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Production and export of marine fishery in Odisha

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Abstract

This is an attempt as a brief and factual presentation on the marine fisheries sectors of Odisha and Govt. policy towards the sector. The study is based on secondary data collected from sources like the Directorate of Fisheries, Government of Odisha and Marine Fisheries Census compiled by CMFRI, the Hand Book of Fisheries Statistics, etc. This study shows that Marine fish production has recorded a sluggish growth in recent years and export of marine product is almost stagnant, far less than the export potential. The fishers lacked cold storage, processing and packaging facilities as well as transportation arrangements to reach other markets, which adversely affected value addition to the catches. The existing infrastructure of three fishing harbors and seven fishing jetties are not sufficient to accommodate all the mechanized boats of the state. In order to increase production and condition of fishers, an efficient management structure, fair procurement practices and suitable infrastructural arrangement need to be developed. This calls for sustained assistance from the govt. as well as other stakeholders.

Keywords: Sustainable yield, backward linkage, CAGR, GSDP, national welfare fund, step

Introduction

Fishery sector constitutes an important segment of the primary sector both at the national and regional levels of the Indian economy. The subsector contributes to the country's economy in terms of employment and livelihood, protein for food security, foreign exchange earnings, etc. It has both backward linkage operating through investment, employment and growth in fishing crafts and gears and forward linkages through those in ice plants, cold storages, processing, curing yards, transportation, marketing and other related activities. Although fishing is as old as human civilization, its enormous potential as a basis for international trade has gradually grown over the years. Innovative and efficient fishing practices, developed harvest and post-harvest infrastructure, growing domestic, international demand for sea food products and favourable government policies, the marine fishery sector has witnessed spectacular growth since the 1990's.

Odisha is one of the maritime states of India and endowed with rich marine water reserves. Six coastal districts (Balasore, Bhadrak, Jagatsinghpur, Kendrapara, puri and Ganjam) of thirty districts of the state are coastal districts and the state has a coastline of 480kms along the Bay of Bengal, Which account for 8% of the coastline of India. The continental shelf up to 200 meters depth covers an area of 24000 km² which is 4.5% of the total area of the Indian continental shelf. On the northern part of Odisha, the continental shelf extends up to 120 kms and in the southern prt up to 40 kms. It offers tremendous opportunities for development of marine fisheries in the state. According to the Fishery Survey in India (FSI), the fisheries potential of Odisha is 5, 13, 667 MT. About 4% the state's population (16.96 lakh) depend upon fisheries for their livelihood. Out of them, 8.90 lakh depend on inland fisheries and 8.06 lakh on marine fisheries. The fisheries sub sector contributed about 6% to the GSDP Share of the Agriculture Sector in the year 2012-13. The maximum sustainable yield (MSY) of commercially important marine species up to 200 depth is estimated at 0.161 million tone. The fishery resources in the state seen remain underutilized despite high potential because of dependence on the neighbouring states for infrastructure needed for the sector. As a result, production and exports of marine fish continue to remain small and unstable. A Clear understanding of the dynamics of the marine fisheries sector, its growth potential and fluctuations in production, availability of infrastructure is necessary for taking corrective measures and putting the sector on the right gear.

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Objectives of the study

The broad objectives of the study is to provide an overview of the marine fisheries of the state of Odisha and the specific objectives are outlined as follows:

- To study the marine resources and production in the state.
- To study growth of export of marine fisheries.
- To study the current marine fishery policies of the state.

Database and methodology

This paper is based on secondary data collected from the Directorate of Fisheries, Government of Odisha and Economics Survey of Odisha, Ministry of Agriculture, Union Government of India, and the Handbook of Fisheries, Ministry of Agriculture, Government of India.

Simple tabular analysis along with rates, charts, graphs, etc. are used for data analysis.

