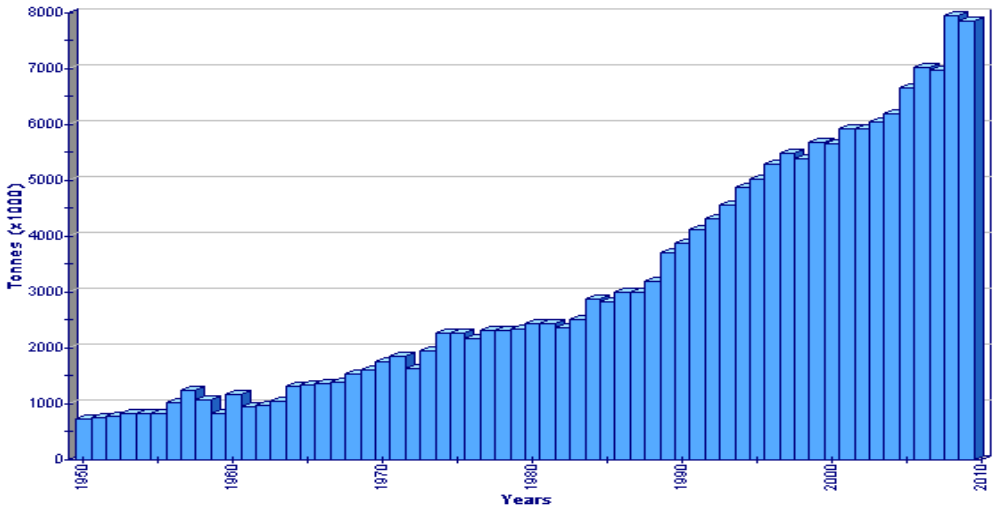

Figure 30.1 . Fish production in India (1950-2010)

ii. Increased commodity diversification

The one country- one product misnomer no more exists with the Indian sea food export which has been the single largest factor contributing to the augmented export earnings .The increased commodity diversification has been one of the major strength achieved over the years. The decadal commodity diversification analysis was done for 1990, 2000 and 2010 (Figure 2) .The results indicated that the share of frozen shrimp declined from 46 per cent to 19 per cent during 1990-2010 whereas the share of frozen fish increased from 28 per cent to 45 per cent during 1990-2000 and then declined to 38 per cent in 2010. The live and chilled items also found a place in the export basket in the past decade. The disaggregated analysis of the commodity diversification also indicated that the number of species/ product / form under each commodity also improved considerably thereby reducing the pressure of meeting buyers' requirements.

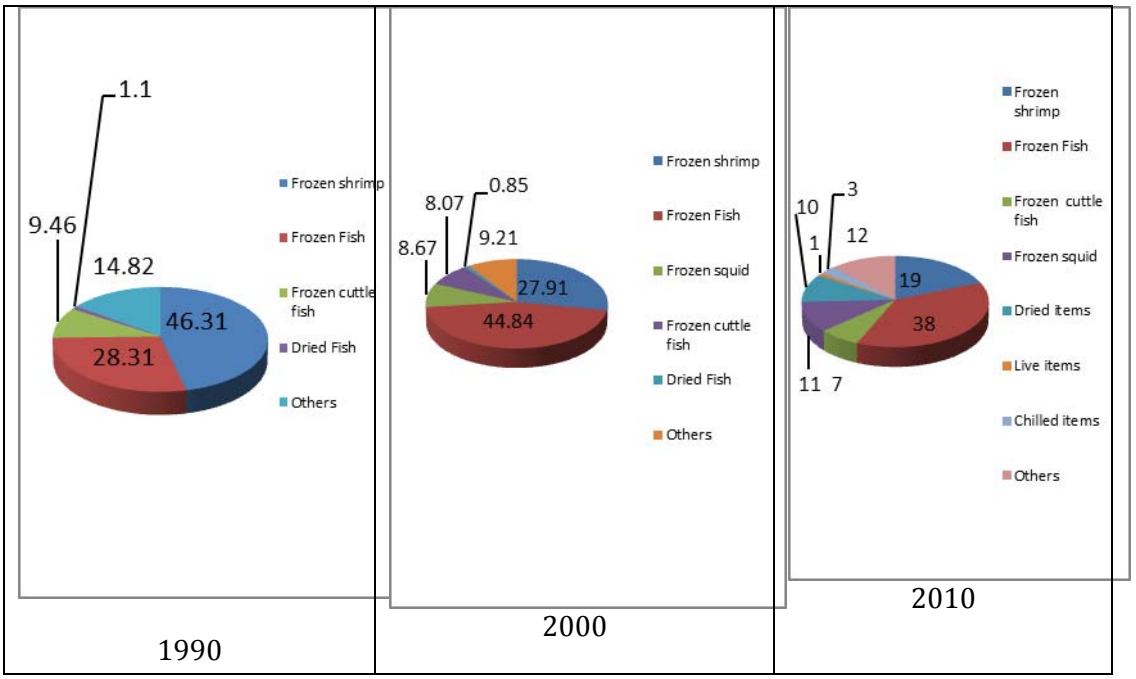

Figure 30.2 Commodity diversification for Indian exports

(iii) Improved Geographic concentrations

Indian seafood products had wide spread acceptance in many of the countries like EU, US , China and other countries. Japan, USA and European Union or Western Europe were the major fish importers from India, which accounted for about 60 to 65 per cent of the volume and about 70-75 per cent in value of Indian seafood exports. Strict quality regulations imposed by US and EU and commodity diversification with finfish and other value added products led to geographic diversification and market opportunities emerged in countries like Middle East, China and South East Asian countries. Even though geographic diversification emerged with countries like Middle East and China with the strict quality regulations in US or EU, they still account for a major share (70-75 per cent) in the foreign exchange earned through our export.

