

**The Project for Conservation and Wise Use of  
Natural Resources of the Chilika Lagoon  
through Community Participation  
in India**

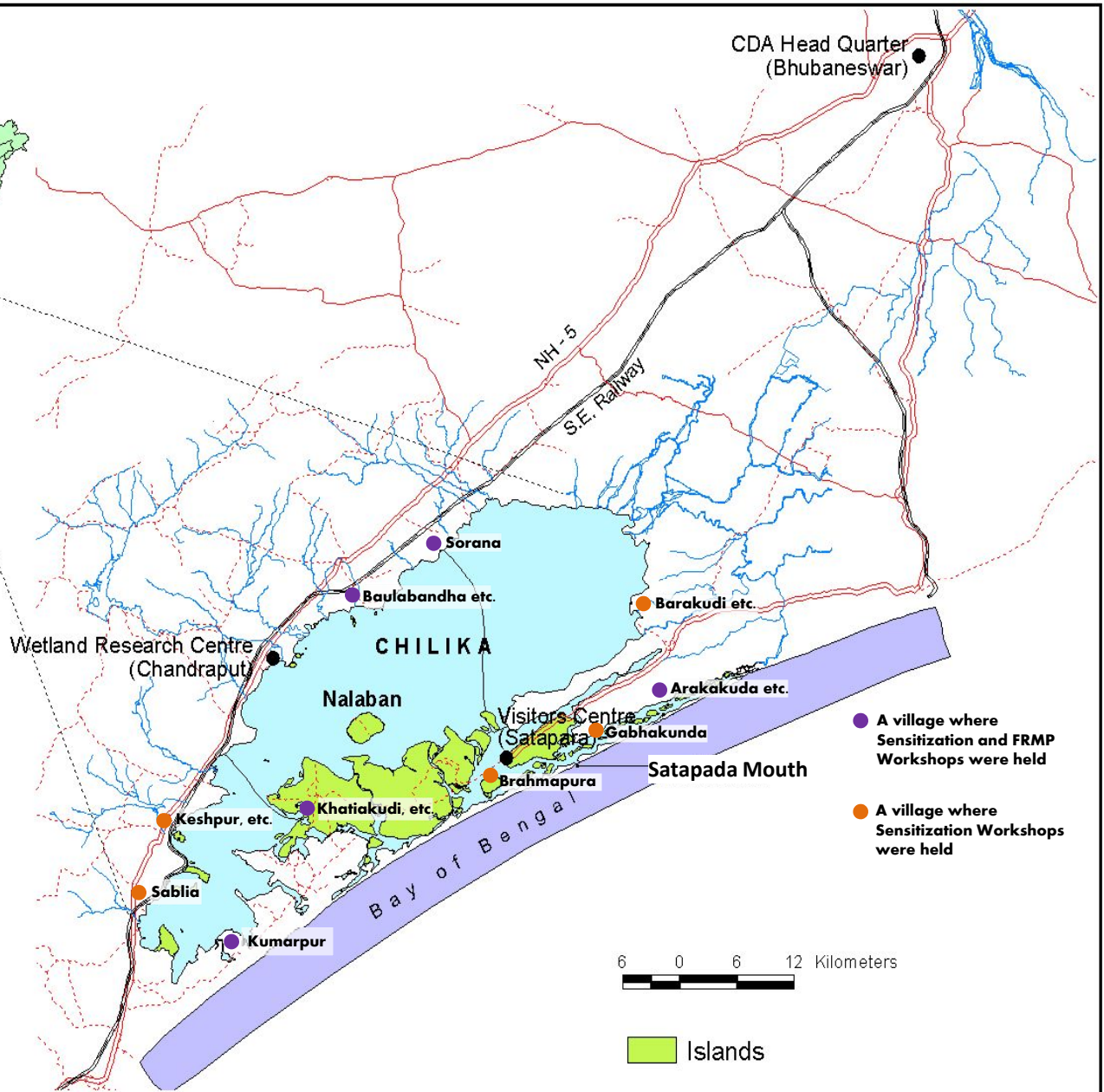
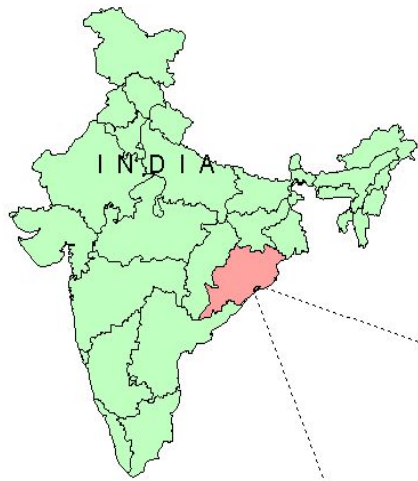
**Fisher's opinion on Fishery Resources  
Management in Chilika Lagoon**

**September 2009**

**Japan International Cooperation Agency  
Chilika Development Authority, Orissa Govt., INDIA**







**Location of selected venue villages for workshops**



## CONTENTS

<b>1</b>	<b>Background</b> .....	1
<b>2</b>	<b>Objectives</b> .....	2
2.1	Sensitization Workshop.....	2
2.2	FRMP Workshop.....	2
<b>3</b>	<b>Outline and of Workshop</b> .....	3
<b>4</b>	<b>Work Schedule of the Workshops</b> .....	4
<b>5</b>	<b>Sensitization Workshop</b> .....	5
5.1	Target group and participants.....	5
5.2	Schedule of Sensitization Workshops.....	5
5.3	Evaluation Matrix of Sensitization Workshop.....	7
<b>6</b>	<b>FRMP Workshop</b> .....	8
6.1	Village selection for FRMP Workshop.....	8
6.2	Schedule of FRMP Workshop.....	8
6.3	Main fisher’s opinions for FRMP.....	9
<b>7</b>	<b>Reflection of fisher’s opinions to FRMP</b> .....	12
<b>8</b>	<b>Recommendation for holding workshop</b> .....	13
 <b>Attachment:</b>		
ANNEX 1.	Evaluation Matrix of Sensitization Workshop.....	ANN- 1
ANNEX 2.	Evaluation Matrix of FRMP Workshop.....	ANN-11
ANNEX 3.	Fisher’s Opinions by Theme.....	ANN-16



# 1 Background

Chilika lagoon in the state of Orissa has been designated as Ramsar site since 1981. More than 100,000 traditional fishers in fishing communities in and around the Chilika lagoon depend on its fishery resources for income as well as protein sources. However, it is of concern on the fishing pressure due to vitalization of economic activities and increasing population. Since the traditional fishers depend on limited natural resources in the lagoon, their livelihood is quite vulnerable to these negative impacts. Therefore, it is an important issue to improve and stabilize the livelihood of people in extreme poverty around the lagoon while simultaneously protecting the wetland.

Prolonged collaborative activity of community people is indispensable for community development based on the conservation of natural environment and sustainable use of fishery resources. Therefore, Chilika Development Authority (CDA) takes a major role to promote awareness of fishers for conservation and sustainable use of fishery resources, and also to establish a system of support and collaboration among stakeholders and government agencies.

With this background, the Government of India (GOI) requested support of the Government of Japan (GOJ) under the form of technical cooperation. Responding to the request, the record of discussion (R/D) was signed in July 2006. The three-year technical cooperation project “Conservation and Wise-Use of Natural Resources in Chilika Lagoon through Community Participation” was launched in October 2006.

As a part of the Project, fishery resource management plan (FRMP) was formulated for selected 10 species based on the scientific resource surveys. Fishers in and around Chilika lack the idea of resource management although they experienced serious decreasing of fish catch in 1990’s due to close of lagoon mouth to the Bay of Bengal. However, fishers are one of key player of management plan. Therefore, the Project held series of workshops for sensitizing fishers about necessity of resource management and extract fisher’s opinions to reflect it to the FRMP.

## 2 Objectives

In order to formulate feasible and effective FRMP, it is necessary to reflect the fisher's opinions to the FRMP. Therefore this series of workshops were implemented to draw indigenous knowledge on feasible actions from fishers to reduce fishing pressure on entire Chilika lagoon and extract their opinions for resource management to reflect to the formulation of FRMP for the Lagoon.

