

**EXPORT PROMOTIONAL ACTIVITIES OF MARINE
PRODUCTS EXPORT DEVELOPMENT AUTHORITY**

by
VISHNU A.
(2015-31-021)



MAJOR PROJECT REPORT

Submitted in partial fulfilment of
the requirements for the post graduate degree of
MBA IN AGRIBUSINESS MANAGEMENT

Faculty of Agriculture
Kerala Agricultural University



COLLEGE OF CO-OPERATION, BANKING AND MANAGEMENT

VELLANIKKARA, THRISSUR-680656

KERALA, INDIA

2017

Declaration

DECLARATION

I, hereby declare that this project “**EXPORT PROMOTIONAL ACTIVITIES OF MARINE PRODUCTS EXPORT DEVELOPMENT AUTHORITY**” is a record of research work done alone by me during the course of MBA (ABM) and it has not previously formed the basis for the award to us for any degree/diploma, fellowship or other similar title, of any other University or Society.

Place: Vellanikkara

Date: 21-10-2017



VISHNU A

(2015-31-021)


Certificate

CERTIFICATE

Certified that this project report entitled **EXPORT PROMOTIONAL ACTIVITIES OF MARINE PRODUCTS EXPORT DEVELOPMENT AUTHORITY (MPEDA)** is a record of project work done independently by **Vishnu A. (2015-31-021)** under my guidance and supervision and that it has not previously formed the basis for the award of any degree, fellowship, or associateship to him.

Vellanikkara

21-10-2017



Dr. Giggin T.

Assistant Professor (KVK)

KAU, Vellanikkara

Dr. GIGGIN T M.V.Sc
ASSISTANT PROFESSOR
KRISHI VIGYAN KENDRA THRISSUR
KERALA AGRICULTURAL UNIVERSITY
VELLANIKKARA.P.O., 680656
THRISSUR DT. KERALA

Acknowledgement

ACKNOWLEDGEMENT

Firstly, I bow with infinite gratitude before the Almighty God for all his blessings and graces showered upon me throughout my life.

*I express my deep sense of gratitude and indebtedness to my guide, **Dr. Giggin T.**, Assistant Professor, KVK, KAU, Vellanikkara for his unconditional support, valuable guidance throughout my project endeavour. Gifted to procure a few from his ocean of knowledge and experience. I express my profound gratitude and heartfelt thanks to my project supervisor and guide for the efforts she had taken and encouragement provided all through the process of doing this project.*

*I feel happy to express my deep sense of gratitude to **Prof. Dr.E.G.Ranjit Kumar**, Director, MBA ABM, for his great support and advices throughout my course which helped me greatly to complete the course successfully.*

*I express my heartfelt thanks to **Dr. P Shaheena**, Associate Dean. CCBM for her timely advices and encouragement.*

*I reckon my deep sense of gratitude and indebtedness to **Mr. Prabhakaran** for his valuable help and exemplary guidance.*

*I benefited immensely from the college library. I owe thanks to all the library staffs and specially **Mr. K. P. Sathian** librarian for the help extended by them. I am also thankful to all the **office staffs** in CCBM, for their help and cooperation in all academic matters.*

I express my earnest gratitude to all my friends of MBA ABM 2015 batch for their encouragement. Words cannot enunciate my indebtedness to my lovable parents for their kind support during the period of my project work.

Vishnu A.

(2015-31-021)

CONTENTS

Chapter No.	Title	Page No.
1	Design of the Study	01-05
2	Review of Literature	06-17
3	Theoretical framework	18-27
4	Marine products export development authority – A Profile	28-41
5	Export promotional activities of MPEDA – An Analysis	42-62
6	Summary of Findings, Conclusions and Suggestions	63-72
	Bibliography	

LIST OF TABLES

Table No.	Title	Page No.
4.5	Various market promotion activities under MPEDA	33
4.12	Major products Exported under MPEDA	40
5.1	Overall Export growth of marine products	43
5.2	Major marine products export countries from India.	44-45
5.2.1	Micro element content in cephalopods.	46
5.3	Major marine products export countries from India.	46-47
5.4	Future forecasted demand of marine products.	48
5.5	Export promotional activities of Mpeda	50
5.6	Impact of Export Promotional activities in export of marine products	52
5.7	Registrations under Mpeda.	54
5.8	Impact of financial assistance for market promotion over manufacture exporter registered under MPEDA	55
5.9	Impact of financial assistance for market promotion over merchant exporter registered under MPEDA	56
5.10	Impact of financial assistance for market promotion over route through merchant exporters registered under MPEDA	56
5.11	Impact of financial assistance for capture fisheries over the fishing vessels registered under MPEDA	57-58

5.12	Impact of financial assistance for culture fisheries over ornamental fish exporters registered under MPEDA	58-59
5.13	Impact of financial assistance for processing infrastructure and value addition over processing plant registered under MPEDA	59-60
5.14	Impact of financial assistance for quality control over fresh/chilled fish handling centres registered under MPEDA	60
5.15	Impact of financial assistance for processing infrastructure and value addition over dried fish handling centres registered under MPEDA	61
5.16	Impact of financial assistance for research and development over live fish handling centres registered under MPEDA	62

LIST OF FIGURES

Figure No.	Content	Page No.
5.1	Forecasted demand for marine products export	48
5.2	Export promotional activities of Mpeda	51
5.3	Registrations under MPEDA	53

Chapter - 1
Design of the Study

Chapter-1

Design of the study

1.1 Introduction

The new economic policy resulted in radical change in structure and direction of Indian economy. The composition of exports has also undergone a drastic change with the beginning of economic planning. Companies globalize their operations through various means such as one of them is export directly and indirectly. Various means included the removal of export subsidies; replace licensing of export with duties, levy low flat tax on export income etc. Exporting is attractive than other methods particularly when underutilized capacity exists. Again, it is attractive substantially lower than producing the goods in the foreign markets. In a number of cases cost consideration make foreign production assembling preferable to exporting.

In order to promote exports, the government has taken number of measures. These include number of incentives like tax relief, subsidies, concessional rate of interest etc. Besides incentives, government has set up a number of institutions to promote exports. These include the establishment of 20-export promotion council; extra incentives are provided to export processing zones (EPZ) (commerce.gov.in). India's present export policy is aimed at big export promotion. The measures adopted for this are many and varied. Although these may help the country to earn much need of foreign exchange.

Fisheries sector plays an important role in the Indian economy. It contributes to the national income, exports, food and nutritional security and in employment generation. This sector is also a principal source of livelihood for a large section of economically underprivileged population of the country, especially in the coastal areas. Share of agriculture and allied activities in the GDP is constantly declining. It has been observed that agriculture sector is gradually diversifying towards high value enterprises including fisheries (Katiha, Jena, & Barik, 2003). Since independence it has recorded considerable progress in terms of production and exports. Offshore shrimp is a valuable foreign exchange earner. Besides it provides employment opportunities to thousands of people. Fishing is the source of living for 7.7 lakh marine fishermen in Kerala. Fisheries sector assumes special significance as it is one of the most important sources of protein and contributes a dominant share of foreign exchange. Over the past few decades, the

seafood sector has undergone massive changes. As a result of considerable interest in its nutritional benefits, seafood today is perceived as a health food. Nutritional experts have emphasized this in different form and media. The important event has taken place in the history of India in 19th century was the enactment of "Indian Fisheries Act" in 1987. This Act delegated protection of fishery resources. However, the fisheries of the country remained in the dormant state throughout this period. It has a capacity of providing employment to 13 million persons and earning about Rs.6000crore worth of foreign exchange through export, it is imperative that we must aim at heralding a blue revolution in the very near future. Thus there is a tremendous scope for increasing fish catch and production in India in the coming years. The state governments, the central government, agencies like the Marine Products Export Development Authority (MPEDA) and other fisheries research organizations, entrepreneurs and commercial banks and other financial agencies, have an important role to play in converting the potential available in India into a commercial scale reality.

1.2 Statement of the problem

It is under the context the government of India thought of starting an exclusive agency for promoting the marine products exports and marine fisheries research by solving the various problems affected by the industry. Accordingly, MPEDA was started in 1972 and has been in existence for more than three decades. Export of marine products from India reach an all-time high of \$5511.12 million during the financial year 2014-15. seafood exports recorded a growth of 6.86% in quantity, 10.69% in rupee and 10.05 % growth in US\$ earnings (MPEDA annual report, 2015). India's marine sector products have assumed a place of pride in the national economy, while the country has now one among the top ten fish producers in the world. Therefore, it is found relevant to study the export promotional activities of MPEDA for a period of five years. To find out how far MPEDA has been successful in its operational objectives.

1.3 Objectives of the study

- i. To study the role of MPEDA in the promotion of marine products export.
- ii. To estimate the growth of marine products export from India in terms of quantity and value, during the period under study.
- iii. To study the problems faced by the MPEDA directly, and suggest measures for their improvement.

1.4 Methodology

1.4.1 Selection of organisation

Marine products export development authority (MPEDA)

1.4.2 Period of study

The study covers a period of 10 years commencing from 2006-007 to 2015-016.

1.4.3 Source of data

Besides the published ones, some important data have been obtained from the records of the organizations namely MPEDA and other agencies such as Seafood Exporters association of India (SEAI), Network for Fish Quality Management and sustainable Fishing (NETFISH), The Central Marine Fisheries Research Institute Central Institute of Fisheries Technology (CIFT).

1.4.4 Data collection method

Secondary data collected from MPEDA annual book, seafood export journal and MPEDA newsletter.

1.4.5 Tools for analysis

The collected data were analysed using appropriate statistical tools like percentages, annual growth rate, compound annual growth rate, trend projections and correlation. Tables and diagrams were given as and when it was found necessary to make the data more easily understandable.

- i. To calculate the annual growth rates of every year with the formula = $(\text{Ending Value} - \text{Beginning Value}) / \text{Beginning Value}$, and then percentage.
- ii. To calculate the compound annual growth rate $\text{CAGR} = (\text{Ending Value} / \text{Beginning Value})^{1 / (\text{No. of years} - 1)} - 1$
- iii. To calculate trend projection first make the data into time series Linear Trend: when the time-series data reveals a rising or a linear trend in sales, the following straight line equation is fitted:

$$T_t = b_0 + b_1 t$$

T_t = linear trend forecast in period t b_0 = intercept of the linear trend line

b_1 = slope of the linear trend line t = time period

1.4.6 Reference Period

21/7/2017 to 31/9/2017

1.4.7 Observations to be made

- 1 The various promotional activities taken by MPEDA for seafood export
- 2 The various international markets for marine products.
- 3 Export demand for various marine products.

1.5 Scope of the study

The study give insight through the various promotional activities taken by MPEDA for the export of seafood, thus the effectiveness of the promotional activities can understand. It helps MPEDA to improve their activities and seafood exporters also get clear awareness about the export promotional activities.

1.6 Limitations of the study

Promotional activities of MPEDA are very wide. Within the limited time only selected promotional activities are studied.

1.7. Chapterisation of the study

The study is presented in 6 chapters:

1. Design of the Study.
2. Review of literature
3. theoretical framework
4. MPEDA – A Profile.
5. Export promotional activities of MPEDA – An Analysis.
6. Summary of Finding, Suggestions and Conclusions.

Chapter – 2
Review of literature

Chapter 2

Review of literature

Chidanibanuti k., (1974) observed that the major importers of Indian marine products were Japan, the USA, Srilanka. Australia, the UK and France. The two major items of world exports were shrimp and tuna. The author found that the landings of tuna were then restricted to Lakshadweep and few centers in Andaman 's due to lack of tuna fishing vessels, trained personnel and technical facilities. He suggested that the export potential could be exploited by generating adequate infrastructure, accelerating the programmes of production in the offshore and deep sea fishing grounds, improving methods of processing and effective marketing in an organized and regulated manner. Diversification of products and markets can be effectively done by exporting Sardines. deep sea lobster. frozen fish, tuna etc, to additional markets in Canada, Denmark, Sweden, Germany, Spain, East-Europe and South East Asia.

Sivayya K.V, (1979), Exports of Indian marine products in aggregate exports increased from 1.62 percent in 1967 to 3.2 percent in 1976. The value of Indian marine products had been more than proportionate to the aggregate exports of the country. Frozen shrimp accounted for a major share, both in quantity and value, which had been mainly responsible for the sustained increase in the exports of Indian marine products. The author suggested that the potential resources should be assessed and tapped by continuing inshore, off-shore and deep sea fishing as well as culturing. Efforts should have made for product and market diversification. The appropriate strategy and policy ingredients should be evolved carefully. In a way, the primary task was three fold, to discover, to optimize and to produce results.

Watling, (1983). The ability of heavy metals to be concentrated in the organs of marine organisms accounts for their toxicity and also poses a direct threat to both aquatic biota and man

Bryan (1984) Cadmium, like other heavy metals, is well known to accumulate in a great number of marine invertebrates, especially mollusc, bivalves and gastropods but concentrations of these metals in cephalopods, one of the essential links in marine trophic chains.

Williams, Bushardt and Nissan (1991), Square footage needed for shipping when the product was packed by weight, deterioration in product quality, primarily associated with the destruction of the carton during shipment, failure of packaging to portray a quality product and failure to communicate consistent information. The packaging constrain includes other constraints like processing technology, methods of transportation, the product, markets, and economies.

Krishnan (1992) The potential for enhancing the marine industry, as a leading one was bright but it was only the techniques and methods that have to be developed as it would result in higher production and lower price. He also concluded that to Combat Competition from Latin America and South East Asia the production strategy need to be improved.

Varghese P.V., (1995), The seafood export from India mainly depended on marine catch. The entire fishing industry was depending on exports. The marine landings and marine products export over the years were compared and it was noted that there was a steep rise in the unit value of exported items which was also reflected in the total export value realized. The high cost of vessels with powerful engines and accessories with high rate of fuel consumption have already made the capture fisheries intensive. The traditional system of fishing ensured optimum current benefits without affecting the potential for similar benefits in the future. The present day fisheries had become non-selective and as a result for short-term economic gains they rapidly deplete the fishery. In this situation the author emphasized the formulation of proper regulations and restrictions towards conservation for the sustainability of the operations.

Pillay, T.V.R., (1998), holds that the export of seafood had been a major incentive for the involvement of companies and corporations in large scale aquaculture operations. Though this had helped in earnings of foreign exchange, there was considerable resentment towards the neglect of domestic markets. He points out that the seafood exporters themselves realized the importance of this when the export markets were affected by unexpected problems, causing considerable financial losses. So he suggested that it was necessary to have a balance between domestic and export markets.