The decadal geographic diversification analysis was done for 1990, 2000 and 2010 (Figure 3) and the results indicated that the share of European countries in the total volume of trade declined from 32 per cent in 1990 to 10 per cent in 2000 and again increased to 21 per cent in 2010. The share of Middle East countries increased from 4 per cent to 49 per cent during 1990-2000 and then declined to 20 per cent in 2010. The share of US declined from 12 to 6 per cent and that of Japan from 24 per cent to 9 per cent during 1990-2010 period. The improved geographic concentration offer better competitiveness for Indian seafood exports and opportunities to thrive under changed economic environment in buyer countries.

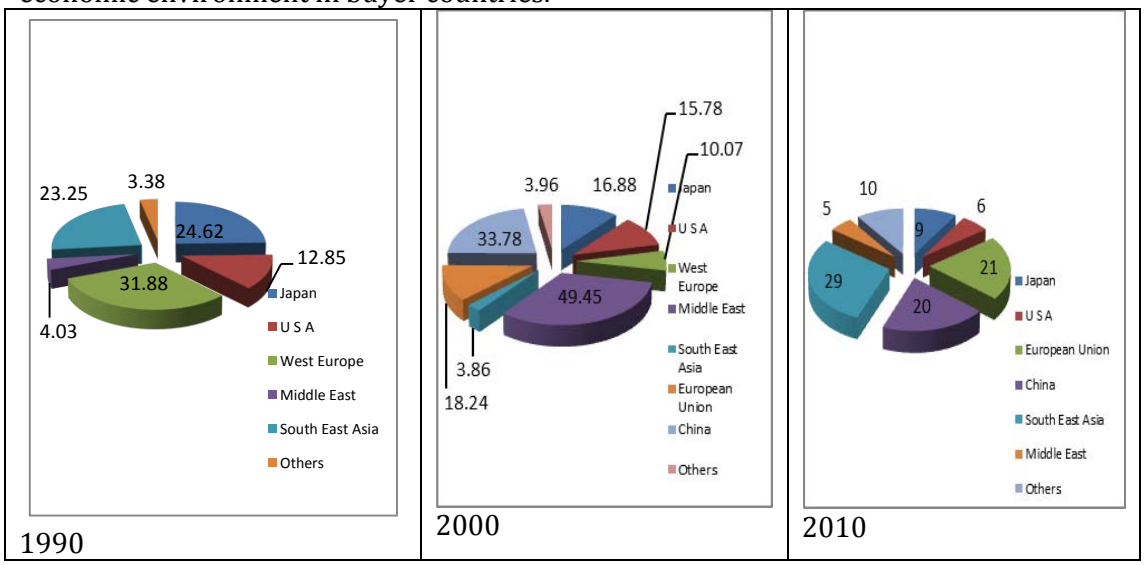

Figure 30.3 Geographic diversification for Indian exports

iv) Strong institutional support and linkages

Indian seafood industry is well supported by various institutional agencies with regard to technological, marketing and financial requirements. The Marine Products Export Development Authority(MPEDA) is the nodal agency in promoting seafood exports through various activities like registration of infrastructure facilities for seafood export trade, collection and dissemination of trade information, projection of Indian marine products in overseas markets through participation in overseas fairs and organizing international seafood fairs in India, promotion of aquaculture for production of shrimp and prawn for export, promotion of value added seafoods and promotion of tuna fishery. In addition, it also undertakes various development measures like distribution of insulated fish boxes, putting up fish landing platforms, improvement of peeling sheds, modernization of industry such as upgrading of plate freezers, installation of IQF machinery, generator sets, ice making machineries, quality control laboratory etc. for ensuring better quality products in the export markets. The marine fishing regulation act, the aquaculture authority act and several other legislations in the country has supported the seafood export industry by way of promoting sustainable fish production. The Coastal Aquaculture Authority (CAA) has recently granted permission for culture of specific pathogen free (SPF) *L. vannamei* which is expected give an impetus to the aquaculture sector in the country in the near future.

In addition, the country has a wide network of research and development organizations which significantly contributed for the progress of the sector. There are about 8 fishery research institutes two deemed universities and a number of fisheries colleges engaged in technology development and dissemination in fisheries sector. Various research

institutions like CMFRI, CIFT, CIBA, CIFRI, CIFA etc provide technological support to the seafood industry. In addition, National Fisheries Development Board, Aquaculture authority, MPEDA, NIPHATT, fisheries departments of various states and other organizations work together for the promotion of the sector. The linkages between these research organizations and development departments facilitated supply of quality products, packaging materials, raw materials and market intelligence for boosting the seafood exports in the country.