Production trend of marine fishery in Odisha analysis

Economic significance of fisheries sector

Contribution of fisheries sector to GSDP of the state is not proportionately substantial, but very significant for the

livelihood of the poor and disadvantaged groups. Time series data about fisheries production in the state is presented in table 1. It is revealed from the table

That total value of fisheries production increased from Rs 5,542 lakh in 1960-61 to Rs 1, 89, 066 in 2014-15. The share of the sector in total GSDP increased from 0.34% to 1.27% over the same period. The proportionate share had kept on increasing up to 2000-01 (1.51%) but declined thereafter. Of course, in absolute terms value of fisheries production has been increasing during the entire period under reference but the compound annual growth rate (CAGR) was higher (7.16%) during the first period (1960-61 to 2000-01) compared to 5.80% in the latter years (2000-01 to 2014-15). Marginalization of the sectors share in GSDP may be attributed to dominance of other emerging sub sectors like IT, other service sectors and industries in the state. As regards the sector's share in agricultural GSDP witnessed an escalating trend from 0.59% at the beginning of the sixties to 8.27% in 2014-15. Relatively higher growth in the agricultural sector compared to the fisheries sector accounts for this.

Table 1: Contribution of fisheries sector to GSDP (Rs-lakh)

Year	Total GSDP	GSDP Contribution		GSDP Contribution of fisheries as percentages of	
		Agriculture	fishing	Agricultural GSDP	Total GSDP
1960-61	1629344	931656	5542	0.59	0.34
1970-71	2391075	1440324	13693	0.95	0.57
1980-81	3019766	1579254	22262	1.41	0.74
1990-91	3883162	1419576	48829	3.44	1.26
2000-01	5830376	1515843	88250	5.82	1.51
2010-11	12513105	2251182	138601	6.16	1.11
2015-16	14857608	2286606	189066	8.27	1.27

Source: Economic Survey of Odisha

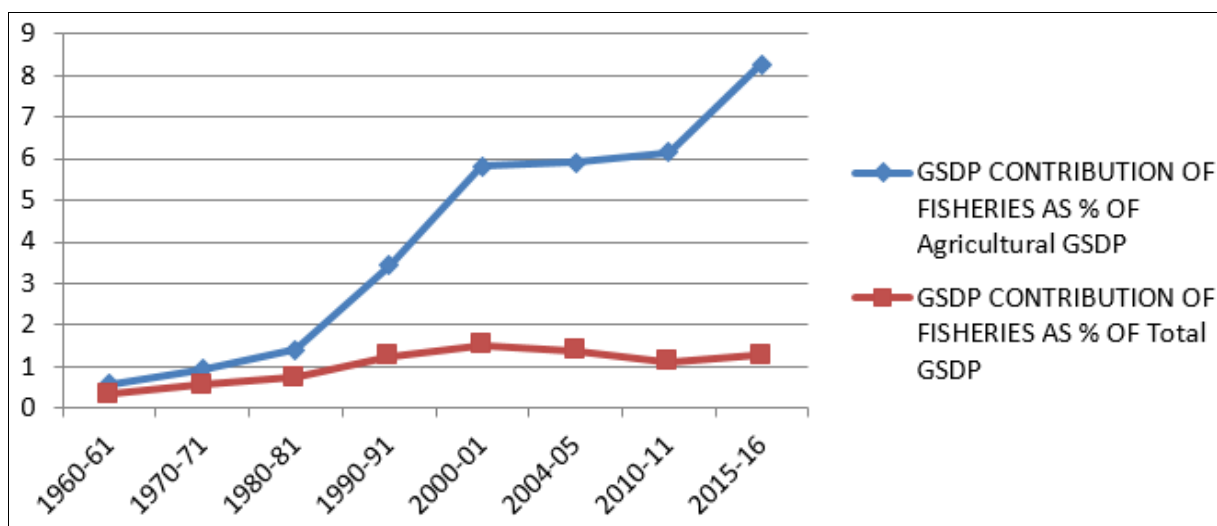


Fig 1: GSDP contribution of fisheries to Agricultural GSDP and Total GSDP

Production

With 4.7% of total fish production in the country, Odisha occupies the 9th rank among the states. During 2013-14, Odisha produced 413.89 TMT OF Fish, of which 293.87 TMT came from inland sources and 120.02 TMT from marine sources. Fish production in the state was valued at Rs. 4490.24 Crore in that year. It may be noted that marine fish production increased from 53581 MT in 1985-86 to 120020 MT IN 2013-14. Till 1997-98 marine fish production witnessed a boom followed by drop and a

