



RESEARCH ARTICLE.....

Study of preference of fishermen community of Gopalpur coast, Odisha towards alternative livelihood options

R. MISHRA, S. PANDA AND B.P. MISHRA

ABSTRACT..... Increasing populations along the coast are thought to be resulting in added pressure on limited and increasingly vulnerable coastal resources. While many of the coastal poor fishermen depend on the natural environment to sustain their livelihoods, they are unable to derive an adequate livelihood and continue to remain in poverty. Alternative livelihoods in this situation are seen as a solution to combat poverty by providing alternative means of deriving an income. The present study was conducted during 2011 taking 120 respondents from six villages namely, Gopalpur, Sana Arjipalli, Bada Arjipalli, Haripur, New Buxipalli and Purunabandha along Gopalpur coast of Odisha for their preference towards alternative livelihood. Among the 23 alternative livelihood options, 7 numbers of alternative livelihood options were identified as perceived by the respondents of six coastal villages of different category household. They were dry fish preparing, dry fish marketing, poultry rearing, goat / sheep/ pig rearing, vegetable marketing, establishment of grocery shop and vegetable farming. Out of these 7 important alternative livelihood options, dry fish preparation and dry fish marketing were fishery based activities; poultry and goat / sheep / pig rearing were livestock based activities and vegetable marketing and farming were agriculture based activities and establishment of grocery shops are income generating activities. Looking to the different household livelihood system, all categories were interested to take up dry fish preparation and dry fish marketing. However, 42.5 per cent respondents including all the low group and only 15.85 per cent of middle group household respondents took interest for poultry rearing as well as goat / sheep / pig rearing as alternative livelihood option. Besides, 19.16 per cent respondents took interest in vegetable marketing as alternative livelihood option. Besides, among the income generation activities as alternative livelihood option, establishment of grocery shop was the choice of 16.66 per cent respondents.

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INTRODUCTION.....

The livelihood concept is relatively recent in the discourse of poverty, food security, natural resource management and development mainly associated with rural development. According to Ellis (2000) livelihood comprises the assets (natural, physical, human, financial and social capital) the activities and the access to these (modified by

institutions and social relations) that together determine the living gained in the individual or household. Sustainable coastal livelihoods are referred to the process through which current and future generations of coastal stakeholders realize their potential by meeting basic needs and improving their quality of life whilst maintaining diverse, healthy and productive marine and coastal ecosystems (Ireland, 2004).

Sustainable management and use of coastal systems is therefore, fundamental for the livelihoods of coastal people. Reference to sustainable coastal management, sustainable coastal livelihoods and sustainable coastal development all revolve around the need to balance livelihood opportunities for economies, prosperity whilst maintaining ecological integrity of the coast.

Pattnaik (2006) has reported that in fishing communities, there is often a particular need to support diversification of economic activities. Increasing populations along the coast are thought to be resulting in added pressure on limited and increasingly vulnerable coastal resources. In order to prevent this overuse and degradation, alternative income generating activities should be provided which will enable people to move out of the environmentally degrading activity that they are currently deriving their livelihood from (Ireland, 2004). While many of the coastal poor depend on the natural environment to sustain their livelihoods, they are unable to derive an adequate livelihood and continue to remain in poverty. Alternative livelihoods in this situation are seen as a solution to combat poverty by providing alternative means of deriving an income (Salagrama, 2006).

The present study deals with the preference of fishermen community towards alternative livelihood options and their sustainability.

RESEARCH METHODS.....

The study was conducted during 2011 along Gopalpur coast of Ganjam district, Odisha. Six villages namely, Gopalpur, Sana Arjipalli, Bada Arjipalli, Haripur, New Buxipalli and Purunabandha and 120 respondents were selected through proportionate random sampling technique. The data were collected through personal interview method administering a pre-tested structured interview schedule. The interview schedule contains preference towards alternative livelihood option and sustainability of alternative livelihood option as perceived by the fishers in terms of economical, ecological soundness, social acceptability, humanness and adaptability. Alternative livelihood options of the fishers was considered taking into account of preference of the fishers towards alternative livelihood options, perception on sustainability of alternative livelihood options, extent of support services towards sustainability of alternative livelihood options and suggestions there to. Different alternative livelihood options were studied assigning rank as first preference, second preference and third preference with assigned scores of 3, 2, and 1, respectively.

