THE BLUE LAGOON AND MIGRATION

An empirical study on incidence of migration among traditional fishermen communities of Chilika Lagoon



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Acknowledgement

This study captures the incidences, factors and impact of migration among the fishermen community who are living in one of the rich biodiversity regions of Odisha. The study is an attempt to understand the impact of both human and nature induced migration of poor fishing communities living inside the Chilika lagoon.

The study would not have been possible without the kind support and help of many individuals and organizations. I would like to extend my sincere gratitude to all of them.

I am highly grateful to the officials and staff of Gopinath Yuvak Sangha, an organization based at Puri for its guidance and constant supervision as well as for providing necessary support in arranging community meetings and smooth completion of the study which covers Puri and Ganjam districts of Odisha.

I would like to thank the fishermen community and villagers who have participated in the family and fishermen federations and have supported us in collection of very vital information on the dynamics of Chilika and its fish reserve.

Last but not the least, my gratitude and appreciations also go to my colleagues for developing and executing this study.

Umi Daniel Regional Head- Migration Aide et Action International, South Asia

CONTENT

Topics	Page No.
Executive Summary	01
Introduction	03
Study Methodology	08
Study Findings	09
The Trend of Migration among Fishing Community	00
Key findings and Conclusions	26
Conclusion and Recommendations	28

Executive Summary

Migration among the fishermen community exhibit a dynamic nature pertaining to their movements. These movements comprise of both temporal and spatial aspects. Presently the coastal marine eco-system in Chilika region of Odisha is under tremendous threat due to a host of human and natural factors. The interplay of these factors of migration and fishermen community started a decade ago when there was a decline in the fish reserve in Chilika Lagoon. Subsequently this decline failed to provide a sustainable and remunerative livelihood for the traditional fishing community. Poverty coupled with environmental hazards, fishing restrictions, tourism, mechanization of fishing methods, and exploitation by powerful prawn mafia are some of the factors which has negatively impacted the livelihood of traditional fishing communities inside Chilika Lagoon. These are the major reasons which make them vulnerable and unguarded against distress migration.

This study intends to capture the pool of incidences, factors and impact of migration among the fishermen community who are living in one of the rich biodiversity regions of Odisha. The analysis of the study is based on the usage of quantitative, qualitative and participatory research tools. It examines the current livelihood and poverty situation, analyses the push factors, examines the informal fishing economy, and looks into various possibilities for the revival of traditional livelihood and eventually managing migration in Chilika lagoon.

The study was conducted in 10 fishermen villages of Puri and Ganjam districts. The findings of the study indicate that, out of 3587 households, 754 households migrate out in search of livelihood. This is 21% of the total households. While the male migration is 72% of the total migrating population and the female migration on the other hand is 28%. As per

the study there are 56% of households where only one member of the household migrates. While 36% of the households responded that more than one family member has been migrating.

The study reveals that 63% of the migrants belong to the age group of 15-35 years, indicating a higher number of youth migration from the fishing community of Chilika. Nearly 50% of the households migrate with the help of middlemen/contractors whereas 36.2% of the households migrate on their own or with the help of relatives. Migration among fishing community is both circular and seasonal in nature. Most of these migrating populations resort to migration due to both debt and to earn a better livelihood. The duration of migration ranges from 2-6 months.

The poverty analysis of the traditional fishing community in the study region reveals that, only 41% of the households possess BPL cards and there are another 38% who claim to be eligible but do not have the BPL cards. Also, there are 31% of these households who own boats, out of which 61% are locally made boats and 37% are motorized boats. Among the fishing community, 2% of the households own fiber boats with onboard engine. Likewise, 54% of the fishing households have their own fishing nets, while 46% of them hire nets from others to do the fishing.

The study indicates that, 35% of the surveyed households resort to migration owing to drastic reduction of fish catches in Chilika Lake and another 33% of the households migrate due to indebtedness. It further reveals that 46% of the migrant households catch only up-to 2 kgs of fish, while 29% catch 2 to 4 kgs followed by 21% of households that catch 4 to 6 kgs of fish on a daily basis. Furthermore, there are 60.5% households who earn a sum of Rs 150 on a daily basis out of their fishing profession.

In reference to migration destinations, 37% of the

households informed that they migrate to the southern states like Tamil Nadu followed by 19% and 12% to the states of Kerala and Andhra Pradesh respectively in order to engage in various unskilled work. More than 85% of the migrants work as unskilled daily wage laborers at construction sites, fish processing units and brick kilns. As far as their working hours are concerned, there are 72% migrants who informed that they work for 10 to 12 hours every day. Furthermore, 4% migrants responded that they work for more than 12 hours a day. These migrants are forced to work for extra hours without any extra payment for the same. 83% of migrants face different types of harassment at the worksites. Physical harassment is very common at the worksite and almost 51% of them have experienced physical violence, followed by 22% who said they were mentally harassed. There are 4% of migrants who alleged that they were kept under bondage condition and another 6% who have faced sexual harassment at work place.

The focus group discussions have indicated that migration among fishing community has increased after the opening up of new sea mouth at Sipakuda. Consequently, the main Chilika Lake got exposed to the sea directly, leading to an increased rate of salinity. It destroyed the bio diversity of the Lagoon, thereby decreasing the fish spawning and further resulting in decreased catch. Natural disasters like cyclones and floods have also increased their vulnerability to migration. As per the FGDs their migration is bringing more distress than opportunities at the destination. They aspire for an effective sustainable government intervention to protect their traditional livelihood and create opportunities for alternative livelihood to reduce distress migration from the Chilika Lagoon.

Therefore an urgent collaborative attention is considered necessary in the areas of capturing official statistics on migratory pattern of fisher communities in Chilika region. This need calls for devising inclusive sustainable livelihood strategies for

migrants to improve their socio-economic status by ensuring adequate access to education and health services, improving food security and ensuring their wages and better access to information on the job market. Appropriate skill development programmes and improved government credit support schemes are also a dire necessity to preserve the biodiversity of Chilika, not in the name of tourism development but as a livelihood support system of fishermen communities.

Introduction

Migration is a universal phenomenon. It is viewed as the creation of space for greater division of labor and occupational shift of population. Some migrate due to income disparities, social discrimination, lack of better facilities, experiences of conflict, and natural disasters and thus aspire for better earning



and living condition. The reasons for migration are multifaceted. The change is prominently in the social strata of the migrating society in the form of breaking the old age traditional occupations and adapting to new vocations. Migrants are pulled into cities by economic forces, such as domestic terms of trade squeezing agriculture, technology diffusion from the developed world favoring modern, large-scale & urban industries, foreign capital flow into urban infrastructure, housing, power, transportation, and large-scale manufacturing in these urban spaces.¹ The increasing rural inequality and deprivation is giving rise to large scale distress migration of poor people who land up in cities and urban locations. They dream for better wages and a better livelihood. Due to lack of social security and entitlements, these migrants often go through untold miseries and exploitation while living and working as unorganized migrant laborers in urban locations. This leads to their exclusion from accessing basic services, entitlements, and governance process of their native villages. At the moment seasonal distress migration has become a regular phenomenon in Odisha. Seasonal distress migration particularly in Western Odisha owes its legacy to the lack of employment opportunities, which has created increasing indebtedness and food insecurity. The reason for indebtedness and food insecurity are mostly due to bouts of drought, debt, social & economic alienation leading to distress situation in the rural pockets of this region.