sluggish trend till the end of the decade. Marine fisheries sector does not exhibit a consistent production trend but inland fish production increased in most of the years till date.

From the Table 2, it is shows that from 1985-86 to 1997-98 indicate an increasing level of production in marine fishery and the year from 1998-99 to 2009-10 shows a fluctuational periods, in 1999 production decreases due to "super cyclone" and in 2001 there will be a flood in odisha which decreases the production level of fisheries in both marine

and inland level. In the year 2009, in paradip their a ship “BLACK ROSE” had sunk and for which in that area fish production will be reduced due to oil linkages. The year from 2010 to presents year there will be an increasing production through which our state export level will also

increases in International level.

The state government approved Odisha Fisheries Policy, 2015, with an objective to increase the productivity and production of fish from inland, brackish and marine resources.

Table 2: Fish Production in Odisha (Quantity in M.T)

Year	Inland fish	Growth Rate (%)	Marine Fish	Growth Rate (%)	Total Fish Production	Growth Rate (%)
1985-86	55127	0	53581	0	108708	0
1986-87	57000	3.4	55324	3.25	112324	3.33
1987-88	64500	13.16	59960	8.38	124460	10.8
1988-89	69865	8.32	60120	0.27	129985	4.44
1989-90	75870	8.6	77895	29.57	153765	18.29
1990-91	80758	6.44	78192	0.38	158950	3.37
1991-92	87883	8.82	95026	21.53	182909	15.07
1992-93	93762	6.69	119376	25.62	213138	16.53
1993-94	128356	36.9	103925	-12.94	232281	8.98
1994-95	134770	5	122892	18.25	257662	10.93
1995-96	134844	0.05	123199	0.25	258043	0.15
1996-97	143496	6.42	133462	8.33	276958	7.33
1997-98	152418	6.22	156081	16.95	308499	11.39
1998-99	159904	4.91	124329	-20.34	284233	-7.87
1999-00	135303	-15.38	125935	1.29	261238	-8.09
2000-01	138556	2.4	121086	-3.85	259642	-0.61
2001-02	168060	21.29	113893	-5.94	281953	8.59
2002-03	174201	3.65	115009	0.98	289210	2.57
2003-04	189483	8.77	116880	1.63	306363	5.93
2004-05	193657	2.2	121928	4.32	315585	3.01
2005-06	203235	4.95	122214	0.23	325449	3.13
2006-07	214583	5.58	128141	4.85	342724	5.31
2007-08	218716	1.93	130767	2.05	349483	1.97
2008-09	239335	9.43	135487	3.61	374822	7.25
2009-10	241311	0.83	129332	-4.54	370643	-1.11
2010-11	252706	4.72	133479	3.21	386185	4.19
2011-12	267532	5.87	114296	-14.37	381828	-1.13
2012-13	291833	9.08	118311	3.51	410144	7.42
2013-14	293869	0.7	120020	1.44	413889	0.91
2014-15	336330	14.44	133210	10.98	469540	13.44
2015-16	376530	11.95	144750	8.66	521280	11.01