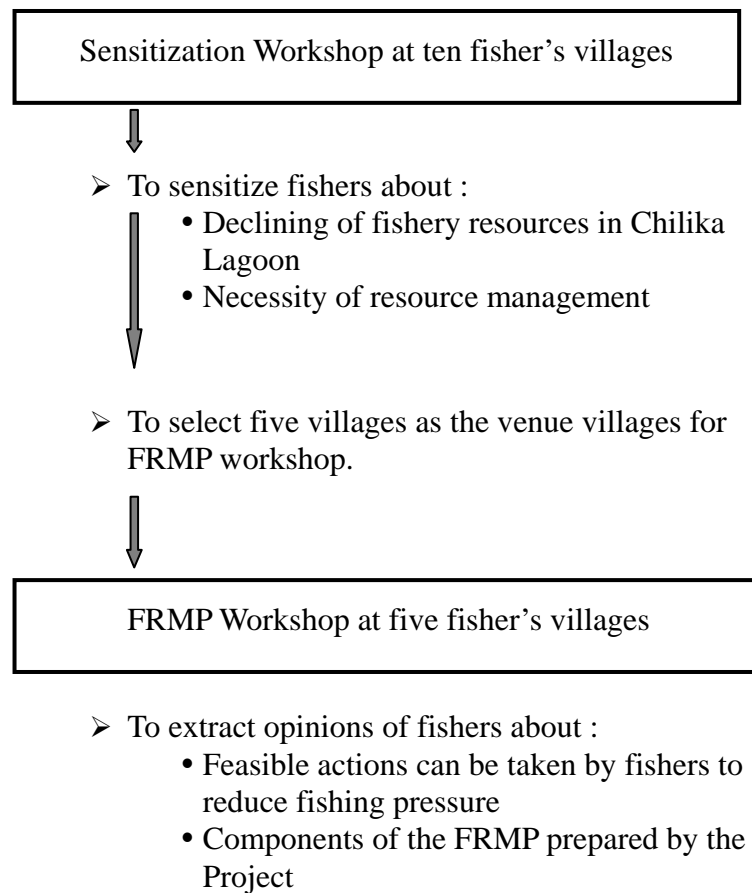
Objectives of workshops in each stage are as follows;

### 2.1 Sensitization Workshop

- To promote awareness on destructive fishing activities which cause depletion of fishery resources as well as their impact on the environmental aspect of Chilika Lagoon.
- To select 5 fisher villages as venue villages of the "FRMP Workshop" from 10 villages in the view of fisher's attitude for fishery resources management.

### 2.2 FRMP Workshop

- To extract fisher's opinion on resource management and to reflect the same for formulation of FRMP.



**Fig. 1 Flow of the Workshops**

### 3 Outline of Workshops

The workshops were designed and implemented from the following viewpoints.

First of all, fishers in and around Chilika do not have much information and knowledge about fishery resources in Chilika Lagoon. It is required to provide information from various viewpoints and for discussions with fishers in the Sensitization Workshop for facilitating deeper understanding of fishers about fishery resources in Chilika. Therefore, the Project assigned resource persons from several Department and Agencies to the workshops to have comprehensive discussions with fishers.

Secondly, the workshops were held on 5 to 10 villages scattered in remote area where communication infrastructure is not well developed. Therefore, it is required to engage person for each village for the preparatory works of the Workshops such as advance notice to the villagers, site management, etc. Due to limitation of CDA staffs, the Project assigned local NGOs which have working experience of the venue villages for preparation and facilitation of the workshops. Five local NGOs were selected for implementing the Sensitization Workshop, and three local NGOs were selected for implementing the FRMP Workshop.

Then CDA took overall responsible for planning and implementing the workshops, and evaluated results of workshops for reflecting fisher's opinions to the FRMP.

The roles of stakeholders aforementioned are as follows.

#### (1) JICA-CDA Project

- To design and implement the workshops
- To select venue villages for the Sensitization Workshop and the FRMP Workshop.
- To assign local NGOs which have working experience in the venue village to conduct the workshops
- To arrange resource persons for workshops
- To evaluate the results of workshops
- To extract fishers opinions for formulation of FRMP

#### (2) NGOs

- To inform the participants in advance about the workshops in the target villages
- To prepare the workshops including cultural programme (e.g. street play)
- To facilitate the workshops primarily in line with the agenda
- To draft a report for the result of discussion after the workshops

#### (3) Government officials as Resource persons

- To inform the fishers about various management points and to interpret different angle of issues in the Sensitization Workshop
- To give information to fishers about fishing regulations and its influence on the fishers, scheme of insurance facilities for fishers, and alternative livelihood options in the FRMP Workshop

## 4 Schedule

The workshops were held in line with following schedule.

**Table 1 Work Schedule of the Workshops**

Work items	2008									2009					
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct-Dec.	Jan	Feb	Mar	Apr	May	Jun	
1. Concept of the workshops is defined.	■														
2. Implementation plan of workshops are prepared.		■													
3. Sensitization Workshop															
1) NGOs for Sensitization Workshop are assigned.			■												
2) Orientation meeting of Sensitization Workshop for NGOs is held				■	■										
3) Preparation for the Sensitization Workshop (set up venue, invitation, etc) is done by NGOs.				■											
4) Sensitization Workshops are held with fishers.						■									
5) Evaluation of the Sensitization Workshop and selection of venue villages for FRMP Workshop are done.							■								
4. FRMP Workshop															
1) Implementation plan of FRMP Workshop is prepared.									■						
2) NGOs for FRMP Workshop are assigned.										■					
3) Orientation meeting of FRMP Workshop for NGOs is held.										■					
4) Preparation for the FRMP Workshop (set up venue, invitation, etc) is done by NGOs.										■		■			
5) FRMP Workshops are held with fishers.										■			■		
6) Evaluation and extracting fisher's opinion on FRMP are done.														■	

Workshop in each village was organized as one day program. After completion of Sensitization Workshop, five villages out of ten were selected for the FRMP Workshop program where found suitable in the Sensitization Workshop,.

Preparation works of workshops were done by NGOs under instruction of the Project. The Sensitization Workshop was prepared and held with the support of JICA expert, FRMP Workshop was held under initiative of CDA.

The “FRMP Workshop” in five villages was planned to hold in February 2009, but the workshops in three villages among five villages were postponed since any kinds of meeting in villages were prohibited during election period. Therefore, FRMP Workshops were held in February and May 2009.

## **5 Sensitization Workshop**

### **5.1 Target group and participants**

Fast of all, ten major fishers villages were selected as venue villages of the workshop.

Target group of the workshop was fishers and their wives from the selected venue villages, particularly Primary Fishery Cooperative Society (PFCS) members, Panchayat Raj representatives, Self Help Group (SHG) members, prominent citizens in the village, etc. Number of participants was about one hundred in total at each venue village.

Officials who attended the Sensitization Workshop were as follows;

#### **(1) JICA-CDA project staffs**

- Chief Executive, CDA
- Additional Chief Executive, CDA
- Scientific Officer, CDA
- Range Officer, CDA
- Project Coordinator/Natural Resource Management & Conservation, JICA

#### **(2) Resource Persons**

- Deputy Superintendent of Fishery, Fishery Department (Marine), Puri
- Additional Director of Fishery (B&T), Fishery Department, Balugaon
- Fishery Extension Officer, Fishery Department (Marine), Puri
- Tahasildar, Nuapada, Puri
- Assistant Conservator of Forest, Chilika Wildlife Division, Balugaon
- Range Officer, Chilika Wildlife Division, Satapada
- Forester, Chilika Wildlife, Brahmagiri
- State Director, World Wildlife Fund for Nature, Bhubaneswar
- Programme Officer, Centre for Environmental Studies, Bhubaneswar

### **5.2 Schedule of Sensitization Workshop**

The workshops were held at 10 villages listed below during the month of August in 2008.