As per 2011 Census report, more than 14 million people migrate in Odisha and the highest percentage of migration is reported from the Coastal Odisha followed by Western Odisha and other tribal regions. Extrapolation of data from the Panchayat census in these selected districts indicate that, the estimated number of seasonal migrant laborers for the coastal and Western Odisha totals up-to 1.5 million, out of which 0.96 million accounts for coastal Odisha and 0.58 million accounts for western Odisha². Finding accurate data and information available on the movement of people across state and district boundaries is tough. The variation and complexities of seasonal, short duration push & pull migration trends, and incidences hardly get captured in major census and sample surveys in India. Therefore, the out migration in Odisha varies with the estimated surveys being conducted by the state government. Owing to its pre-dominant dependence on farm based livelihood and agrarian set up, the coastal region has been experiencing severe distress situations. This consequence is evident because of unemployment, frequent bouts of natural disasters like cyclones, floods, salinity, and crop failures. Because of male dominance the out migration of skilled and unskilled

^{1.} Migration Remittance and changing pattern of livelihood; evidence from Western Odisha

 $^{2.\} www.or is samigration.blog spot. in$

^{3.} Migration profiling of Odisha Ajeevika Bureau

laborers from coastal region of Odisha is more prominent when compared to other migratory regions of the state.

Odisha's long coastline is inhabited by the traditional marine fishing communities because of their dependency on fishing as their primary livelihood option. Those people living in and around the Lagoon are benefitted from the rich fishery resources owing to the lagoon's highly productive eco-system. The livelihoods of many fishermen are sustained through these resources. The lake sustains more than 150,000 fisher-folk living in 132 villages on the shore and islands. Over the years, the ecosystem of the lake has been under threat due to a host of natural and manmade factors. These factors like, deformation, siltation, unplanned commercial aquaculture, and natural disasters, have led to the destruction of the natural biotic life resulting in reduction of fish catch in the lake. The fisher communities have faced adverse impact due to reduced fish catch in the lake and have gotten into debt, poverty and are forced to migrate in search of alternative livelihood options. With a perspective quite ironical, people living inside a rich natural biodiversity are seen to be deserting their habitat and migrating to the cities and urban areas for a better livelihood.

Context of Study

Chilika lagoon is situated on the eastern coast of Odisha and spread across three districts namely; Puri, Khurda and Ganjam. The lake is the biggest brackish water lake in India, covering 1,100 square kilometers, and the second largest in the world. It is situated in the Bay of Bengal, which is one of the six major cyclone-prone areas in the world. Chilika lagoon has been the source of livelihood for over 2,00,000 fishermen and

thousands of local people who are engaged in allied fishery business and activities. For centuries, these fishing communities followed traditional methods of fishing. These traditional practices entailed the use of different types of fishing implements, such as bamboo traps or bamboo nets to capture different seafood in fishing grounds that were allocated on the basis of lineage. The linkage between the people and Chilika lagoon is so close that environmental conservation of the lagoon is required to maintain & protect it. Taking





into consideration the multiple benefits derived from various aspects of the lagoon and its rich eco-system and for the development of the people nearby; there is a dire need to save it. However, the lagoon environment has been under serious threat due to high anthropogenic pressure, especially after the 1980's. The environmental deterioration caused the fishermen to earn less profit and kept them poor and rapidly ruined its enriched eco-system. Chilika lagoon becomes less saline during July to December due to rush of flood waters from 52 rivers and rivulets. On another front, it becomes more saline during December to July as the supply of flood water is cut off when south wind begins to blow and the saline water rush from Bay of Bengal at the time of high tides (Patro, 2001).

The average depth of Chilika lagoon is around 50 cm in north sector, while a maximum depth of 3.7 m is found in central sector (A. K. Pattnaik and Doi, 2005). Besides, the depth near seashore along with Bay of Bengal is quite shallow. Chilika lagoon is a unique assemblage of marine, brackish and fresh water ecosystems with estuarine characters.⁴

 $^{4. \,} Sustainable \, Regional \, Development \, in \, the \, Catchment \, of \, Chilika \, Lagoon, \, Orissa \, State, \, India; \, Shimpei \, Iwasaki \, Chilika \, Catchment \, of \, Chilika \, Chili$

Corrosion of Chilika Lagoon

The flora and fauna of Chilika lake has encountered numerous and varied climate and environmental threats. Such threats include siltation from the inland river systems, a decrease in salinity and fishery resources. This has resulted in an overall loss of biodiversity with a decline in productivity distressing the livelihood of many fishing communities. It is estimated that around 1.6 million tons of sediment has annually been deposited by the rivers, Daya and Bhargavi in the north-east of the lagoon and by several streams, nallas and other means.

The fishers' access and user rights in terms of these natural resources are governed by both formal & informal systems. And these systems determine the social and economic conditions of the fisher households and the communities on a whole. Chilika Lake is an outstanding example of habitat loss and destruction. There has been serious decline in fish catch from the lake. Due to clogging of the channels connecting the lake to the sea, silt does not get flushed out regularly. The decreased interaction with the sea has also reduced the salinity of the water creating another set of problems (Ayyapan & Jena 2000:243) like, the loss of depth has caused a decline in the availability of deeper shelter zone as breeding grounds. Factors like, agriculture runoff, deforestation, encroachment by shrimp farming, industrial discharge have destroyed the biotic life in the lake⁵. The major destruction on the habitat was also caused due to the super cyclone of 1999. Besides destructing houses and productive assets, the tidal waves also affected the productivity of the coastal area (Government of Odisha 2000: 1/10).

During 2010-2011, the total fish landing of the lake was recorded to be 7736.54 MT as against 7892.97 MT during 2009-2010 i.e. a decrease of 1.98%. The monthly fish landings ranged between 485.54 MT

to 807.45 MT while the highest fish landing was recorded in the month of March, 2011 and the lowest in January, 2011. As per the Chilika Development Authority (CDA), CDA has constructed a new mouth in Chilika to counter the salt water intrusion and increased siltation that was observed to be affecting the lake's biodiversity. While no comprehensive evaluation was available to measure the social and economic implications of this engineering measure, CDA has claimed an increase in fish stock in the lake⁶. However, fishing cooperatives claimed that their fish catch was decreasing as a direct impact of the new mouth.⁷

As a result of this development in the Chilika Lake, the livelihood of traditional fishing communities have been largely affected. Moreover, the seasonal fish restriction, no fishing zone and the tourism has had negative impacts on the traditional livelihood of the people and has resulted in large scale migration of people to different cities. However, it is observed that the landing of crab and prawn has increased during this year.⁸

However, the two main ecologically related threats are due to human actions.

^{5.} Trend in Poverty and livelihoods in coastal fishing community of Orissa by Venketesh Salagrama

^{6.} Strengthening responses to climate variability in south Asia-Discussion paper: India Shreya Mitra, Nisha Pandey and Janani Vivekananda April 2013

^{7.} Focus Group Discussion with the villagers of Brahmagiri, Chilika 2013 8. (http://www.chilika.com/Import%20docum/CDA%20Annual%20Report%20 2012.pdf)

The Study

Migration flow and migration studies have been influenced by the recent global trends of political-economic change. Migration study became a new area of research for various disciplines. The focus on migration has moved from scrutinizing the occurrence to contextualizing the occurrence within the broader context of socio-political economic change.

Therefore, the study of migration of different communities and from different approaches is very crucial and the need of the hour. Migration and mobility have been seen in the positive light. They are considered as a forward looking phenomenon because of the intent behind, i.e., human consideration for a better livelihood, life and well-being. However, globally distress migration has been tremendously challenging. Migration due to conflict, natural disasters, acute poverty, and unemployment are the key reasons which are increasing the vulnerability of the poor and disadvantaged communities and

thus fostering migration. Chilika is considered as a biodiversity hotspot and an environmental paradise of the world. It boasts of some rare, threatened and endangered spices listed in the IUCN directory and regarded as 1st Ramsar site for its ecological significance.