Source: Economic survey of Odisha

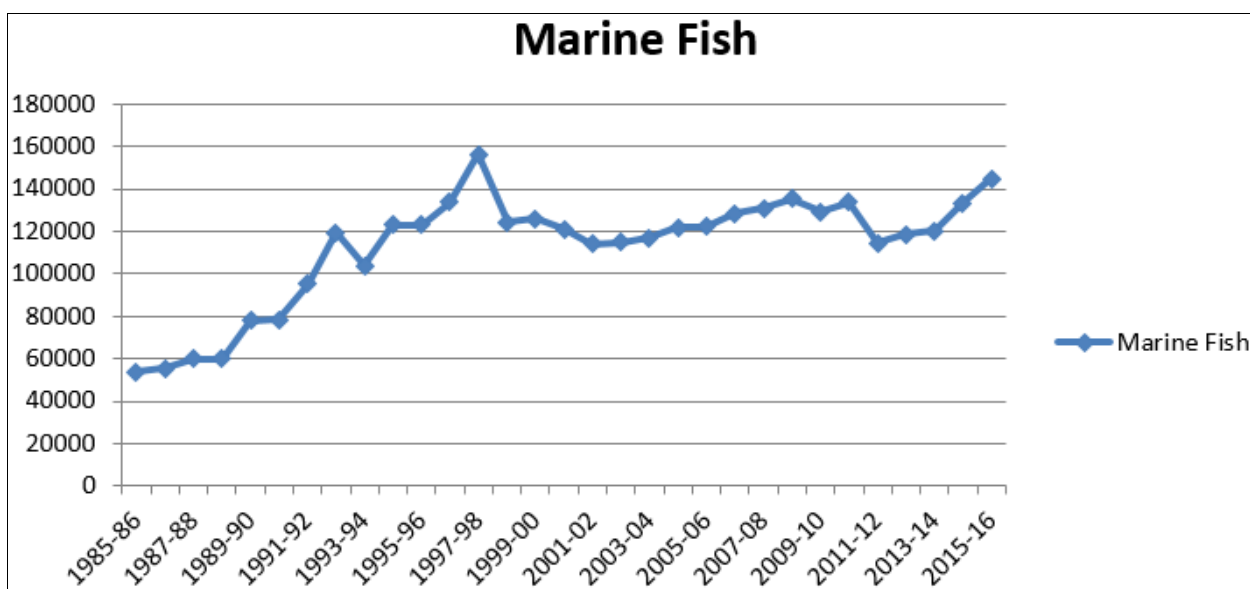


Fig 2: Marine fish production of Odisha

District wise marine fish production of Odisha

Odisha has 6 coastal districts namely; Balasore, Bhadrak,

Jagatsinghpur, kendrapara, Puri and Ganjam. Table 3 shows the productions of different district in different year. from

2014-15 its shows that Jagatsinghpur district has produced more than other districts and kendrapara district produced

less fish than other district`

Table 3: District wise marine fish production

Year	Balasore	Bhadrak	Jagatsinghpur	Kendrapara	Puri	Ganjam	Total
2008-09	35916	12310	34388	7363	34325	11185	135487
2009-10	35998	12811	33012	4798	31431	11282	129332
2010-11	35183	12631	35656	6853	31880	11276	133479
2011-12	27338	9773	28675	6339	31000	11171	114296
2012-13	27234	11086	32971	4898	30774	11348	118311
2013-14	29819	11076	30395	7474	30938	10319	120021
2014-15	35201	11721	36632	7009	30989	11659	133211