**Table2 Schedule of the Sensitization Workshop**

No	Name of villages	Date of workshop	Venue	Number of participant	Resource Person
1	Brahmapura	4 <sup>th</sup> AUG, 2008	Brahmapura	60	<ul style="list-style-type: none"> <li>• Assistant Conservator of Forest, Chilika Wildlife Division, Balugaon</li> <li>• Range Officer, Chilika Wildlife Division, Satapada</li> </ul>
2	Sabulia & Ramba	5 <sup>th</sup> AUG, 2008	Sabulia	100	<ul style="list-style-type: none"> <li>• Fishery Extension Officer, Additional Director of Fishery (B&amp;T), Fishery Department, Balugaon</li> </ul>
3	Barakudi, Rasakudi & Khamluhan	7 <sup>th</sup> AUG, 2008	Barakudi	130	<ul style="list-style-type: none"> <li>• Programme Officer, Centre for Environmental Studies, Bhubaneswar</li> <li>• Fishery Extension Officer, Additional Director of Fishery (B&amp;T), Fishery Department, Balugaon</li> </ul>
4	Arakhakuda & Sanapatna	8 <sup>th</sup> AUG, 2008	Arakhakuda	130	<ul style="list-style-type: none"> <li>• Fishery Extension Officer, Additional Director of Fishery (B&amp;T), Fishery Department, Balugaon</li> <li>• Range Officer, Chilika Wildlife Division, Satapada</li> </ul>
5	Keshpur & Tentuliapada	11 <sup>th</sup> AUG, 2008	Keshpur	160	<ul style="list-style-type: none"> <li>• State Director, World Wildlife Fund for Nature, Bhubaneswar Fishery Extension Officer,</li> <li>• Additional Director of Fishery (B&amp;T), Fishery Department, Balugaon</li> </ul>
6	Sorana	16 <sup>th</sup> AUG, 2008	Sorana	150	<ul style="list-style-type: none"> <li>• Fishery Extension Officer, Additional Director of Fishery (B&amp;T), Fishery Department, Balugaon</li> </ul>
7	Baulabandha & Nairi	19 <sup>th</sup> AUG, 2008.	Baulabandha	240	<ul style="list-style-type: none"> <li>• State Director, World Wildlife Fund for Nature, Bhubaneswar</li> <li>• Fishery Extension Officer, Fishery Department (Marine), Puri Tahasildar, Nuapada</li> <li>• Fishery Extension Officer, Additional Director of Fishery (B&amp;T), Fishery Department, Balugaon</li> </ul>
8	Kumarpur	20 <sup>th</sup> AUG, 2008	Kumarpur	130	<ul style="list-style-type: none"> <li>• Programme Officer, Centre for Environmental Studies, Bhubaneswar</li> <li>• Fishery Extension Officer, Additional Director of Fishery (B&amp;T), Fishery Department, Balugaon</li> </ul>

No	Name of villages	Date of workshop	Venue	Number of participant	Resource Person
					<ul style="list-style-type: none"> <li>• Tahasilder, Nuapada</li> </ul>
9	Barakudi, Karimpur, Baghalanji	26 <sup>th</sup> AUG, 2008	Barakudi	100	<ul style="list-style-type: none"> <li>• Deputy Superintendent of Fishery, Fishery Department (Marine), Puri</li> <li>• Forestor, Chilika Wildlife, Brahmagiri</li> </ul>
10	Gabakunda, Mirzapur, Raipur & Parbatipur	27 <sup>th</sup> AUG, 2008	Gabakunda	70	<ul style="list-style-type: none"> <li>• Range Officer, Chilika Wildlife Division, Satapada</li> </ul>

### 5.3 Evaluation of Sensitization Workshop

Consciousness of the fishers about fishery resources management was relatively good in most of villages, and fishers can accept on necessity of regulatory measures to maintain the fishery resources in Chilika Lagoon.

In the Sensitization Workshop, higher awareness about the importance of fishery resources management was shown at Baulabanda and Kumarpur, and better participation was shown at Kumarpur and Arakakuda. In this viewpoint, these three villages were selected venue villages for the FRMP Workshop. In addition, Sorana and Khatiakudi were also selected as the venue villages from viewpoints of villager's attitude and fisher's knowledge about fisheries in Chilika Lagoon, etc. The villages which shown high dependence on government to maintain their lives were excluded from the villages for the FRMP Workshop (Refer to ANNEX1 for detail information).

Five villages namely Khatiakudi, Baulabandha, Arakakuda, Sorana, Kumarpur, were selected by the Project as venue villages of the FRMP Workshop from the viewpoints of villager's attitude and consciousness for fisheries resources management.

## **6 FRMP Workshop**

### **6.1 Target group and participants**

The FRMP Workshops were held with 80 to 130 fishers. The Project advised NGOs to invite person who could participate effectively and contribute to achieve the objective of the workshops. The important personalities of the village / villages like local peoples representatives (PRI members), representative of PFCS, village committee Chairman / Presidents, village level Government Officials, women SHG members, Mahila Samiti <sup>1</sup> members were also invited to the workshops.

NGOs organized village level meetings to explain objectives of the FRMP Workshop to participants in advance of the FRMP Workshop.

Only officers from Department of Fisheries and Revenue were invited as resource persons of the FRMP Workshop since the workshop aimed to extract fisher's opinions against resource management.

Officials who attended the FRMP Workshop were as follows;

#### **(1) JICA-CDA project staffs**

- Chief Executive, Chilika Development Authority
- Addl. Chief Executive, Chilika Development Authority
- Scientific Officer, Chilika Development Authority
- Range Officer, Chilika Development Authority
- Project Coordinator, JICA-CDA project
- Project Assistant, JICA-CDA project

#### **(2) Resource Persons**

- Asst. Director of Fisheries (B&T), Balugaon
- Deputy Superintendent of Fisheries, Balugaon
- Fisheries Extension Officer, Balugaon
- Revenue Inspector, Krushnaprasad

### **6.2 Schedule of FRMP Workshop**

The FRMP Workshop was proposed to be completed within March-2009. Accordingly a schedule for the workshops was drawn and the workshops started during February-2009. But due to unavoidable situation i.e. General Elections held during March-April, 3 nos. of workshops were held during May-2009. The date of workshops held in different villages is as follows.

**Table3      Schedule of the FRMP Workshop**

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1 A group of village women organized to work together

No	Name of villages	Date of workshop	Venue	Number of participant	Resource Person
1	Khatiakudi, Rasakudi & Khamuahan	13 <sup>th</sup> FEB, 2009	Khatiakudi	130	<ul style="list-style-type: none"> <li>• Fisheries Extension Officer, Balugaon</li> <li>• Revenue Inspector, Krushnaprasad</li> </ul>
2	Baulabandha & Nairi	20th FEB, 2009	Baulabandha	120	<ul style="list-style-type: none"> <li>• Asst. Director of Fisheries (B&amp;T), Balugaon</li> </ul>
3	Arakhakuda & Sanapatna	22th MAY, 2009	Arakhakuda	80	-
4	Sorana	27th MAY, 2009	Sorana	80	<ul style="list-style-type: none"> <li>• Deputy Superintendent of Fisheries, Balugaon</li> <li>• Fisheries Extension Officer, Balugaon</li> </ul>
5	Kumarpur	29th MAY, 2009	Kumarpur	90	-

### 6.3 Fisher's opinion for FRMP

Opinion of fishers about the FRMP were summarized in each category as follows. (Refer to ANNEX 2 and 3 for detail information)

#### (1) About Existing Fishing Regulations

- Fishers from all area around the lagoon admit that use of Alimi nets, zero nets, box nets etc. are not allowed in outer channel of Chilika. But use of these nets is more in outer channel than the other areas which prevents / obstructs migration of fish between sea and the lagoon.
- Fishers insist strict implementation / enforcement of the existing legal provisions of Orissa Marine Fisheries Regulation Act (OMFRA).
- Registration of fishing boats and regulation of motorized boats for fishing need to be strictly enforced by the Fisheries Department.
- For auto recruitment of juveniles and migration of fish from the Bay of Bengal to the lagoon, the sensitive areas such as outer channel, Magarmukh channel, Palur canal etc. should be prescribed as no fishing zone and use of any type of nets and Khanda in these areas needs to be strictly prohibited.
- For fishery resources improvement, ban of fishing activities for 3 to 4 months in a year i.e. during spawning period/ recruitment of juveniles, needs to be enforced. But it is suggested that government should provide proportionate compensation to the fishers who are affected by the ban of fishing.