Even though the resources of the rich blue lagoon are fast depleting and endangering the livelihoods of the local inhabitants, their perception is contradictory to this fact and the necessary measures that need to be taken. It is difficult to understand the complex process of examining the livelihood, environment, vulnerabilities, and its outcome with such a short study. Therefore, this study mostly focuses on and examines the vulnerability of the traditional fisher people, factors, incidences and impacts of migration through an empirical and participatory approach. In terms of secondary data, the study has referred to selected literatures and documents available about the livelihood of fisher community and environmental and natural disasters.



Study Methodology

Objectives:

- To understand the incidences of migration among the fishermen communities depending on Chilika Lake
- To understand the challenges of migration faced by the fishing community in this region
- To provide a set of recommendations based on the study findings to mitigate the challenges faced by the fishing communities of this region

Preparation of interview schedule: A detailed structured household interview schedule was developed for the study and administered in the migrant households. Questions ranging from the socio-economic aspects, livelihood, cause of migration, duration of migration, and mode of migration to wages, indebtedness, and status of the family members left behind etc., have been dealt with in the questionnaire.

Focus Group Discussion: In order to make the study more inclusive and evidence based, focus group discussions were held with the fisherman communities in two villages namely Arakhakuda (Harachandi Sahi) and Brahmapur (Haripur). The focus group

discussions were centered around livelihood opportunities available in and around the lake, people's perception about migration, environmental degradation, and the development work carried out by the government in that region.

Participatory Rural Appraisal: Participatory rural appraisal at the sample villages was carried out to understand the seasonality of migration and analyze the cause and effect of migration within the community. (Case studies were collected to have an in-depth understanding of the situation. Observations were made for further qualitative assessment).

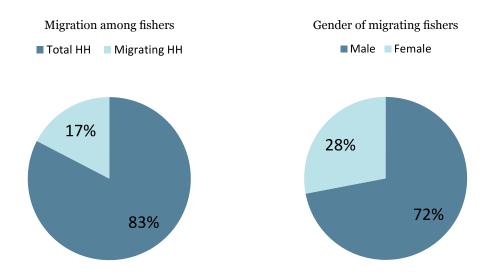
Sample Selection: 10 villages were selected to study the incidences of migration among the fishermen communities. Purposive sampling technique was adopted for all the migratory households who were identified and then surveyed. 754 migrant households were covered under the study.

Data Analysis: Both quantitative data and qualitative data were collected and analyzed for preparing the report. All data and information that were collected from the primary sources was compiled, processed, analyzed, and interpreted to prepare the study report. The statistical package SPSS was used for the analysis of quantitative data.

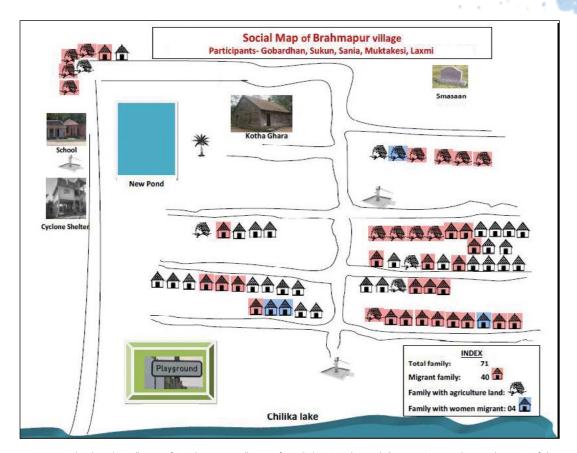
Study Findings

Demographic profile:

Chilika lake is spread across three districts; Puri, Khurda and Ganjam. The study covered 10 fisherman community villages out of which 8 villages are in Puri district and 2 in Ganjam district covering 3587 households. The total population of these villages is 19502. Out of the 3587 households, 754 households (21%) are seasonal migrants. Out of the total migrants, 72% of them are male migrants while 28% are female migrants.



Village	Gram Panchayat	District	House- hold	Population	Migrating house- holds surveyed	% of migrating house-holds	Migrating population	% of migrating population
Jagulei Padar	Kanas	Puri	455	2259	71	16	101	4
Barakudi	Bramhagiri	Puri	94	479	39	41	53	_ 11
Sanapatna	Krushna Prasad	Puri	171	1135	37	22	77	7_
Gadakokala	Bramhagiri	Puri	151	687	50	33	66	10
Khirisahi	Krushna Prasad	Puri	269	1038	92	34	221	21
Brahmapur	Krushna Prasad	Puri	317	2253	88	28	131	6
Kaudikhuni	Kanas	Puri	379	3134	55	15	98	3
Arakhakuda	Krushna Prasad	Puri	824	3948	122	15	271	7
Gajapati Nagar	Ganjam	Ganjam	324	1785	98	30	174	10
Pathara	Kalikote	Ganjam	603	2784	102	17	233	8
Total			3587	19502	754	21	1425	7

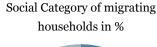


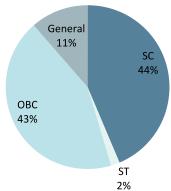
Haripur is the hamlet village of Brahmapur village of Krushna Prasad panchayat under Krushna Prasad block of Puri district. The village has a total of 71 households. There are 19 households who depend on agriculture. But due to water-logging and salinity, the lands have lost their productivity and the production rate is very low. All these households belong to fishing community who have been fishing in the lake since generations. Due to lack of employment and non remunerative fishing, people from 40 households have migrated as seasonal wage laborers. Out of these 40 migrant households, 4 of the families also reported having experienced exploitation at the migration workplace.

Social Category of Migrating Households:

In Chilika, majority of the fishermen are traditional fishers and belong to the Scheduled Caste and

Other Backward Castes. As per the study, 44% of the households belong to the Scheduled Caste category, followed by 43% of OBCs (Other Backward Castes). Scheduled Tribes are less in number in Chilika but 2% of them belong to the migrating population.

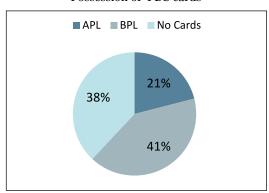




Access to Government entitlements:

Majority of the migrant households belong to the Below Poverty Line (BPL) category. There are 41% of the households who have BPL cards where as 38% of the households do not have any card. As per the investigators' observations, these 38% are also very poor and they need to get enlisted in the category of households living below poverty line. Nearly 21% of the households have Above Poverty Line (APL) cards. There has been no BPL survey since 1997. Consequently many deserving families have been deprived from receiving the benefits of the public distribution system.

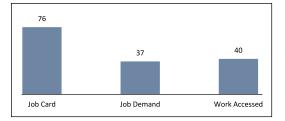
Possession of PDS cards



Status of MGNREGA: The migrant households have access to different government schemes at their villages. Out of the total migrating households 76% have job cards under MGNREGA but the irony is that only 40% households have access to the MGNREGA work. The Focus Group Discussions revealed that most of the MGNREGA work was being done through machines.



Status of MGNREGA

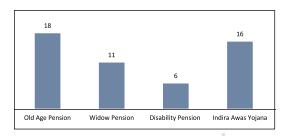


Access to Government Schemes:

There are 31% households who are a part of the Self Help Groups (SHGs); 18% get old age pension; 16% have houses allocated under the Indira Awas Yojna; 11% get widow pension, and 6% get disability pension.

The Study specifies that out of the total migrating households, 18% are receiving old age pension, 11% receive widow pension and 6% receive disability pension. The study also shows that 16% of households are allocated & given houses under the Indira Awas Yojana.