Source: Economic survey of Odisha

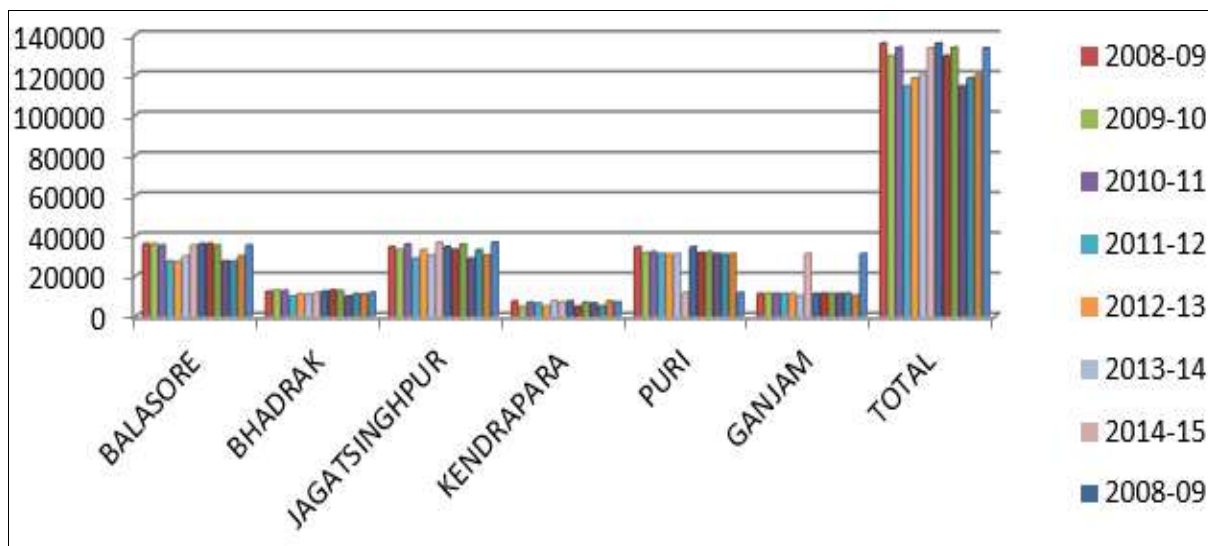


Fig 3: Export trend of fishery in Odisha

Export of marine fish

Exports played a crucial role for development of marine fisheries and socio-economic scenario of coastal rural sector. The infrastructure development in terms of ice plants, pre-processing centers, processing centers, export houses, consequent transport and other facilities along the fishing villages greatly owes to the growth of marine product exports. Seafood business in India is oriented towards international trade. International trade in fish and fish products has been increasing very rapidly in recent decades. Although export played a vital role for development, the WTO regime on exports should be closely watched and parallel development of domestic marketing system, which will act as shock absorbers, should be accorded paramount importance in our future strategies. Fresh fish, once inaccessible to distant locations are now easily available due to vast improvements in handling technologies coupled with advanced transportation facilities and consequent market penetration. About 80% of the catch is channelized through domestic marketing system and the rest for exports.

As fish production increases in the state, so do its export. This trend of total fish exports in the state from 1996-97 to 2013-14 is shown in table 4. It may be observed that the export of marine product is almost stagnant or less compare to size and resources potential for export. At present, Odisha is having 30 exporters who are processing in 19 modern processing plants spreading throughout the coastal districts of Odisha. Out of 19 processing plants, 5 are European approved standard and few of them are highly international standard to meet the requirement of the international market.

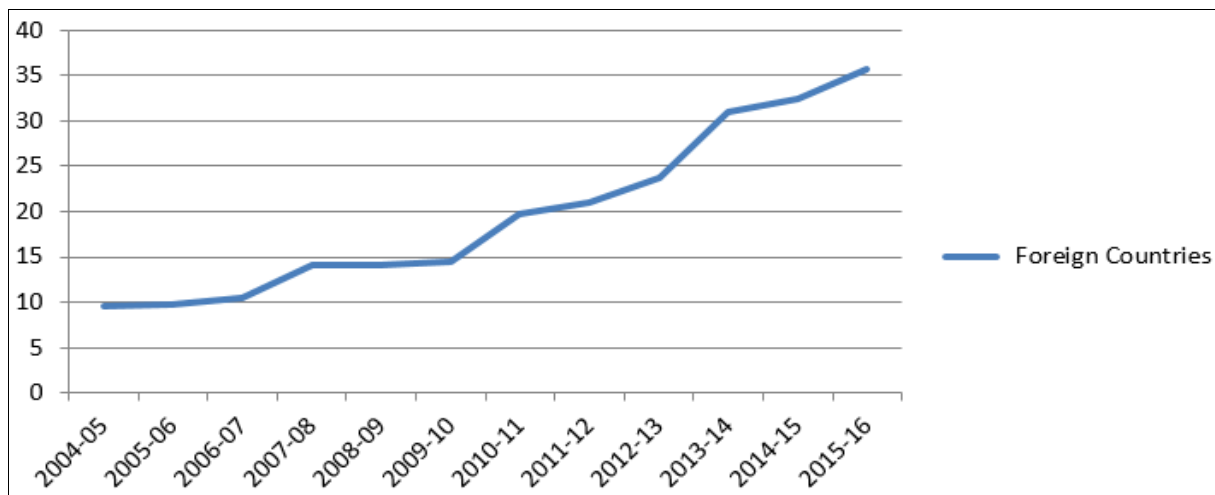
Table 4: Fish export to other state and countries

