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LIVELIHOOD ASSESSMENT OF THE FISHERMEN COMMUNITY OF JAGATSINGHPUR DISTRICT OF ODISHA, INDIA

Rashmi Rekha Dash

Ph.D Research Scholar

Department of Anthropology, Utkal University, Bhubaneswar, Odisha, India

ABSTRACT:

Fishing as an occupation is being practiced around the world since time immemorial. Fishing plays an important role in supporting livelihood and also forms an important source of diet for over a billion people around the globe. The present study is an exclusive research on the livelihood pattern of the fishermen community of the coastal people of Jagatsinghpur district, Odisha. This paper highlights the various aspect of fishermen livelihood such as actual fishing, fish seed collection, various other fishing allied activity like, marketing of fish, net making, curing, peeling etc. The present study uses both primary and secondary data. The primary data were collected through field study approach, whereas secondary data is collected from various authentic sources such as the Census of India, Economic Survey of Odisha, Department of fisheries etc. The result of this research shows a wide spectrum of activities associated in the livelihood of a fishermen community such as mechanized boat, motorized boat, non-motorized. Various types of aquaculture can also been in this rural fishermen community. During research it is been found that 99.5% of the population belong to traditional fishermen community.

Key Words: - Fishermen Community, Active Fishing, Fish Seed Collection, Motorized Boat, Aquaculture.

INTRODUCTION:

Fish is recognized as a global super food. Fisheries and aquaculture is one of the fastest growing food sectors and has been playing a pertinent role in the economic development front on account of its contribution to food and nutritional security, national income, employment opportunities as well as generating livelihood options. Fisheries sector occupies a very important place in the socio-economic condition of a country. It also generate large employment as it stimulates growth of a number of subsidiary industries. It is a source of cheap and nutritious food, besides being a great ways to enhance nation's foreign exchange.[1]

Indian fisheries and aquaculture is an important sector of food production providing nutritional security, besides livelihood support and gainful employment to more than 14 million people, and contributing to agricultural exports. India is the third largest fish producing country and the second largest aquaculture fish producer in the world. With diverse resources ranging from deep seas to lakes in the mountains and more than 10% of the global biodiversity in terms of fish and shellfish species, the country has shown continuous and sustained increments in fish production since independence.

Paradigm shifts in terms of increasing contributions from inland sector and further from aquaculture have been significant over the years. With high growth rates, the different facets, viz., marine fisheries, coastal aquaculture, inland fisheries, freshwater aquaculture, and cold-water fisheries are contributing to the food basket, health, economy, exports, employment and tourism of the country.[2]

More than 50 different types of fish and shellfish products are being exported to 75 countries around the world. Fish and fish products have presently emerged as the largest group in agricultural exports from India, with 13.77 lakh tonnes in terms of quantity and Rs.45,106.89 crore in value.[3] This accounts for around 10% of the total exports and nearly 20% of the agricultural exports, and contribute to about 0.91% of the GDP and 5.23% to the Ag - GVA of the country. With over 2.4 lakh fishing crafts operating along the coast, 7 major fishing harbours, 75 minor fishing harbours and 1,537 landing centres are functioning to cater to the needs of over 4.0 million fisher folk. For promoting aquaculture, 429 Fish Farmers Development Agencies (FFDAs) and 39 Brackish water Fish Farms Development Agencies (BFDAs) were established in the country. The annual carp seed production is to the tune of 40 billion fry and that of shrimp is about 54 billion PLs, with increasing species diversification in the recent past. Besides large-scale freshwater food fish culture, ornamental fish culture and high value marine fish farming are gaining importance in the recent past[4].

Odisha is one of the important maritime states of India having excellent scope for fisheries development.[5,6] The state has 6.83 lakh hectare of freshwater resources, 4.18 lakh hectare of brackish water resources. In Odisha, the fisheries development was carried out by the Industries Department and was subsequently taken up by Fisheries Department. Odisha is one of the important maritime provincial States of India extends from $17^0$49'N to $22^0$54'N latitude and from $81^0$29'E to $87^0$29'E on the Eastern Coast of India. It has an area of about 155,707 km and 480 km

of coastline for fisheries development of the state. Six maritime districts – Bhadrak, Balasore, Kendrapara, Puri, Ganjam, and Jagatsinghpur – lie along this long coastline. Nearly thousand fishing villages are situated in this very state. The number of the fishing villages keeps on changing in each DOF yearbook because of the frequent cyclones. However, according to the DOF (Department of Fisheries) yearbooks the marine fishing population of these districts are nearly a million. Comparing the DOF yearbooks one can see a steady rise in the fisher population of Odisha's coastal states.