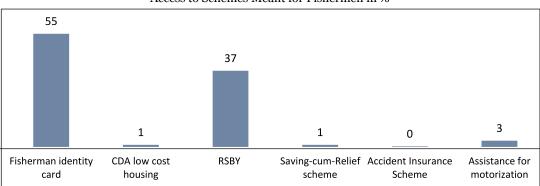
Access to Govt. Schemes in %



Access to Schemes Meant For Fishermen:

Both the state & central governments have devised several schemes meant for and targeted at fisherman communities. There are 55% of the households who have received fisherman identity cards issued by the government and 37% of the households are covered under Rastriya Swasthya Bima Yojna. Only 1% of the households are covered under Savings cum Relief schemes & low cost housing respectively. These facilities are provided by the Chilika Development Authority and 3% have received assistance for

motorization of their boats. Most of the households accessing these above-mentioned schemes are from a particular village called Brahmapur of Chilika which the Chilika Development Agency has taken up as a model village for tourism purpose.



Access to Schemes Meant for Fishermen in %

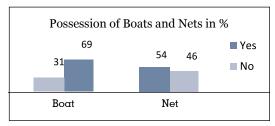
Livelihood of the Migrant Households:

The fishing communities of Chilika largely depend on fishing for their livelihood. The migrant fishermen do not own any agricultural land. There are 90% of respondents who said that they do not possess any agricultural land while, 24% said that they have the record of rights of their homestead lands. The study reflects that most of the surveyed households are landless and depend on the fish reserve of Chilika Lake.



Possession of Fishing Equipments:

Fishing requires primary fishing equipments like boats and nets. As per the surveyed households, 31% of them have boats out of which 61% have locally made fishing boats and 37% have motorized boats. Only 2% of the households said that they have fiber motor boats. Similarly, 54% of households have their own fishing nets while 46% do not have any. These are the households who go as co-fishermen for fishing together.

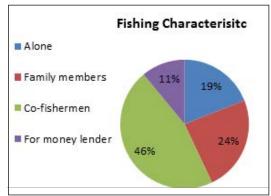


Fishing Characteristic



Fishing in Chilika Lake and the adjacent sea is mostly a group activity. Either the fishers go for fishing with the support of their family members or with co-fishermen. There are 46% of households who said that, they go for fishing with co-fishermen while 24% said that their family members assist them in fishing. Only 19% of households said that only one member of their family go out for fishing. These 19% are small fishermen who do not go far from their habitation for fishing. Another note-worthy factor is that, respondents from 11% of households said they go out for fishing for the money lenders. These are the fishermen who go for fishing to repay their loan taken from the money lenders who

get remuneration from them on daily basis. During the Focus Group Discussion with the community it has been revealed that the presence of money lenders has changed the fishing dynamics in last 10 years. Since the fish reserve in Chilika has substantially decreased, the fishing communities are forced to take loan to meet their exigencies. Taking advantage of the situation the money lenders make these fishermen go fishing for them on a daily wage basis.

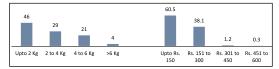


Fish Catch and Daily Income:

The everyday fish catch is sparse. Majority (46%) of the migrant households claimed that they catch up to 2 Kgs of fish per day, while 29% said they catch 2 to 4 Kgs fish followed by 21% of households who catch 4 to 6 Kgs of fish daily. Hardly 4% households revealed that they catch more than 6 Kgs of fish per day. Similarly, the daily income from fishing is very minimal. There are 60.5% of the households who said that their daily income is up to Rs 150. This reflects that



Quantity of fish per day and Income in %

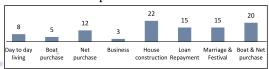


the fishermen who fish up to 2 Kgs and between 2 to 4 Kgs manage to earn this approximate amount. Among others, 38.1% migrating households earn between Rs 151 to Rs 300 while 1.2% earn between Rs 301 to Rs 450 on a daily basis. Only 0.3% (2 HHs) of the migrant households said they earn between Rs 451 to Rs 600 daily from fishing. Migrating households who are earning in the range of Rs. 300-600 are having better fishing equipments provided by the Chilika Development Authority.

Indebtedness of Migrant Households:

Money lending has surged among the fishermen community in Chilika basin. The distress condition of fishermen forces them to take loan from the money lender. The decline of fish reserve in Chilika, ban in fishing in certain pockets of the region and gheri system has increased the misery of traditional fishermen communities. The study reveals that 94% of the households have availed loans.

Purpose of Loan in %

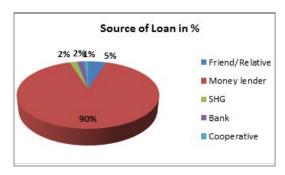


The purpose of taking loan differs from house to house. For construction of houses 22% households have taken loan. Because safe houses are one of their primary needs this would protect them from and during natural disasters. 20% of households have taken loan to purchase both boat and net which are the most required equipments of a fisherman. There are 12% and 5% of households who have taken loan to purchase only net and boat, respectively. Hence it is perceptible that for fishing purposes 37% of the households are availing loan. An interesting finding of

the study is that 15% households have taken loan to repay their existing loan and another 7% households have taken loan for managing their day to day living expenses. These households are highly vulnerable and fall into the dubious cycle of debt. In addition, there are 15% of households who have taken loan for purposes like marriage and festivals.

Source of Loan:

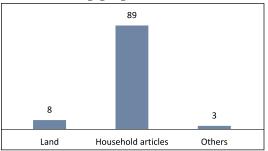
There are no social protection mechanisms to safeguard the livelihoods of the fishermen community. In the absence of a government credit system, fishermen usually take loans from the money lenders at a higher rate of interest. In most cases the money lenders are the middlemen of fish marketing. These middlemen have the monopoly and right to purchase the fish catch at lesser price and sell it at a higher rate. As a result, the poor fishermen are unable to sell their fish to others other than to the money lender. There are 90% of the households who have taken loan from the money lenders while 5% have taken from their friends and relatives. Institutions like Self Help Groups (SHG) and banks have extended loans to 2% of migrant households.



Most of the migrating households do not mortgage anything while they take loans. The money lenders recover their money on daily basis from the fishing made by the money borrower. In the earlier findings it is observed that 11% of the households fish for the money lenders. The study specifies that only 16% households mortgage something or the other

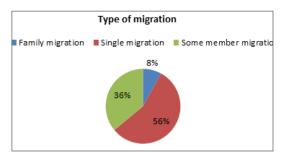
to avail loans. Among those, who have mortgaged to take loans, around 89% of them have mortgaged household articles. As per the investigator's discussion with the community, many of them have mortgaged gold items. There are 8% of households who have mortgaged their land. It is the banks who have kept back land as mortgage in order to sanction loan.

Mortgage against loan in %



The Trend of Migration among Fishing Community Migration Type & Age Group of Migrant Fishers:

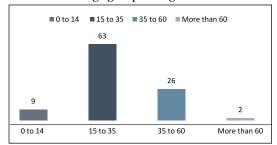
Migration among fishers is mostly singular in nature. There are 56% of households who said that only one member from their family migrates for livelihood while 36% of households responded that more than one member migrates from their household. In such pattern of migration, it is observed that either the wife or another male member of the family accompanies the other migrant from the family. Also, there are 8% of households where members who migrate constitutes of husband, wife and their children. However, when we look at their traditional occupation i.e. 'fishing', they fish together as a group but when they migrate they mostly go alone.