Srivastava K.P., (1999 (a)), The status of seafood quality management in India. He stated that, so far, 59 seafood processing units and seven freezer vessels had been

approved to export their products to the countries of European union. The author suggested that the seafood exporters of India should develop necessary infrastructure required for the establishment of HACCP (Hazard Analysis critical Control point) based seafood quality and safety management system because the Indian Seafood export trade was in a position to ensure the quality and safety of fishery products to the specific requirements of the importing countries.

Srivastava K.P., (1999(b)) discussed the quality requirements of seafood in India. He pointed out that over the last few years significant changes in policy and quality criteria had been observed in the international seafood trade. In keeping with the present day consumers demand for quality and governments responsibility for seafood safety, the author suggested that the sincere efforts should be made by Export Inspection Council, Export Inspection Agencies, Marine Products Export Development Authority and Central Institute of Fisheries Technology to develop necessary infrastructure for the establishment of a Hazard Analysis of Critical Point (HACCP) based seafood quality and safety management system.

Hunt (1999) Fiji 's fisheries: their contribution to development and their future. The main objective of the study was to analyze the contribution of fisheries on Fiji 's development. He stated that, Fiji 's fisheries industry has mixed fortunes. There was a rapid growth on Fiji 's fresh fish and became the third important industry on export. These industries had shown positive effect on their economy. The present hands off 'policy by government on fresh fish export industry helps these industries to reach mature. Fiji was one of the largest population island nations in South Pacific. They are around 760000 people (excluding Papua New Guinea), of which 40 percent are urbanized. The estimate direct and indirect fisheries employees are 21000 to 31000 on an account 6 to 8 per cent of the population. In tuna vessels and tuna processing plants 10,300 Islanders are directly employed including four percent of women employee in canneries. Fiji ranked 46th out of 175 International Human Development (IHD) Index. The estimated weekly income of an artisanal fishing households was F\$ 34. This study concluded that the success of Fijian model of large catching, processing and fresh fish export industry was due to entrepreneurial skill, favourable air transport links, low tax policy and private investment.

Lupin (1999), The equivalence and compliance of European Union (EU) and USA Hazard Analysis and Critical Control Point (HACCP)-based regulations for fish and fish products and importance of safety regulations on fish and fish products in international trade. He has pointed out that EU and USA imports 50 per cent of the total demand in international fish markets and HACCP-based regulations are mandatory in the both countries. He has recommended that the domestic fishery industry and exporters has to adopt a pro-active attitude regarding HACCP-based regulations for two reasons. The first reason was in spite of the shortcomings and difficulties, current regulations make them clearly responsible and liable for the fate of HACCP-based systems and the second reason was many industries has been already implemented HACCP system and making profit.

Tharakan A.J., (1999), India had international Competitive advantage in shrimp and Cephalopods. Therefore, he suggested that higher unit value realization from the export of these two products should be realized by value addition and creation of international brand equity for Indian Shrimp and cephalopods.

Dewit (2001). Concluded that governments are targeting specific industries indirectly through providing export subsidies to specific markets via export insurance and such conceal strategic rent capture less developed markets.

Ahmed, Mohamed, Johnson and Meng (2002). They have suggested that the government agencies to do more to promote external trade and to create higher level export promotion awareness programme for small and medium-sized firms shall give greater emphasis.

Katiha, Jena, & Barik, (2003). Fisheries sector plays an important role in the Indian economy. It contributes to the national income, exports, food and nutritional security and in employment generation. This sector is also a principal source of livelihood for a large section of economically underprivileged population of the country, especially in the coastal areas. Share of agriculture and allied activities in the GDP is constantly declining. It has been observed that agriculture sector is gradually diversifying towards high value enterprises including fisheries

Matthew (2003) According to the United Nations Development Programme Human Development Index, India stood at 124th position in the world community and 44.2 percent of Indian population were living below poverty line by earning less than \$1 a day which includes a significant proportion of fishing communities. India has a coastal population of 370 million people or 36 percent of the country's total population. About 6.7 million people Indians are dependent on fisheries for their livelihood. He has concluded that fish has become a highly traded commodity and one-third of total fisheries product was traded in international markets. Comparing to the global average India 's seafood exports lies below the average because only 12 per cent of Indian fish production (wet weight equivalent) was exported.

Rae and Josling (2003), They also mentioned that export policies and agricultural resource endowment of the developing country offer significant explanations for their export growth. They concluded that by reducing the agricultural trade barriers results significant increase of 6 percent above on developed countries processed food export.

Salele (2003), Due to lack of government assistance in marketing most of their fishes are sold to the middleman. Most fishers adopted modern fishing technologies which resulted in their livelihoods being better off economically and culturally. However, adoption of such technologies encouraged the revival of traditional fishing skills. He concluded that globalised trade had improved the livelihoods of fishers and their families and these improvements are realized in the form of household income, child welfare, children's schooling, family health, nutrition and quality of life.

Ayyappan and Krishnan (2004) concluded that a combined effort to understand fisheries and its nuances were necessary for comparative advantage which India held in this sector. It helps India to go a long way to assimilate the blue revolution. The fisheries sector provides employment opportunity, generates income and brings huge foreign earning from export.

Bose and Galvan (2005) The New Zealand (NZ) seafood industry was heavily dependents upon export market. In fact more than 80 percent of their fish and seafood production are exported and more than 90 percent of the industry's earnings are generated from export. In 2000, New Zealand has exported seafood upto NZ \$ 1.43 billion and became fourth largest seafood exporter of the world. They had concluded

that the lag supply, productive capacity, seasonality and time trend are significantly influence the export supply behaviour on rock lobster to Japanese market.

Dey, Rab, Jahan, Nisapa, Kumar and Ahmed (2005) implementation status of sanitary and phytosanitary (SPS) measures on fish and fish product exports in major fish-exporting countries in Asia and to analyzed the costs and benefits of compliance with these standards and regulations in these countries. They had concluded that health safety was a legitimate claim of the consumers in both developed and developing countries. Hence the developing countries should consider and implement comprehensive health standard measures from the farm level to till the point of distribution channel.

Food and Agriculture Organization of the United Nations (2005) had prepared technical guidelines on —Increasing the contribution of Small-Scale Fisheries to Poverty Alleviation and Food Securityl. This technical Guideline report was focused on small-scale fisheries and their contribution to poverty alleviation and food security. In their report they had mentioned that most of the developing countries the small-scale fishermen communities are living under poverty and food insecurity.

Klasra and Fidan (2005) The shares of fishery exports on some selected countries in the world markets by using Constant Market Share (CMS) model, thrown light on world fish production, consumption and its trade. They analyzed the fish export and fish products of the selected countries by twenty years (1980–2000) data. The analyze results clearly indicate that Turkey and other major exporting countries has increased fishery products exports of the world. The analysis on commodity-composition level shown that countries like Canada, the United States, Iceland and Turkey were targeted their fishery exports in fast-growing other countries and the results of competitiveness effects revealed that the Denmark, Netherlands and Turkey were the most non-competitive exporting countries and also they lost their export market share.

Foreign trade policy (2009). The new national policy clearly states that there will be no qualitative restrictions on export of marine products. Through promotional measures including fiscal incentives for critical development of infrastructure for exports, duty

free import of inputs for exports, setting up export zones, and providing full refund of all indirect levies and taxes

Department of Animal Husbandry, Dairying & Fisheries (2010), The fisheries sector contributes significantly to the national economy and provides livelihood approximately to 14.49 million people in the country. Fisheries sector has been recognized as a powerful generator for income, employment and foreign exchange. The main challenges faced on the development of fisheries sector was sustainable technologies for fin and shell fish culture, aquaculture Certification, yield optimization, infrastructure for harvest and post-harvest operations, landing and berthing facilities for fishing vessels and uniform registration of fishing vessels. Hence they had concluded that few of the ongoing fisheries development schemes shown positive impact on Inland Fisheries and Aquaculture, Marine Fisheries, Infrastructure and Post-Harvest Operations and Welfare of Fishermen

Department of Commerce (2010), The Government of India has shown special interest and put concerted efforts to promote India 's export. In this policy for the first time Indian government has introduced two important schemes namely Focus Market Scheme and Focus Product Scheme. The objective of this scheme was to offset high freight cost and other externalities to select international markets with a view to enhance our export competitiveness in these countries. Under this scheme the following benefits are enjoyed by marine sector, (i) Imports for technological upgradation under EPCG in fisheries sector (except fishing trawlers, ships, boats and other similar items) exempted from maintaining average export obligation, (ii) Duty free import of specified specialized inputs /chemicals and flavouring oils is allowed to the extent of 1% of FOB value of preceding financial year's export, (iii) To allow import of monofilament longline system for tuna fishing at a concessional rate of duty and Bait Fish for tuna fishing at Nil duty (or) Zero duty, (iv) A self-removal procedure for clearance of seafood waste is applicable subject to prescribed wastage Norms, (v) Marine products are incentivized at special higher rate under VKGUY scheme and (vi) Marine sector included for benefits under zero duty EPCG scheme.

MPEDA Newsletter (2011) Export of Marine Products during April - March 2010-11 have achieved the US\$ 2.67 billion mark by registering a growth of 10.96% in quantity,

Reference

1. Ayyappan, S., & Krishnan, M. (2004). Fisheries Sector in India: Dimensions of Development. *Indian Journal of Agricultural Economics*, 59 (3), 391-412
2. Bryan GW (1984) *Pollution due to heavy metals and their compounds*. In: Kinne O (ed) *Marine ecology*, vol 5 part 3. Wiley, Chichester, pp 1289-1431
3. Colin Hunt, (1999). Fiji's fisheries: their contribution to development and their future. *Marine Policy*, 23, (6), 571-585.
4. Department of Animal Husbandry, Dairying & Fisheries, (2010). *Annual Report*. Ministry of Agriculture, Government of India.
5. Department of Commerce. (2010). Special Focus Initiatives *Foreign Trade Policy - 27th August 2009 - 31st March 2014 - w.e.f. 23.08.2010*. Ministry of Commerce and Industry, Government of India.
6. Food and Agriculture Organization. (2005). *Increasing the Contribution of Small-Scale Fisheries to Poverty Alleviation and Food Security*. Food and agriculture organization of the United Nations Rome. Retrieved from <ftp://ftp.fao.org/docrep/fao/008/a0237e/a0237e00.pdf>
7. Government of India ministry of commerce and industry (2009-2014) Foreign trade policy Notification No. 1/2009-2014 <http://www.dgft.gov.in/exim/2000/policy/ftp-plcontent0910.pdf>
8. Government of India ministry of commerce and industry (2013-2014), annual report http://commerce.gov.in/pdf_download/7.Export%20Promotion%20Measures.pdf
9. Gerda Dewit. (2001). Intervention in risky export markets: insurance, strategic action or aid?. *European Journal of Political Economy*, 17, pp575-592.
10. Hector M. Lupin. (1999). Producing to achieve HACCP compliance of fishery and aquaculture products for export. *Food Control* 10, 267-275.
11. Hudson, A. (2017) 'Restoring and Protecting the world's large marine ecosystems: An engine for job creation and sustainable economic development', *Environmental Development*. Elsevier, 22(October), pp. 150–155. doi: 10.1016/j.envdev.2016.10.003.

12. Katiha, P. K., Jena, J. K. and Barik, N. K. (2003) Profile of Key Inland Freshwater Aquacultural Technologies in India, A Profile of People, Technologies and Policies in Fisheries Sector in India Available at: www.ncap.res.in/upload_files/workshop/wspten.pdf.
13. Krishnan G. (1992), "Potential for Development and Challenges for the Development of Marine Industry in India" *Seafood Export Journal*, XXIV(7): pp5-8.
14. Madan M. Dey, Rab, M. A. Jahan, K. M. Nisapa, A. Kumar, A. & Ahmed, M. (2005). Food safety standards and regulatory measures: implications for selected fish exporting Asian countries. *Aquaculture Economics & Management*, 9 (1-2), 217-236.
15. Marine Product Export Development Authority. (2008). *Proposal for the development of tuna fisheries in Andaman & Nicobar Islands*. Retrieved from <http://www.and.nic.in/Announcements/Proposal%20for%20Tuna%20Fisheries.pdf>
16. Marine Product Export Development Authority(2011) MPEDA newsletter <http://mpeda.gov.in/MPEDA/pdf/newsletter/Mar11.pdf>
17. Mushtaq Ahmad Klasra. & Halil Fidan. (2005). Competitiveness of Major Exporting Countries and Turkey in the World Fishery Market: A Constant Market Share Analysis. *Aquaculture Economics & Management*, 9 (3), 317-330.
18. Militz, T. A. *et al.* (2017) 'Consumer perspectives on theoretical certification schemes for the marine aquarium trade', *Fisheries Research*. Elsevier B.V., 193, pp. 33–42. doi: 10.1016/j.fishres.2017.03.022.
19. Rae, A. & Josling, T. (2003). Processed food trade and developing countries: protection and trade liberalization. *Food Policy*, 28, 147-166.
20. Shekar Bose., & Arna Galvan. (2005). Export supply of New Zealand's live rock lobster to Japan: an empirical analysis. *Japan and the World Economy*, 17, 111–123.
21. Sebastian Matthew. (2003). *Trade in Fisheries and Human Development Country Case Study – India*. Retrieved from
22. http://icsf.net/icsf2006/uploads/resources/presentations/pdf/english/1199770787544***India_Fisheries_June_2003%5B1%5D.pdf

23. Watling, HR. 1983. Accumulation of seven metals by *Crassostrea gigas*, *C. margaritacea*, *Perna perna* and *Chromytilus meridionalis*. *Bull. Environ! Contam. Toxicol.*, 30, 213-320.
24. Williams, D.C., Jr, Stephen C. Bushardt, Edward Nissan. (1991). *Packaging for export - A case study of underutilized species of finfish*. Retrieved from <http://www.sciencedirect.com/science/article/pii/0308597X9190039E>
25. Wood U. Salele. (2003). Sustainable rural development in the time of globalization: implications of the fishery export trade policy on the livelihoods of fishing communities in Samoa. <http://proquest.umi.com/pqdweb?index=1&did=765993031&SrchMode=1&sid=3&Fmt=6&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1265641389&clientId=110593>

Chapter - 3

Theoretical framework

Chapter 3

Theoretical Framework

3.1 Industry Profile

Export plays a very significant role in the development and growth of any country (Harish and Dr.S. NatarajaIyer 2016). For many countries, export earnings constitute one of the most important sources of meeting foreign exchange requirements for development projects. India is a developing country requiring import of equipment, machineries, technical know-how to support growth and modernization of several of its developmental activities. To fulfill this, the country has two options; one is to allow free flow of foreign capital both foreign direct investment and credit from international Monetary Institutions, and the other option is to increase its exports to earn foreign exchange, sufficient to pay the import bills. India has availed both the sources with greater role for the former in the 10.50's and 1960's. Only from early years of 1970's, export received adequate attention. A drastic change in the policy was made in 1991 with a focus on liberalization and globalization of the economy, the later assigning high priority for export as an engine for growth. A liberal outward looking policy aims at export led growth and a rapid growth is expected to have a strong trickledown effect to remove poverty and unemployment in the economy.