Jagatsinpur is a coastal district of Odisha. It has a coastline of 67 km with an overall area of 1,668sq.km.[7] It is the smallest district of Odisha. This district is carved out of the old Cuttack district. Out of its 8 block only 2 block namely Erasama & Kujang touched the Bay of Bengal. Rivers like Alaka, Biluakhai, Kusumi, Hansua, Kuanria and Lunijhara flows from this district.

OBJECTIVES OF STUDY

- To analyse the various aspect of fishermen livelihood.
- To investigate economic status of this community.
- To access the allied fishing activity which are associated with fishing.

AREA UNDER STUDY:

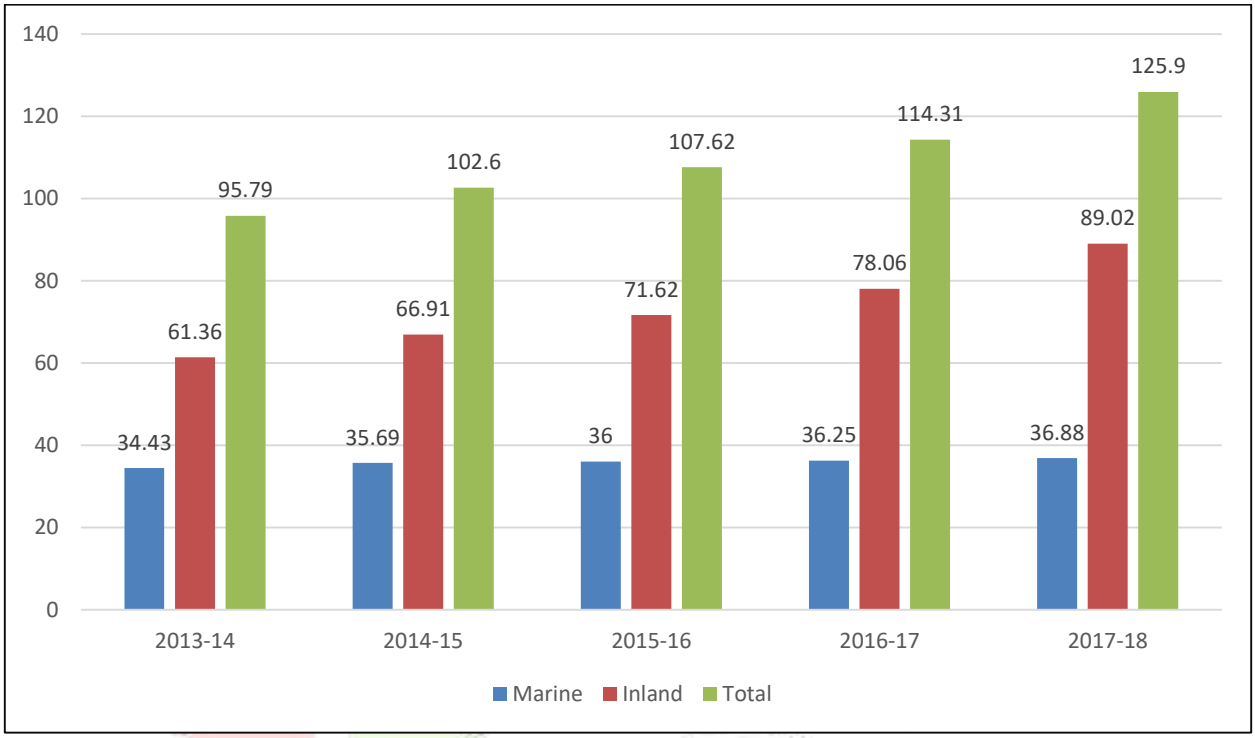
For research work two coastal blocks of Jagatsinghpur district of Odisha state is selected namely Erasama and Kujang. 15 fishermen dominated village is considered for the fieldwork study. These 15 villages are Dhinkia, Gobindapur, Trilochanpur, Bhuyianpala, Gadakujanga, Noliasahi, Polanga, Nuagan, Jhimani, Bhutumundai, Chakradharpur, Mangarajpur, Nuagarh, Pipal & Paradeepgarh. There are a total of 2,994 households in this village. The total population of these villages are 17,883. They are basically traditional fishermen community.