Year	Foreign Countries	Other States	Total Export
2004-05	9.54	56.18	65.72
2005-06	9.8	51.18	60.98
2006-07	10.52	57.48	68
2007-08	14.16	57.74	71.9
2008-09	14.13	63.89	78.02
2009-10	14.53	48.49	63.02
2010-11	19.73	55.99	75.72
2011-12	21.08	34.35	55.43
2012-13	23.69	45.76	69.45
2013-14	30.98	35.01	65.99
2014-15	32.47	33.22	65.69
2015-16	35.63	38.94	74.57

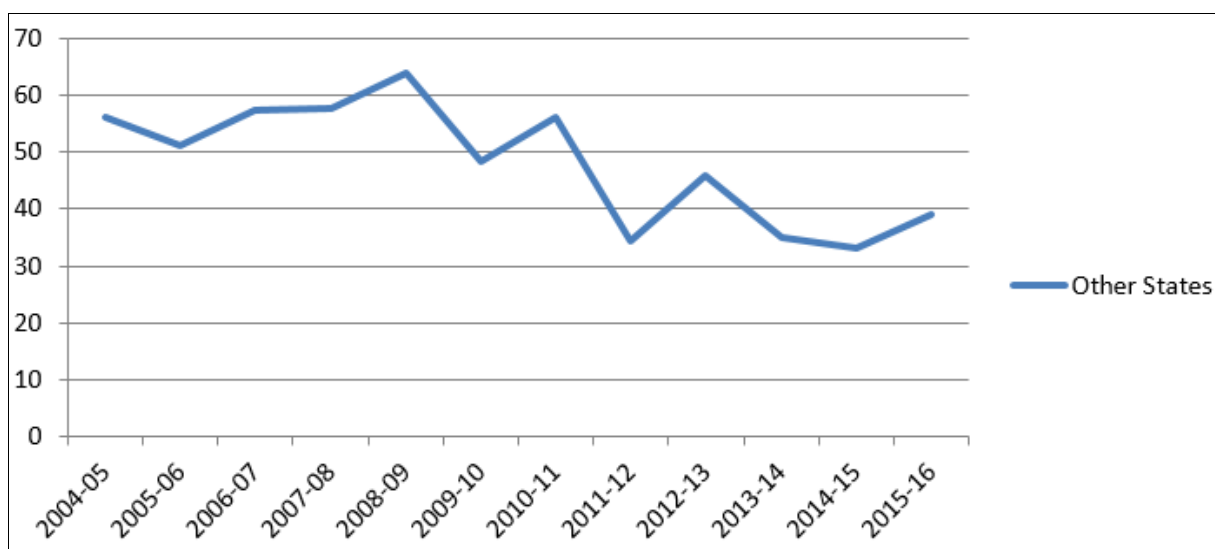
Source: Directorate OF Fishery, Odisha. (Table 4)