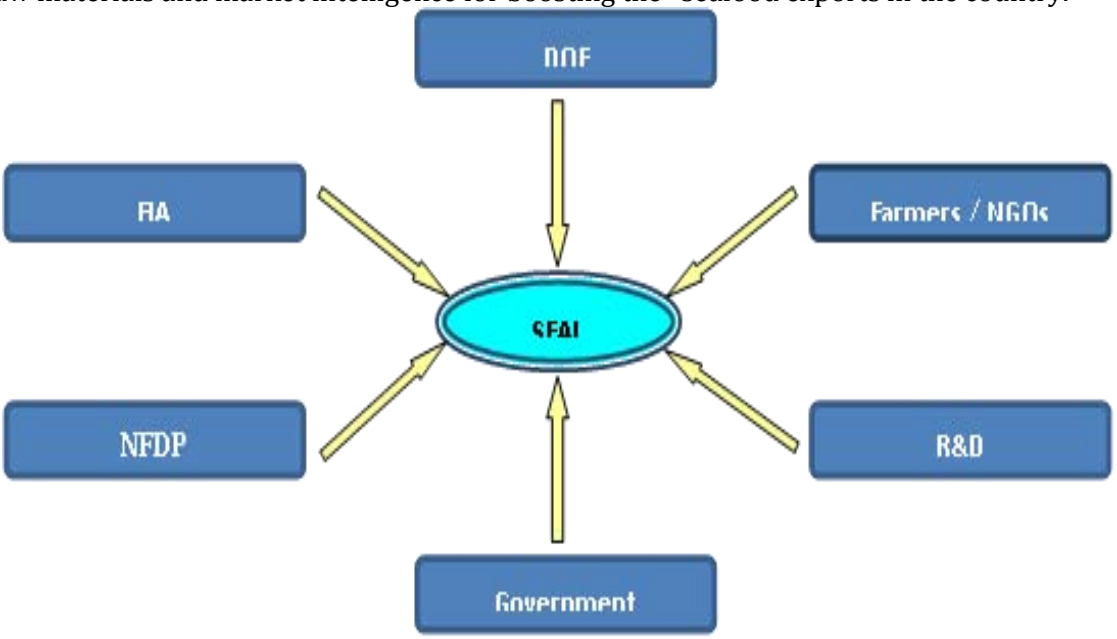

Figure 30.4 Institutional supports and Linkages developed

B. Weaknesses

(i) High cost of production

There exists severe paucity of raw material due to depleted landings in marine sector and disease incidence in culture sector. The major exportable species like shrimps, lobsters and high value fishes registered a downward trend in ladings over the years. There has also been a significant reduction in shrimp production due to disease outbreak and huge cost of shrimp farming. The reduction in landings coupled with geographical separation of landings often results in irregular supply of raw material thereby resulting in non-realization of economies of scale to the different exporters. In addition, the seasonal variations in marine catches constrain the operations of the firms. During lean seasons, majority of the firms face shortage of raw materials resulting in low capacity utilization. The bigger firms either having access to backward integration or owning fishing vessels may operate to some extent but the smaller firms either lay idle or limit their operations. The peak landings in the marine capture sector generally coincide with the peak season for exports. More than 60 per cent of the landings occur during the post monsoon period which coincides with the highest export demand. Thus to restore parity between the demand and the supply, the raw materials are often purchased at exorbitant prices with even forward marketing with the boat owners . There can be chances of deterioration in quality due to non-availability and that too at affordable prices.

The increasing demand for fish in the domestic market as a result of population and percapita income growth rates pushed up prices of many of the exportable fish varieties.

The high purchase prices of the exportable species and other operating expenses like labour cost, water and electricity charges caused the cost of production to increase at exorbitant levels. In addition, the high cost of compliance for EU approval, high cost incurred for purchase at distant markets, establishment cost all resulted in higher unit cost of production and lower profit margins. The establishment cost of a processing plant increased considerably over the years due to stringent quality standards set by international trade regulations. The compliance cost for EU approval also increased manifold thus resulting in huge cost of establishment. The overall compliance cost for meeting the EU norms has been estimated at 15 to 40 per cent of the FOB value. Often the cost of investment is so huge that the break evens aren't even attained after a decade of continuance in business. The analysis of the short run and long run gains on the SPS and compliance measures by the exporter's indicated that with the huge cost of investment required for the compliance of EU approval and HACCP implementation, the gains weren't significant due to non-capacity utilization of the processing plant and lack of raw materials. The processing plants which have implemented the compliance requirements for the EU approval are yet to break even their cost of investment even after 8 -10 years on account of processing capacity utilization to the tune of 22-25 per cent.

There exists uncertainty in prices in the international market with the economic recession spreading to most of the target markets. The price uncertainties lead to delay in payments, loss in revenue and delay in realizing new markets. The uncertainty in prices often lead to additional cost of storage and the material getting delayed in shipment and increased demurages. In addition, ecolabelling and other private standards by international retailers for environmental and social purposes also results in high costs and low margins.

ii. Low capacity utilization

Realization of capacity utilization of processing / exporting units was the major problem faced by many of the exporters. The reduction in landings coupled with geographical separation of landings often results in irregular supply of raw material and poor capacity utilization. In addition, seasonal variations in marine catches constrain the operations of the firms. During lean seasons, majority of the firms face shortage of raw materials resulting in low capacity utilization. The bigger firms either having access to backward integration or owning fishing vessels may operate to some extent but the smaller firms either lay idle or limit their operations. The average capacity of processing plants was found to be 32.12 tonnes whereas the utilization was only 12.10 tonnes (37.70) per cent. Analysis for the capacity utilization across different quarters showed that during the period from October - December months it was 30.39 per cent followed by January- March at 28.29 per cent. The processing plants processed minimal quantities during July-August and April-June. The average quantum of marine fish products processed per processing plant was found to be 2,781.70 tonnes per annum.