METHODOLOGY:

This research paper is mainly based on the primary data, collected from the fieldwork study. The primary data is collected from 15 villages through random stratified sampling technique. The total number of households according to 2011 census data is 2994 as a result a sample size of 331 is taken as per Krejcie & Morgan. The secondary data is compiled from various authentic sources such as Department of Fisheries, Government of India, Census of India, Economic Survey of India, Marine Fisheries Census complied by Central Marine Fisheries Research Institute (CMFRI), Hand Book of Fisheries Statistics, Government of Odisha, renowned research papers, articles related to fisheries, books, etc.

RESULT AND DISCUSSION:

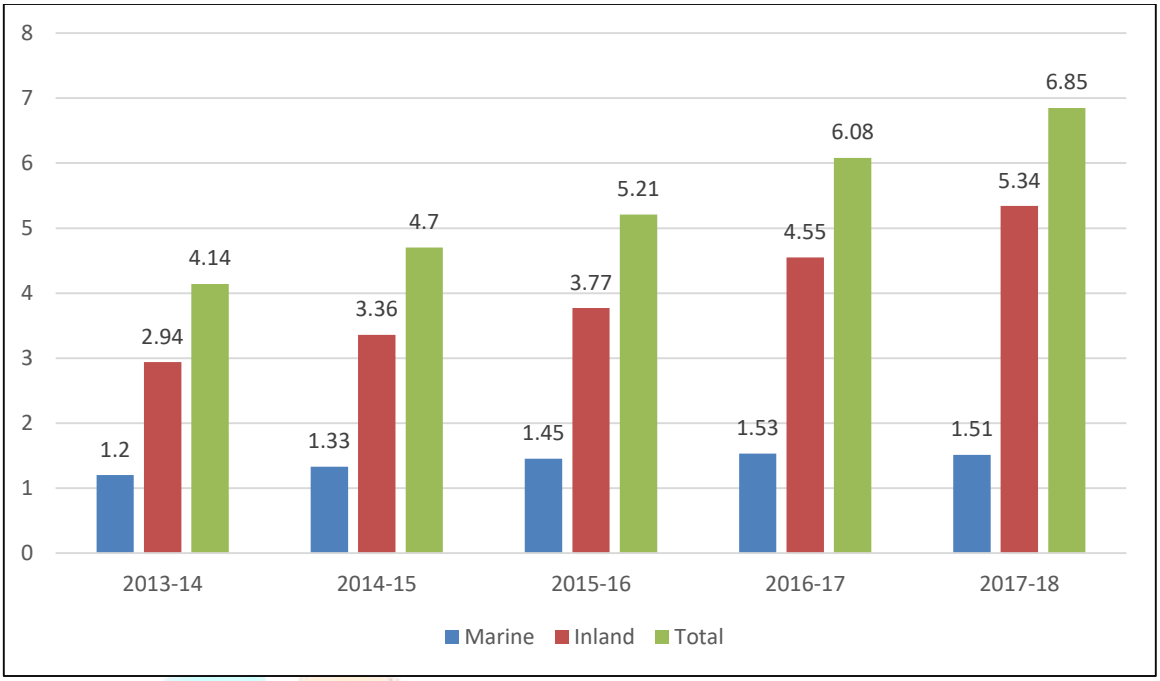
Fisheries sector plays a significant role in the Indian economy. It contributes to the national treasure, exports, food & nutritional security and plays an important role in generating employment. This sector is also a major source of livelihood for a large part of economically deprived population of the country, especially the coastal areas. It has been viewed that agricultural sector is gradually diversifying towards high valued enterprises such as fisheries. It is evident from the contribution to the nation's GDP. This is due to a sustained annual growth rate for past five decades. The growing production of fish indicates the booming sector of fisheries and its contribution to the economic growth of the nation.



3.1 Fish production in India during recent years (in lakh tones)

This figure shows a steady increase in the fish production in India. The total fish production during 2017-18 is estimated to be 12.60 million metric tons, of which nearly 65% is from inland sector and about 50% of the total production is from culture fisheries, and constitutes about 6.3% of the global fish production.