The level of perception of the respondents was decided taking difference between maximum and minimum score obtained by the sample with regard to independent variables such as personal, social, economic, communication behaviour, marketing behaviour, fishing behaviour, and training. Simple

statistical methods were used for analysis and interpretation of results.

RESEARCH FINDINGS AND ANALYSIS.....

The need for sustainable livelihoods for coastal communities is critical. Population growth rate continues to increase, while marine resource stocks continue to dwindle. Even where suitable fisheries management systems are in place, there are simply too many people fishing too few fish. Alternative livelihoods are seen as essential for both the development of coastal communities and for the conservation of marine and coastal biodiversity and ecosystems.

This study looks at the alternative livelihoods in order to build a better understanding on what benefits and opportunities exist with the introduction of alternative livelihoods in coastal areas.

The goal of alternative livelihoods is not simply to come up with an alternative activity that theoretically provides choice and hopefully promotes sustainability. Rather it is to find solutions that fit with people's current livelihood strategies and that will have positive impact on their livelihood and the use of natural resources.

Table 1 : Alternative livelihood options of the fishermen and their scores and ranks

Sr. No.	Alternative livelihood options	Score	Rank
1.	Vegetable farming	40	VII
2.	Vegetable nursery	12	XVIII
3.	Mushroom culture	18	XIII
4.	Poultry farming	126	III
5.	Dairy farming	39	VIII
6.	Goat / sheep / pig rearing	69	IV
7.	Fish culture	23	X
8.	Net making	17	XIV
9.	Dry fish preparation	335	I
10.	Dry fish marketing	327	II
11.	Vegetable marketing	58	V
12.	Preparation of badi / papad	18	XIII
13.	Tailoring	13	XVI
14.	Egg / chicken centre	30	IX
15.	Grocery	50	VI
16.	Selling of net material and gear accessories	13	XVII
17.	Coconut marketing	6	XX
18.	Fast food centre	11	XIX
19.	Repair of electronic goods	5	XXI
20.	Beetle shop	16	XV
21.	Laundry / saloon	19	XII
22.	Tea / Snacks bar	20	XI
23.	Stationary shop	14	XVI

In the present study alternative livelihood options are ranked based on the scores obtained from the respondents of different household livelihood system (Table 1).

All the 23 alternative livelihood options as perceived by the fishermen communities are categorized into 5 sectors *viz.*, (a) agriculture production activities (b) livestock and poultry rearing activities (c) fishery based activities (d) income generation activities and (e) service sector activities.

The scores obtained by the respondents on agriculture production activities; their ranking and household livelihood systems of the respondents are presented in Table 2.

Among the agriculture production activities, vegetables farming ranked first followed by mushroom cultivation and then vegetable nursery. The vegetable farming activity was appreciated by 78.6 per cent medium categories household respondents while rest was by higher category. None of low category household respondents was interested for vegetable farming. But both vegetable nursery and mushroom cultivation activities were the interest of only higher category household respondents though very low. It might be because of the higher category respondents have the ability to invest for preparing nursery as well as mushroom cultivation and also they can gain knowledge and skill for the purpose through capacity development training programmes.

The scores obtained by the respondents on livestock and poultry rearing activities, their ranking and household livelihood systems of the respondents are presented in Table 3.

Among the livestock and poultry rearing activities, poultry rearing was ranked first followed by goat / sheep / pig rearing and then dairy farming. 42.5 per cent of the total

respondents showed interest in poultry farming whereas 27 per cent in goat / sheep / pig rearing and 11 per cent on dairy farming. All the low category respondents and most of the medium category respondents were interested for poultry rearing and goat / sheep / pig rearing. However, the dairy farming was mainly appreciated by the medium and high categories respondents.

The scores obtained by the respondents on fishery based activities their ranking and household livelihood systems of the respondents are presented in Table 4.