## **(2) About Non-fishers and Lease Area**

- The increasing number of non-fishers, who are involved in illegal prawn culture (Ghery) and other fishing activities in the lagoon is a cause of concern for the fisher's community. Regulation for the entry of non-fishers and identification/registration of all local fishers with issue of identity cards can help to improve the situation.
- Lease areas of all fishers co-operatives need to be properly demarcated and the conflicts on fishing areas to be resolved amicably with regular inter-village and inter-cooperative societies meetings in presence of Govt. officials i.e. Officials from Fisheries, FISHFED and Assistant Registrar of Cooperative Societies (Chilika).

## **(3) About Ghery**

- Fishers from all sectors of the lagoon insist eviction of un-authorized encroachments for Ghery and restrictions on catching of the juveniles of economically important species.
- The shore line of Chilika Lagoon should be clearly demarcated and efforts should be done to make these areas free from Ghery with active participation of local fishers.
- Enforcement of eviction drives needs the involvement of representatives from local fisher's co-operatives, village committees, and PRI representatives with the constituted Task Force for the purpose.
- Illegal encroachments of shoreline do not only affect the livelihood of poor local fishers, but also affect adversely fish spawning and mullet fishery. The Task Force needs to be strengthened with local fishers and eviction drives should be done continuously through the year.

## **(4) About Alternative livelihood options instead of fishing**

- In the view of in-sufficient fish availability in the lagoon, alternate livelihood option need to be facilitated in all fishers villages. Value addition for fish catches needs to be effectively introduced / promoted with technical and financial support. The fisher's wives are interested in the activities to generate alternate incomes for the families.
- The existing women SHGs are eagerly waiting to start different Income Generating Activities (IGAs) through financial and technical support from Government.
- The viable IGAs suggested by the fishers/ fisher women are improvement of marketing linkages, provision of bank loan for fishing (boats, gears, nets etc.), dry fish marketing and other business such as diary, goat farming, poultry, vegetable marketing, grocery shops etc. in the villages. Making other business initiatives based on local availability of raw materials, tailoring, crab fattening, fish feed preparation, aquaculture in the village ponds etc. were also suggested.
- Capacity building of stakeholders, especially the fishers for alternate livelihood

options needs to be done with regular trainings, interactions, exposure visits etc.

**(5) Others**

- Fishing near Nalabana wildlife sanctuary is against the regulation, but some fishers need entry passes into the sanctuary areas for the shelter of their fishing boats in case of adverse weather conditions.
- For improvement of fishery resources, spread of Nalagrass (*Phragmites karka*) needs to be controlled in the northern sector of the lagoon.
- To reduce deposition of silt and flushing out of sediments in the Lagoon, some channels such as Magarmukh channels, outer channel and Palur canal need to be dredged and kept free from blockages such as fishing nets. The creeks in Parikud islands should be dredged to lead the fish migration and juveniles into Lagoon.
- Massive awareness programmes for the fishers, local NGOs, school children, village level Government functionaries and village women on the sustainable and wise use of natural resources of Chilika Lagoon needs to be implemented in a sustained manner. Environment Education Programme for school children with special references to Chilika eco-system should be continued to brain the young minds on conservation and cultural importance of Chilika Lagoon.
- Some area in Chilika Lagoon should be demarcated for spawning area of fish. Boat may be restricted for some months in the deeper area of Rambha for fish spawning.
- Some miscreants have stolen boat engine, nets and even boats of fishers while they are in fishing. So one Police Station should be established in Chilika to look after this problem.

## 7 Reflection of fisher's opinions to FRMP

Many fishers pointed out problems of illegal fishing activities in Chilika lagoon such as encroachment in prohibited areas and use of small mesh size nets. As the result, following opinions were extracted as opinions of fishers for fishery resources management in Chilika Lagoon.

### (1) Fishery resources management in Outer Channel

Disturbance of fish migration by excessive fishing activities in Outer channel is mentioned by many fishers. Although OMFRA prohibits fishing activities in outer channel for 7 months from July to January, fishers recommend restricting all fishing activities in outer channel for not 7 months but for 3 to 4 months in a year.

### (2) Fishery resources management in Palur Canal

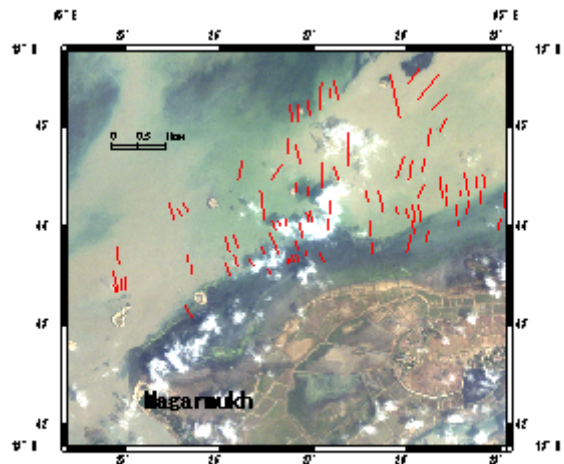
Palur canal is a canal which connects Chilika Lagoon to Bay of Bengal, but it is completely blocked by illegal fishing gear although any fishing is prohibited in the Palur canal by OMFRA. Fishers worried about disturbance of fish migration through Palur canal, and recommended to remove all fishing gears in Palur canal to ensure the fish migration between sea and lagoon.

### (3) Existing regulations

In addition to the opinions aforementioned, fishers pointed out about noncompliant of existing regulations and Acts. For take instance, although catching juveniles of Bhekti and Khainga under 150mm is prohibited in the notification of OMFRA, no fishers follow this notification and no officials monitor these illegal activities. Most of fishers understand the importance to protect juveniles of fish, prawn and crab. Therefore, fishers recommended to enforce existing regulations "OMFR Act" strictly.



Palur canal blocked by Khanda



Satellite imagery indicates congested Khanda (red lines in picture) around Magarmukh area

## **8 Recommendation for holding workshops**

The Project has experienced to have workshops in local villages to exchange opinions, ideas and suggestions with local villagers. This is very useful and meaningful to grasp and understand the minds of villagers for governmental officials. It is highly recommended to continue to have this kind of workshops constantly for renewing the fisheries resources management and introducing the scheme of alternative livelihood activities to fisher's villages around Chilika lagoon.

Based on the experience of the workshops, the Project recommends followings for holding workshops more smoothly and effectively.

### **(1) Capability of NGO**

The local NGOs are very helpful to mobilize the villagers for the workshops and making other logistic arrangements. However, some of the NGOs couldn't involve the participants effectively in discussions such as failure to conclude different opinions of several fishers in one particular issue, discussing one issue for long time, unfairness to distribute chances to participants to speak, etc.,. These things indicate lack of experience on facilitations. Therefore, capacity building of the NGOs is required to make them realize their role as a facilitator to have more interactive and fruitful workshop. For the purpose, orientation training of the NGOs for the objectives of the workshop and the expected outcome needs to be organized in advance. The local NGOs should be carefully selected based on their organizational capability and availability of manpower.

### **(2) Season**

The workshops are designed to be held in the village level. The availability of infrastructure to hold the workshops in the village is always a problem. So holding the workshops in rainy season is ruled out. And also summer season is not suitable due to high temperature. So the best season for holding the workshops is winter or spring i.e. from October to March.

### **(3) Venue**

In most of the places/ villages, workshops are held in village school campus for which it becomes difficult to arrange the workshops on working days. It is proposed to hold the workshops at the open places preferably in an isolate area away from habitation such as cyclone shelter centre, village community centers and local temple campus etc. so that villagers can concentrate on the workshop.

### **(4) Number of participants**

In the Sensitization Workshops, more than 100 numbers of fishers from the village were invited to participate in the discussion. It was observed that effective communication with reference to coming to a definite conclusion on any issue, was very time consuming; and the views of individuals / groups were very divulge in nature. The workshops in the village should be held with 50 numbers of villagers for efficient discussions.