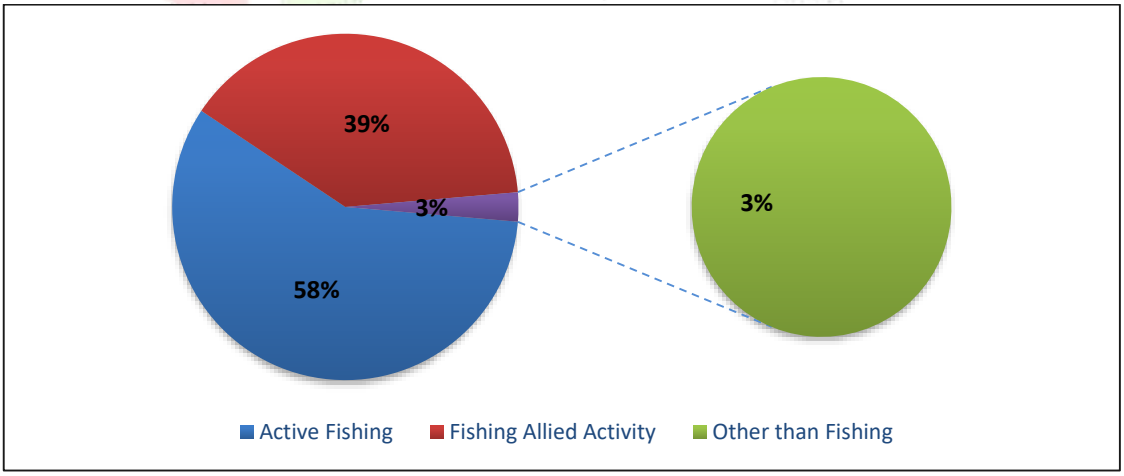
Both in India and Odisha Inland fishing is more productive than marine fishing. Basically inland fishing consist of fishing in fresh water such as canals, ponds, reservoirs, lakes, river etc. Aquaculture farms plays a significant role in it. It is generally more intensive and commercially operational. Whereas marine fishing are carried out throughout the world's oceans & seas including bays, estuary and lagoons. Basically marine fishing consist of fishing in salt water. It requires more sophisticated boat and net.



3.2 Fish production in Odisha during recent years (in lakh tones)

Except the marine fish production of 2017-18 this bar graph shows a similar trend with a steadily increasing in fish production. The fisheries sector is one of the growing sectors and has been recognized by the State Government of Odisha as one of the major growing sectors, apart from agriculture, to contribute towards rural economy. With vast and variety of aquatic resources in Odisha, the fisheries of Freshwater, Marine & Brackish water offer enormous scope in generating employment and promoting trade and many other associated commercial activities. The food security and livelihood support from fisheries for the rural poor is one of the major benefits

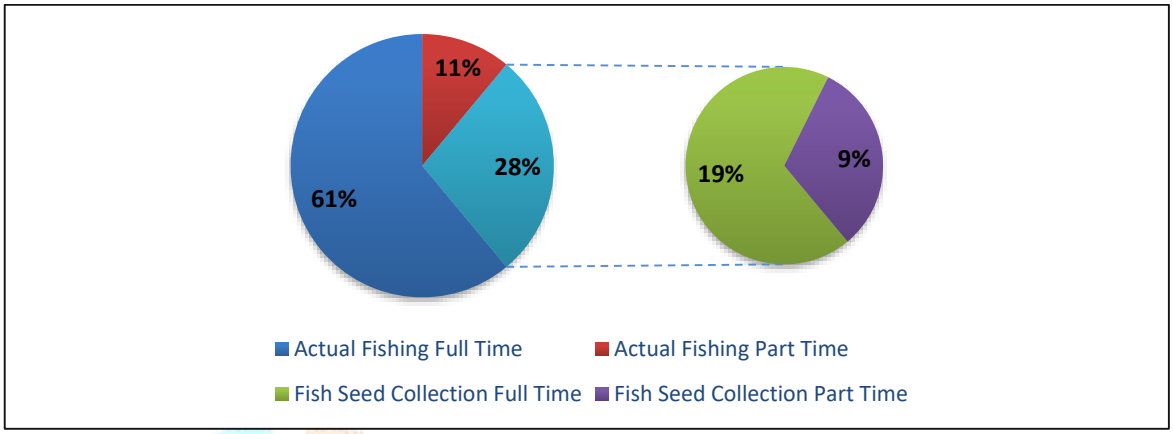
During the fieldwork study, it was found that the fishermen community livelihood activity can be majorly classified into 3 categories i.e. active fishing, fishing allied activity and livelihood other than fishing.