A Snap Shot on the Capacity Utilisation

- *Average capacity - 32.12 tonnes/day*
- *Average capacity - 12.10 tonnes (37.7 per cent) utilization*
- *Average Quantity processed- 2781.70 tonnes*
- *The average number of processing days -230 days per annum.*
- *Peak Operations - October to December (30.39) January- March (28.29)*

iii. Deficiencies in the value chain constituents

Absence of quality control at primary production centres (landing centres) often results in poor quality of the products. Even though there occurred drastic changes in the marine fishing sector with advancements in harvest technologies, the facilities for onboard storage, freezing or processing are still lacking. In addition, many of our landing centers lack basic amenities including hygienic auctioning platforms, quality ice and packaging material. The quality deterioration and discard losses hinder our exports through reduced supply of raw materials.

Even though our export supply chain is well developed with good storage, processing and transport infrastructure when compared to the domestic marketing system, it is nowhere comparable with that of developed countries. The imports of fishes from other countries and re-exports which was a viable option for the exporting firms to realize capacity utilization couldn't gain momentum in the Indian seafood export industry due to import restrictions for many of the items and other factors limiting the imports. The freezing and cold storage facilities available at present in the country is not sufficient for promoting large scale imports. There are other limitations like high cost of imports and distance of warehouses from ports which restricts imports.

(iv) Constraints in value addition

The international trade scenario is changing fast and the importers are insisting on stringent quality standards and newer types of value added and ready to eat products. Introduction of diversified seafood products in the export front has improved product acceptance and better unit value realization for our sea food products. A variety of value added products such as fish balls, soup powder, fish cutlet, fish finger, fish flakes, fillet and fillet blocks, fish steaks, ready to serve fish curry, minced meat, surimi and extruded products, fish sauce and fish salad, IQF and AFD products and coated seafood products are now exported from the country.

There is need for new innovative products catering to the demands of the domestic as well as overseas consumers to boost our seafood trade and enhance earnings. In India, about 80 per cent of the catch is now utilized as fresh or chilled, 6 per cent as dried or cured, 4.7 per cent for fish meal preparation and 5.3 per cent for freezing and export (Ministry of food processing industries, www.mospi.in). In addition there is scope for production of a number of marine byproducts with pharmaceutical or industrial uses which could fetch very

high prices in the overseas markets. However the potential for value added and marine byproducts is not fully utilized in the country even though it is endowed with abundant cheap resources, labour and infrastructural facilities. There is need for development and promotion of value added products and marine byproducts to enhance our export earnings. Even though the share of value added and marine byproducts in the total export increased over the years, the decadal average shows a meager ten per cent share in the total volume of sea food exports. However the last three years showed significant share of around 12.5 per cent.

B. Opportunities

i. Emergence of candidate species

Indian sea food sector has better opportunities with capture and trade of candidate species like puffer fish, yellowfin tuna, certain species of sharks having good export demand. Puffer fish which was a menace to the gears had been identified as a deliquacy in the Far East fetching around a couple of dollars per kg. The success in mariculture technologies for export oriented varieties like Cobia (*Rachycentron sp)*, lobsters and open sea cage farming offer vast scope for augmenting fish production in the future. In addition, the aquaculture sector of the country is also witnessing a boom with introduction of exotic species *L. vannamei* in the culture system which yields better returns. Enhancing production of *L. vannamei* which is a preferred item in the European markets may improve the performance of the seafood export industry which suffers setback from reduction in capture and culture based shrimps. White shrimps yields better returns with per hectare production of up to 20 tonnes/ha when compared to 2-3 tonnes/ha for black tiger shrimp. The culture duration is 3 months only as compared to the duration of 5 months of tiger shrimps and yields better returns under intensive and semi intensive farming.

ii. Augmented Domestic market

The domestic fish market is growing in leaps and bounds with population and percapita income growth rates, changes in food habits, increasing awareness on nutritional qualities of fish, improvements in transport, storage and processing facilities and access to quality fish. The exports of high value fishes like seerfishes and pomfrets declined even with increase in landings and it shows the competitiveness of the domestic market and affordability of these fishes to affluent domestic consumers. Analysis of price changes in the past decade showed that for many of the high value fishes, the price increase in the domestic market was more than that of the export market. The strong domestic market offer promising scope for the export sector in the country by utilizing the existing infrastructural facilities for developing products suited for the domestic sector and achieving economies of scale.