# ANNEX



# ANNEX 1. Evaluation Matrix of Sensitization Workshop

Sector	Village	Workshop Date	Opinions from villagers on fishery resource management	Interaction by Resource Person	Facilitation by NGOs	Participativeness of villagers
Northern sector	Sorana Block: Chilika District: Khurda	16 <sup>th</sup> Aug, 2008	<ul style="list-style-type: none"> <li>It is better for all using traditional fishing method since everyone can catch some amount of fish.</li> <li>If new fishers with new equipment, fishers will protest against them.</li> <li>Fishers will support the ban or restriction by the government, the winter season when all wild birds coming to Chilika would be a good time for the fishing ban. However, we suggest simultaneously some alternative programmes in this period to sustain their livelihood.</li> <li>The government should create income generating programmes, so that fishers are not necessary to go outside for labours.</li> <li>Wild grass from Bhusandapur to Sorana should be cleared away.</li> <li>Fishers are never killing wild birds, but poachers who should be punished by law.</li> <li>Important channels should be protected throughout the year, so that fish come into the lagoon regularly.</li> <li>Zero nets should not be used at the new mouth and channels, and those companies who are producing the net should be closed.</li> <li>Gherys should be demolished, but the demolition is not done properly. Thus the power to control it should be given to the PFCS.</li> <li>More bird sanctuary areas have been reducing the fishing areas.</li> <li>Motorized boats should be controlled.</li> </ul>	<p><b>FEO, ADF (B&amp;T), Fishery Dept., Balugaon</b></p> <ul style="list-style-type: none"> <li>Fishery resources are reduced due to using of zero nets, killing of juveniles, constructing Gherys for prawn culture, using of pesticides at close land areas, and fishing operation by a large number of motorized boats.</li> <li>Fishers should obey the OMFRA. And boat licenses should also be kept and sub-leasing for the Ghery prawn culture should be stopped. Those local problems should be solved by strengthening of village committee.</li> </ul> <p><b>Scientific Officer, CDA</b></p> <ul style="list-style-type: none"> <li>It is important to enhance their knowledge on fishing activities among students and community in Chilika conservation process. He stressed on not to use zero nets in fishing activities and removal of Nala grass (Phragmites karka) in Chilika and also propose a single administration unit instead of several departments.</li> <li>He stressed on the alternative livelihood projects which are necessary to reduce fishing pressure on Chilika.</li> <li>At this point of time stakeholders awareness is necessary to stop all the hazardous uses in Chilika.</li> </ul>	<ul style="list-style-type: none"> <li>Workshop preparation and organising is well done.</li> <li>Facilitation was proceeded along with the agenda and brought necessary discussion timely.</li> <li>The NGO staffs ask villagers for their participation time to time, which motivate their concentration to the workshop.</li> </ul>	<ul style="list-style-type: none"> <li>Villagers are quite keeping their concentration and positive attention to hear those interactions delivered by JICA-CDA project side as well as by resource persons.</li> <li>Most of the villagers remain till the end of the programme.</li> <li>Villagers have well responses to issues which were raised by the resource persons as well as JICA-CDA project.</li> </ul>
	Facilitating NGO	Appx nos. participants				
	WORD (Woman Organisation of Rural Development)	150 Male: 120 Female: 30		<p><u>Evaluation:</u> Consciousness of the fishers about fishery resources management is relatively good, and fishers also have given their acceptance on necessity of regulatory measures to maintain the fishery resources in Chilika. However, when holding further discussion in the village in future, it is important to involve the issue on alternative source of livelihood options which can be suggested for the village.</p>	<p><u>Evaluation:</u> FEO: It was notable that he explained the banned activities in Chilika with illustrating the current law in Chilika. However, general issues in Chilika were spelt out only, so that further discussion will be expected by narrowing down to the specific issues, thus more detail can be discussed with fishers.</p>	<p><u>Evaluation:</u> It was well organised in overall. Necessary facilitation was given by the NGO so that the meeting could built a fruitful discussion during the workshop.</p>

Sector	Village	Workshop Date	Opinions from villagers on fishery resource management	Interaction by Resource Person	Facilitation by NGOs	Participativeness of villagers
Northern sector	Barakudi (& Karimpur, Baghalanji)	26 <sup>th</sup> Aug, 2009	<ul style="list-style-type: none"> <li>• If outside people who have modern fishing equipment and try to exploit resources in Chilika come to our area, we will protest them to catch fish by such new equipment.</li> <li>• Regulation on new equipment should be started.</li> <li>• We should not go for juvenile fishing, so that fish population will be increased and everyone will get share.</li> <li>• Different from marine fishery resources, Chilika has limited number of resources, thus we should protect juvenile fishes.</li> <li>• We want to request alternative livelihood sources. If those are provided to us, we will not depend on Chilika.</li> <li>• Although we are not interested in catching small fish, we catch them and sell in little price due to lack of big fish in Chilika.</li> <li>• We will not catch mother fish, and are ready to support the government for conservation of Chilika fishery resources.</li> <li>• We should be informed about available governmental scheme timely to get the opportunity for support.</li> <li>• More awareness programmes are necessary to build up proper information.</li> </ul>	<p><b>DSF, Fishery Dept. (Marine), Puri</b></p> <ul style="list-style-type: none"> <li>• There are some supporting schemes for marine fisheries, such as subsidy for nets, diesel and motorized engines, etc.</li> <li>• Large mesh size nets should be used for catching big fishes. The small fishes should be released in the lagoon when they are caught by the nets.</li> <li>• PFCS should be formed and act properly to conserve the fish resources in Chilika.</li> </ul> <p><b>Forester, Chilika Wildlife, Brahmagiri</b></p> <ul style="list-style-type: none"> <li>• Plantation programmes carried out in the catchments of the lagoon. Due to deforestation the silt is now deposited in the mouth of river and Chilika which has reduced the water carrying capacity of lagoon, as a result the fish resource has reduced.</li> <li>• Migratory birds should be protected since the birds have considerable correlation with fishery resources. Any poacher should be handed over to the authority and be punished.</li> <li>• Juveniles catch has reduced the fish resources. They should be protected and allowed to grow to become adult.</li> </ul> <p><b>Scientific Officer, CDA</b></p> <ul style="list-style-type: none"> <li>• He advised not to use zero nets and to spread this message to all villages depending upon Chilika. He also emphasised that removal of silt deposition at mouth area will increase the fish resource. It is important not to catch brood fishes which lay millions of eggs. He expressed the importance to ban Gherys which reduce fishing grounds and fishers not to sub-lease their fishery areas to outsiders. JICA-CDA project looks for increasing the fishing resources.</li> <li>• It was his suggestions for dry fish units to function. The experience of livelihood project activities of JICA-CDA project was shared such as duckery, goatery, grocery, tent house, vegetable vending. JICA-CDA project empowers the women through SHG's for which we should not be limited to fishing only.</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop preparation particularly venue setting was not enough, which resulted in attracting less attention by the villagers.</li> <li>• The facilitator summarises every end of the speech and discussion.</li> </ul>	<ul style="list-style-type: none"> <li>• Most of the villagers came to workshop in delay which creates less concentration for the workshop.</li> <li>• Only limited villagers joined for the discussion, and not much response from the other villagers expressed.</li> </ul>
	Block: Bramahagiri					
		District: Puri				
	Facilitating NGO					
	The PEOPLE	100 Male: 50 Female: 50	<p><u>Evaluation:</u> Consciousness of the fishers about fishery resources management is relatively good, and fishers also have given their acceptance on necessity of regulatory measures to maintain the fishery resources in Chilika. However, discussion tended to become requesting their demand for livelihood option and available governmental support, particularly from women SHG members.</p>	<p><u>Evaluation:</u> <b>DSF:</b> Overall issues of fishery resources in Chilika were expressed. The governmental scheme has explained in the discussion, however, the supporting scheme is for marine fishing activities. Thus the applicability to the fisheries in Chilika will be separate issue and requires further discussion. <b>Forester:</b> He explained issues within the area in general. If further discussion requires the wildlife protection by the fishers, then variable suggestion will be expected from the Forester.</p>	<p><u>Evaluation:</u> It was well organised in overall. Necessary facilitation was given by the NGO so that the meeting could built a fruitful discussion during the workshop.</p>	<p><u>Evaluation:</u> Participation by the villagers is satisfactory in general. However, the role of facilitator is quite necessary since the villager often express their general demand for village development.</p>