Age Group of Migrating Fishers:

The incidences of migration is high among the age group of 15 to 35 years of population. They constitute 63% of the total migrating population. Migration among youths is higher among the fishing communities and followed by the age group of 35 to 60 years who constitute 26% only.

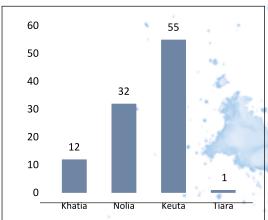
Age group of migrant



Migrating Fishing Communities:

As per the findings of the study, it is the Keuta community among whom the incidence of migration is high. Among the migrants, 55% fishermen belong to the Keuta community. It is believed that this community is the original traditional fishing community of Chilika and is found in majority in and around the Chilika Island. The members of this community fully depend upon Chilika for their livelihood. The community is known for fishing in Inland River and in Chilika Lake.

Quantity of fish per day and Income in %

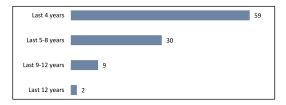


The second highest migrating population has been found among Nolia community. Their migration is 32% of the total migrating population. Nolia community is well known for sea fishing in high tide but nevertheless they also depend on Chilika. Among others, 12% Khatia and only 1% of Tiara community migrate in search of alternative livelihood. Fishermen belonging to the Khatia community buy fish from other fishermen and sell it to the outside merchants.

Years of Migration:

Migration in the Chilika Lagoon started more than a decade ago. The study indicates that only 2% households have been migrating since 12 years. It further reveals that 9% of the migrating households are migrating since 9-12 years while 30% have been on the move since 5-8 years only. The perturbing findings of the study are that the majority of the migrating households i.e. 59% are migrating since last four years.

Years of Migration in %



Fishing in Chilika Lake was enough as a means of livelihood for the people of Brahmapur village in Krushna Prasad GP of Puri district before the 1960's. The area of the lake was 1165 Sq. Km and there was enough fish production round the year. The economic conditions of the villagers within Chilika Lagoon were better until it got affected by devastating floods during 1968 and 1980. Due to siltation and sand deposit from 9 rivers joining the lake, the traditional sea mouth also got closed. In the year 2000, the Govt. of Odisha opened a new mouth without restoring the traditional sea mouth, as a result of which heavy sea water entered the lake swiftly which further affected the fish production. The fishing area for common local people also started decreasing after a large area of the lake was given on lease to TATA during 1988. This led to the declaration and reservation of 14% of fish fed area of the local villagers for the non fishermen community during 1992-1995. Further, the Chilika Development Authority created an Ireland for tourism covering 200 Sa.Km of the lake. After Super Cyclone and Phailin, the traditional fish species variety has also reduced from 32 to 12.70% of crab production has also reduced in the lake. The high quality of fish, prawn and crab which was being imported earlier is not found nowadays.

TREND ANALYSIS OF LIVELIHOOD PATTERN IN BRAHMAPUR VILLAGE OF KRUSHNAPRASAD G.P.

Period	Area of Lake	Encroachment	Interference of other players in fishing	Disaster	Fish production	Migration
1960-70	#####			+++	‡ ‡‡‡‡	
1971- 1980	‡ ‡‡‡‡	+++			‡ ‡‡‡‡	
1981- 1990	++++	+‡‡	‡ ‡		+++++	
1991- 2000	+++++	+‡‡‡	* **	+++	++++	++
2001- 2012	+++++	++++	<i>‡‡‡</i>	++ ++	++	+++

Migration of the fishermen community started way back in the year 2000 in the village when only two families went to Kerala to work in tea gardens and construction sites. At present, 40 families from the village are migrating to states like Andhra Pradesh, Tamil Nadu and Kerala during lean season to earn their living by working in brick kilns and construction sites.

Modes of Migration:

Migration Medium	НН	Percent
Middleman/Contractor	378	50.15
Self	273	36.2
Friend	87	11.54
Relative	14	1.85
Other	2	0.26
Total	754	100

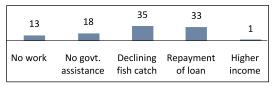
The middlemen or the contractors play a crucial role in influencing the migration decision of the households. Nearly 50% of the households migrate with the middlemen or the contractors whereas 36.2% take their own decision. There are also 13% of households who migrate with their friends and relatives.

The Push/Pull Factor of Migration:

The factor of migration in Chilika Lagoon is more push than pull in nature. These factors of migration for fishers are interrelated with each other. As per the study, 35% of the households said they migrate due to drastic reduction in fish catch in the lake while 33% cited repay of loan as the reason behind their migration. Similarly, 18% households are migrating due to non availability of government assistance to reduce their distress condition while 13% of the households

said lack of employment opportunities is pushing them to migrate out of their villages. Only 1% of the households said they migrate out for higher income.

The push/pull factor of migration in %



Arakhakuda village under Krushnaprasad GP of Puri district located in the periphery of Chilika Lake is dominated by the fishing community. There are no cultivable lands in the village and fishing in the lake is the only source of livelihood for the villagers. All 824 families catch fish out of which 83 families, owing to better economic conditions are involved in trading fish as middlemen. But at present, 122 families (15%) are migrating to other states in search of livelihood and are engaged in bricks kilns and construction sites of Andhra Pradesh, Karnataka, Maharashtra and Tamil Nadu.

Earlier fishing was the most reliable and profitable livelihood option for the villagers but now the fishing communities are in a vulnerable state due to reduced fish production for reasons like decrease in fish catch, less fishing area, control of mafias on the lagoon, climate change and closure of natural sea mouth. Further the government social security schemes are not benefiting the people due to faulty governance. As a result, the people are migrating to other states in search of livelihood as unskilled laborers to neighboring states and within Odisha. A good number of them are facing oppression and harassment due to the exploitative process of labor recruitment by middlemen. In villages those women who are left behind along with children and elderly are facing social insecurity and the absence of male members is further deteriorating the situation as the families are getting excluded from accessing the government social security fold.

Cause & Effect analysis of Migration of village Arakhakuda, Chilika BONDAGE Hostage of Women & Girls for long period SOCIAL INSECURITY & CONFLICT AT Physical and mental VILLAGE - Left behind women, elderly and Abuse No leave in any children stay in distress, stigma and **VIOLATION OF CHILD RIGHTS Emergency** -Children at worksite are - Malfunctioning of govt. schemes - No minimum out of School **Encroachment of outsiders on** or equal -No health care at worksite village resources and fishing zone wages -Children both at worksite - Abuse on left behind single women and left behind are engage - Less helping hand during disaster in Wage work and conflict No Unity within the community - Less no. of youth & male at villages **EXPLOITATION ON WAGES** Low wages Overtime duty INDEBDTEDNESS OF THE FAMILY **Problem in adopting** Loan trap of middlemen new sector & trade Decrease working capacity Problem in Language & and income in new trade communication Participants: Uddhaba, Gayatri, Subhakesi, Ratnakara, Sabita, Phulamati, Gobinda, Puhana, Bairagi, Somadei Facilitated by: Saroj, Roshan & **Jyotiprakash** Indebtedness **Food Insecurity** No employment Less earning No Agricultural Decreased fish Malfunctioning of land catching & fishing area govt. prog. Less people's Village river Close of natural New sea face of Climate change participation controlled by Mafias sea face Govt. for tourism

Rising unemployment leads to migration



Bidyadhara Behera (55), a fisherman by profession hails from the Gadakokula village of Brahmagiri block in Puri district. His family consists of his 80 years old ailing mother, wife Hemalata and daughter Neelam. The reason he opted for migration and has been on the move since last two years to other states is the repayment of loan he took during his elder daughter's wedding.