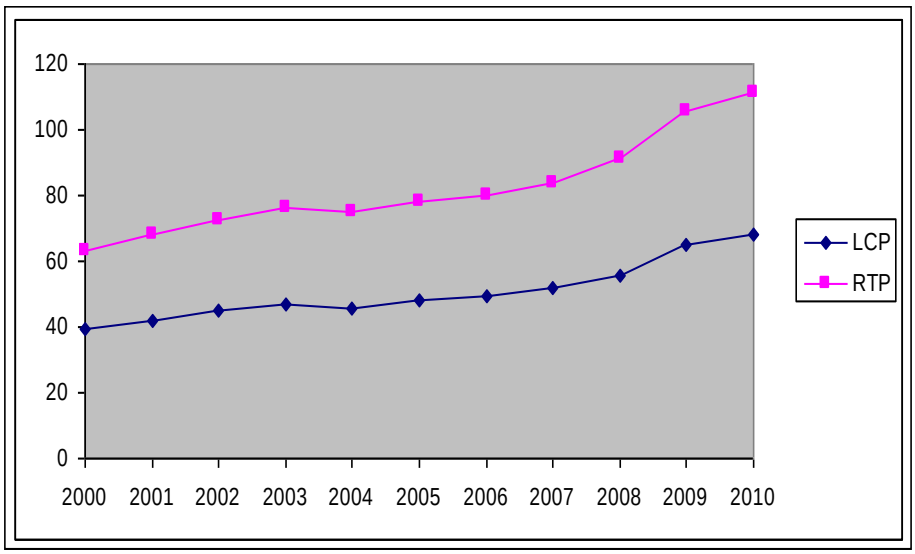

Figure 30.5 Growth in doemstic marine fish prices at first and last sales(2000-10)

In addition, the increase in the prices of the high value exportable fin fish species like pomfrets, seerfishes, tuna, ribbon fishes and snappers in the domestic market was very much higher than that of the export market. The avaerge reatil price realised per kg for seer fishes and pomfrets were even higher than that of the unit value realised in the export market indicating the competitiveness of the domestic market (Table 1). The augmented doemstic market offer promising scope for the export sector to develop quality products which cater to the needs of the domestic consumers by utilzing their existing capacity.

Table 30.1 Comparative analysis on the Export and Domestic price of exportable varities/ species

Name of fish	Export price			Domestic price		
	1997-98	2007-08	per cent increase	1997-98	2007-08	per cent increase
Ribbon Fish	27	52	92.59	16	50	212.5
Pomfrets	172	228	32.56	120	248	106.67
Tuna	38	58	52.63	25	49	96
Mackerel	40	64	59.1	30	59	96.67
Sardine	34	21	-38.5	25	42	68
Seerfish	67	133	98.51	73	265	263.01
Snappers	51	132	159.14	38	62	63.16

iii. Changed world economic order :Trade agreements like SAPTA and ASEAN and global recession

Indian sea food export sector performed well under the changed world trade scenario with new free trade agreements like ASEAN and SAPTA and under global economic recession which is evidenced by the marked increase in quantity, value and unit value realized during the period 2007-11.

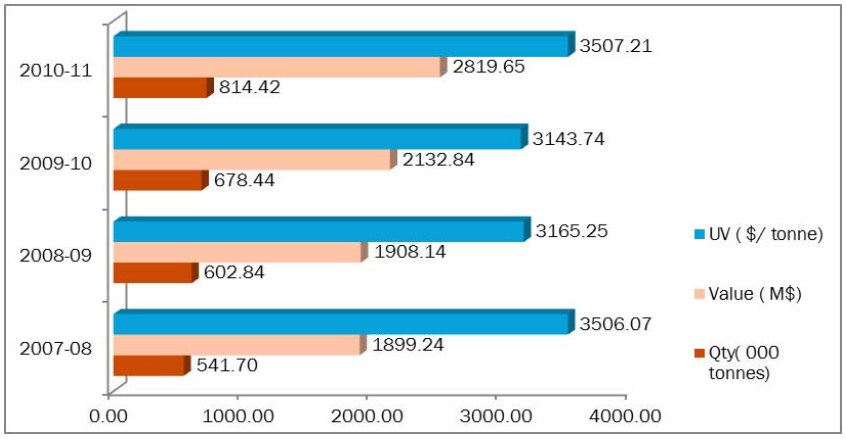

Figure 30..6 Performance of the seafood exports during 2007-2011

The ASEAN free trade will provide with an opportunity to reap in the export economies of scale through the timely and incessant availability of raw materials thereby increase export domain and realm of operations. The ASEAN provides additional market access to Indian exporters and opportunities for new investment. In addition, the expected increased volume of trade will provide gainful direct and indirect employment in sector. There also exist possibilities of outsourcing products from overseas at competitive prices from the ASEAN members. In the short run due competitiveness, processors will start to strengthen their plants by producing value added products and improve quality for their products. The results of impact analysis from exporters and processors are presented in Table 2 and 3.

ASEAN Agreement is India's first multilateral trade agreement which opened a 1.70 billion consumer market to the member countries with a combined GDP of $ 2.3 trillion. The Agreement provides an array of business opportunities that will brighten the economic sentiment of the ASEAN business community.The expected trade is $ 60 billion by 2011-12 and China has already an FTA with ASEAN, perhaps on more favourable terms. By this FTA, India, though not by way of competition, will have access to this flourishing market . ASEAN will reduce its heavy dependence on China .FTA can be extended to service sector anjd whose dialogues are in process . Between 1997 and 2006 China's free trade with ASEAN increased from 3.7 to 11.4 per cent whereas for India, it is 1 to 1.6 per cent. So India has huge potential to raise its trade with ASEAN due to this FTA . ASEAN is India's 4th largest trading partner after the E.U., USA and China. The FTA with ASEAN will lead to closer economic integration. Prospect $ 3.3 US billion fisheries export to various ASEAN members due to its geographical advantage, less freight charges, commonality of consumables and less stringent measures.