3.3. Various livelihood activity of the fishermen community.

This pie chart shows the various livelihood activity of this fishermen community. About 58% of the people were engaged in active fishing. The allied activity is associated with various other activity which are part and parcel of

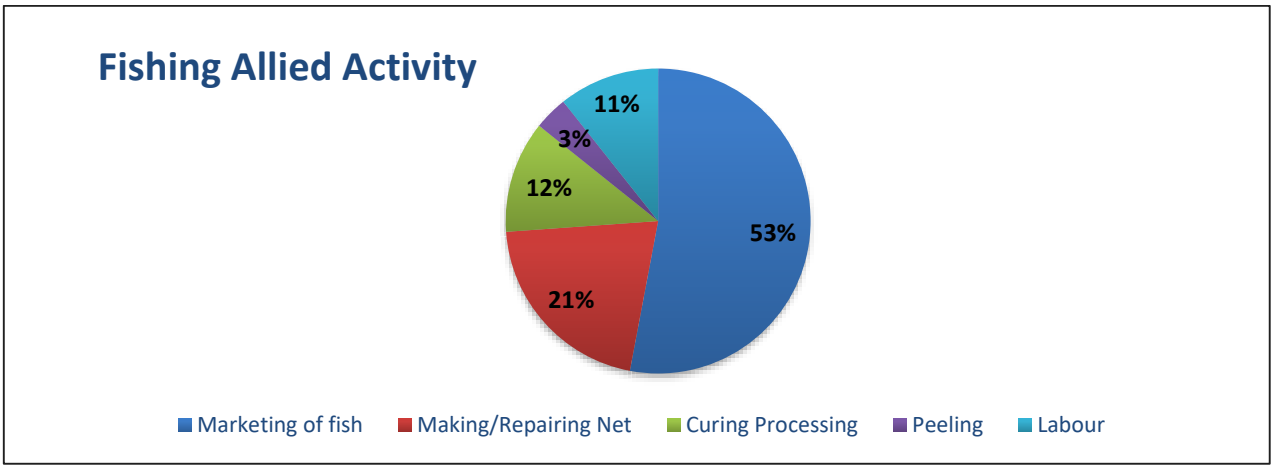
fishing activity and for this 39% of the working population is engaged in this line. Very few about 3% of the total population were engaged in other than fishing activity. Apart from these, almost 99.50% of the entire community belongs to the traditional fishermen community.



3.4. Categorization of Active Fishing

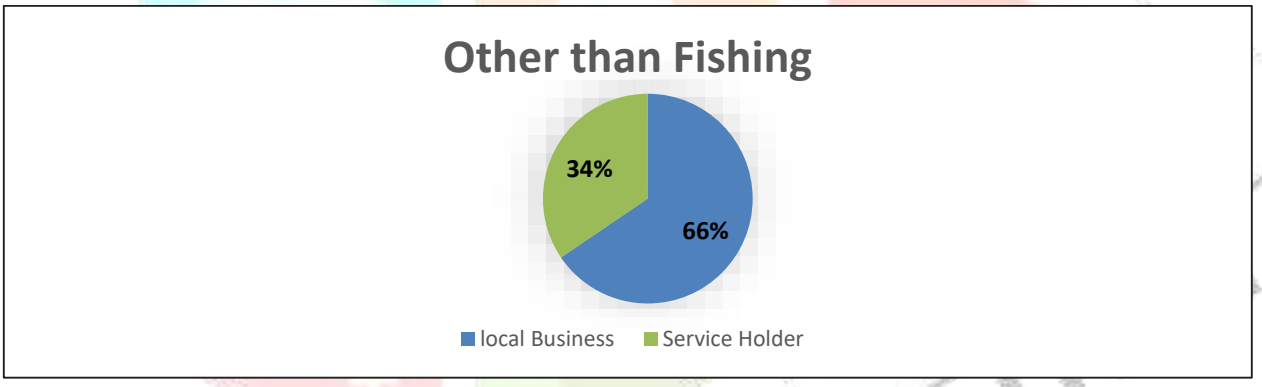
This above pie chat shows the spatial distribution of active fishing into actual fishing and fish seed collection activity. In actual fishing, fishes are literally caught. Generally man used to perform this task. About 72% of the active fishing comes under actual fishing. Further this actual fishing is divided into full time and part time depending on the amount of time & energy it requires. 61% of actual fishing comes under full time domain, while only 11% consist of part time activity. In case of fish seed collection, 28% of the active fishing comes under fish seed collection. 19% are of full time activity whereas 9% of them are of part timer.