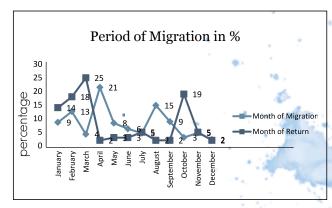
Bidyadhara neither had a boat nor fishing net. He used to go out for fishing with the help of other fishermen from his community and earned a very meager amount on a day to day basis. Agricultural land as less as 40 decimal was another source of livelihood for himself and his family. Cultivation on it fetched him 60 Kgs of paddy. However, he had shared his land with another person.

Fishing became a painful job for Bidyadhara when the fish reserve started declining in Chilika. After boating for almost 70 to 80 Kms. he used to reach outer Chilika which is a common fishing ground for fishermen. But in present day situation, the drastic climatic change in Chilika has led to heavy siltation and sedimentation, thereby adversely affecting the fish production. Hence, it became difficult for Bidyadhara to sustain the livelihood of his family when a long stay of 8 to 10 days at the lake fetched him only Rs 500.

Meanwhile, the family also had to make arrangements for their elder daughter's wedding. In order to manage the expenses of the wedding, Bidyadhara took a loan of Rs. 1 lakh from a village money lender, SHG, and village fishermen cooperative at a higher rate of interest by mortgaging his agricultural land. This became the major factor behind their migration to Tamil Nadu after they wedded their daughter. However, even after two years of their migration, Bidyadhara has been able to repay only 30% of the loan amount while another 70% will lead to further migration of the family.

Period of Migration:

Migration is not constant throughout the year. As per the study data, the largest mobilization of fishers tends to be in the month of February (14%), April (21%) and August (15%). Similarly, most of the migrants return to their villages in the months of March (25%) and October (19%). This indicates that a larger portion of migrants appear to be conducting different forms of



circular migration, returning to their communities, either once in a month or every few months. These types of migration are linked to the seasonality of fish catching in the Chilika Lagoon.

SEASONALITY MAPPING OF PEOPLE'S LIVELIHOOD DEPENDENCY

Brahmapur village, Participants- Gobardhan, Sukun, Sania, Muktakesi, Laxmi, Bhabani

Diamin.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April
Fish production	•	• •	•	•	• •	•••	•••	• •	• •	0.0	•	
Festivals	• •					• •	• • •					• •
Entrance of sea	1											
water & release Agri Production							• • •	0 0	•	•		
Rate of Fish	•••	•	•	•	•	•	•	•	•	•	•	
Food Insecurity				• •	•							
Govt.								•	•	•		
wage work												
	. •					•	•				•••	• •
Indebtedness Migration		0								42		
HAR								16		K		

Fishing is the prime occupation of the people of Brahmapur village as they depend on it round the year except in the month of April. Only 19 families having small pieces of land cultivate paddy, ground nuts and manage their livelihood with its output for 2 to 3 months only. But in the recent years, production of fish has witnessed a decline and is believed to decline further. During the month of September to November, people catch up to 5 to 10 Kgs of fish per day and while in the rest of the months they get 1to2 Kgs only. The worst situation arrives in the month of April when

the fish catch is nil. However, when compared to the situation in the early years, people used to catch up to 10 to 20 Kgs of fish every day round the year. It is only after the opening up of new sea mouth that water from the sea started gushing into the lake at a high speed in the month of June, July and August thus making it difficult for the fishermen to catch fish. Further during the lean period, people face difficulties such as food insecurity due to less fish production, unavailability of government wage work and social security schemes that force them to migrate.

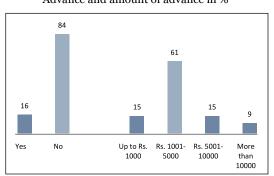
Migration becomes prone in the villages mostly for 6 months i.e. during April to September. People start migrating during April as there is no fish production in the lake and any other option of livelihood available to them. They return back only during August and September when the fish production is believed to have increased due to the return of sea water from the lake.

Indebtedness is another reason why people from the fishing community have started migrating. People borrow loans from village moneylenders and fish traders to meet the expenses of festivals and marriages mostly during March, April and May as it is the considered the lean period. October to March is the period when people stay in their villages as it is the main fishing season and also the availability of government wage work.

Advance and Amount of Advance:

The migrant households do not take advance as a commitment to work. There are only 16% of the households who said they take advance in order to migrate. The advance amount is also very less. As per the study, majority of the households have taken advance within an amount of Rs 5000. 61% of the migrants have taken advance between Rs 1001 to Rs 5000 while 15% have taken up to Rs 1000 only. This justifies that migration among the fishermen community is more distress induced. These migrant households do have an earning from fishing and

Advance and amount of advance in %

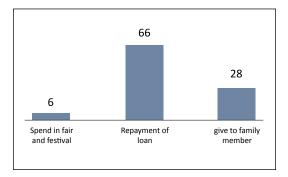


whatever they have is so low that it pushes them to migrate. Another 15% of the households have taken advance between Rs 5000 to Rs 10000 and only 9% have taken more than Rs 10000 as an advance.

Use of advance money:

Most of the migrant households spend the advance money they take to repay the loan taken by them earlier from the money lenders. There are 66% of the households who said that they spend the advance amount in repaying the existing loan they had taken, while another 28% of the households said they give the advance amount to their family members for survival during the migration period of the earning family member. Only 6% of the households said they spend the advance money during the festivals.

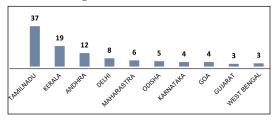
Use of advance amount in %



Migration Destination:

With the loss of livelihood the migrant households work as laborers in other states. As many as 37% of the households informed that they migrate to Tamil Nadu followed by 19% to Kerala and 12% to Andhra Pradesh to work in different cities of these states. Few households also migrate to Delhi, Maharashtra, Karnataka, Goa, Gujarat and West Bengal. There are 5% of households who migrate to different cities of Odisha too. These migrant households engage themselves in sectors like construction, fish factory, brick kilns, weaving mills and iron factory etc.

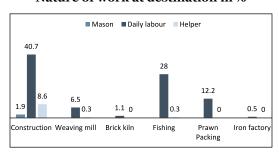
Migration Destination in %



Nature and Sector of Work at Destination:

The migrant households mostly work as daily laborers at different worksites. More than 85% of the migrants work as daily laborers. In the construction sites there are 40.7% migrants working while in brick kilns 1%, fishing sector has 28% and prawn factories have 12.2% working as daily laborers. Among others 8.6% work as helpers and 1.9% as masons. It is evident that the fishers only have the expertise of fishing and do not have any other professional or technical skill.

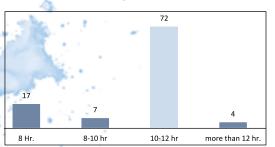
Nature of work at destination in %



Working Hours:

The migrants have to work for extra hours than the normal working hours. There are 72% of the migrants who said they have to work between 10 to 12 hours

Working hours in %

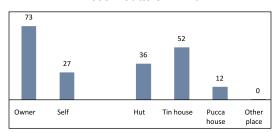


and another 4% work for more than 12 hours a day. These migrants are forced to work for extra hours without being given any extra payment. Only 17% of the migrants said they work 8 hours a day.

Accommodation and Type of Accommodation at Destination

The migrants are by and large provided accommodation by the owners. There are 73% of the migrants who are provided accommodation by the owner of the settlement whereas 27% have to arrange accommodation on their own. 52% migrants live in houses made up of tin and 36% in huts while only 12% are accommodated in a pucca house.