The traditional goods from agriculture and handicrafts have dominated exports from India. Only recently, non-traditional goods such as engineering products, machine tools, processed foods and computer software find significant shares in total export by India. At the same time, the policies of globalization, especially the emergence of GATT and WTO have opened up new opportunities for increased export of traditional goods, with high value additions. It can be taken as both a challenge and an opportunity. It is a challenge because the quality of the product must meet the international standard(ISO) to stand the stiff competition of the world trade; and an opportunity because it opens up the new scope for more efficient use of natural resources land and sea to the benefit of a vast section of Indian population that is dependent on these resources and is poor and underemployed. Sector of such prospective export oriented production is fisheries.

3.2 India's marine products Export profile:

The principal export markets for Indian marine products are Japan. USA though exports of marine products are affected to a large number of markets. Other destinations of some significance include European Union, China, South East Asia, Middle East, East Europe. African countries, Latin American countries, other Asian and European countries. The important ports through which marine products are exported from India includes Mumbai, JNP, Kandla, Porbandar, Pipavav, Goa, Kochi, Trivandrum, Mangalore/ICD, Karwar, Chennai, Tuticorin, Mundra, Haldia, Calicut, Nsict, Karimanj, Ahmadabad, Agartala, Paradeep, Mid Sea, Delhi, Kakinada, Kolkata, Vizag, Hill Land Customs, Trichy, Bangalore, Okha, Port Blair

The marine products export basket of India comprises mainly frozen shrimp, frozen fish, frozen squid, frozen cuttle fish, dried item, chilled items, live items, frozen lobster, frozen octopus, canned item, pickles and others. Until recently frozen frog legs was also one of the important items of export. Restrictions imposed on catch of frogs to maintain ecological balance and the crude process of their killing considered as cruelty are bound to affect the exports of this item.

3.3 The Indian Seafood Industry

Seafood consists of an extensive variety of sea animals and seaweed, which serve as a delicacy or is regarded as suitable for the purpose of eating. Seafood usually comprise mostly of seawater animals, such as fish and shellfish (including mollusks and crustaceans). Seafood is also used collectively to refer to animals from fresh water, and any other kind of edible aquatic animals. This category makes up the hulk of the human food that comes from the waters of the world. Under this classification, edible seaweed is also included, though it is specifically termed as sea vegetables (agriculturalproductsindia.com). Types of Seafood are categorized under three main classes: Fish, Shellfish and Roe. Fish is any non - tetrapod chordate, i.e., an animal with a backbone that has gills throughout life and has limbs, if any, in the shape of fins (agriculturalproductsindia.com). Few of the fishes which are regarded as edible are Anchovy, Bluefish, Catfish, Eel, Flounder. Grouper.

3.4 History of Marine Products Export in India

The evolution of export of Marine Products from India can be studied under various stages. They are presented below.

3.4.1 First stage [from 50s to early 70]

In this stage, India's marine products exports mainly selected dried items like anchovies, shrimps, shark tins etc. The traditional neighboring, countries like Sri Lanka, Malaysia, Singapore and Burma were the major markets. During this period fish was also the cheapest animal protein food for domestic consumers, and the exports markets mostly served the poor in those countries. The exports in no way then affected Indian domestic consumers, but acted as a cushion for the producers (fisheries) as it helped to maintain a steady price for their produce even during seasons of bumper landings.

3.4.2 Second stage [from 70s to early 90s]

In this stage frozen items took the center stage and markets also got shifted to developed countries like US, Japan and European nations. While initially frozen shrimp as the major item, slowly cephalopods (cuttlefish and squid) and other crustaceans also became important species in the export basket during this period. As these were selected items, it did not affect seriously the domestic fish consumers, especially the poor and the middle class. As foreign exchange earnings were a prime motto during this period, the Government came forward with lot of incentives, subsidies for production as well

The fall in supply of shrimp also coincided with the increasing dominance of frozen fish (fin fish) in terms of quantity and this could be termed the most important change in happening in marine products export in the last one or two decades. In the year 2006-07, while frozen fish formed 44 % and in the year 2008-09, the emergence of chilled items (mainly fin fish) increased significantly to 21450 tins (4 %) from a mere 6540 tons in 2007-08. Unfortunately, all this was happening even, when India's total marine fish landings in the country was either declining or stagnating and not showing any growth. It is no more a situation of a few selected and highly priced varieties sent overseas thus not affecting the domestic fish trade and fish consumers. Even low priced fishes are now more and more exported. This is more evident from the changes noticed in the export destinations. In terms of quantity, over the last more than one decade, China and other southeast Asian countries take away almost half of Indian marine products export. In 1996-2000 periods, they accumulated by 40 % of the volume, but only 20 % by with their performance for finfish. In 2009-2009 China and South East Asian countries topped with 39 % by volume. Putting European Union behind with 25%. During 2009-10 export earnings have crossed 2 billion US \$ and

Rs. 10,000 crore marks. Exports aggregated to 678436 tons valued at Rs. 10048.53 crores and US \$ 2132.84 million. This recorded an increases growth of 12.54 % in quantity, 16.74 % in Rupee earning and 11.75 % growth in US \$ earning.

Export of marine products during April –March 2010-2011 have achieved the US \$ 2.67 billion mark by registering a growth of 10.96 % in quantity. 20.42% In INR value and 25.55 % in US \$ realization compared to the same period of last year according to the provisional export figures (MPEDA). This is the first tie in the history of Indian, marine products industry that the export figures are crossing the US \$ 2.5 billion mark. Average unit value realization has also gone up by 13 %.

3.5 Importance of foreign trade in India

Before 1947 when India was a colony of the British, the pattern of foreign trade was typically colonial. India was the supplier of foodstuffs and raw materials to the industrialized nations particularly to England and an importer of manufactured goods. This dependence on foreign countries for manufacturers did not permit industrialization at home, rather as a result of the competition from British manufacturers., the indigenous handicrafts suffered a severe blow. With the dawn of independence, the colonial pattern of trade was changed to the needs of a developing economy. An economy, which decides to embark on a program of development, is required to extend its productive capacity at a faster rate. For this, imports of machinery and equipment, which can't be produced in the initial stages at home, are essential. Such imports, which either help to create new capacity in some lines of production or enlarge capacity other lines of production, are called developmental imports. Besides these imports, a developing economy is also required to import consumer goods, which are in short supply at home during the period of industrialization. Such imports are anti-inflationary because they reduce the scarcity of consumer goods. (Aswathappa, 2010)

It is therefore, inevitable that during the early years of development, imports have to be increased at a very faster rate. It can't be restricted because the level of investment as well as the growth of these countries is dependent on these imports. It is natural that the balance of trade in such a situation will turn heavily against the developing country. To meet the growing foreign debt in a view of inelastic imports, a developing country must increase its exports.

In India, the approach has been to identify products, sectors and industries based on potential, capability and world trends in demand and competitiveness and to provide for these a policy framework, which is helpful in increasing exports. Therefore, late eighties onwards a certain degree of selectivity has been followed by the government for focusing special attention. Fourteen sectors have been identified including marine products, processed foods, jewelers, electronic goods, readymade agreements etc. for making thrust in international markets.

India pursue trade policies to improve exports of the above thrust sectors with an idea to reduce the trade deficit and to remove disequilibrium in the balance of payments. Liberal trade policies are those that reduce government controls and replace direct intervention with price mechanisms (such as tariffs). For the benefit of exporters, advance licenses, export promotion for capital goods (EPCG), duty drawback, 100 percent export oriented goods (EOU's) an Export processing zones (EPZ), which are meant for facilitating imports for export promotion.

3.6 Foreign trade policy of India 2009-2016

The thrust of the new foreign trade policy of India 2009-2016 as well as the earlier one is to double to India's export of goods and services. It further states that the long-term policy objective for the government is to double India's share in global trade by 2020. The Marine Products Export Development Authority (MPEDA) goes even further and its vision document brought out in 2017 wanted exports to increase from the current level of .61 million MT to at least 2 million MT by the year 2015. The new national policy clearly states that there will be no qualitative restrictions on export of marine products. Through promotional measures including fiscal incentives for critical development of infrastructure for exports, duty free import of inputs for exports, setting up export zones, and providing full refund of all indirect levies and taxes (dgft.gov.in).

The government as a developmental endeavor, always considered promotion of marine products export. Any development in the marine fisheries sector, including export promotion, cannot be pursued without taking into consideration certain basic characteristics of Indian fishery resources, which are given below.

- Limited and renewable natural resources embed in a complex food chain
- Found more inshore than offshore a- availability per unit area

- A common property resource
- A protein rich food resource ensuring food security of the people
- Source of livelihood for millions of people both in production and marketing

The growth in India's marine products exports is described in Indian rupee terms by the ministries and export promotion agencies. In the year 2008- 2009, India's marine products exports earnings was worth Rs. 8608 crores and according to the chairperson of MPEDA, in 2007-2008, the earnings was worth only Rs. 7621 crores and hence there is a 13 % growth.

3.7 India's Seafood Growth Country Profile

India with a long coast line of 8129 kms, two million sq. kms of exclusive Economic Zone and 1.2 million hectares of brackish water bodies, offers vast potential for development of fisheries. against an estimated fishery potential of 3.9 million tons from marine sector, only 2.6 million tons are tapped. Fishing efforts are largely confined to the inshore waters through artisanal, traditional, mechanized sectors. About 90 % of the present production from the marine sector is from within a depth range of up to 50 to 70 meters and remaining 10 percent from depths extending up to 200 meters. While 93 percent of the production is contributed by artisanal, mechanized and motorized sector, the remaining 7 % is contributed by deep sea fishing fleets confining their operation mainly to the shrimp ground in the upper east coast.

India is one of the oldest civilizations in the world with a kaleidoscopic variety and rich cultural heritage. It is positioned between latitudes 8 4' and 37 6' north and longitudes 68 7' and 97 25' east with a geographical area of 3.87,263 sq. km (about 2.4 percent of the earth's surface area). The country is bounded by the Himalayas in the north, the Indian ocean in the south, the Bay of Bengal on the east and the Arabian sea on the west.

After independence in 1947, the country adopted a socialist style of development through centralized planning. The national five year plans were formulated and implemented to harmonize the use of resources for parallel development

of capital- intensive heavy industries, with labour intensive small scale industries and the rural and agricultural sectors.

Within three decades of independence, the country record achievements in technology and also attained self-sufficiency in food production through the green revolution. However, the growth of the country in this period and the worsening balance of payment situation led the government to undertake a series of reforms. Beginning in mid-eighties, these reforms were mainly directed to minimize the state interference in business and liberalize the economy. These efforts culminated in the new economic policy of 1991 and a clear shift from pre-planning to pro-market growth model based on the principles of liberalization, privatization and globalization of the economy.

India now stands as the third largest economy in the world in terms of purchasing power parity (PPP) and the second fastest growing major economy in the world, with a GDP growth rate of 9.4 in the last fiscal year 2006-2007. However, in spite of marked developments in industrial and service sectors, agricultural sector continues to remain as the major determinant of the health of the economy. It contributes about 20% of the Gross domestic product (GDP) and employs about 60 % of the labour force in the country. Industries contribute about 26 % of the GDP and employ about 12 % of the labor force and tertiary sector contributes the rest and employs about 28 percent of the labour force. In the year 2007-2008 total GDP was 4723400. GDP from agricultural forestry and fishing was 782597. GDP from fisheries alone was 35650. GDP from fisheries as percentage to total GDP was 0.75 and GDP from agricultural forestry and fishing was 4.56

3.8 Fisheries Sector

The fisheries sector occupies a very important role in the socio economic development of India. Soon after independence in 1947, the government started focusing on the fisheries sector for two reasons: (1) to promote fisheries production in order to ensure food safety (subsequently foreign exchange earnings were also added) and (2) capacity building in fisheries through subsidization of various assets. As a result, starting from a purely traditional activity in the fifties, both aquaculture and fisheries have now transformed into commercial enterprises. The sector has been recognized as a powerful income and employment generator as it stimulates the growth of a number of subsidiary industries and is a source of cheap and nutritious food.

Fishing is one of the oldest occupation of the mankind and even today it is. It is the key income earning sector of many maritime countries, both developed and developing. Fishing provides not only occupation to enormous people, but also a rich provider of immense food and related sources. The national planning committee, during the discussions for growth strategies in this sector in 1948, described the traditional fishing sector as “largely of primitive character, carried on by ignorant and ill-equipped fisherman”. Their techniques are rudimentary; their capital investment is less. These explanations are broad enough to sketch an elementary picture of the traditional fishing sector in India.

3.8.1 Indian Fisheries

Before independence, in India, the marine fisheries production was of subsistence level. Like the other productive sectors under colonial economy, the fisheries sector was also under the muddles of poverty, lower religious and social status. After the drawn of Indian republic, the Government of India held many studies to evolve strategies to make the distracted economy stronger.

3.9 Administration of Indian Fisheries

The constitution of Republic of India has enlisted the respective powers of the union and states to make law and administer different sectors. Development and regulation of marine fisheries within the territorial water of Indian coast, known as inshore fisheries and of inland fisheries development and for improving the living conditions of fishermen. They assist the mechanization of fishing boats, arrange bank loans through Fisherman co-operative societies for purchase and improvement of crafts and gears and development of domestic marketing and also manage housing schemes for fishermen. They also establish boat building yards, nylon net factories, fishermen training centers etc. Some state governments also set up fisheries corporations.

3.10 Role of Central Government

In the central government, there is no separate ministry for fisheries and different tasks of marine fisheries development., from exploration to marketing., fall under the administrative jurisdiction of ministries of Agriculture., Commerce and constituted food processing industries. The ministry of agriculture deals with fish

production, the ministry of commerce handles the regulation and the task of promoting exports and the ministry of food processing industries looks after the development of fish processing activities.

3.11 Theoretical Approach to Fishing

Today the basic point of fishery management is the Maximum Sustainable Yield (MSY), defined as the greatest yield that the stock can reproduce year after year, however it is known that the key variables determining production possibilities from a fish population are rate of entry into fishable age rate growth of individual fish, natural mortality and fishing mortality. Thus, with the extension of EEZ, while opportunities to argument fish production and employment have been opened, they are yet to be efficiently exploited. In the event of inefficient exploitation and under exploitation, natural mortality would offset the net increase in the stock from the rate of entry into fishable age and growth. Exploitation of these opportunities possess complex biological, economic, social and political problems.