Table 5: Export of marine products, quantity and value

Year	Quantity (In 000MT)	Value (Rs in crore)
2004-05	9.54	241.2
2005-06	9.8	259.39
2006-07	10.52	304.46
2007-08	14.16	351.52
2008-09	14.13	357.88
2009-10	14.53	428.28
2010-11	19.73	606.41
2011-12	21.08	792.76
2012-13	23.69	908.48
2013-14	30.98	1817.07
2014-15	32.47	1963.85
2015-16	35.63	1787.84

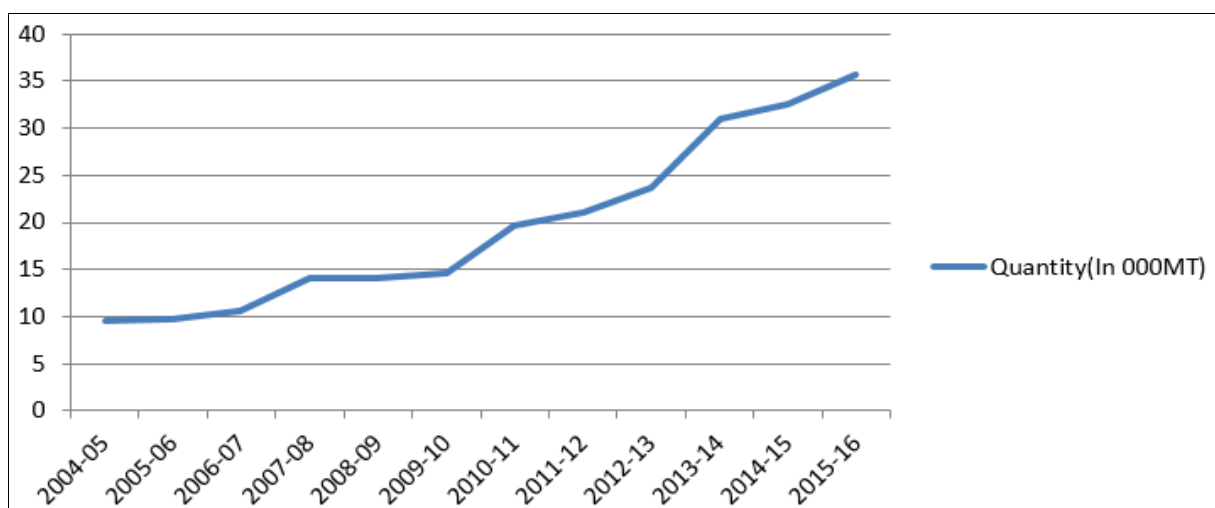
**Fig 4:** Fish Export to Foreign Countries

This shows an increasing trend of export to foreign countries over the periods. Due to increase demand of export product in international market.

**Fig 5:** Fish Export to Other States

This figure shows an decreasing trend of export to other states. The above two figure shows that, as foreign export increases, export to other states decreases but total export increases over the periods. Export of Marine Products to

Foreign Countries and Its Value As export to foreign countries increases day by day, It is important to determine its value. Here in table 5, indicate the quantity and its value.

**Fig 6:** Quantity (In 000MT)

This shows that over the period of time quantity of export will increase. From 2004-05 to 2015-16 quantity increases

four times.