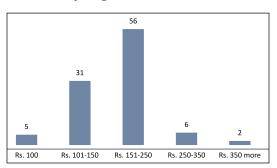
Accomodation and Type of Accomodation in %



Daily Wage at the Worksite

The daily wages of the migrants ranges between Rs 100 to Rs 350 at the worksite. Majority of the migrants (52%) get between Rs 151 to Rs 250 whereas 32% get between Rs 101 to Rs 150. Only 6% of the migrants have received daily wages between Rs 250 to Rs 350.

Daily Wage at the Worksite in %



A Strive towards Survival



Chandani Jena, a 45 years old widow fights for the survival of her family since her husband passed away after he succumbed to a disease that affected his lungs during his stay at a construction site of Tamil Nadu.

Kailash Jena, the deceased husband of Chandani was on the move since 7 years. When he migrated to the Eneru district of Tamil Nadu to work as a daily wage labor under a local contractor in Ashok Leyland Company, the dusty and polluted environment at the worksite affected

his lungs so badly that it resulted in the loss of his life. Though the company paid Rs 25000 as compensation to his family but that alone was not sufficient to sustain their living.

As there is no other source of income, the family now faces persistent poverty. According to Chandani Jena, "We have nothing left with us. My daughters and I get little assistance from our neighbors and relatives but I do not know how long this will continue. I am worried if I will be able to manage my family and give my children a better living."

Like any other parent, Chandani wants her children to attain better education but finance is an obstacle for them. Another concern for the family is the repayment of loan of Rs 10,000 taken by her husband seven years ago. She believes that had there been any livelihood opportunities at her locality, her husband wouldn't have migrated and lost his life.

Payment at the Worksite:

Migrants are employed on a daily wage basis. There are 75% of the migrants who said they are paid weekly whereas 18% of migrants are paid on a monthly basis. Only 4% of migrants are paid daily wages. While interacting with the fishers during the Focus Group Discussion, it is revealed that the contractors in order

Nature of Payment at the Worksite

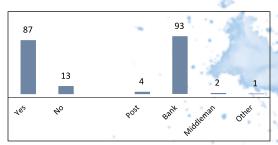
Daily Weekly Monthly End of the work

18% 3% 4%

to refrain the migrant from changing the worksite or going back to their villages do not pay them on a daily basis. It is worthy to mention that when asked on whether they have received the amount committed by the contractor, 43% of the households said they are have not received the committed amount.

Remittance of Money for the Family Members Left behind

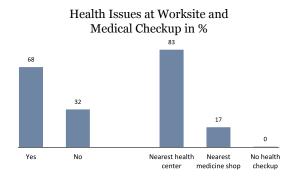
Money Remittance and Medium of Remittance to the Left Behind Family Members in%



The migrants send money for their left behind family members for their day to day living. There are 87% of the migrants who answered that they send money for their left behind family members. Among them 93% send the money through banks, 4% by money order (post) and 2% through middlemen.

Health Issues at Worksite

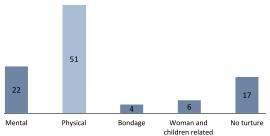
Due to unhealthy living conditions at destination worksites, these migrants often fall ill. There are 68% of the migrants who said they fell ill at the worksite. Among them 83% went to the nearest medical centre for treatment while 17% took the medicine as per the advice of the local medicine shop owner.



Harassment Faced at the Worksite

Migrants (83%) face different types of harassment at the worksite. Among the nature of harassment, physical harassment (51%) is common at the worksite followed by mental harassment (22%). There are 4% of migrants who alleged they are kept under hostage or in bondage like condition and 6% of the migrants held that they faced gender based harassment particularly women and children.

Harassment Faced at the Worksite in %



Struggling to Rebuild Livelihood after Escaping from Bondage

Pramila (name changed), a 30 year old migrant lady who has been migrating along with her husband and two kids since five years in search of alternative livelihood. The decision was made after the decline in fish catch in the Chilika Lagoon. In the past five years she has worked in various construction, stone crushing and prawn processing sites in Bangalore and Chennai undergoing several problems while being on the move.

However, the worst situation came in the year 2012 when Pramila had the most traumatic experience of migration in her life. Her family and she were allured by a local contractor of Puri who promised them to pay a monthly remuneration of Rs 5000 per month. But at the worksite they could only receive half of the promised wage. Upon opposing the injustice done to them, the couple was beaten up by the supervisor at the worksite. Further, they were made to work in two shifts. The first shift started at eight in the morning and lasted till 6 pm while the second shift began from 9 pm till 2 am with one hour break within the shifts.

When the physical and mental harassment became unbearable, the family decided to leave the place. But due to the strict supervision throughout the day they were unable to escape until one day when they went to the market to buy some essentials. They rushed to the nearest station and boarded a train to Odisha with the little money they had saved from their earnings.

At present, Pramila is concentrating on the education of her kids as she doesn't want them to undergo similar situation as her in their life. The duos have also found a job in the region. However she is unsure about her migration in the future. She says, "I only wish that we are given employment opportunities at our village so that I could prevent my family and myself from falling into such bondage situation again."

Problems Faced by left behind Family Members:

Left out face any problem	HH	Percent
Children	91	12
Older person in the family	78	10
Female members	223	30
No problem	362	48
Total	754	100

When the earning member of the family goes away from the home, the left behind members face great difficulties. However, 48% of the respondents said that the left behind family members do not face any problem. It is obvious that many of them are very short term migrants who migrate for a month or two. But 30% of the respondents said that most of the problems are faced by the female members of the family. As per the Focus Group Discussion the female members said that they feel threat from unsocial elements and face problems when they are not left with any money to buy essential materials. There are 12% and 10% respondents who said children and older persons face problems respectively, when they are out.

FOCUS GROUP DISCUSSION

Place of FGDs: Harachandi Sahi of Arakhakuda Revenue Village and Haripur of Brahmapur Revenue Village of Puri district



Key findings from FGDs

1.On Livelihood

- Most of the families are Below the Poverty Line (BPL). The primary occupation of the families is fishing. There are a few households who are having agricultural land. But they cannot do cultivation as the soil becomes salty. Ground nut cultivation is also done by the fishers;
- Only few of the fishers have their own boat and net while majority take loans to buy boat and net.
- The daily fish catch has reduced drastically in the past decade. Earlier the fish catch was sufficient enough to feed the family round the year. But at present they are looking for alternative livelihood for their survival.

2. On Debt

Most of the fishers have taken loan either to purchase fishing equipments like boat or net or for social purposes like marriage;

- Those who have taken loan for fishing purposes, fish for the money lenders only;
- Due to inadequate fish catch they never come out of the debt trap.

3. On Chilika Development Authority (CDA)

- The CDA is not serving its purpose. It is rather instrumental in the unfavorable fishing rights of the community;
- The technological solution to open new sea mouth (near Sipakuda) defying the nature has negatively affected the fishers;
- The fish catch was plenty for couple of years after the opening up of the new sea mouth, but it has reduced significantly in past 6-7 years. Now the CDA is still defending its decision;
- ❖ Instead of taking steps to secure the primitive

occupation of the fishers, the CDA is eager enough to look for alternative livelihood, blaming the fishers for being the reason of decreased fish reserve in the lagoon area.

4. On Migration

- Migrating decision is made to reduce the deprivation in the family. As the fish catch is inadequate to sustain the family throughout the year, income from migration fills the gap;
- Migration started in the lagoon region in the past 6-7 years. Earlier single male members used to migrate but now single female and married couples are also migrating out. Very few families migrate out along with their children;
- The Keuta community who are the traditional fishermen of the lagoon are migrating more from the region;
- The middlemen play a major role in selecting the destination place of migrants. The migrants are verbally committed to certain wage but they do not get the promised wage when they reach the destination:
- The migrants are often not allowed to move out of the premises or change the employers as per their wish. They are also not paid for months at a stretch and only two meals per day are given to them. In case of protest, they are physically harassed and kept in bondage condition.