3.12 The Scope of the Fisheries Resources in India

There is a vast potential of fisheries resources, which remain unexplored. Government should come up with helping hand to promote deep sea dishing without over exploiting it. Conditions of the landing centers should be improved to promote overall quality exports. The infrastructural facilities of the country like develop net of ports, domestic facilities should be promoted. The danger of over exploitation of resources should be in the minds of each as the destruction of the resources without minding its existence may bring darkness in the immediate future. The flow of goods in a profitable and responsible manner should not be disrupted. Fisheries resources should be exploited in an optimum manner without disturbing the natural equilibrium of the habitat of fish. In addition to this, the resources procured from nature should be handled with utmost care during harvesting., processing and marketing to avoid wastages.

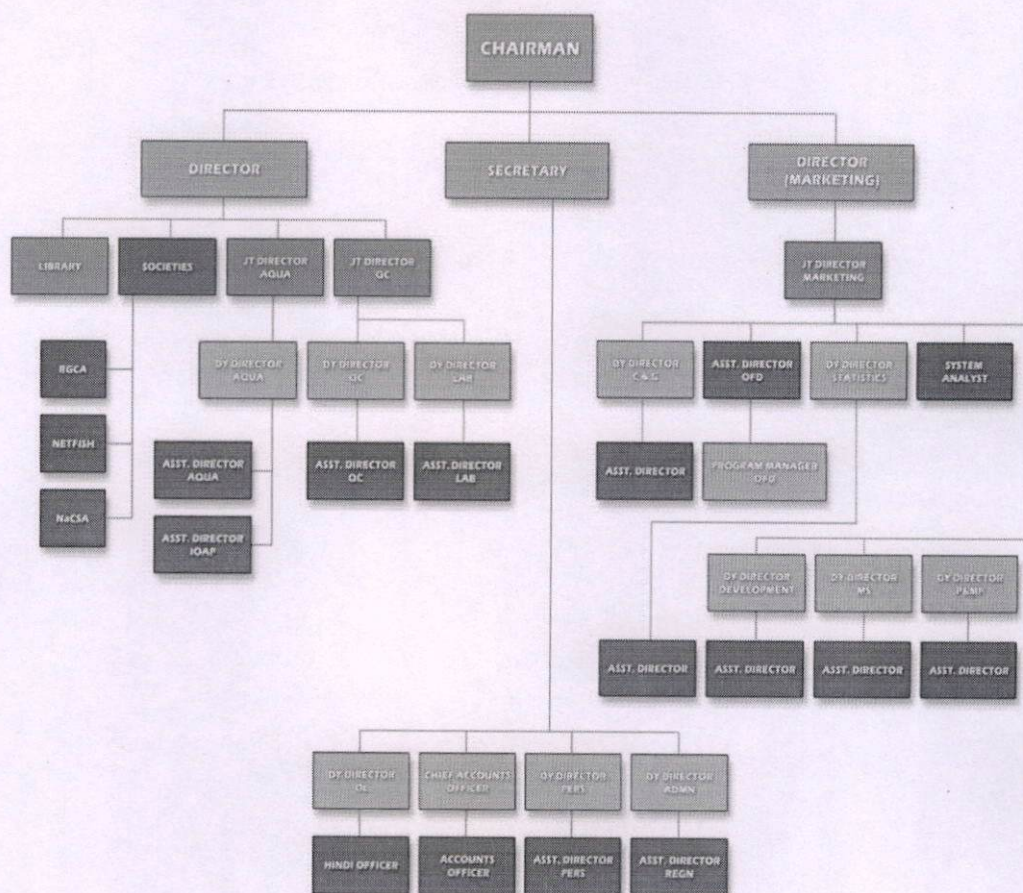
Chapter – 4

Organisational Profile

Chapter 4

Organization profile

Marine Products Export Development Authority - MPEDA (Ministry of Commerce and Industry, Govt. of India.



The Marine Products Export Development Authority (MPEDA) was constituted in 1977 under the Marine Products Export Development Authority Act 1972. The role envisaged for the MPEDA under the statute is comprehensive covering fisheries of all kinds, increasing exports, specifying standards, processing, marketing, extension and training in various aspects of the industry.

India with a long coastline and abundant fishery resources has emerged as one of the leading seafood suppliers in the world. The Marine Products Export Development Authority, a nodal agency set up by the Govt. of India in 1972 for the promotion of seafood exports from India, gives a detailed account of India's seafood potential, products, processing units and export performance. The Seafood Industry of India has come a long way and today seafood is exported to nearly 70 countries from India. MPEDA functions under the Ministry of Commerce, Government of India and acts as a coordinating agency with different Central and State Government establishments engaged in fishery production and allied activities.

4.1 Objectives of the MPEDA

MPEDA has the following objectives and it is presented below

- i. Conservation and management of fishery resources and development of offshore fishing
- ii. Registration of exporters and processing plans
- iii. Regulations of marine -products export
- iv. Laying down standards and specifications
- v. Acting as an agency for extension of relief as per directions from Government.
- vi. Helping the industry in relation to market intelligence, export promotion. and import of essential items.
- vii. Imparting training in different aspects of the marine products industry, reference to quality control, processing and marketing.
- viii. Promotion of commercial shrimp farming .
- ix. Promotion of joint ventures in aquaculture. production. processing and marketing of value added seafood.

4.2 Work programme of MPEDA

MPEDA has the following work programs and it is presented below.

- i. Registration of infrastructure facilities for seafood Export trade
- ii. Collection and dissemination of trade information.
- iii. Projection of Indian marine products in overseas markets h participation in overseas fairs and organizing international seafood fairs in India.

- iv. Implementation of development measures vital to the industry 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
- v. Promotion of aquaculture for production of shrimp and prawn for export
- vi. Promotion of value added Seafood's
- vii. Promotion of Tuna fishery.
- viii. Implementation of organic farming.
- ix. Conservation management.

4.3 Office Network of MPEDA

The Head Quarters of MPEDA is located at Kochi in Kerala. The regional offices of MPEDA in India includes Veraval in (Gujarat), Mumbai in (Maharashtra), Kochi in (Kerala), Chennai in (Tamil Nadu), Visakhapatnam in (Andhra Pradesh) and Kolkata in (West Bengal) and six sub regional offices in India are at Goa, Mangalore in (Karnataka), Kollam in (Kerala), Tuticorin in (Tamil Nadu), Bhubaneswar in (Orissa) and Guwahatti in (Assam) are functioning as field offices for implementation of various activities of the Authority besides engaging themselves in export promotion of marine products by providing guidance and assistance to the processing industry and the export trade.

Similarly six regional centres at Kochi in (Kerala), Panvel in (Maharashtra), Valsad in (Gujarat), Thanjavur in (Tamil Nadu), Vijayawada in (Andhra Pradesh), and Bhubaneswar in (Orissa) and four sub regional centers at Kannur in (Kerala), Karwar in (Karnataka), Bhimavaram in (Andhra Pradesh) and Kolkata in (West Bengal) extend assistance to augment production of shrimp to sustain and increase exports. MPEDA has also set up three stand alone laboratories, other than the one in Head Quarters, at Bhimavaram, Nellore in Andhra Pradesh & Bhubaneswar (Orissa) equipped with sophisticated equipments like LC MS for testing various parameters.

The authority operates two overseas Trade Promotion Offices, one at Tokyo (Japan) and the other at New York (USA) with Resident Directors as Head of offices. The objectives of the overseas Trade Promotion Offices are to promote seafood imports into the respective countries by liaising Indian exporters as well as overseas importers,

developing contact with Government agencies/ officials to remove identified constraints, promote the image of Indian Products through publicity campaigns, identify market for new products, Create awareness On the capabilities of Indian processing, packaging, quality inspection procedures etc. and also to identify suitable joint venture partners for deep sea fishing, aqua culture projects, processing and marketing value added products etc. The adviser of Agriculture and Marine Products Division of the Indian trade Centre at Brussels (under the Ministry of Commerce assists) MPEDA in its trade promotional activities in Europe, and liaises with the European countries.

Marine Product Export Development Authority (MPEDA), as a logical extension of its initiatives to project the capabilities of the seafood processing sector and to optimize the installed capacity utilization. MPEDA has been implementing various schemes aimed at increasing the production from culture and capture fisheries, value addition and marketing thrust. The Centre has identified value addition and production of super quality ready-to-eat marine products in consumer packs to achieve the target of \$ 6 billion worth of seafood exports by 2017.

4.4 Schemes of MPEDA

The plan schemes of the MPEDA are implemented under seven major heads namely

- i. Market Promotion.
- ii. Capture Fisheries.
- iii. Culture Fisheries.
- iv. Processing infrastructure and value addition
- v. Quality control
- vi. Research and Development
- vii. Viability gap funding

The market and its situations are always changing even with a slight stimulus and so the exporters should be well prepared to meet the unexpected changes any time. The products should be modified with the changing trends of the market. The export promotion council and MPEDA also give both financial and advisory support to the exporters. The council also come with market promotion schemes to promote export. Some of the product development and market promotion schemes which are most beneficial to exporters are research and development of new products, training in new

technology by inviting overseas technical experts to India, assistance for setting up of chilled rooms at exporters premises, projection of resources potential from Indian serene and unpolluted water sources, printing and distribution of leaflets and booklets in different languages and quality assurance in processing. Development of rapport between exporter and importer. Invitation to ensured experts for export promotional visit. Organizing international buyer seller meets and participation in specialized trade fairs.

Table 4.5 various market promotion activities under MPEDA

Sl.NO.	Year	international fairs	domestic fairs	printing works	advertisements
1	2006-2007	8	10	8	105
2	2007-2008	8	11	8	123
3	2008-2009	7	9	9	116
4	2009-2010	7	11	6	120
5	2010-2011	8	16	7	107
6	2011-2012	8	10	13	182
7	2012-2013	8	11	25	176
8	2013-2014	8	11	8	135
9	2014-2015	6	20	6	125
10	2015-2016	9	12	7	108

Source: annual report

4.5 Marketing Promotion and Services

MPEDA compiles and disseminates trade enquiries received from overseas buyers among exporters. In association with concerned agencies it sorts out trade disputes. It compiles and disseminates information about freezer space requirements

for shipment of frozen cargo and liaises with shipping companies and airlines to meet the demands of the industry. It liaises with the government for conservation measures of over exploited resources like shrimps, lobsters, Sea cucumbers, seaweeds. and sea shells etc. marketing expertise is shared with exporters and those involved in fishing industry.

4.5.1 Antidumping duty on exports of Indian Shrimp to USA.

The United States Department of Commerce (US DoC) after its investigation has initiated anti-dumping duty on shrimp imports from India since 2004 based on the representations of Southern Shrimp Producers Alliance the association of local shrimp producers in USA. The initial antidumping duty imposed was 10.17%. This has been reviewed subsequently by US DoC. US DoC has announced the final results of 9th Administrative Review on Anti-Dumping Duty for the period 01.02.2013 to 31.01.2014. The review specific average rate of antidumping duty for frozen warm water shrimp from India after the 9th review is 2.96%.

4.5.2 Sea Freight Assistance Scheme

During Financial year 2015-2016, 811 applications received from 65 manufacturer exporters and an amount of ` 291.53 Lakh has been disbursed towards Sea Freight Assistance for export of value added products.

4.5.3 Association with INFOFISH

INFOFISH is an Intergovernmental Organization under the Food and Agriculture Organization (FAO) providing marketing information and technical advisory services to the fishery industry of the Asia-Pacific region and beyond from its headquarters in Kuala Lumpur, Malaysia. Thirteen countries are currently members of INFOFISH which are Bangladesh, Cambodia, Fiji, India, Iran, Malaysia, Maldives, Pakistan, Papua New Guinea, Philippines, Solomon Islands, Sri Lanka and Thailand. India is a founder member of this organization and MPEDA is the National Focal Point of INFOFISH in India as authorized by Ministry of Commerce & Industry, Govt. of India.

4.5.4 India International Seafood show 2016

MPEDA in association with Seafood Exporters Association of India decided to conduct the 20th edition of India International Seafood Show 2016 at Port Trust Diamond Jubilee Stadium, Visakhapatnam from 23-25 September 2016. All the preparations for the event is under progress and the event will bring together the Indian seafood export fraternity and the overseas buyers under one umbrella and enable them to interact and finalize future business dealings. The show will pave way for foreign direct investment in India and may contribute significantly to the "Make in India" programme.

4.6 Capture Fisheries

Marine Fish production in India has been continuously increased from 0.58 million tonnes in 1950 to 3.40 million tonnes in 2015 against the estimated marine fishery potential of Indian EEZ at 4.41 million tonnes. Capture fisheries are extremely diversified, comprising of a large number of fisheries that are categorized by different levels of classification. Capture fisheries contribute about 48% of seafood export of India value wise and about 74% quantity wise.

4.6.1 Conservation of Marine Resources - Catch Certification Scheme

Implementation of European Union Regulation 1005/2008 demands validation of catch certificate for export of sea foods to European Union since 1st January 2010. MPEDA has been authorized by the Govt. of India for validation of catch certificate. MPEDA has deployed 28 Data Entry Operators and 46 Harbour Data Collectors (Trainees) on contract basis at major fish landing centers and fishing harbours for capturing the data for facilitating the catch certification work. Online validation of catch certificate is being done by the field offices of MPEDA under regular monitoring. During the year under report, through the field offices of MPEDA, we have validated 11051 catch certificates for export to EU. An amount of ` 113.37 lakh has been spent for this purpose.

4.7 Culture fisheries

4.7.1 Export production through aquaculture

44

Export oriented aquaculture production continues to increase year over the year and the increased production contributed significantly to the sea food exports from the country. Aquaculture production has increased to 5,00,581 MT during 2015-16 with an increase of 15.19 % over the production of 4,34,558 MT during the previous year 2014-15.

4.7.2. Implementation of New Farm Development assistance

Financial assistance of ` 56.02 lakhs was released to the concerned beneficiaries in the states of Gujarat, Maharashtra, Kerala, Tamil Nadu, Odisha and WB during the year 2015-16 for developing new farms of 114.22 ha.

4.7.3 Assistance for establishing Commercial Hatcheries / Nurseries

During 2015-16, 15 no. of commercial shrimp hatcheries/nurseries are established for the production of quality shrimp seeds. These hatcheries/nurseries were assisted with a total subsidy amount of ` 82.87 lakhs. Nurseries are highly relevant in the culture of shell and fin fishes. Growth and survival of the fish/shellfish in the grow out operation can be significantly improved by stocking the juveniles/fingerlings from the nursery facility.

4.7.4 Assistance to Societies

Aqua Societies are established to adopt Better Management Practices(BMPs) in farms to improve production, productivity and returns through participatory approach, capacity building and empowerment of primary producers, facilitating improved service provision and interaction among stakeholders etc. Financial assistance is extended to 5 registered societies to the tune of 5.49 lakh for startup grant and purchase of aerators.