The important weaknesses and threats anticipated include exchange rate fluctuations- huge with ASEAN countries ,huge difference in productivity, labour cost and inputs, dumping of 177 species of fish from Thailand and Vietnam. comparative advantage in farmed shrimp in countries like Thailand and Vietnam, ornamental fish from Singapore and Malaysia and yellow fin tunas from Indonesia. There exist huge amount of subsidies by ASEAN – India hardly 0.5 per cent. The imports of cheaper varieties will result in crash of prices which may forcing fishers to give up fishing. The FTA is likely to permit zero tariff imports of sardines, mackerels, anchovies and crabs.It is also feared that cheaper imports of local popular varieties will spell doom to fishing communities. The sector that is going to be hit worst is fisheries - particularly artisanal fishing which will be unable to compete with the factory fishing carried out by such countries as Thailand. There is a fear that new forms of trade barriers (251 notifications) by ASEAN will further dampen trade. Further liberalisation in fisheries sector to increase trade will precipitate debt trap and related problems of the fishing community

The Possible impact of ASEAN agreement was analysed on different stakeholders/resources
1.Consumers
2. Exporters
3. Processors
4. Resources
5.Primary stakeholders
6.Market functionaries

1 Impact on consumers

The consumer will in a way be benefited by the FTA on account of ensuring year round availability, price stabilization and affordability providing commodity diversification, meeting taste and preferences, parity on demand and supply and thereby enhancing nutritional security. The results of impact analysis from consumers are presented in Table 30.2 The impact study revealed that free trade agreement leads to year round availability of fishes which was opined by 204 out of 240 consumers (85.2 per cent) and 75.2 per cent of consumers ensured that there will be price stabilization and affordability in the fish market due to free trade agreement. 63.2 per cent of consumers responded that free trade agreement helps to commodity diversification of fishes.

Table 30.2 : Impact analysis of fish consumers

Impact factors	Response (Per cent)
Parity on demand and supply	102 (42.5)
Price stabilization and affordability	180 (75.2)
Providing commodity diversification	152(63.2)
Meeting taste and preferences	78 (32.5)
Ensuring year round availability	204 (85.2)
Enhancing nutritional security	84 (35.2)

2 Impact on exporters

ASEAN with 600 million people against India's billion plus presents a substantial opportunity for Indian exporters and businessman. The ASEAN free trade will provide with an opportunity to reap in the export economies of scale through the timely and incessant availability of raw materials thereby Increase export domain and realm of operations. The ASEAN provides additional market access to Indian exporters and opportunities for new investment. In addition the expected increased volume of trade will provide gainful direct and indirect employment in sector. There also exist possibilities of outsourcing products from overseas at competitive prices from the ASEAN members. In the short run due competitiveness, processors will start to strengthen their plants by producing value added products and improve quality for their products. The results of impact analysis from exporters and processors are presented in Table 3 and 4. 45 exporters out of 50 exporters (90.0 per cent) opined that there would be more export economics of scale due to free trade agreement. 89.0 per cent of exporters agreed that free trade agreement leads to timely and incessant availability of raw materials. 75.0 per cent of exporters felt that free trade agreement would increase export domain and realm of operations related to fish exports. (Table 30.3)

Table 30.3 : Impact analysis of fish exporters

Impact factors	Response (Per cent)
Reaping export economics of scale	45 (90.0)
Increase export domain and realm of operations	37 (75.0)
Timely and incessant availability of raw materials	44 (89.0)
Additional market access to Indian exporters	28 (56.0)
Opportunities for new investment	15 (30.0)
Providing gainful employment 1 tonne – 200 mandays	33 (65.0)

3 Impact on processors

The impact study of processors revealed that there would be Higher capacity utilization of processing plants due to free trade agreement.(92 per cent) and 85.0 per cent of the processors agreed that there would be more economics of scale. 75.0 per cent of (37 processors) opined that free trade agreement leads to direct and indirect employment in sector. (Table 30.4)

Table 30.4 : Impact analysis of fish processors

Impact factors	Response (Per cent)
Higher capacity utilization of processing plants	46 (92.0)
Economics of scale	43 (85.0)

Outsource products from overseas at competitive prices from the ASEAN members	26 (53.0)
Direct and indirect employment in sector	37 (75.0)
Due to competitiveness, processors will start to strengthen their plants by producing value added products and improve quality for their products	25 (50.0)

4 Impact on resources/environment

The marine fisheries sector in India is stagnating with marine fish landings over the period of years shows depletion of resources. The over fishing in India has lead to the depletion of fishery resources which in turn affect environment. With this agreement, importing such depleting items from ASEAN countries would reduce negative impact on environment. Also there exists the possibility of "Fishing holidays" to replenish and rejuvenate fisheries stock and to avoid negative environmental impact. During these period import can be done to meet local demand.Impact on environment was studied based on Kerala's fisheries production over the period of years shows depletion of resources , over fishing in India leads to depletion of fishery resources which in turn affect environment, with this agreement, negative impact on environment would be reduced by importing such depleting items from ASEAN countries."Fishing holidays" to replenish and rejuvenate fisheries stock and to avoid negative environmental impact and during these period import can be done to meet local demand .