Sector	Village	Workshop Date	Opinions from villagers on fishery resource management	Interaction by Resource Person	Facilitation by NGOs	Participativeness of villagers
<b>Central sector (West coast)</b>	<b>Baulabandha (&amp; Nairi)</b>	Aug. 19	<ul style="list-style-type: none"> <li>Small fishes should not be caught, and bigger size nets should be used.</li> <li>Use of zero nets should be banned, and the government should also ban on zero net producing companies.</li> <li>Mouths should not be obstructed.</li> <li>A large area is covered by prawn Gherys, but those should be destroyed. The government should implement strong bill and regulation to control the Gherys.</li> <li>Adverse impacts on resources due to lack of awareness.</li> <li>Juveniles which are caught at the mouth areas should also be released in our areas.</li> </ul>	<p><b>State Director, WWF</b></p> <ul style="list-style-type: none"> <li>Fishers are facing problems in Chilika. Fishers are also a part of the problems, and who are able to solve these issues.</li> <li>Due to the population increase, fishery resources are decreased. Fishery resources should not be completely depleted, but be maintained for the next generation.</li> <li>It is important to find alternative income sources for fishers and wives by forming SHGs.</li> </ul> <p><b>FEO, ADF (B&amp;T), Fishery Dept., Balugaon</b></p> <ul style="list-style-type: none"> <li>Prawn, fish juveniles are caught by pull stick and push stick by fishers' children. Catching of those juveniles will affect fishery resource in Chilika.</li> <li>The government already banned the use of zero nets, but people are still using them. Do not catch juveniles from outside of canal, and do not catch small size fish from the lagoon.</li> <li>Crab juveniles are often not utilized and just discarded. Numbers of crabs are also decreasing from the lagoon.</li> <li>All fishers should use country boats and keep boat licenses.</li> <li>Non-fishers are responsible for the Ghery, but they do not know how to fish. Fishers should teach them how to engage in proper way of fishing.</li> </ul> <p><b>Range Officer, CDA</b></p> <ul style="list-style-type: none"> <li>He elaborated the different types of fishes, species and over population in this area and stressed not to use zero nets and gill nets as well as motorized boats.</li> <li>He also stressed on alternative income sources besides fishing activities.</li> <li>He explained that deposition of silt will result in losing its area, illegal Gherys and poaching birds should be banned. We should try to avoid chasing of boats towards dolphins.</li> </ul> <p><b>Project Coordinator/Environmental Awareness, JICA</b></p> <ul style="list-style-type: none"> <li>Under JICA-CDA project, fishery resource survey of specific economic species is undertaken for recognizing resource condition of Chilika. At the time of concluding the project, there will be a proposal of fishery resources management plan, which is also basing on the result of survey.</li> <li>However, any laws and regulations by the government will not work solely, but the understanding and co-working with fishers is vital for sustainable use of resources since fishers are the first party who concerns the resource management. It is a valuable opportunity for us to have interaction during the workshop, and then receive any opinions and suggestions from fisher's side.</li> </ul>	<ul style="list-style-type: none"> <li>Workshop preparation and organizing is well done.</li> <li>Facilitation was preceded along with the agenda and brought necessary discussion timely.</li> <li>The NGO staffs ask villagers for their participation time to time, which motivate their concentration to the workshop.</li> </ul>	<ul style="list-style-type: none"> <li>A considerable number of villagers remained attended till the end of the workshop and joined to the discussion on the resource management, although the some of the villagers left after street play and speech from resource persons.</li> <li>Ex-Sarpanch addressed to the villagers to follow rules and regulations to save livelihood in Chilika.</li> </ul>
	Block: Chilika District: Khurda		<ul style="list-style-type: none"> <li>Weed from Bhusandapur to Sorana should be cleared, and channels of those areas should be dredged.</li> <li>Fishing can be banned two months (November and February) for increase of fish resources.</li> <li>By clearing the channel, migration routes for juveniles from the sea should be protected for two month.</li> <li>Restriction in numbers of boats can be carried out by giving power to control to PFCS; such as 2 to 3 motorized boats should be allowed per one PFCS.</li> </ul>			
		Facilitating NGO	Appx nos. participants	<p><u>Evaluation:</u> Consciousness of the fishers about the resources is relatively high in the village. Fishers recognise major general impacts caused by using of zero nets, blockage of the mouth etc. around Chilika. It is worth noting that they identify the pattern of fishery resources, and basing on the knowledge they propose the fishing ban for specific period. There is another proposal such as regulation of motorized boat number. However, for the further discussion it will be necessary for its feasibility as well as the capability by PFCS.</p>	<p><u>Evaluation:</u> <b>WWF:</b> The interaction could not go beyond general discussion of issues in Chilika, although it was effective in giving some motivation to the community for the issue in some extent. <b>FEO:</b> It was notable that he explained the banned activities in Chilika with illustrating the current practices which is breaching the regulation. Further discussion will be expected by narrowing down to the specific issues so that more detail can be discussed with fishers.</p>	<p><u>Evaluation:</u> It was well organised in overall. Necessary facilitation was given by the NGO so that the meeting could build a fruitful discussion during the workshop.</p>
	NJNS (Nabajagarana Narisangathan)	240 Male: 150 Female: 90				

Sector	Village	Workshop Date	Opinions from villagers on fishery resource management	Interaction by Resource Person	Facilitation by NGOs	Participativeness of villagers	
<b>Central sector (East coast)</b>	<b>Khatiakudi</b> (& Raskudi Khalamuhan)	7 <sup>th</sup> Aug, 2008	<ul style="list-style-type: none"> <li>It is better for all if we engage in traditional fisheries, which is more sustainable than catching fishes by the introduction of modern tools and equipments.</li> <li>Modern equipment also catches small juveniles.</li> <li>Non-fishers introducing new equipments and creating unbearable situation.</li> <li>Fishing activities by non-fishers should be strictly prohibited.</li> <li>Important channels are dried up by natural process, and only two channels, namely Ganjam and Morada are partly functioning only in rainy season.</li> <li>Lifestyle in Chilika becomes poor from time to time due to the entrance of non-fishers and their prawn culture system.</li> <li>New channels to the Bay of Bengal should be made by the Government.</li> <li>The net fishing (Khanda) in the deep Chilika by motorized boats should be controlled with rule and regulations by the state government.</li> <li>Zero nets should be banned by the government.</li> <li>Penalty for banned activities should be executed.</li> <li>We, traditional fishers will follow the instruction and regulation by the government.</li> <li>Fishing activities should be restricted in shore line only, not in the deep Chilika.</li> <li>Revenue authority does not control illegal Gherys effectively. It should be enforced very strictly.</li> </ul>	<p><b>Programme Officer, Centre for Environmental Studies</b></p> <ul style="list-style-type: none"> <li>Factories are affecting directly in the ecological system of Chilika lagoon.</li> <li>We all should work together to conserve the ecological balance in Chilika.</li> </ul> <p><b>FEO, ADF (B&amp;T), Fishery Dept., Balugaon</b></p> <ul style="list-style-type: none"> <li>Most critical issue is the non-fishers evolving into the Chilika.</li> <li>There is violation of regulation such as, using zero nets, collecting of Pili 'Muhan Munha', and using vast number of motor boat without licences.</li> </ul> <p><b>Tahasildar, Nuapada</b></p> <ul style="list-style-type: none"> <li>It is important to concentrate on and review your own fishing activities. You may be using zero nets which impact on the resources in Chilika.</li> <li>Lease given to fishers should be utilised amongst fishers. It should be given to the fishers permanently or long-term period basis.</li> <li>Unauthorised person or groups and Ghery should be prohibited from Chilika.</li> </ul> <p><b>Range Officer, CDA</b></p> <ul style="list-style-type: none"> <li>Chilika will be narrowed lake like a pond in future if remedial actions are not taken against it. So all of us should initiate steps to control siltation by planting trees. As regards encroachment of unauthorised Gherys, villagers should not cooperate or work under the mafias who are taking Gherys.</li> <li>Regarding fish catching, some principle should be carried out by fishers not to catch fish spawn and undertake alternative income generating activities. So that pressure in Chilika will be reduced.</li> </ul>	<ul style="list-style-type: none"> <li>Workshop preparation and organising is well done.</li> <li>The street play done by this NGO along with the target issue was highly remarkable to catch the attention to the issue.</li> </ul>	<ul style="list-style-type: none"> <li>Villagers are quite keeping their concentration and positive attention to hear those interactions delivered by JICA-CDA project side as well as by resource persons, and most of the villagers remain till the end of the programme.</li> <li>Villagers have well responses to issues which were raised by the resource persons as well as JICA-CDA project.</li> </ul>	
	Facilitating NGO	Appx nos. participants					
	NPSS (Netra Pitula Sisu Sangathan)	130 Male: 70 Female: 60	<p><u>Evaluation</u></p> <p>Consciousness of the fishers about fishery resources management is relatively good, and fishers also have given their acceptance on necessity of regulatory measures to maintain the fishery resources in Chilika. However, they expressed solid opposition for current practices by non-fishers, thus the discussion on resource management tends to go into complains against those fishers and their prawn culture activities.</p>	<p><u>Evaluation:</u></p> <p><b>CES:</b> The interaction did not go beyond general discussion of issues in Chilika, and some topics are not directly related to the fishery resource management and conservation which should be stressed in the workshop.</p> <p><b>FEO:</b> It was notable that critical issues in the area between fishers and non-fishers were narrated in the speech and banned activities was also highlighted and again explained in the discussion.</p> <p><b>Tahasildar:</b> The regulatory measure to control Ghery culture could be highlighted in the interaction, permanent solution should be clearly spelt out. However current practices and general issues between fishers and non-fishers was explained only.</p>	<p><u>Evaluation:</u></p> <p>It was well organised in overall. However, facilitation part was not satisfactorily carried out. Facilitation ability of the workshop can not be evaluated since the facilitation followed by agenda was carried out by person from outside.</p>	<p><u>Evaluation:</u></p> <p>Participation by the villagers is satisfactory in general. However, the role of facilitator will be very important in the workshop for the active discussion by the fishers.</p>	