5.On Government Regulation on Fishing

- Government is not taking strong action on the defaulting fishers who fish during the spawning period when fishing is banned;
- Many a times compensation is not paid to the affected fishermen during the ban period;
- Despite repeated High Court orders, the government is not able to regulate and abolish Gheri from the Lagoon which is adversely affecting the traditional fisher communities.

6.On Primary Fish Cooperative Societies (PFCS)

- Many of the PFCS is now non functional due to decline in fish catch in the lagoon;
- Those who are functional are struggling with the administration in lease and demarcation issues;
- There are instances where a particular PFCS has to undergo several round of legal battle to get it back on lease from the local administration. The PFCS blames it on the CDA in recommending their lease area to be a reserve area to promote tourism;
- The functional PFCS demand the regulation of non fishers in the lagoon area.

7.On Change of Climate and Natural Disaster

- The water of the Chilika Lagoon is becoming more saline leading to the disappearance of several fish species from the lagoon. Change in acidity is linked to elevated sea surface temperatures affecting fish breeding in a brackish water body like Chilika:
- Change in sea wind is also affecting the fish catch in the area. Earlier south wind from the sea helped in pushing the fish reserve of Chilika to the sea and helped fishers to catch more fish. But since last decade the south wind is not sufficient enough to move the fish towards the sea;
- Increased intensity in storms damage the fish reserve causing the decline in fish catch (respondents expressed their plight while discussing the impact of super cyclonic storm 'Phailin'):
- The Chilika Lagoon fish reserve depends on 'Plankton' the most basic and important part of the marine food webs. It is the basis of the food chain and all species rely on it directly or indirectly. Many of the commercial fish rely on it to grow but the decrease of plankton in the lagoon can be attributed to the extinction of many commercial fish species.

Conclusion & Recommondation

The inadequate fish catch in the region is the major factor influencing the migrating decisions of the fishers. Therefore migration is becoming an integral part of the fishing communities and is seen as a social adaptation to a complex environment. The push factors are more dominating than the pull factors. The socio-economic profiles of the migrant households are very poor. Among the migrant households majority are from BPL category families and do not have agricultural land which could have provided alternative livelihood to them. Another important factor is access to physical as well as financial capital (such as boats, fishing nets and credit) which is important for many migrants. Due to lack of access to both physical and financial capital most of the migrant households are taking loans at higher interest rates from moneylenders to buy fishing equipments. Some households even fish for the moneylenders in order to repay the loan and get some money for their sustenance.

The type of fishing operation and modes of employment to an extent determine the migration type. Most of the fishers are engaged in fishing as daily laborers who also take advance from the large fishermen and further these large fishermen take loan from the moneylenders. It becomes a vicious cycle out of which neither the large fishermen nor the small fishermen could come out.

With the opening up of the new sea mouth in Chilika, the fish catch has declined drastically. Though the fishers agree that it provided plenty of fish catch for couple of years from the day of opening but those residing near to the old sea mouth could not get the benefit of the new one as the fish production in their area reduced drastically. Especially the Nolia communities are the ones who have been greatly affected by it. The rise of salinity in the lake led to the diminishing number of fish species which were abundantly available in the lake. The opening of the

sea mouth proximity to the lake increased the salinity. And with the absence of sufficient daily catch of fish the old age livelihood of the fishers has faced many challenges.

Although there are several social security schemes of the government that would act as an alternative livelihood, but those are beyond the reach of the fishermen community. Many of these migrant fishermen are even enrolled under the MGNREGA scheme and hold a job but they fail to get jobs even if they demand for it. Thus, the prolonged distress condition leads to migration.

The Focus Group Discussion revealed that migration can also be attributed to the illegal prawn 'gheri' which reduced the fishing catchment areas for the traditional fishermen. The declaration of tourism spots and banning fishing in some of the high fish catchment areas also affected the livelihood of the fishermen. Some fishermen also admit that profuse catch of prawn seeds and fish spawns at the sea mouth for hatcheries also contributed to the declining fish catch in the areas. They also feel the role of CDA in the region is not encouraging. Instead of protecting the fishing rights and promoting healthy fishing practice to balance the ecology of the lagoon, the CDA is more into promoting tourism and creating an environment for the fishermen to leave out their primary occupation and choose an alternative livelihood.

The fishermen believe that this will open a flood gate for the big companies to enter into the fishing business in the area. The Focus Group Discussion further reveals that the impact of natural disasters like cyclone (during the survey, severe cyclonic storm 'Phailin' hit the coast of Chilika) also destroys the fish production environment leading to a decline in fish catch in the region.

In the villages of Chilika Lagoon, people do not take the decision to migrate in order to earn better income. It is rather a survival strategy to reduce

further vulnerability of the family. As per the study, single migration is predominant in the region. Most of the youths are migrating out from the villages. It is also observed that many newly-wed couples are also migrating out to repay the loan they have taken for their wedding. And when these migrants migrate out, they become more vulnerable at destination worksites. It is evident from the study that the vulnerability of the migrants is increasing more at the different worksites they work in. Most of the fishermen work as daily laborers at different worksites outside the state. They even have to work for extra hours than the normal working hours but are never paid the extra or the committed amount. Physical harassment is common to these fisher migrants which increase when they complain. Most of them are also kept under bondage conditions and cannot change the worksite as per their choice.

To sum up, the incidence of migration among the fishermen communities in the Chilika Lagoon is more due to the distress condition than opportunity. Although they are not associated with any extensive tradition of migration, the shrinking livelihood earnings from their primary occupation i.e. 'fishing' is increasing the vulnerability of the families. There are indications that the Chilika fishermen have increased their participation in internal migration over the years. Blame it on the administrative decision failure, frequent natural disasters, unfit soil for agriculture or absence of a fishermen friendly policy framework, it is an established fact that compared to the past decades, the economic and environmental condition in and around the lagoon has been deteriorating posing a challenge for the fishermen communities to choose a coping up strategy in the form of 'migration'. Thus it is of utmost importance that attempts must be made to take non-negotiable stand to protect the livelihoods of the fishermen communities at the source.

Recommendations

- Efforts should be made to reduce the distress conditions of migrant fishermen to check their migration to other states;
- The Odisha Climate Change Action Plan and the Integrated Coastal Zone Management Authority should specifically prepare a blueprint for long term and sustainable policy framework to ensure the livelihood of fishermen community inclusively;
- Some areas in the Chilika Lagoon should be demarcated for spawning area of fish to increase the fish reserve. Fishing of spawn and boat movements in those areas should be prohibited;
- Skill building of the fishermen communities as per the market demand is required in order to enable them to migrate with a skill;
- Labor recruiting contractors involved in migration should be strictly regulated and monitored;
- Extensive awareness raising on safe and regular migration channels should be undertaken;
- A policy to enhance the skills of returnee migrants with training in business creation and personnel management alongside provision of funds to provide the push for returnee migrants to set up small scale enterprise should be developed;
- The government should formulate a strong and realistic migration protection policy, together with migrant fishermen, to address exploitation and ill-treatment by unfettered brokers and employers;
- The government should ensure identification, integration, education and health care for children of migrant workers;

*	The government should formalize and regulate remittance processes to ensure that migrants can remit money safely, cheaply and effectively to their families;
*	There should be establishment of migration facilitation cell at the source point and implementation of the Interstate Migrant Workman Act, 1979.



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