Among the fishery based activities, dry fish preparation was ranked first followed by fish culture practice and then net making and repairing activities. All the respondents of different categories were interested for dry fish preparation. But only 6.7 per cent of the respondents of low and medium category took interest in net making and preparing and only 7.5 per cent of respondents of medium and high category showed interest in fish culture activity.

The scores obtained by the respondents on income generation activities, their ranking and household livelihood system of the respondents are presented in Table 5.

Among the income generation activities, dry fish marketing was ranked first followed by vegetable marketing, grocery shop, egg / chicken centre and others. All the respondents took interest in marketing dry fish. Although vegetable marketing was preferred by medium and high category respondents, establishment of egg and chicken centre was preferred by low and medium category household respondents. However, for the grocery shop, all categories of respondents took interest.

Table 2 : Agriculture production activities, scores, ranks and household livelihood systems

Sr. No.	Agricultural activities	Score	Rank	Household livelihood systems			
				Low	Medium	High	Total
1.	Vegetable farming	40	I	0	11	3	14
2.	Vegetable nursery	12	III	0	0	5	5
3.	Mushroom cultivation	18	II	0	0	10	10

Table 3 : Livestock activities, scores, ranks and household livelihood system

Sr. No.	Activities	Score	Rank	Household livelihood systems			
				Low	Medium	High	Total
1.	Poultry rearing	126	I	19	29	3	51
2.	Dairy farming	39	III	0	6	14	20
3.	Goat / Sheep / pig rearing	69	II	19	13	0	32

Table 4 : Fishery based activities, scores, ranks and household livelihood systems

Sr. No.	Activities	Score	Rank	Household livelihood systems			
				Low	Medium	High	Total
1.	Fish culture	23	II	0	1	8	9
2.	Net making and repairing	17	III	5	3	0	8
3.	Dry fish preparation	335	I	19	82	19	120

The scores obtained by the respondents on service sector activities, their ranking and household livelihood systems of the respondents are presented in Table 6.

Among the service sector activities, tea / snacks bar was ranked first followed by laundry / saloon, beetle shop, stationery shop, fast food center etc. Tea / snacks bar and laundry / saloon, beetle shop were appreciated by low and medium category respondents whereas medium and high category respondents showed interest for stationery shops and fast food centre.

The livelihood strategies of the poor in coastal communities are diverse (Carney, 2002 and Ellis, 2000) and are made up of multiple activities to achieve a desired outcome. They are also determined by the assets available at the household level in terms of ownership and access (Shamsuddoha, 2004). Depending on household assets, people undertake a diverse array of activities to earn their living. Choices are conditioned by the extent of and access to the asset base. Therefore, certain activities are common everywhere and to everyone and others are typical of specific environments such as the coast and to certain social groups.

Watts and Oatley (2004) reported on the socio-economic status of fishers and alternative livelihood options for the poor fishermen and women of Philippines. Pomeroy *et al.* (2006) studied the impact of coastal livelihood of poor fishing community of India, Indonesia, Sri Lanka and Thailand and suggested the alternative livelihood options for their sustenance. Campbell *et al.* (2006) studied the impact of current changes on the poor in coastal fishing communities and

examined existing responses to assist the poor in coping with change on the coast and finding alternative livelihoods.

Among the 23 alternative livelihood options, 7 numbers of alternative livelihood options have been identified as perceived by the respondents of six coastal villages of different categories household. They are :

- Dry fish preparing
- Dry fish marketing
- Poultry rearing
- Goat / sheep/ pig rearing
- Vegetable marketing
- Establishment of grocery shop
- Vegetable farming

Out of these 7 important alternative livelihood options, dry fish preparation and dry fish marketing were fishery based activities; poultry and goat / sheep / pig rearing were livestock based activities vegetable marketing and farming were agriculture based activities and establishment of grocery shops were income generating activities. When looked to the household livelihood system, all the fisher households were interested to take up dry fish preparation and dry fish marketing. However, 51 respondents were interested for poultry farming as alternative livelihood option. From this, it was observed that all the low group household respondents took interest for poultry rearing as well as goat / sheep / pig rearing as alternative livelihood option. Only 15.85 per cent of middle category household respondents took interest in goat / sheep / pig rearing as alternative livelihood option. But, none of the