Baby fishes were used for seeding of new ponds. Fertilized fish eggs are known as fish seeds. Many of the cultivable fishes breed in the natural habitats like rivers, estuaries and sea. Hence collection of their seeds (young fishes) from the natural environment can be undertaken. The collection methods would vary according to the source. Collecting eggs or fry from the wild was the first method used in obtaining stocking material. This is still followed for species for which the spawning behaviour is not controlled or not well understood, or for which the costs of artificial propagation are too high or where fry in large quantities is easily obtainable. Means of collection differ with species and the source.



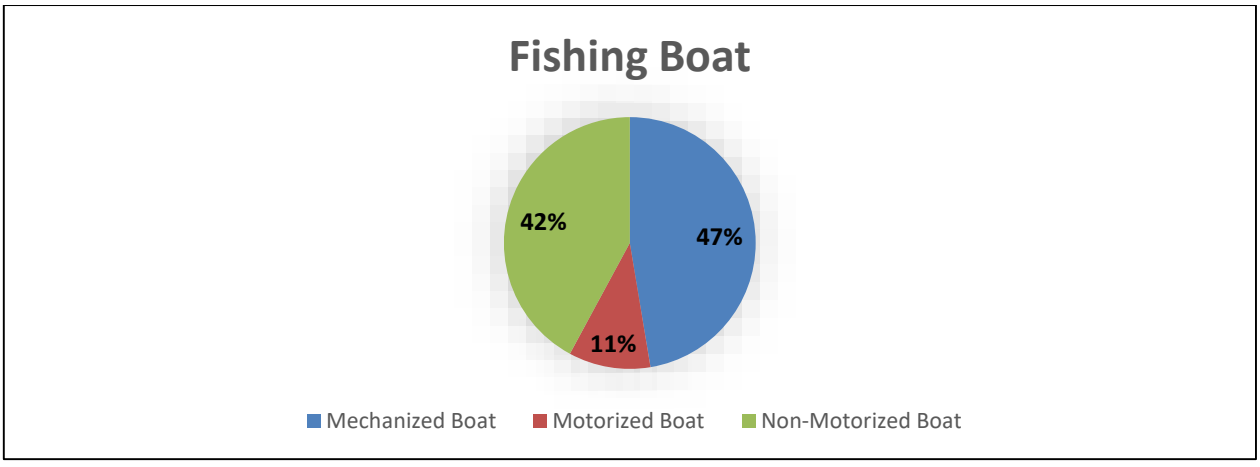
3.5. Various Fishing Allied Activity

The above pie chart shows the various fishing allied activity that a fishermen community must undergo in order to their needs. More than half of the working population is engage in marketing of fish. Marketing of fish is based on a marketing system which includes transporting to and from the market, handling, sorting, packing, sorting merchandizing etc. Next to marketing of fish comes net making or repairing, which employees 21% of the population. Net is the primary tool of any fishermen, as a result of this in a fishermen community net making and net repairing is a continuous process which goes side by side as active fishing. After net making and repairing comes curing or processing which is about 12%. In curing fish is cured by subjecting it to fermentation, pickling, smoking, or some combination of these before it is eaten. This enhances the preservation processing ability of the fish. In general term it is called as dry fish. It is simply done by adding salt and letting it dry. This fishing allied activity is a high labour oriented sector hence about 11% of the labour force is engaged. Prawn peeling is worth mentioning as 3% of employment are generated for this. In peeling the outer covering of the shrimps are remove as they don't have a skeleton inside their body at all. Mostly woman are employed for this job. In fishing allied activity more than 75% of the work is done by woman only.