Sector	Village	Workshop Date	Opinions from villagers on fishery resource management	Interaction by Resource Person	Facilitation by NGOs	Participativeness of villagers
Southern sector	Keshpur, (& Tentulipada)	11 <sup>th</sup> Aug. 2008	<ul style="list-style-type: none"> <li>Rich people use modern fishing equipment, but we are only using traditional ones.</li> <li>Palur canal is closed, and juveniles are depleted.</li> <li>All fish resource are decreased due to over population.</li> <li>We request the support for SHG activities.</li> <li>Chilika is our food storage, and we learned in the workshop that we will not catch fish and fish juveniles by using zero nets.</li> <li>We should investigate our own village for prohibiting illegal Gherys, but prawn Ghery mafias are motivating our fishers with some support.</li> </ul>	<p><b>State Director, WWF</b></p> <ul style="list-style-type: none"> <li>To know problem around you is the most important step for its solution. If you identify your own problem, the half of problem is already solved.</li> <li>We first protect Chilika Lagoon and its natural resources.</li> </ul> <p><b>FEO, ADF (B&amp;T), Fishery Dept., Balugaon</b></p> <ul style="list-style-type: none"> <li>Due to lack of fish resources, most of fishers are now poorly living. They are unable to maintain their family because they are completely unaware about Chilika habitats and its environment.</li> <li>Awareness workshops should be opened in every village in and around Chilika so that the livelihood pattern of fishers will be changed in a better way.</li> <li>Over population in and around Chilika has led to the lost of the fauna and flora. If any other income generating programmes for fishers, it will support for maintaining their family.</li> </ul> <p><b>Scientific Officer, CDA</b></p> <ul style="list-style-type: none"> <li>He explained the types of fishes and species and the number of dependant families as well as express not to use gill nets &amp; blue net in mouth area and Magarmukh for which juvenile of fishes got space for their growth. He advised fishers not to make prawn Gherys in their fishing areas</li> <li>If mother fishes will not be caught, fishery resource will be increased.</li> <li>He stressed on alternate source of income for which they are less dependent on Chilika. The blockage in Palur canal should be removed.</li> <li>Regarding environment awareness, all should be aware of Chilika habitat.</li> </ul>	<ul style="list-style-type: none"> <li>Due to the lack of communication and discussion with the villagers at the preparation stage, it was very difficult to keep the discussion in proper way throughout the workshop.</li> <li>The NGO also could not explain the objectives clearly to the participants in the opening of the workshop.</li> </ul>	<ul style="list-style-type: none"> <li>The most of the villagers left during the workshops.</li> <li>The reason of the less attention by them would be that they mostly attended for the workshop in order to request support for SHGs or any programmes in the village.</li> </ul>
	Facilitating NGO	Appx nos. participants				
	NJNS (Nabajagarana Narisangathan)	160 Male: 90 Female: 70	<p><u>Evaluation:</u> Although the fishers explain their knowledge on major issues in Chilika, strong and potential dependency on the government was expressed at large level. Discussion and opinion about resource management mostly concluded in their requests for support to SHGs for village development.</p>	<p><u>Evaluation:</u> <b>WWF:</b> The interaction could not go beyond general discussion of issues in Chilika, although it was effective in giving some motivation to the community for the issue in some extent. <b>FEO:</b> Area specific issues could be highlighted more in the speech. The discussion was mostly about necessity of livelihood improvement and resources conservation in general.</p>	<p><u>Evaluation:</u> The facilitation by the NGO was weak in the workshop. The villagers could not be motivated to contribute to the discussion for resource management.</p>	<p><u>Evaluation:</u> Participation and understanding for the workshop was very low. Most of the villagers seemed to attend the workshop for requesting support from the government.</p>

Sector	Village	Workshop Date	Opinions from villagers on fishery resource management	Interaction by Resource Person	Facilitation by NGOs	Participativeness of villagers
Southern sector	Sabulia, (& Rambha)	5 <sup>th</sup> Aug. 2008	<ul style="list-style-type: none"> <li>It is not possible to maintain our family due to decreasing of fish resource in Chilika lagoon.</li> <li>FISHFED had given lease in specific fishing area such as Jharajana, Kudakuni, and fish are caught by traditionally technique such as Tatabdad and bamboo making infrastructure. However now all fishers are catching by blue nets.</li> <li>Most PFCS are taken lease from FISHFED and giving sub-lease to mafia for their family maintenance, which is not sufficient for fisher's families. Thus, we will not give sub-lease to mafia for illegal prawn Gherys.</li> <li>The Palur Canal Protection Committee, Rambha, Sabulia, Palur and Kumarpur attempted to protect the juvenile catch from canal side, however it ended in failure. If the action by state government or taskforce initiate against this issue, the livelihood of fishers and biodiversity of Chilika will be protected.</li> </ul>	<p><b>FEO, ADF (B&amp;T), Fishery Dept., Balugaon</b></p> <ul style="list-style-type: none"> <li>Most of fishers entered in Chilika without boat licence for catching the fish.</li> <li>Fishers have taken lease from the government and are giving sub-lease to Ghery owners. The illegal Ghery owners are covered in and around the Chilika lagoon which cause pollution and decrease of the fish resources.</li> <li>Fishers should attempt not to catch juveniles in mouth side, not to use motorized boats, not to make illegal Gherys in Chilika Lagoon, and not to throw any wastage material, polythene, broken pots and glass items to the Lagoon.</li> <li>Fisher should have non-fishing operation days so that the life pattern of fish resources in the lagoon will be changed towards proper condition.</li> </ul> <p><b>Scientific Officer, CDA</b></p> <ul style="list-style-type: none"> <li>He explained the destructive fishing activities like juveniles catching in the mouth side and Palur canal, use of motorized boat, illegal Gherys in spawning place of fish and prawns, and biodiversities of different species in Chilika lagoon.</li> <li>He also explained the silt deposition and illegal blockage of Palur canal.</li> <li>The brackish water and estuarine should be maintained for the growth of fish and prawn, and illegal prawn Gherys should be eradicated.</li> </ul>	<ul style="list-style-type: none"> <li>Workshop preparation and organising is relatively well.</li> <li>Facilitation and proceeding by the NGO was not so sufficient, so there was some difficulties in discussion in the workshop.</li> </ul>	<ul style="list-style-type: none"> <li>Villagers were mostly participative but majority of the participants was from fisher's wives.</li> <li>There was some noise disturbance by other villagers within the village, so that the workshop often affected by the sound.</li> </ul>
	Block: Khalikote					
		Facilitating NGO	Appx nos. participants	<ul style="list-style-type: none"> <li>Companies which are manufacturing zero nets and gill nets should be banned for their production.</li> <li>It is requested for fishers not to catch small fish, not to catch prawn and fish juveniles, and not to use motorized boats for fishing.</li> <li>We should continue to use traditional fishing equipment for protecting fish resources in Chilika.</li> <li>Many of fishers have to labour out side to maintain the livelihood. Any support for livelihood improvement should be necessary.</li> </ul>		
	NJNS (Nabajagarana Narisangathan)	100 Male: 40 Female: 60	<p><u>Evaluation:</u> Consciousness of the fishers about fishery resources management is relatively good, and fishers derived some idea what should be done for better resource condition of Chilika. However, when holding further discussion in the village in future, it is important to involve the issue on alternative source of livelihood options which can be suggested for the village.</p>	<p><u>Evaluation:</u> <b>FEO:</b> Although the speech was covered on fishery resources and current condition of Chilika, the discussion was limited on general issues. More details by the view of the Fishery department could be suggested.</p>	<p><u>Evaluation:</u> The preparation of the workshop was well in overall. However, the facilitation by the NGO was weak in the workshop, so that the villagers could not be motivated in a large extent.</p>	<p><u>Evaluation:</u> Participativeness by the villager is good. However, discussion on the fishery resource management was done by limited part of the villagers.</p>