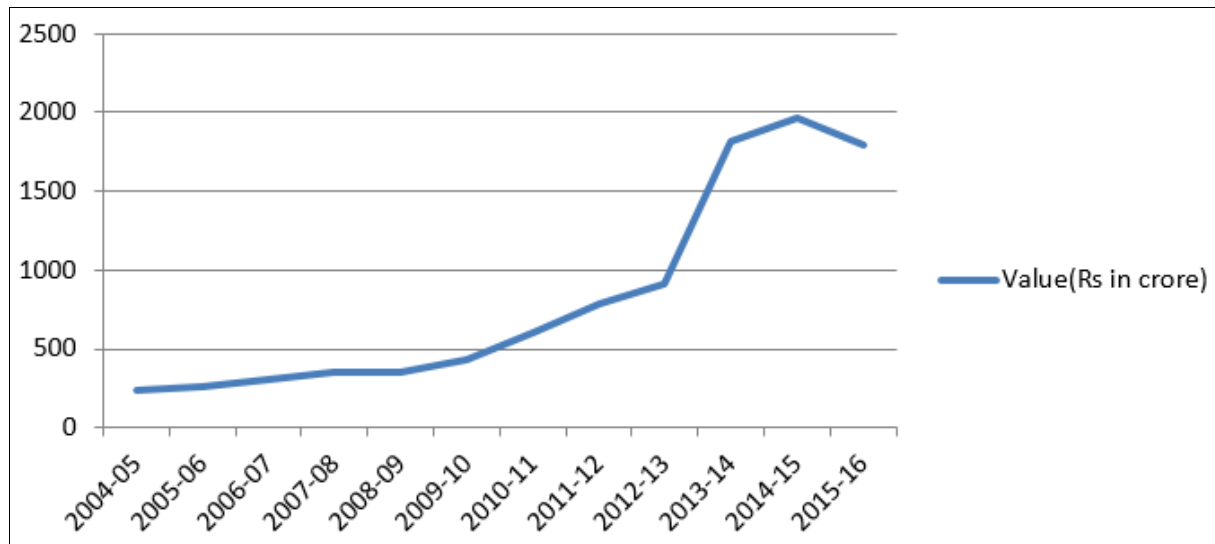


Fig 7: Value (Rs in crore)

The total contribution of sea food production of Orissa in the basket of India sea food export is 8% in terms of quantity and 5% in terms of value. In 2002-03 which has been reduced to 4% in terms of value and 3% in terms of quantity. In the year 2004-05, 11% utilization capacity of our processing factories is mainly due to decline of oceanic catch un-utilized of vast coastal land for aquaculture and inadequate infrastructure. However, to increase the potentialities of exports, tremendous opportunities are available.

The above need based shortfall opportunities need intervention for boosting production and export in marine sector. Moreover the fishermen of Orissa are paying a national obligation which is of international obligation for the conservation of olive ridley sea turtle

Need based interventions

1. Up gradation of landing centers
2. Setting up of chilled storage and ice factories as per EU norms
3. Creation for improvement of infrastructure facilities for aquaculture cluster.
4. The processing plant to be equipped with value added machineries.
5. Fishermen are to be provided with equipments for deep sea fisheries beyond 50 kms.
6. Common cold storage facilities is not available in the state in the line with other states to keep the finished products at the time of distress, price fluctuation in the international market. This state is not having quality testing laboratories (Up to date marine lab.) the shipment from Paradip port is necessary to avoid higher container charges and custom related issues.
7. Bhubaneswar airport should have direct international flight for easy access of overseas buyers.

Findings

- Marine fish production of Odisha shows a sluggish growth trend in recent Year
- Export of marine fish to foreign countries has increased in terms of quantity and value. Export of marine fish to

other states has decreased

Conclusion.

Most of fishing activities are carried out in coastal waters without disturbing deep waters. Marine fish production in Odisha has recorded a sluggish growth in recent years and the export of marine product is almost stagnant compared potential. The fisheries sector suffered from for inadequate infrastructure facilities like lack of cold storage, poor processing and packaging as well as bad transportation facilities to reach markets. The fisher folk forced to sell their product to the traders or take resort to distress sales for fear of the fish becoming putrid. In the absence of processing facilities like freezing, drying or salting, the fishers could not make value addition to the fish. However, the traders who procure fish and sell them in regional and international markets gain maximum margins. The existing infrastructure of three fishing harbours and seven fishing jetties are not sufficient to accommodate all mechanised boats of the state.

From the above discussion it can be concluded that production and export trend of marine fishery in Odisha is improving and it will also be a source of income earning and foreign exchange earnings.

Therefore, in order to increase the production potential of the sector, some uniform and performable fisheries policy need to be implemented.

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