4.7.5 Assistance for Traditional farms / Padasekharams

45

Financial assistance of ` 36.14 lakhs was released to the concerned beneficiaries in the state of Kerala during the year 2015-16 for developing 464.36 ha Padasekharam area for aquaculture purpose.

4.8 Quality control

4.8.1 HACCP Training Program & Certification

MPEDA has been providing technical assistance to the seafood industry in HACCP implementation by imparting training to the technical personnel of the industry and also issues compliance certificate after necessary verification of HACCP implementation by the unit. During reporting year two HACCP (Basic) Training Programs were conducted, one each at Kochi and Porbandar. A total of 73 (43 +30) technical personnel were trained. A HACCP compliance certificate also issued during the year under report.

4.8.2 Implementation of MPEDA Logo Scheme

MPEDA has evolved a Marine Products (Quality Marking) scheme to grant a logo as a mark of quality. which is to be affixed on seafood products exported from India by the registered seafood processors who meet the criteria prescribed, which will make marketing their products easier. During the reporting year 2 beneficiaries has been granted with MPEDA Logo.

4.8.3 Interaction meet of Exporters with Indian Institute of Packaging

MPEDA organized second interaction meets of Exporters at IIP Campus Mumbai in association with Indian Institute of Packaging (IIP) Mumbai at Chennai on 30/04/2015. 38 participants attended the meet including scientists from CIFT, NIFPHATT and officers of MPEDA.

The packaging of products is an essential quality control factor in now days. The marine products are highly perishable in nature and it has foul smell. Therefore, a certain standards of packing must be followed.

According to the study of Williams, Bushardt and Nissan (1991), Their study concentrated on estimating square footage needed for shipping when the product was packed by weight, deterioration in product quality, primarily associated with the destruction of the carton during shipment, failure of packaging to portray a quality

product and failure to communicate consistent information. The packaging constrain includes other constraints like processing technology, methods of transportation, the product, markets, and economies.

4.9 Head office

MPEDA functions under the ministry of commerce and industry, Government of India acts as a model agency coordinating with different central and state government establishment engaged in fishery production and allied activities. With this head office in Cochin, the authority has established field offices in all maritime states of India and development schemes for export promotion and aquaculture production of marine products are implemented through these field offices.

Apart from offices working in India, MPEDA also has two of its trade promotion offices functioning at Tokyo, Japan and New York, USA. To liaise with Indian ministries a trade promotion office is also functioning at New Delhi . At Vallarpadam, cochin a training center for aquaculture is developed, to generate trained personnel on shrimp hatchery/shrimp farming management.

The regional offices of MPEDA are at Cochin, Chennai, Mumbai, Kolkata, Visage and sub-regional offices at Manglore, Panaji, Kollam, Bhubaneswar and Tuticorian, they concentrate on discharging their duties related to the implementation of various plans and schemes of the authority on export promotional activities and by providing guidance and assistance in processing export trade. The regional offices maintain a close association with the department of fisheries of state government, and also with the sea food industry and other organizations involved in export trade.

4.10 Trade Promotion Offices

To serve the market of Indian seafood MPEDA has two trade promotion offices working in Tokyo and New York. Japan is the leading market for mariner products and the office was incorporated in the year 1978. USA being the second important market, particularly for Indian shrimp, the export has increased over 15 times to japan during the time period of 1984 – 70 to 2001 – 02, whereas a record of increase to 20 times has been measured during the year 1984 – 85 to 2001 – 02 to USA.

The main function of USA and Japan offices are as following:

- i. Collection of marine intelligence
- ii. Settlement of quality and trade disputes
- iii. Public relation activity
- iv. Assistance in undertaking market surveys
- v. Assistance to importers and exporters
- vi. Organized and coordinate visits of important persons and delegations
- vii. Arrangements
- viii. Promotion of joint ventures, technical arrangements and charter

4.11 Roles and responsibilities of MPEDA

- i. Providing infrastructural facilities for seafood export trade and registration
- ii. Collection of trade information and their dissemination
- iii. Promotional activities of Indian marine products are being done by MPEDA in overseas market
- iv. Implementation of schemes which is important for the industry by extending assistance for infrastructure development which leads to better preservation and modernized processing
- v. Promotion of deep sea fishing projects to increase the efficiency of fishing through test fishing, upgradation and joint venture & installation of equipment's.
- vi. Market promotional activities and publicity.
- vii. Provide training for fishermen, fish processing workers, aquaculture farmers and other stake holders in the respective fields related to fishing.
- viii. Conduct research and development for the aquaculture through Rajiv Gandhi Centre for Aquaculture(RGCA)
- ix. To prescribe for itself any matters required for protecting and augmenting the seafood exports from the country in the future.

4.12 Major products Exported under MPEDA

The shrimp is the major item exported from India and cephalopods also has international markets.

Table 4.12 Major products Exported under MPEDA

Sl.No.	Marine products	Total quantity exported
1	Frozen shrimp	373866
2	Frozen fin fish	334240
3	Frozen squid	81769
4	Frozen cuttle fish	65596
5	Dried items	43320
6	Live fish	5493

Source: Annual report MPEDA (2015-2016)

Frozen shrimp continued to be the major item of export in terms of quantity and value, accounting for a share of 39.53 % in quantity and 66.06% of the total USD earnings. Shrimp exports during the period increased by 4.58% in terms of quantity. However, unit value realization decreased to 8.28 USD/Kg from 10.38 in 2014-15 with a depreciation of 2.09%. The overall export of shrimp during 2015-16 was to the tune of 3,73,866 MT worth USD 3,096.68 Million. USA is the largest market imported (1,34,144 MT) for frozen shrimp followed by European Union (81,849MT), South East Asia (65,188 MT), Japan (34,204 MT), Middle East countries (17,477 MT), China (9542MT) and Other Countries (31,464 MT). The export of Vannamei shrimp has improved from 2,22,176 MT to 2,56,699 MT in 2015-16 with a growth of 16%. In value terms about 50.18 % of total Vannamei shrimp was exported to USA followed by 17.25% to South East Asian countries, 15.78% to EU, 4.55% to Japan, 3.62% to Middle East, 2.23% to China and 6.40% to Other Countries. Japan is the major market for Black Tiger shrimp with a share of 37.04% in terms of value followed by USA (20.56%) and South East Asia (19.28%).

Frozen Fish is the second largest export item, accounting for a share of 24.18% in quantity and 11.30% in USD earnings. Export of Frozen fish has shown a negative growth of 14.49% in terms of USD, however unit value realization increased to 2.32 USD/Kg from 2 USD/Kg in 2014-15, with a growth of 15.67%.

Frozen squid have shown a growth in terms of quantity as well as in value, and are recorded a growth of 17.54%, 26.66% and 17.96% in terms of quantity, rupee value and USD earnings respectively.

Export of Chilled items also improved in terms of quantity as well as in value, with a growth of 5.56%, 27.29% and 18.91% in terms of quantity, rupee value and USD earnings respectively. Unit value realization also improved by 12.65%.

Export of Frozen Cuttlefish have shown negative growth of 20.35%, 10.75% and 16.76% in terms of quantity, rupee value and USD terms respectively. However, the Unit value realization improved by 4.51%. Dried items have shown a negative growth of 38.59% in quantity 28.17% in rupee value and 32.59% in USD terms respectively, even though unit value realization picked up from 2.35 to 2.58 this year with a positive growth of 9.77%.

Live and Other Items also had shown a negative growth in terms of USD earnings and in Unit Value realization. However, the Live items shown a slight improvement in Quantity (0.09%) as well as in Indian Rupee earnings (2.42%).

Chapter -5
Data Analysis

Chapter 5

Data analysis and interpretation

Table 5.1 Overall Export growth of marine products

Sl.No.	Year	Quantity (MT)	Annual Growth Rate	Value (Rs)	Annual Growth Rate
1	2006-2007	612641.00	19.62%	8363.53	15.43%
2	2007-2008	541701.00	-11.58%	7620.92	-8.88%
3	2008-2009	602835.00	11.29%	8607.94	12.95%
4	2009-2010	678436.00	12.54%	10048.53	16.74%
5	2010-2011	813091.00	19.85%	12901.47	28.39%
6	2011-2012	862012.00	6.02%	16597.23	28.65%
7	2012-2013	928215.00	7.68%	18856.26	13.61%
8	2013-2014	983756.00	5.98%	30213.26	60.23%
9	2014-2015	1051243.00	6.86%	33441.61	10.69%
10	2015-2016	945892.00	-10.02%	30420.83	-9.03%
		CAGR	4.94%		15.43%

Source: Annual report MPEDA

The above table 5.1 shows the growth of marine products from 2006 to 2016. The marine products export has growth of 4.94% on quantity and 15.43% growth in value over the past 10 years. Comparing the overall marine products exports there is a major decline over the period 2007-2008 and 2015-2016. The major reasons for the

decline is shown in Table 2 and Table 3. There is a all-time hike in marine products export during 2014-2015 and the reason for the increased value for marine products shown in Table 4.

Table 5.2 Major marine products export countries from India

(Q: Quantity in Tons, V: Value in Rs. Crore, \$: USD Million)

Sl.N o.	Country		2015 - 2016	2014 - 2015	Growt h (%)	2007- 08	2006- 07	Growt h (%)
1	JAPAN	Q	75393	78772	-4.29	67373	67437	-0.09
		V	2610	3040	-14.13	1227.5 9	1,353. 38	-9.29
		\$	403	502	-19.67	305	299.2	2.1
2	USA	Q	153695	129667	18.53	36612	43758	-16.33
		V	8633	8830	-2.23	1016.9 4	1,347. 80	-24.55
		\$	1334	1458	-8.52	253	297.08	-14.82
3	EUROPE AN UNON	Q	186349	188031	-0.89	14938 1	14977 3	-0.26
		V	6311	6715	-6.02	2664.2 4	2,760. 32	-3.48
		\$	970	1106	-12.28	663	610.95	8.55
4	CHINA	Q	50042	59519	-15.92	13979 2	20351 3	-31.31
		V	1432	1349	6.17	1009.5 9	1,156. 96	-12.74
		\$	220	221	-0.34	253	259.06	-2.38
5	SOUTH EAST ASIA	Q	328900	409931	-19.77	63818	67650	-5.66
		V	7499	8620	-13.01	573.97	616.7	-6.93
		\$	1152	1416	-18.63	143	136.43	5.18
6	MIDDLE EAST	Q	53905	64608	-16.57	25752	23585	9.19
		V	1793	2020	-11.24	393.96	371.06	6.17
		\$	276	333	-17	98	82.47	18.9
7	OTHERS	Q	97609	120716	-19.14	58972	56924	3.6

		V	2140	2864	-25.3	734.62	757.3	-2.99
		\$	329	472	-30.25	183	167.75	9.05
	TOTAL	Q	945892	105124	-10.02	54170	61264	-11.58
				3		1	1	
		V	30213.	33441.	-9.03	7620.9	8363.5	-8.88
			26	61		2	3	
		\$	5007.7	5511.1	-14.94	1899	1852.9	2.49
				2			3	

Source: Annual report MPEDA

The above Table 5.2 compares the major markets of marine products export during 2007-2008 with 2006-2007 and 2015-2016 with 2014-2015. There is a decline in imports in several foreign countries Japan, USA, EU, China, South East Asia comparing 2007-2008 with 2006-2007. The major decrease is shown by USA 36612 MT (-16.33%) in quantity compared to year 2006-2007's 43758 MT and value wise there is decline of -24.55%. China also had a decline from 203513 to 139792 (-31.31%) in quantity wise and value wise -12.74%. This decrease in import by these major markets resulted in India's overall marine products export into the ever time decrease of -11.58% during 2007-2008. The decline in export is due to the foreign markets especially China and USA tightened their TBT's (technical barriers to trade) NTB's (non-tariff barriers) to deny comparative advantage taken by developing countries. There is a dull in international market prior to the 2008-2009 global recession.

The other great decrease in export in international market was encountered in 2015-2016. Comparing 2015-2016 with 2014-2015 the export of marine products shown decreased growth of -10.02% in quantity and -9.03% in value. The decrease in marine products export is shown by Japan, European Union, China, South east Asia, Middle east, other countries. The major reason for decrease in export is due to the micro and macro elements content in cephalopods standards are more stringent than previous year. Especially the Cadmium content more than the prescribed rate 0.238 ppm is the standard. Cadmium, like other heavy metals, is well known to accumulate in a great number of marine invertebrates, especially mollusc, bivalves and gastropods but concentrations of these metals in cephalopods, one of the essential links in marine trophic chains (Bryan 1984), The ability of heavy metals to be concentrated in the organs of marine organisms accounts for their toxicity and also poses a direct threat to

both aquatic biota and man (Watling, 1983). Table 2.1 shows the elements content in fish.

Table 5.2.1 Micro element content in cephalopods

Sl.No.	Element	Quantity (parts per million)
1	Cadmium	0.238
2	Mercury	0.212
3	Lead	0.817
4	Nickel	0.15
5	Arsenic	0.212

Source: European Food Safety Authority

The other reason contributed to the decline is capture fisheries and the higher export rate of 2014-2015 year. The year 2014-2015 was marine export reached million metric tons this is also a reason because the demand for marine products didn't increased up to the growth of 2014-2015.