Table 5 : Income generation activities, their scores, ranks and household livelihood system

Sr. No.	Activities	Score	Rank	Household livelihood systems			
				Low	Medium	High	Total
1	Dry fish marketing	327	I	19	82	19	120
2.	Vegetable marketing	58	II	0	14	9	23
3.	Preparation of <i>Badi / Papad</i>	18	V	2	7	0	9
4.	Tailoring	13	VI	0	6	0	6
5.	Egg / Chicken centre	30	IV	4	9	0	13
6.	Grocery shop	50	III	3	13	4	20
7.	Selling of net materials	13	VII	1	6	0	7
8.	Coconut marketing	6	VIII	0	4	0	4

Table 6 : Service sector activities, their scores, ranks and household livelihood system

Sr. No.	Activities	Score	Rank	Household livelihood systems			
				Low	Medium	High	Total
1.	Fast food centre	11	V	0	2	3	5
2.	Repair of electronic goods	5	VI	0	0	2	2
3.	Beetle shop	16	III	3	5	1	9
4.	Laundry / saloon	19	II	6	4	0	10
5.	Tea / Snacks bar	20	I	5	5	0	10
6.	Stationery shop	14	IV	1	4	4	9

higher category household respondents was interested for this rearing to take up. Looking to the agricultural production activity as alternative livelihood option, vegetable marketing was ranked 5th where vegetable farming was ranked 7th. Only 23 respondents (19.16%) took interest in vegetable marketing out of which 14 respondents were of medium category and rest area of higher category respondents. Similarly, vegetable farming was the interest of 11 medium category and 3 higher category respondents of fishermen family. Besides, among the income generation activities as alternative livelihood option, establishment of grocery shop was the choice of 20 respondents (16.66%) of fishermen communities, Out of these respondents, 21 per cent were of higher category whereas 16 per cent each of low and medium category. The higher category household respondents have the ability to invest for the purpose.

Driving forces for alternative livelihoods :

From the interview, a number of different driving forces for alternative livelihoods of fishermen community of Gopalpur coast have been emerged (Fig. 1).

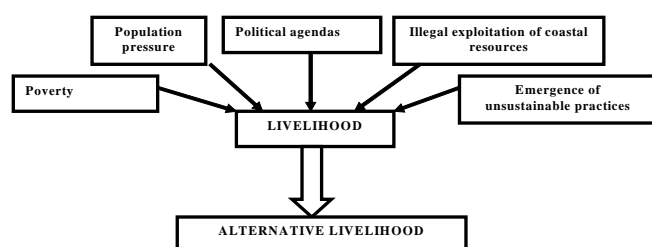


Fig. 1 : Driving forces affecting to livelihood of coastal fishermen community

All of these are interlinked and can be seen as a cause and effect of the other. Asong *et al.* (2000), Flores (1999) and Howard (2003) analyzed the problems faced by the coastal poor and their use of the natural resource base and concluded that alternative livelihoods are the solution to current

unsustainable levels of use. Johnson and Start (2004) argued that livelihood diversification is about more than multiple income sources *i.e.* alternatives, it relates also to the transformation of economies and the complex nature in which people make decisions within these economies.

Any sort of intervention on the traditional strategies in livelihoods of coastal poor community will lead to more risk. Because of their circumstances, the poor are often risk averse and therefore, less likely to want to engage in these riskier activities.

Dimensions to peoples livelihoods :

Access to assets will be determined by people's socio-economic status in the village. Not, all people will have access to all the assets as listed. When looking to support people's livelihoods it is important to use these assets as the building blocks for the livelihood intervention. Thus, it is extremely important to build a thorough understanding of access to assets by different socio-economic groups in order to identify the appropriate intervention.

Closely linked to people's access to assets are people's preferences. Access to assets will ultimately determine what people can or cannot get involved in, but equally people make choices based on their own personal preferences.

Besides these, there are a number of wider external influences that also affect the way, people live their lives in villages. Among them are the external influences which are controlled and can be influenced, such as Government policies, programmes and institutions and external influences which are less controllable such as natural disasters and vulnerability.

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