5 Impact on primary stakeholders

Impact on primary stakeholders was based on the fact that dependents for livelihood. Since 50 per cent of fishermen community (non mechanized and motorized) earn their livelihood from only 20-25 per cent of total catch. There exists high cost of fishing and decreasing CPUE (Catch Per Unit Effort) and geographical similarities between ASEAN and Kerala marine ecosystem leads to negative impact. The major countries like Thailand and Vietnam may dump 177 species of fish in the Indian market which will threaten livelihood security of fisherman and if the FTA allows Thai fishing vessels access the Indian territorial waters, it leads to over-fishing and the damage to fish stocks , Highly disorganized fish marketing systems where the price spread accounts to more than 40 per cent and fresh catch of anchovy, lobster, crab, sardine, mackerel, shark, shrimp and squid may be replaced by refrigerated cheap imports. Further liberalization of fisheries sector to increase trade will precipitate the problems of fishing community and cant stand the factory fishing of some of the ASEAN countries like Thailand and Vitenam

Bottlenecks in ASEAN agreement include agreement was only for trade-in-goods and did not include software and information technology and the rules of chances of Chinese fish into India through ASEAN isn't discussed and there exists a lack of clarity and over lapping in the negative list with respect to different processed form .And according to GATT agreement 24, it is mandatory for WTO signatories to open up trade. So products can't be maintained in the negative list for longer period.

The biggest apprehension exists with the primary stakeholders since 50 per cent of fishermen community (non mechanized and motorized) earn their livelihood from only 20-25 per cent of total catch are already suffering from increasing cost of fishing and

decreasing CPUE (Catch Per Unit Effort). The preset system of fish marketing is highly disorganized where the price spread accounts to more than 40 per cent. Fresh catch of anchovy, lobster, crab, sardine, mackerel, shark, shrimp and squid may be replaced by refrigerated cheap imports. Further liberalization of fisheries sector to increase trade will precipitate the problems of fishing community. (The Hindu, 2009). It will be also difficult for the traditional sector to coup up with the factory fishing of some of the ASEAN countries like Thailand and Vietnam. Primary stakeholders fear that free trade agreement leads to distress sale due to low volumes.

Case study of sardine was conducted in Kochi. Comparison of landing centre price and export price of sardine revealed that landing center price of sardine was Rs. 15 per kg and export price was Rs. 17.5 per kg. So landing center price was competitive than export price Fears and apprehensions of primary stakeholders about Indo-ASEAN free trade agreement are only illusion and there would not be any negative impact due this agreement. In addition quality, freshness and timely availability will add to the advantage. Finally fishermen are not at a loss due to free trade agreement. The details are presented in Table 30.5.

Table 30.5 : Comparison of landing centre price and export price of sardine

Item	Price (Rs/kg)
Landing center price of sardine	15.0
Export price	
1. Price of sardine	5.0
2. Freight charges	7.5
3. Other charges (transportation/ processing/value addition/ berthing)	5.0
Total export price of sardine	17.5

6 Impact on market functionaries

Market functionaries will be having an added advantage of reaping in market economies of scale. The import of fish into the country is to provide ample opportunities in marketing and improving the market structure.

Conclusion:

ASEAN agreement is not a myth but a stark reality. The Agreement provides an array of business opportunities that will brighten the economic sentiment of the ASEAN business community. The expected trade is to the tune of $ 60 billion by 2011-12. It is important to note that China has already an FTA with ASEAN, perhaps on more favourable terms. By this FTA, India, though not by way of competition, will have access to this flourishing market. In addition it is anticipated that the free trade agreement will reduce ASEAN's heavy dependence on China. The Free Trade Agreement will be extended to the service sector whose dialogue are in progress and is expected to have its take off by December 2011

The strategies which were cited include **p**rovision of Minimum Support price for fish species, possibilities of an anti- dumping duty ,siphoning off positive terms of trade from other sectors to fisheries to create investment opportunities. micro losses for macro gains . Increasing investment to create multiplier effects and periodic monitoring and evaluation of negative list/ highly sensitive list

iv. Ecolabelling and certification

The sustainable fishery management certification, labelling of fish and sea food products, allowing consumers to use their choice and buying power to select eco-labelled products are innovative approaches necessary for the marine fishing industry to survive in the future. These arrangements will provide a driver for generating a market incentive for the products. An "ecolabel" is a label which identifies overall environmental preference of a product or service within a specific product / service category based on life cycle considerations. The International Organization for Standardization (ISO) has identified three broad categories of Voluntary Environmental Performance Labels, with Ecolabelling fitting under the Type-I designation. Type-I clarified environmental labels as a voluntary, multiple criteria based, third party programme that awards a license that authorizes the use of environmental labels on products indicating overall environmental preferability of a product within a particular product category based on life cycle considerations. Ecolabelling although not yet become an established trade measure, may impact Indian seafood trade in the near future with consumer preference and better prices in overseas markets. Indian fish production and trade sectors may be able to reap the benefits with ecolabelling gaining importance in the International trade arena due to its subsistence nature and ecosystem conservation measures.