Table 5.3 Major marine products export countries from India

Sl.No.	COUNTRY		2014 -2015	2013 - 2014	GROWTH (%)
1	Japan	Q	78772	71484	10.2
		V	3040	2463.83	23.4
		\$	502	410.95	22.23
2	USA	Q	129667	110880	16.94
		V	8830	7744	14.02
		\$	1458	1286	13.39
3	European union	Q	188031	174686	7.64
		V	6715	6129	9.56
		\$	1106	1013	9.22
4	China	Q	59519	75783	-21.46
		V	1349	1766	-23.64
		\$	221	293	-24.45
5	South east Asia	Q	409931	380061	7.86

		V	8620	8046	7.14
		\$	1416	1320	7.26
6	Middle east	Q	64608	58040	11.32
		V	2020	1599	26.35
		\$	333	272	22.17
7	Others	Q	120716	112823	7
		V	2864	2462	16.35
		\$	472	410	15.06
	Total	Q	1051243	983756	6.86
		V	33441.61	30213	10.69
		\$	5511.12	5007	10.05

Source: Annual Report MPEDA

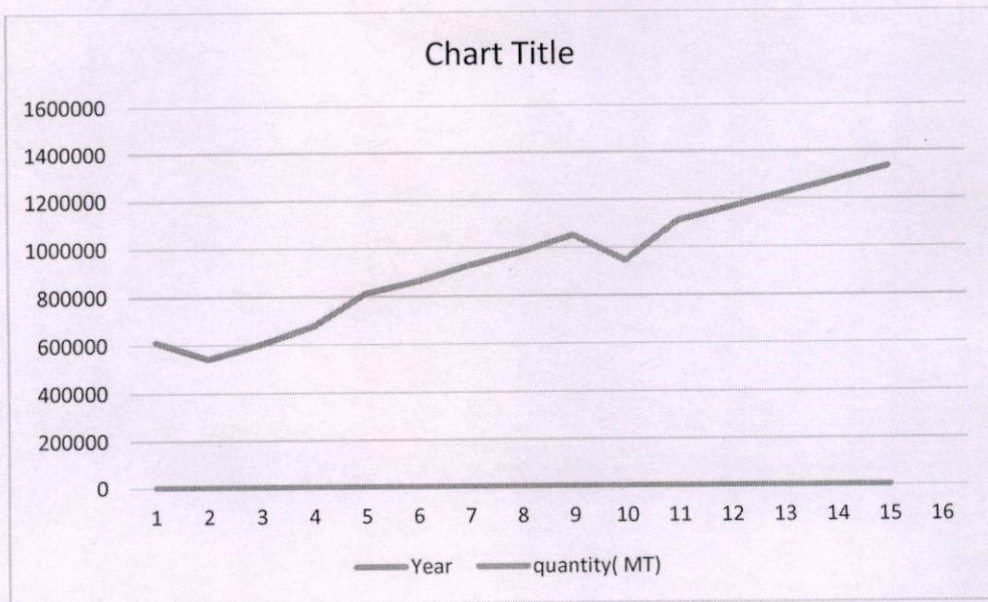
The above table 5.3 compares the export of marine products from India during the year 2014-2015 with 2013-2014. The 2014-2015 is the year in which the Indian marine products export reached an all-time high of \$5511.12 million during the financial year 2014-15. Marine product exports crossed all previous records in quantity, rupee value and US Dollar (\$) terms. Exports aggregated to 10,51,243 tonnes valued at Rs. 33,441.61 crore and \$5511.12 million. Compared to previous year, seafood exports recorded a growth of 6.86% in quantity, 10.69% in rupee and 10.05 % growth in US\$ earnings. The USA and Middle east recorded the highest growth rate 16.94% and 11.32% in quantity. The Japan, European union, South east Asian countries shown growth in import. But import of China declined -21.46% this very much affected the International market. Weaker economic condition in China, devaluation of Yen, depreciation of the Indian Rupee, improvement in supply conditions in South East Asian (SEA) countries in comparison to previous year has resulted in continuous increase in export of marine products.

Table 5.4 Future forecasted demand of marine products

Sl.No.	Year	Quantity(MT)
1.	2006	612641
2.	2007	541701
3.	2008	602835
4.	2009	678436
5.	2010	813091
6.	2011	862012
7.	2012	928215
8.	2013	983756
9.	2014	1051243
10.	2015	945892
11.	2016	1110946
12.	2017	1167121
13.	2018	1223297
14.	2019	1279472
15.	2020	1335647

Source: Secondary data

Figure 5.1 Forecasted demand for marine products export



Source: Secondary data

The above table 5.4 shows there is an increase in demand for marine products in 2016 and upcoming years. The figure 5.1 also shows a positive linear trend in future demand. The forecasted demand for marine products in 2016, 2017, 2018, 2019, 2020 are follows 1110946, 1167121, 1223297, 1279472, 1335647 respectively. The study shows there is a great opportunity for marine products in upcoming years if there is no change in the economy.

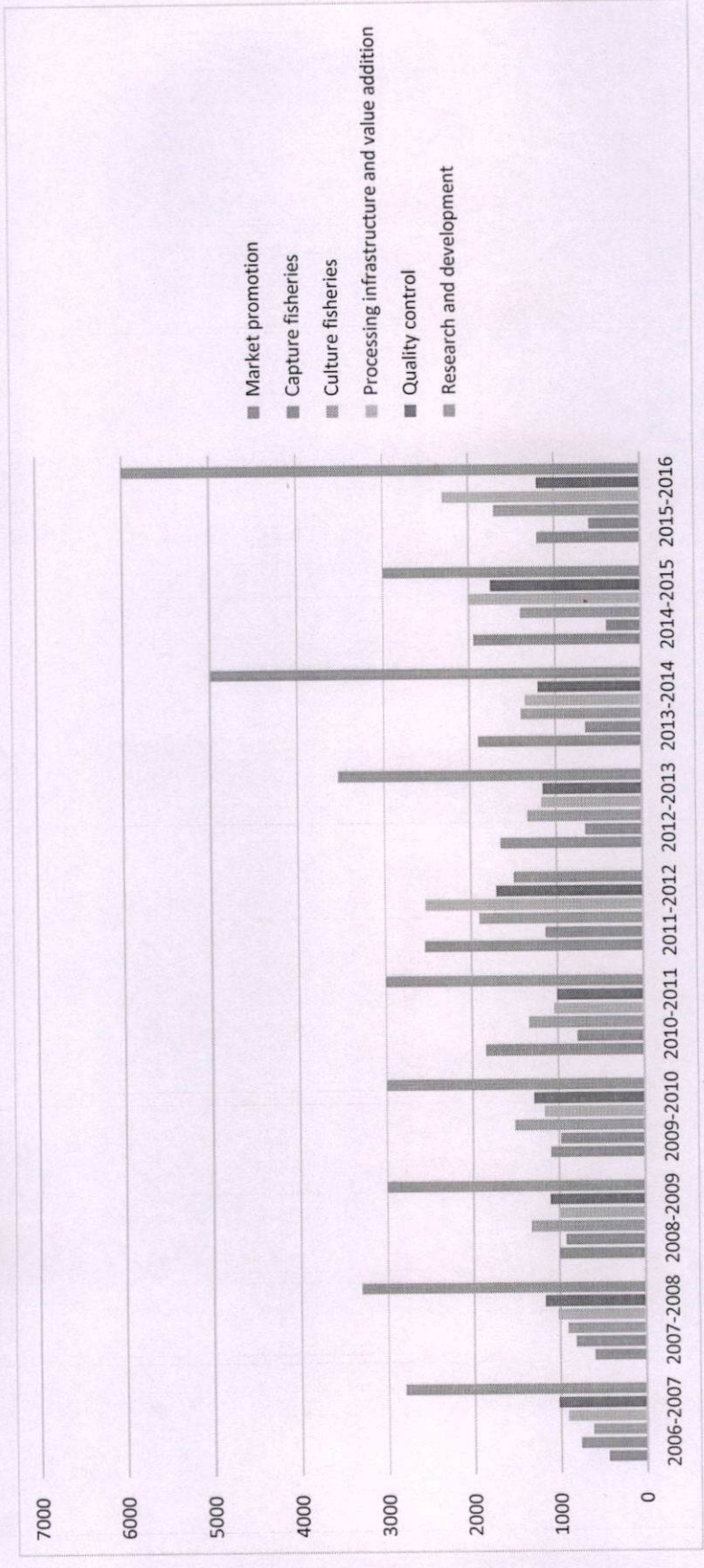
Table 5.5 Export promotional activities of Mpeda

Sl.No.	Year	Market promotion (lakhs)	Capture fisheries (lakhs)	Culture fisheries (lakhs)	Processing infrastructure and value addition (lakhs)	Quality control (lakhs)	Research and development (lakhs)	Total (lakhs)
1	2006-2007	440	762.33	621	912	1022	2800	6557.33
2	2007-2008	597.45	813.33	908	1022.24	1166.8	3300	7807.82
3	2008-2009	1000.4	925.21	1326	982	1100	3000	8333.61
4	2009-2010	1089.79	977.12	1507.96	1158.25	1285.25	3000	9018.37
5	2010-2011	1843.84	771.66	1338.17	1041.53	1006.03	3000	9001.23
6	2011-2012	2541.03	1133.75	1905.73	2534.2	1704.56	1500	11319.27
7	2012-2013	1647	664	1335	1170	1154	3529	9500
8	2013-2014	1900	650	1400	1350	1200	5000	11500
9	2014-2015	1950	400	1400	2000	1750	3000	10500
10	2015-2016	1200	600	1,700.00	2300	1200	6,000.00	13000
	Grand total	14209.51	7697.4	13441.86	14470.22	12588.64	34129	96537.63

Source: Secondary data



Figure 5.2 Export promotional activities of Mpeda



Source: Secondary data

The above table 5.5 and figure 5.2 shows various export promotional activities conducted by MPEDA. Under the six heads major export promotional activities are conducted. In this promotional activities the major portion of amount spent for research and development about 34129 lakhs and the least amount spent for capture fisheries 7697.4 lakhs. The 2015-2016 is the year in which largest amount spent for export promotion 13000 lakhs. During 2006 to 2016 there is an amount spent for export promotion are 96537.63 lakhs.

Table 5.6 Impact of Export Promotional activities in export of marine products

Sl.No.	Year	Quantity (MT)	Total expenditure on promotional activities (Crore)
1	2006-2007	612641.00	6557.33
2	2007-2008	541701.00	7807.82
3	2008-2009	602835.00	8333.61
4	2009-2010	678436.00	9018.37
5	2010-2011	813091.00	9001.23
6	2011-2012	862012.00	11319.27
7	2012-2013	928215.00	9500
8	2013-2014	983756.00	11500
9	2014-2015	1051243.00	10500
10	2015-2016	945892.00	13000
		Total	96537.63

Source: Secondary data

The table 5.6 shows the amount spent for export promotional activities from 2006-2007 to 2015-2016 total 96537.63 crore rupees are spent for export promotional activities of marine products. For the promotion of marine products there is an average of 9653.763 crore are spending each year and lowest amount for promotion is spent is 6557.33 crore in 2006-2007 and there is a continuous increase in amount can be observed. The correlation between export promotional activities and marine products exported is 0.79734, which means there is a positive relationship between export promotional activities on export of marine products. If there is an increase in amount

		V	2140	2864	-25.3	734.62	757.3	-2.99
		\$	329	472	-30.25	183	167.75	9.05
	TOTAL	Q	945892	105124	-10.02	54170	61264	-11.58
				3		1	1	
		V	30213.	33441.	-9.03	7620.9	8363.5	-8.88
			26	61		2	3	
		\$	5007.7	5511.1	-14.94	1899	1852.9	2.49
				2			3	

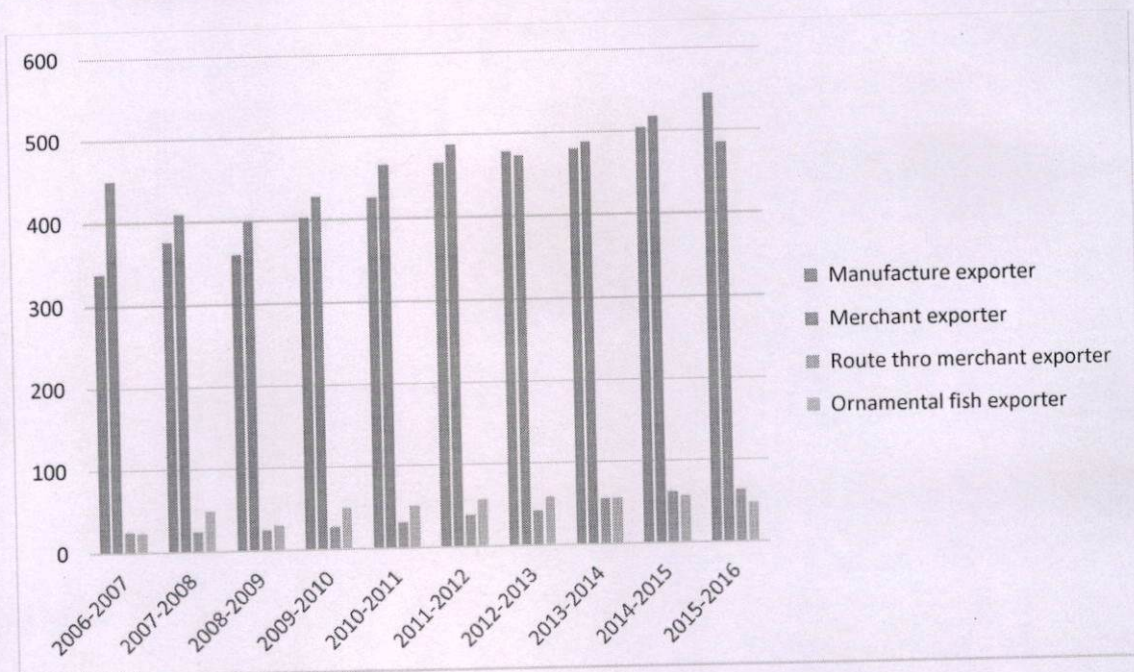
Source: Annual report MPEDA

The above Table 5.2 compares the major markets of marine products export during 2007-2008 with 2006-2007 and 2015-2016 with 2014-2015. There is a decline in imports in several foreign countries Japan, USA, EU, China, South East Asia comparing 2007-2008 with 2006-2007. The major decrease is shown by USA 36612 MT (-16.33%) in quantity compared to year 2006-2007's 43758 MT and value wise there is decline of -24.55%. China also had a decline from 203513 to 139792 (-31.31%) in quantity wise and value wise -12.74%. This decrease in import by these major markets resulted in India's overall marine products export into the ever time decrease of -11.58% during 2007-2008. The decline in export is due to the foreign markets especially China and USA tightened their TBT's (technical barriers to trade) NTB's (non-tariff barriers) to deny comparative advantage taken by developing countries. There is a dull in international market prior to the 2008-2009 global recession.

The other great decrease in export in international market was encountered in 2015-2016. Comparing 2015-2016 with 2014-2015 the export of marine products shown decreased growth of -10.02% in quantity and -9.03% in value. The decrease in marine products export is shown by Japan, European Union, China, South east Asia, Middle east, other countries. The major reason for decrease in export is due to the micro and macro elements content in cephalopods standards are more stringent than previous year. Especially the Cadmium content more than the prescribed rate 0.238 ppm is the standard. Cadmium, like other heavy metals, is well known to accumulate in a great number of marine invertebrates, especially mollusc, bivalves and gastropods but concentrations of these metals in cephalopods, one of the essential links in marine trophic chains (Bryan 1984), The ability of heavy metals to be concentrated in the organs of marine organisms accounts for their toxicity and also poses a direct threat to

spent for promotion, there is also increase in overall export. But there is a decrease in marine products export during 2015-2016 and 2007-2008.

Figure 3 Registrations under MPEDA



Source: Secondary data

The table 5.7 and figure 5.3 shows the number of registrations takes place in MPEDA. The MPEDA certification is mandatory for exporting marine products to foreign countries. The table shows registration taken place in MPEDA in each year under different category. The manufacture exporters and merchant exporters are more in number 4375 and 4605 respectively registered under MPEDA over the years. The chart 3 shows there is increasing trend among the exporters which means opportunities in marine products exports are increasing. Earlier merchant exporters were higher but recently the manufacture exporters were higher than merchant exporters.