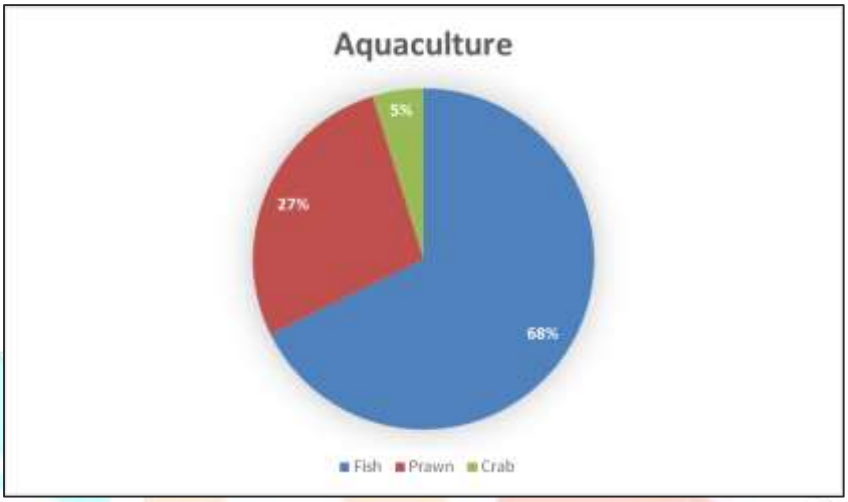
3.6. Activity other than Fishing

As this is a rural fisherman community, hence almost all of them is somehow related to fishing in some ways or the other. During the research it has been found that very people of about 29 are found to be employed in other than fishing activity. 19 of them use to do local business like shop outlet, barber shop, vegetable venders etc. whereas 10 of them are employed in governmental or private job.



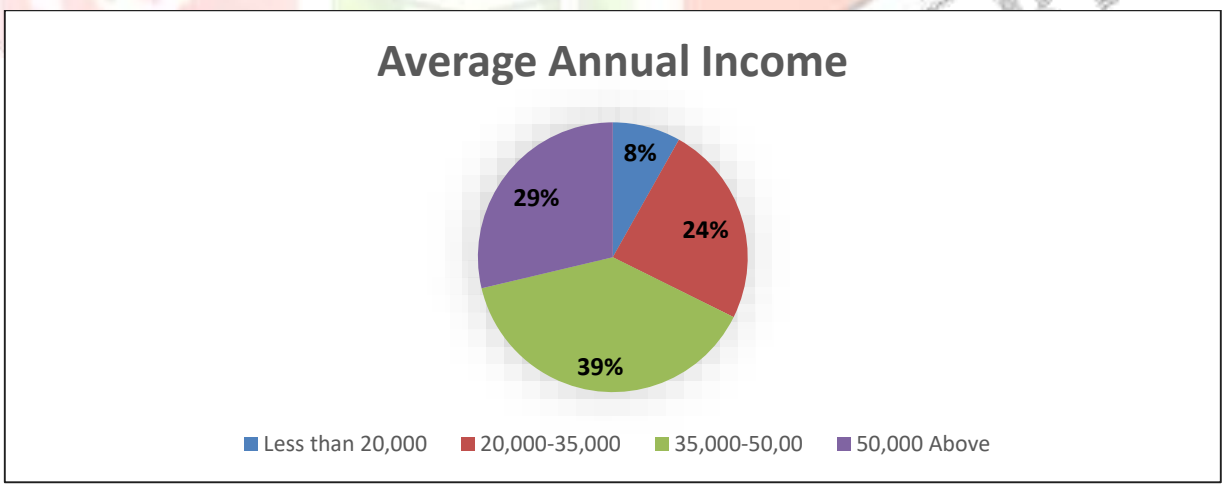
3.7. Different types of fishing boat

According to the fieldwork study 38 number of fishing boat were found to be owned. 18 of them is mechanized boat. Mechanized is the costliest. Further research reveals that 12 of them are trawlers, 4 of them are gillnetting and 2 of them are liners. Apart from mechanized boat 4 motorized boat is found and 16 non-motorized boat. Non-motorized boat is the cheapest and requires manual rowing to navigate.