Country Of Origin (COO) is the country of manufacture, production, or growth where an article or product comes from. From a marketing perspective, country of origin is a way to differentiate the product from the competitors. The country of origin has an impact on consumers' quality perceptions of a product, as well as ultimately preference for and willingness to buy that product. The concept of country of origin had been a long pending boon for the Indian fisheries products. There occurs significant re-exports from South East Asian countries and China into the US and European markets .The country of origin clause and the catch certificate indicating the region form where it is being caught will potentially benefit the Indian products in the international market

Limitations

(i) Unsustainable fishing practices

Even though our capture fisheries production has increased over the years, overexploitation and targeted fishing led to declining catch trends in most of the west coast states like Maharashtra and Gujarat and stagnating catch levels of demersal resources in Kerala. The increased export demand led to the targeted fishing of varieties like shrimps, cephalopods, pomfrets etc and decline in their landings. In addition, destructive fishing methods like trawling and use of engines with huge capacities contributed to the depletion in the stock of certain resources. In addition losses due to bycatch, discards and juvenile fishing are other major factors limiting the sustainability of fish production in the country. Eventhough the situation has not reached an alarming level, unless the fishery is

conserved through following responsible fishing practices it will become a serious threat to the fish production and trade in the country.

(ii) Technological constraints in aquaculture/ mariculture

Eventhough the aquaculture sector is expecting a boom with introduction of disease tolerant *vannamei*, it also faces several technological constraints like deficiency in supply of quality seeds, lack of expertise in hatchery and farming practices, shortage and high cost of labour, costs for pollution abatement and other environmental requirements, social risks and market failure. In the mariculture sector also there are several limitations like absence of proper water leasing policies in most of the states, suitability to different locations, shortage of trained manpower, risks due to environmental variations and climate change, poaching and huge investment costs.

(iii) Continued trade impediments

The stringent measures set by WTO and also by private retailers at international market for social and environmental purposes like protection of labour rights, elimination of child labour, environmental pollution , ecosystem/resource conservation etc affect our sea food trade in the future which may require reorientation of our capture and culture fisheries production and trade sectors through macro level policies. In addition, the implementation of IUU Regulations may adversely affect our exports from capture fisheries sector at least in the short run because of it being open access and unregulated. Uncertainty in prices in the international market with economic recession spreading to most of the target markets lead to delay in payments, loss in revenue and delay in realizing new markets. The uncertainties in prices often lead to additional cost of storage and delayed shipments and increased demurrages.

There is widespread concern in exporting countries about the impact of the new traceability requirements introduced in 2010 in major markets to prevent Illegal, Unreported and Unregulated (IUU) fishing. The FAO Conference of the Agreement on Port State Measures also has given approval to prevent, deter and eliminate IUU fishing. This has got serious implication in the Indian seafood trade as the marine capture fishery in the country is primarily open access and regulations exist only in the form of seasonal bans and mesh size regulations. Elimination of IUU fishing requires imposing regulations in capture fisheries sector for product acceptance in global markets. Regulating the capture fisheries sector in the country is a difficult task and may raise serious several issues from nature of regulations, ownership rights and on transaction costs of implementation.

(iv) Poor market information systems

The lack of market and product information leads to demand and supply constraints. The taste and preference of the buyers are ever changing that it becomes difficult to cope up with their demand. Often the demand for the product forms changes with income and seasons. On the supply side, the awareness on ecolabelling, catch certificate and numerous trade regulations and quality standards becomes important. The lack of proper market intelligence and poor market news leads to lag in equipping the seafood traders. In addition, lack of proper forward and backward market linkages in both capture fisheries and aquaculture sectors affects the efficiency and viability of most of the exporting firms

through low capacity utilization, high costs of procurement, storage, transport and processing.

Based on the SWOL analysis, the value chain interventions for profitable and sustainable seafood marketing is depicted in the flow diagram (Figure 8). The flow diagram indicates three levels of interventions viz., procurement of raw material, product development, and market capitalization. All these interventions require concerted efforts in the different constituents of the value chain. The value chain also suggests harnessing the potential of domestic markets on account of higher purchasing power and willingness to pay for some of the exportable species in the domestic market.

Conclusion

The marine products exports from India continue to surge up new heights and unabated by global recession. During 2011-12 the quantum of exports surpassed 8.10 lakh tonnes with a forex earning of 2.85 billion dollar. the appreciation of the Indian rupee hasn't much affected the export earnings. The reason for the sustained increase in export is due to the demand for raw fish rather than value added products from the retail outlets as the buyers opted for cheaper fish on account of lower income and increasing unemployment. Nevertheless, being a heavy export earner the fisheries sector is facing numerous problems on account of economic shortcoming, technical constraints, institutional limitation, trade restrictions and marketing lacunae. Severe competition exists between the different competitors like Thailand, China and South East Asian countries for sustaining the market share by product diversification. The sea food industry in many countries are undergoing a rapid change to process more and more "ready to cook" and "ready to eat" in convenient packs. India's predominant position in shrimp market is being eroded due to the sudden spurt in farmed shrimp production in china, Indonesia, Thailand, Vietnam etc. the problems were again complicated with the restriction placed by USA through imposition of antidumping duties which has been discussed at length in the appellate body but continues to haunt the export industry . Situations aren't rosy with European Union countries with changing quality standards and cases of rejection and alerts. The SWOL analysis of the Indian export sector reveals that it had confronted the asymmetric trade opportunities impressively while competing in the world market impressively and poised for a million tonne export and four billion dollar revenue earnings in the near future .

In the wake of an emerging domestic market the export policy framework for efficient and sustainable seafood markets integrating domestic markets is required.

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