Table 5.7 Registrations under MPEDA

SI.No.	Year	Manufacture exporter	Merchant exporter	Route through merchant exporter	Ornamental fish exporter	Fishing vessels	Processing plant	Fresh/chilled fish	Live fish handling centers	Dried fish handling centers	Total
1	2006-2007	338	450	25	23	6209	325	33	27	25	7455
2	2007-2008	376	410	24	49	6560	426	38	27	39	7949
3	2008-2009	360	400	25	30	5587	414	24	22	37	6899
4	2009-2010	403	428	27	50	6809	411	27	24	43	8222
5	2010-2011	426	465	31	51	8139	416	31	28	50	9637
6	2011-2012	466	488	38	57	8991	438	33	32	62	10605
7	2012-2013	478	473	42	59	9010	450	32	34	63	10641
8	2013-2014	480	488	55	56	9595	465	38	36	65	11278
9	2014-2015	504	518	62	57	10004	481	41	40	90	11797
10	2015-2016	544	485	63	47	10663	506	46	41	106	12501
	Grand total	4375	4605	392	479	81567	4332	343	311	580	96984

Source: Secondary data.

The table 5.7 shows overall 96984 numbers of registrations taken place over the years. The number of registrations is touched an all-time high of 12501.

Table 5.8 Impact financial assistance for market promotion over manufacture exporter registered under MPEDA

SI.No.	Year	Market promotion	Manufacture exporter
1	2006-2007	440	338
2	2007-2008	597.45	376
3	2008-2009	1000.4	360
4	2009-2010	1089.79	403
5	2010-2011	1843.84	426
6	2011-2012	2541.03	466
7	2012-2013	1647	478
8	2013-2014	1900	480
9	2014-2015	1950	504
10	2015-2016	1200	544

Source: secondary data

The table 5.8 gives the impact of financial assistance for market promotion over manufacture exporter registered under MPEDA. The value of correlation between financial assistance given for market promotion over manufacture exporter were 0.6454. There is a positive correlation between market promotion and manufacture exporters. According to the analysis as the market promotion activities were increased, more manufacture fish exporters were registered under MPEDA. 2015-2016 was the year with highest number of manufacture exporters registered under MPEDA with 544 exporters. Around Rs. 1200 lakh were spent for financial assistance of market promotion activities.

Table 5.9 Impact financial assistance for market promotion over merchant exporter registered under MPEDA

Sl.No.	Year	Market promotion	Merchant exporter
1	2006-2007	440	450
2	2007-2008	597.45	410
3	2008-2009	1000.4	400
4	2009-2010	1089.79	428
5	2010-2011	1843.84	465
6	2011-2012	2541.03	488
7	2012-2013	1647	473
8	2013-2014	1900	488
9	2014-2015	1950	518
10	2015-2016	1200	485

Source: Secondary data

The above table 5.9 shows the impact of financial assistance for market promotion over merchant exporter registered under MPEDA. The value of correlation between financial assistance given for market promotion over merchant exporter were 0.7130. There is a positive correlation between market promotion and merchant exporters. According to the analysis as the market promotion activities were increased, more merchant fish exporters were registered under MPEDA. 2014-2015 was the year with highest number of merchant exporters registered under MPEDA with 518 exporters. Around Rs. 1200 lakh were spent for financial assistance of market promotion activities.

Table 5.10 Impact financial assistance for market promotion over route through merchant exporters registered under MPEDA

Sl.No.	Year	Market promotion	Route through merchant exporter
--------	------	------------------	---------------------------------

1	2006-2007	440	25
2	2007-2008	597.45	24
3	2008-2009	1000.4	25
4	2009-2010	1089.79	27
5	2010-2011	1843.84	31
6	2011-2012	2541.03	38
7	2012-2013	1647	42
8	2013-2014	1900	55
9	2014-2015	1950	62
10	2015-2016	1200	63

Source: Secondary data

The above table 5.10 shows the impact of financial assistance for market promotion over route through merchant registered under MPEDA. The value of correlation between financial assistance given for market promotion over route through merchant exporter were 0.4997. There is a positive correlation between market promotion and route through merchant exporters. According to the analysis as the market promotion activities were increased, more route through merchant fish exporters were registered under MPEDA. 2015-2016 was the year with highest number of route through merchant exporters registered under MPEDA with 63 exporters. Around Rs. 1200 lakh were spent for financial assistance of market promotion activities.

Table 5.11 Impact of financial assistance for capture fisheries over the fishing vessels registered under MPEDA

Sl.No.	Year	Capture fisheries	Fishing vessels
1	2006-2007	762.33	6209
2	2007-2008	813.33	6560
3	2008-2009	925.21	5587

4	2009-2010	977.12	6809
5	2010-2011	771.66	8139
6	2011-2012	1133.75	8991
7	2012-2013	664	9010
8	2013-2014	650	9595
9	2014-2015	400	10004
10	2015-2016	600	10663

Source: Secondary data

The above table 5.11 shows the impact of financial assistance for capture fisheries over the number of fishing vessels registered under MPEDA. The value of correlation between financial assistance given for capture fisheries over fishing vessels were -0.54375. This value indicates that there is a negative relationship between the financial assistance given for capture fisheries activities over the number of fishing vessels registered under MPEDA. The reason for this negative impact was from 2006-2007 to 2011-2012 there was a financial assistance given for converting old fishing vessels into tuna long liners. Afterwards 2011-2012 the assistance for capture fisheries is reduced but there were opportunities for marine products there for the number of fishing vessels increased and new vessels were equipped with tuna long liners. 2015-2016 was the year with highest number of fishing vessels registered under MPEDA with 10663 vessels. Around Rs.600 lakh were spent for processing and value addition activities. The boom in marine products exports is the reason for increasing number of fishing vessels even there is a lack in financial assistance.

Table 5.12 Impact of financial assistance for culture fisheries over ornamental fish exporters registered under MPEDA

Sl.No.	Year	Culture fisheries	Ornamental fish exporter
1	2006-2007	621	23
2	2007-2008	908	49
3	2008-2009	1326	30

4	2009-2010	1507.96	50
5	2010-2011	1338.17	51
6	2011-2012	1905.73	57
7	2012-2013	1335	59
8	2013-2014	1400	56
9	2014-2015	1400	57
10	2015-2016	1,700.00	47

Source: Secondary data

The above table 5.12 shows the impact of financial assistance for culture fisheries over the number of ornamental fish exporter registered under MPEDA. The value of correlation between assistance given for culture fisheries over ornamental fish exporter were 0.6035. This value indicates that there is a positive relationship between the financial assistance given for culture fisheries activities over the number of ornamental fish exporters registered under MPEDA. According to the analysis as the culture fisheries activities were increased, more ornamental fish exporters were registered under MPEDA. 2014-15 was the year with highest number of ornamental fish exporters registered under MPEDA with 57 exporters. Around Rs. 1700 lakh were spent for culture fisheries activities.

Table 5.13 Impact of financial assistance for processing infrastructure and value addition over processing plant registered under MPEDA

Sl.No.	Year	Processing infrastructure and value addition	Processing plant
1	2006-2007	912	325
2	2007-2008	1022.24	426
3	2008-2009	982	414
4	2009-2010	1158.25	411
5	2010-2011	1041.53	416
6	2011-2012	2534.2	438
7	2012-2013	1170	450
8	2013-2014	1350	465

9	2014-2015	2000	481
10	2015-2016	2300	506

Source: Secondary data

The above table 5.13 shows the impact of financial assistance for processing infrastructure and value additions over number of processing plants registered under MPEDA. The value of correlation between assistance given for processing infrastructure and value addition activities over the number of processing plant were 0.6374. This value indicates that there is a positive relationship between the financial assistance given for processing infrastructure and value additions over the number processing plants registered under MPEDA. According to the analysis as the financial assistance given for processing infrastructure and value addition increases, more number of processing plants are opened or registered under MPEDA. 2015-2016 was the year with highest number of processing plants registered under MPEDA with 506 centres. Around Rs.2300 lakh were spent for processing and value addition activities.

Table 5.14 Impact of financial assistance for quality control over fresh/chilled fish handling centres registered under MPEDA

Sl.No.	Year	Quality control	Fresh/chilled fish handling centres
1	2006-2007	1022	33
2	2007-2008	1166.8	38
3	2008-2009	1100	24
4	2009-2010	1285.25	27
5	2010-2011	1006.03	31
6	2011-2012	1704.56	33
7	2012-2013	1154	32
8	2013-2014	1200	38
9	2014-2015	1750	41
10	2015-2016	1200	46

Source: Secondary data

The above table 5.14 shows the impact of financial assistance for quality control over fresh/chilled fish handling centres. The value of correlation between assistance given for quality control over fresh/chilled fish handling centres were 0.2783. This value indicates that there is a positive relationship between the financial assistance given for quality control activities over the number of Fresh/chilled fish handling centres registered under MPEDA. According to the analysis as the quality control activities were increased, more Fresh/chilled fish handling centres were opened or registered under MPEDA. 2015-16 was the year with highest number of fresh/chilled fish handling centres registered under MPEDA with 46 centres. Around Rs. 1200 lakh were spent for quality control activities.

Table 5.15 Impact of financial assistance for processing infrastructure and value addition over dried fish handling centres registered under MPEDA

Sl.No.	Year	Processing infrastructure and value addition	Dried fish handling centres
1	2006-2007	912	25
2	2007-2008	1022.24	39
3	2008-2009	982	37
4	2009-2010	1158.25	43
5	2010-2011	1041.53	50
6	2011-2012	2534.2	62
7	2012-2013	1170	63
8	2013-2014	1350	65
9	2014-2015	2000	90
10	2015-2016	2300	106

Source: Secondary data

The table 5.15 shows impact of financial assistance for processing infrastructure and value addition over dried fish handling centres. The value of correlation between assistance given for processing infrastructure over dried fish handling centres were 0.7730. This value indicates that there is a positive relationship between the financial assistance given for processing infrastructure and the value addition activities over the dried fish handling centres registered under MPEDA. According to the analysis as the

processing infrastructure and value addition activities were increased, more dried fish handling centres were opened or registered under MPEDA. 2015-16 was the year with highest number of dried fish handling centres registered under MPEDA with 106 centres. Around Rs.2300 lakh were spent for processing infrastructure and value addition activities.

Table 5.16 Impact of financial assistance for research and development over live fish handling centres registered under MPEDA

Sl.No.	Year	Research and development	Live fish handling centres
1	2006-2007	2800	27
2	2007-2008	3300	27
3	2008-2009	3000	22
4	2009-2010	3000	24
5	2010-2011	3000	28
6	2011-2012	1500	32
7	2012-2013	3529	34
8	2013-2014	5000	36
9	2014-2015	3000	40
10	2015-2016	6,000.00	41

Source: Secondary data

The table 5.16 shows impact of financial assistance for research and development over live fish handling centres. The value of correlation between assistance given for research and development over live fish handling centres were 0.5344. The value indicates that there is a positive relationship between the financial assistance given for research and development activities over the number of live fish handling centres registered under MPEDA. According to the analysis as the research and development activities were increased, more live fish handling centres were opened or registered under MPEDA. 2015-16 was the year with highest number of live fish handling centres registered under MPEDA with 41 centres. Around Rs.6000 lakhs were spending for research and development activities.

Chapter-6
Findings, Conclusions and
Suggestions

Chapter 6

Findings, conclusions and suggestions

Promotion of export has become an important part of India's trade and export import policy. Export promotion is very essential for the development of the Indian economy. Hence the government of India has been adopting various export promotion measures for the promotion and diversification of export. Export promotion measures include various policy decisions, schemes, concessions, incentives and facilities offered to the exporters. Export promotion measure aim at removing the difficulties and problems faced by the exporters.

The Marine Products Export Development Authority, a nodal agency set up by the Govt. of India in 1972 for the promotion of seafood exports from India, gives a detailed account of India's seafood potential, products, processing units and export performance. The Seafood Industry of India has come a long way and today seafood is exported to nearly 70 countries from India. MPEDA functions under the Ministry of Commerce, Government of India and acts as a coordinating agency with different Central and State Government establishments engaged in fishery production and allied activities. The authority conduct fairs and exhibitions and also takes part in international fairs. It also gives publicity to Indian marine products in foreign countries. The authority advises central government on all matters relating to seafood industry and its exports.

In order to maintain growth of marine products MPEDA provide various financial assistance under Six major heads and these are analyzed in detail and following details have been found out

6.1 Findings

1. Major markets of Indian marine products are Japan, USA, China, European Union, South east Asia, and Middle east etc.
2. According to the analysis for the year 2014-2015, is the year which recorded highest export in marine products 1051243 MT in quantity and the growth of 10.69% compared to the previous year 2013-2014.
3. In the year 2007-2008, there is a great decline in overall marine products export due to the foreign markets especially China and USA. The major decrease is shown

- by USA 36612 MT (-16.33%) in quantity compared to year 2006-2007's 43758 MT. China also had a decline from 203513 to 139792 (-31.31%) in quantity.
4. In the year 2015-2016 also faced these great decline in overall marine products export 945892.00 MT as compared to the 2014-2015's 1051243.00 MT. The avg. annual growth rate recorded was -10.02%. The decline is due to the major countries are proposed ban on Cephalopods which had a presence of Cadmium content more than the prescribed rate it is result of water pollution. Cadmium, like other heavy metals, is well known to accumulate in a great number of marine invertebrates, especially mollusc, bivalves and gastropods but concentrations of these metals in cephalopods, one of the essential links in marine trophic chains (Bryan 1984),
 5. The year 2014-15 was the most favourable year for both quantity and value wise export of marine products. 1051243 MT is the overall marine products export and a growth of 10.69%. The major reason for this hike is USA and Middle east recorded the highest growth rate 16.94% and 11.32% in quantity. The Japan, European union, South east Asian countries shown growth in import. Growth may be viewed under prevailing international market situations. Depreciation of Euro, weaker economic condition in China, devaluation of Yen, depreciation of the Indian Rupee, improvement in supply conditions in South East Asian (SEA) countries in comparison to previous year has resulted this huge growth. (MPEDA annual report,2014-2015)
 6. The forecasted demand for marine products in 2016, 2017, 2018, 2019,2020 are follows 1110946, 1167121, 1223297, 1279472, 1335647 respectively. The study shows there is a great opportunity for marine products in upcoming years. India exported 11,34,948 MT of seafood worth an all-time high of US\$ 5.78 billion (Rs 37, 870.90 crore) in 2016-17 as against 9,45,892 tons and 4.69 billion dollars a year earlier, with USA and South East Asia continuing to be the major importers while the demand from the European Union (EU) grew substantially during the period. (Ministry of Commerce & Industry, 2017)
 7. The 2015-2016 is the year in which largest amount spent for export promotion 13000 lakhs. During 2006 to 2016 there is a total amount of 96537.63 lakh spent for export promotion.
 8. The major portion of the export promotion activities fund are utilized for research and development 34129 lakhs.