3.8. Different kinds of Aquaculture

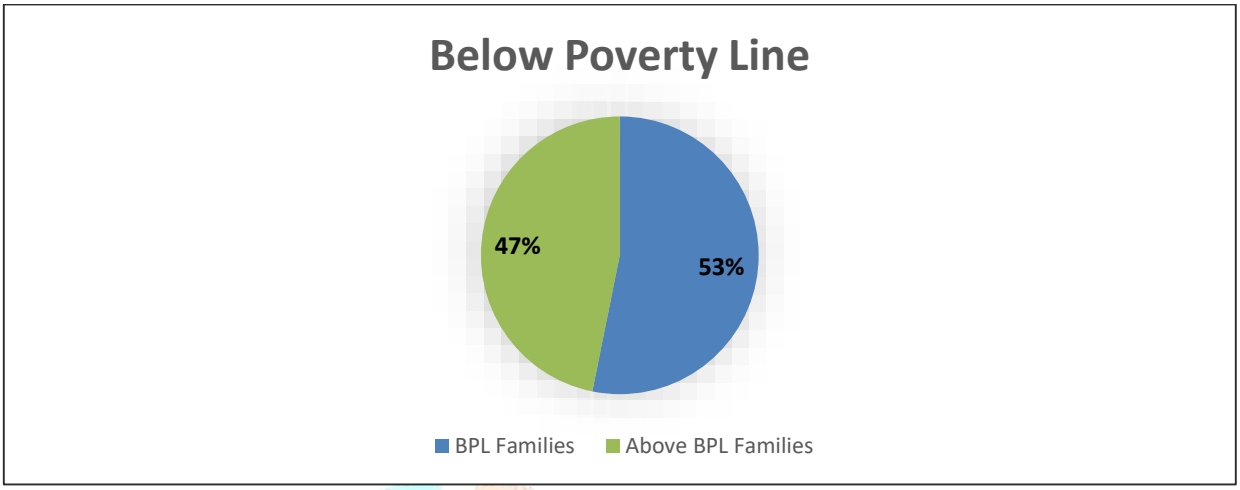
Three kinds of aquaculture can been seen in these villages. As per the field report out of 62 total aquaculture 42 of them, which is 68% of the total aquaculture are dedicated to fish farming like Rohu, Catla, Mrigal etc. Prawn cultivation can be seen in 17 and only 3 crab cultivation aquaculture are also found here.



3.9. Classification of Average Annual Income of families

The above graph shows that majority i.e. 39% of the annual income of fishermen families comes in 35,000-50,000 bracket, which is not at all adequate for a secured life. Extreme low income less than 20,000 annual income can be seen in 8% of the family, which is a matter of great concern. As per the field data, out of 331 sample size of families 27 families are under 20,000 income bracket whereas 80 families average annual incomes comes under the bracket of

20,000-35,000. Majority of them about i.e.129 of them belongs to the income bracket of 35,000- 50,000 and 95 families comes under the bracket of 50,000 above annual income.



3.10. Families living under Below Poverty line

This pie chart shows the horrendous poverty condition of the community. During the fieldwork it has been found that out of 331 sample size 176 families are living under the BPL. Basically it's a rural traditional fishermen community but still more than half of the family lives under the poverty line, which is a great matter of concern for both society and humanity as a whole. Government and civil society should come together to help these people in combating poverty.

CONCLUSION:

Odisha is one of the maritime state of India situated on the eastern coast of India, spreading over an area of 1,56,707 sq.km with a coastline of 480 km running across its six maritime districts. Nearly a thousand fishing villages are situated in this very state. Apart from this Odisha has a pristine natural beauty with a rural tranquillity and a vast coastline dotted with some spectacular virgin beaches, lakes and lagoons, having excellent scope for development of inland, brackish water and marine fisheries. The strength of the fisheries sector in Odisha lies in the large under/un-utilized fresh water and brackish water resources with proper utilization of these resources, the fish production from capture and capture–cum-culture fisheries could be substantially augmented to meet the domestic market demands, create employment and income generating opportunities for the rural poor and enhance their food and livelihood security.

This research paper highlights the key aspect of their livelihood and their net assert value they possess. The main reason behind this research is to delict a clear picture about the livelihood of the rural fishermen community in Odisha and their nature of work they used to do for their livelihood in particular. If we consider fishing as an industry, than fishermen essentially constitute the primary stakeholder group. The services rendered by fishers to the fishing sector are the basic platform for the prospective growth of the fishing industry substantially. As for now fish production had established itself as a dominant economic activity, so many other commercial party will certainly be

going to involve in venture but we need to find out a balance so that the rural community is not left behind. Systematic planning, proper regulation is going to help a lot in the long run, keeping in mind the basic nature of the livelihood of these rural fishermen community. The study will help the policy makers to formulate judicious and pragmatic policies to cater the issues of development in the livelihood pattern of fishermen community of Odisha in particular.

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