9. There is a correlation between export promotional activities and marine products exported is 0.79734. which means if there is an increase in export promotional activities this also result increase in export of marine products. But these promotions should be support the overall marine products export and attract new exporters into marine products export.
10. There are a total 96984 registrations by various categories recorded from 2006-2007 to 2015-2016. In the year 2015-2016 is the large number of registrations takes place 12501.
11. The analysis shows there is an increasing trend in the number of registrations took place in MPEDA from 2006-2007 to 2015-2016. But there is slight decrease in 2008-2009 the number of registrations took place are 6899. This is due to the global recession encountered in 2008.
12. There is a correlation between financial assistance given for market promotion over manufacture exporter were 0.6454. According to the analysis as the market promotion activities were increased, more manufacture fish exporters were registered under MPEDA. 2015-2016 was the year with highest number of manufacture exporters registered under MPEDA with 544 exporters. Around Rs. 1200 lakh were spent for financial assistance of market promotion activities.
13. There is a correlation between financial assistance given for market promotion over merchant exporter were 0.7130. According to the analysis as the market promotion activities were increased, more merchant fish exporters were registered under MPEDA. 2014-2015 was the year with highest number of merchant exporters registered under MPEDA with 518 exporters. Around Rs. 1200 lakh were spent for financial assistance of market promotion activities.
14. There is a correlation between financial assistance given for market promotion over route through merchant exporter were 0.4997. According to the analysis as the market promotion activities were increased, more route through merchant fish exporters were registered under MPEDA. 2015-2016 was the year with highest number of route through merchant exporters registered under MPEDA with 63 exporters. Around Rs. 1200 lakh were spent for financial assistance of market promotion activities.
15. There is a correlation between financial assistance given for capture fisheries over fishing vessels were -0.54375. This value indicates that there is a negative relationship between the financial assistance given for capture fisheries activities

over the number of fishing vessels registered under MPEDA. The reason for this negative impact was from 2006-2007 to 2011-2012 there was a financial assistance given for converting old fishing vessels into tuna long liners. Afterwards 2011-2012 the assistance for capture fisheries is reduced but there were opportunities for marine products there for the number of fishing vessels increased and new vessels were equipped with tuna long liners. 2015-2016 was the year with highest number of fishing vessels registered under MPEDA with 10663 vessels. Around Rs.600 lakh were spent for processing and value addition activities. The boom in marine products exports is the reason for increasing number of fishing vessels even there is a lack in financial assistance. But it does not reach its potential there is plenty of fishing vessels are unregistered under MPEDA.

16. There is a correlation between assistance given for culture fisheries over ornamental fish exporter were 0.6035. This value indicates that there is a positive relationship between the financial assistance given for culture fisheries activities over the number of ornamental fish exporters registered under MPEDA. According to the analysis as the culture fisheries activities were increased, more ornamental fish exporters were registered under MPEDA. 2014-15 was the year with highest number of ornamental fish exporters registered under MPEDA with 57 exporters. Around Rs. 1700 lakh were spent for culture fisheries activities.
17. There is a correlation between assistance given for processing infrastructure and value addition activities over the number of processing plant were 0.6374. This value indicates that there is a positive relationship between the financial assistance given for processing infrastructure and value additions over the number processing plants registered under MPEDA. According to the analysis as the financial assistance given for processing infrastructure and value addition increases, more number of processing plants are opened or registered under MPEDA. 2015-2016 was the year with highest number of processing plants registered under MPEDA with 506 centres. Around Rs.2300 lakh were spent for processing and value addition activities.
18. There is a correlation between assistance given for quality control over fresh/chilled fish handling centres were 0.2783. This value indicates that there is a positive relationship between the financial assistance given for quality control activities over the number of Fresh/chilled fish handling centres registered under MPEDA. According to the analysis as the quality control activities were increased,

more Fresh/chilled fish handling centres were opened or registered under MPEDA. 2015-16 was the year with highest number of fresh/chilled fish handling centres registered under MPEDA with 46 centres. Around Rs. 1200 lakh were spent for quality control activities.

19. There is a correlation between assistance given for processing infrastructure over dried fish handling centres were 0.7730. This value indicates that there is a positive relationship between the financial assistance given for processing infrastructure and the value addition activities over the dried fish handling centres registered under MPEDA. According to the analysis as the processing infrastructure and value addition activities were increased, more dried fish handling centres were opened or registered under MPEDA. 2015-16 was the year with highest number of dried fish handling centres registered under MPEDA with 106 centres. Around Rs.2300 lakh were spent for processing infrastructure and value addition activities.
20. There is a correlation between assistance given for research and development over live fish handling centres were 0.5344. The value indicates that there is a positive relationship between the financial assistance given for research and development activities over the number of live fish handling centres registered under MPEDA. According to the analysis as the research and development activities were increased, more live fish handling centres were opened or registered under MPEDA. 2015-16 was the year with highest number of live fish handling centres registered under MPEDA with 41 centres. Around Rs.6000 lakh were spent for research and development activities.
21. Under MPEDA there are several other market promotional activities such as conducting international and domestic fairs, publications, internal and external advertisements.in the year 2011-2012 most number of advertisements are given 182 internal and external ads.
22. The MPEDA effectively reduced the anti-dumping duty imposed by USA 10.17% to 2.9%. In this activity the role played by MPEDA is un questionable.
23. During Financial year 2015-2016, 811 applications received from 65 manufacturer exporters and an amount of 291.53 Lakh has been disbursed towards Sea Freight Assistance for export of value added products.
24. During the year 2015-2016, through the field offices of MPEDA, they have validated 11051 catch certificates for export to EU. An amount of ` 113.37 lakh has been spent for this purpose.

25. Export oriented aquaculture production continues to increase year over the year and the increased production contributed significantly to the sea food exports from the country. Aquaculture production has increased to 5,00,581 MT during 2015-16 with an increase of 15.19 % over the production of 4,34,558 MT during the previous year 2014-15.
26. Financial assistance of 56.02 lakhs was released to the concerned beneficiaries in the states of Gujarat, Maharashtra, Kerala, Tamil Nadu, Odisha and West Bengal during the year 2015-16 for developing new farms of 114.22 ha.
27. During 2015-16, 15 no. of commercial shrimp hatcheries/nurseries are established for the production of quality shrimp seeds. These hatcheries/nurseries were assisted with a total subsidy amount of ` 82.87 lakhs.
28. During 2015-2016 Financial assistance is extended to 5 registered societies to the tune of 5.49 lakh for start-up grant and purchase of aerators.
29. Financial assistance of 36.14 lakhs was released to the concerned beneficiaries in the state of Kerala during the year 2015-16 for developing 464.36 ha Padasekharam area for aquaculture purpose.
30. MPEDA has been providing technical assistance to the seafood industry in HACCP implementation by imparting training to the technical personnel of the industry and also issues compliance certificate after necessary verification of HACCP implementation by the unit.
31. MPEDA has evolved a Marine Products (Quality Marking) scheme to grant a logo as a mark of quality. which is to be affixed on seafood products exported from India by the registered seafood processors who meet the criteria prescribed, which will make marketing their products easier.
32. MPEDA has conducting various programs to make awareness about packaging and the salient features of packaging.

6.2 Suggestions

On the basis of conclusions arrived the following suggestions are placed to the management of MPEDA so as to have more efficiency in operations and smoothness in the functioning of MPEDA.

1. Quality control measurements must be given more importance in order to prevent antidumping procedures initiated by the foreign countries. More laboratories to be

started under Mpeda to examine the micro and macro elemental content in marine products and exporters should be aware about these risks.

2. Monopoly in the activities make MPEDA less effective in certification procedures.
3. MPEDA has to improve domestic standards up to the level of international standards this will results India to jump over the stringent certification procedures.
4. MPEDA must promote environmental programs against water pollution. The government has to promote waste remediation (WR) programs to reduce the harmful effects of industrial pollution. In the marine environment, the ecosystem service of Waste Remediation (WR) enables humans to utilise the natural functioning of ecosystems to process and detoxify a large number of waste products and therefore avoid harmful effects on human wellbeing and the environment (Hudson, 2017).
5. The aqua culture must give more focus to overcome the effects of poisons elements in fishes and it will also be an uninterrupted source for future market demands.
6. MPEDA must give much focus to avoid antidumping policies taken by major exporting countries and provide assistance for overcome technical trade barriers and non-tariff barriers.
7. The financial assistance given for capture fisheries over fishing vessels do not reduced it has to be extended towards other sectors of Fisher folk.
8. MPEDA must encourage women Fisher folk programs and utilize the great potential in this sector. Which will not only improve profit of the industry but there will be social welfare also part of this act. There is study supporting this suggestion is done by Brake in 2001. He had examined the experiences of women in two fishery dependent areas of India for their wider lessons. He also described the roles and needs of Indian women in fishing industry particularly in Kerala and the impacts of fisheries development programs on their work participation and life standard. He had concluded that Fisheries development programs are beneficial to many fishing villages in terms of community development, health care and education. (Brake 2001)
9. New export promotional schemes, especially to the beginners should create awareness by giving educational programmes through SME's and MSME under the guidance of MPEDA to attract more people to marine product export.
10. Minimum Insurance premium for the beginners must be provided to all new exporters to overcome the fear of debt or loss engaged in marine exports. There is

a policy which government targeting specific industries indirectly through providing export subsidies to specific markets via export insurance and such conceal strategic rent capture less developed markets (Dewite, 2001). Such activities will attract more beginners into marine sector.

11. MPEDA should find out means for internal accruals for investment funds to expand its current promotional activities.
12. Value added export products must be introduced by introducing incubation centres for extensive research.
13. As the exports of sea ornaments like coral reefs, oysters, pebbles, sedimentary etc. has considered to be a growing trend. MPEDA must give more incentives or subsidies to the exporters who are in the area of ornament and aquarium fish exports. Though they have showing an positive trend these field requires much more attention.
14. Effective use of various media of advertisement especially electronic media, public relations such as write-ups in news papers, magazines etc must be expanded.
15. MPEDA must organize and help exporters to release foreign exchange for business promotion tours, transportation subsidy etc.
16. The role of MPEDA should not be restricted to the promotion of marine product export alone. But it should also extend to developing of our marine economy as
17. More value added items based on the taste of export market, should be added with the help of market surveys, research and development facilities

6.3 Conclusion

Export of marine products has increased rapidly over the years. India's marine sector products have assumed a place of pride in the national economy. while the country has now become the second largest fish producer in the world. The MPEDA had played a dominant role to achieve this position. The Marine Products Export Development Authority (MPEDA) was constituted in 1977.

The role envisaged for the MPEDA under the statute is comprehensive covering fisheries of all kinds, increasing exports, specifying standards, processing, marketing, extension and training in various aspects of the industry. Up to a certain level the various promotional activities taken by MPEDA has found its objectives. Even though

there is a short decline in marine products export recorded in 2015-2016, the study gives the idea that the market has the tremendous potential to grow further.

The various export promotion activities taken under the six heads found its objectives. But there are certain areas where the MPEDA have to place its hand is capture fisheries. The MPEDA has to give more support to the capture fisheries promotion activities and this will improve the overall economic development. The MPEDA has to extend their activities towards social and environmental welfare. The sea is a treasure of numerous opportunities so diversification of marine products should be in action plan. The promotion of aqua culture and development of inland fisheries also a vital focus of MPEDA for the sustainable development of Indian fisheries.

Bibliography

Bibliography

Journals

1. Ayyappan, S., & Krishnan, M. (2004). Fisheries Sector in India: Dimensions of Development. *Indian Journal of Agricultural Economics*, 59 (3), pp 391-412
2. Bryan GW (1984) Pollution due to heavy metals and their compounds. In: Kinne O (ed) *Marine ecology*, vol 5 part 3. Wiley, Chichester, pp 1289-1431
3. Colin Hunt, (1999). Fiji's fisheries: their contribution to development and their future. *Marine Policy*, 23, (6), pp 571-585.
4. Gerda Dewit. (2001). Intervention in risky export markets: insurance, strategic action or aid? *European Journal of Political Economy*, 17, pp575-592.

E – Journals

1. Alexander Sarris. (2001). The Role of Agriculture in Economic Development and Poverty Reduction. Retrieved from http://www.wds.worldbank.org/external/default/WDSContentServer/WDSP/I/B/2002/11/22/000094946_02111304010425/Rendered/PDF/multi0page.pdf
2. Carl-Christian Schmidt, (2003). Globalisation, Industry Structure, Market Power and Impact on Fish Trade Opportunities and Challenges for Developed (OECD) Countries. Retrieved from <http://www.oecd.org/dataoecd/8/12/25012071.pdf>
3. Constance Elaine Brake. (2001). *The Roles of Women Fisherfolk in the Fishing Industry in India and The Impacts of Development on their Lives*. Retrieved from <http://www.collectionstionscanada.gc.ca/obj/s4/f2/dsk3/ftp.05/MQ63975.pdf>.
4. Department for International Development. (2005). The Role of Fisheries in Economic Growth and Poverty Alleviation towards a wealth-based approach for fisheries management. Retrieved from http://www.onefish.org/servlet/BinaryDownloaderServlet?filename=1138030238431_HoP_keysheet.pdf&refID=292368
5. IMM Ltd. (2003 December). *Fisheries in India: An Important and Dynamic Sector” Post-Harvest Fisheries Research Project R7799, Exeter, UK.*

Retrieved from

<http://www.research4development.info/PDF/Outputs/R7799b.pdf>

6. Marine Product Export Development Authority. (2008). *Proposal for the development of tuna fisheries in Andaman & Nicobar Islands*. Retrieved from <http://www.and.nic.in/Announcements/Proposal%20for%20Tuna%20Fisheries.pdf>
7. Sebastian Matthew. (2003). *Trade in Fisheries and Human Development Country Case Study – India*. Retrieved from
8. http://icsf.net/icsf2006/uploads/resources/presentations/pdf/english/1199770787544***India_Fisheries_June_2003%5B1%5D.pdf
9. Williams, D.C., Jr, Stephen C. Bushardt,. Edward Nissan. (1991). *Packaging for export - A case study of underutilized species of finfish*. Retrieved from <http://www.sciencedirect.com/science/article/pii/0308597X9190039E>

Reports

1. Department of Animal Husbandry, Dairying & Fisheries, (2010). *Annual Report*. Ministry of Agriculture, Government of India.
2. Marine Product Export Development Authority, Annual report From (2006-2007) to (2015-2016).
3. Press Information Bureau Government of India Ministry of Statistics & Programme Implementation (2017) 'India's Seafood Export at all-time High in 2016-17 : MPEDA ', (433), pp. 43–46.