Sector	Village	Workshop Date	Opinions from villagers on fishery resource management	Interaction by Resource Person	Facilitation by NGOs	Participativeness of villagers
Southern sector	Kumarpur	20 <sup>th</sup> Aug 2008	<ul style="list-style-type: none"> <li>Although the fish catch is not so enough, we try to keep our traditional fishing method, so that fish resources can be sustained to the future generation.</li> <li>Modern fishing methods can catch juvenile fish also, and deplete the resources at any time, therefore we may catch fish in limited number of fish but with proper way, so that fish resource can be utilised for long time.</li> <li>We have not been getting sufficient fish from the lagoon because our self unconsciousness such as setting illegal Gherys and using motorized boats.</li> <li>Rambha, Paluru, Kumarpur and Patnasi which named Sahaba union will unite for protection of Palur Canal and eradicate gill nets and zero nets from the canal.</li> <li>Samalanasi to birds' island area in Ramba bay should be protected for breeding and nourish grounds.</li> <li>Fishes generally breed and also juveniles are found during rainy season, thus fishing should be banned from July to September to allow those juveniles to grow up to adult.</li> <li>Palur canal should be dredged deeply and not be obstructed, especially by Tatta Khanda so that migration of fish, prawn and crab juveniles come into the lagoon.</li> <li>Prawn seed collection in Palur canal and its estuary mouth should be banned. The seed collection of <i>penaeus monodon</i> kills juveniles of those species such as <i>penaeus indicus</i> and other fish and crabs.</li> </ul>	<p><b>Programme Officer, Centre for Environmental Studies</b></p> <ul style="list-style-type: none"> <li>Irrawadi dolphins in Chilika attract tourists, however polythene bags used by fishers and tourists are affecting their lives since they are eating it as jelly fish by mistake.</li> <li>We have to understand and decide what to behave, and have to abide by the government rules and regulations such as not blocking the Palur canal, not setting long khanda net.</li> <li>In order to keep fish resources in Chilika, fish spawning areas should not be disturbed, and illegal Gherys be banned.</li> </ul> <p><b>FEO, ADF (B&amp;T), Fishery Dept., Balugaon</b></p> <ul style="list-style-type: none"> <li>Fishers are not abiding the OMFRA and they do not possess the boat licenses.</li> <li>Long Khanda should not be set in the lagoon and country boats should be used for fishing activities.</li> <li>Do not sub-lease the areas to non-fishers for Gherys which create siltation in and around Chilika.</li> </ul> <p><b>Tahasildar, Nuapada</b></p> <ul style="list-style-type: none"> <li>Fishers are taking lease from FISHFED, and giving sub-lease to prawn culture mafias. It creates very difficult problem for fishers, and the sub-leasing for illegal Gherys should be stopped in the lagoon.</li> </ul> <p><b>Scientific Officer, CDA</b></p> <ul style="list-style-type: none"> <li>He stressed on not to catch small fishes, not to make illegal Gherys, and not to block Palur canal side for which fish juveniles enter into Chilika from sea. Opening of new mouth indicates more fish entering in the lagoon.</li> <li>It was his suggestion to provide alternative source of income of livelihood for fishers.</li> <li>He explained the biodiversity of Chilika lagoon with different types of fishes, species, crabs, and prawns and the people present around it. He stressed that fishers should come forward to restore the fishery resources of the Lagoon.</li> </ul>	<ul style="list-style-type: none"> <li>Workshop preparation and organising is well done except for sound system arrangement, which is crucial for workshops with a large number of participants.</li> <li>Facilitator proceeded along with the agenda and brought necessary discussion timely.</li> </ul>	<ul style="list-style-type: none"> <li>Villagers are quite keeping their concentration and positive attention to hear those interactions delivered by JICA-CDA project side as well as by resource persons.</li> </ul>
	Block: Krushnaprasad District: Puri					
	NJNS Nabajagarana Narisangathan	130 Male: 50 Female: 80	<p><u>Evaluation:</u> Consciousness and knowledge of the fishers about the resources is found to be quite high in the village. Fishers recognise major general impacts caused by using of zero nets, blockage of the mouth etc. around Chilika. It is worth noting that they identify the general breeding pattern of fishery resources, and basing on that, they are proposing necessary fishing restriction for specific period.</p>	<p><u>Evaluation:</u> <b>CES:</b> General discussion of issues in Chilika was made, and some topics are not directly related to the fishery resource management and conservation which should be stressed in the workshop. <b>FEO:</b> It was notable that the ongoing fishery regulation act was cited in the interaction and explained banned activities in the discussion. <b>Tahasildar:</b> The regulatory measure to control Ghery culture should be highlighted in the interaction, however current practices between fishers and non-fishers was explained only.</p>	<p><u>Evaluation:</u> It was well organised in overall. Necessary facilitation was given by the NGO so that the meeting could build a fruitful discussion during the workshop.</p>	<p><u>Evaluation:</u> Participation by the villagers is satisfactory. It was notable that some of fishers were quite knowledgeable about resources in Chilika and giving active discussion during the workshop.</p>

Sector	Village	Workshop Date	Opinions from villagers on fishery resource management	Interaction by Resource Person	Facilitation by NGOs	Participativeness of villagers
Outer Channel sector	Brahmapura	Aug. 4 2009	<ul style="list-style-type: none"> <li>Some fishers are taking maximum fish, so it is necessary to protest those fishers.</li> <li>If we have only traditional fishing equipment, we have no other choices but just use our own method.</li> <li>Some fishers have lost their livelihood and migrated as labour to other states. The alternative livelihood programmes are requested to the government.</li> <li>Fishers requested support for free nets and boats as well as construction of roads, latrines, dustbins, vocational training and tourist rest house.</li> </ul>	<p><b>ACF, Chilika Wildlife Division</b></p> <ul style="list-style-type: none"> <li>Birds from all around the globe come to the Chilika and they have been poached by local people which are an offence against the law.</li> <li>Tourist café should be planned to construct and maintained by the village committee. The village committee should come forward to develop eco-tourism in the area.</li> </ul> <p><b>Range Officer, Chilika Wildlife Division, Satapada</b></p> <ul style="list-style-type: none"> <li>People should have pro-tourist attitude so that we can attract large number of tourists to Chilika, presently tourist is the key source of livelihood and we should maintain the temperament.</li> <li>Bad effects of juvenile catch with lots of example. In this area the destructive fisheries is commonly visibly here which is not a healthy signs for our livelihood.</li> <li>Bad effects of using sophisticated nets, night fishing. The important channel should be free for 100 meters wide as non-fishing zone.</li> </ul> <p><b>Chief Executive, CDA</b></p> <ul style="list-style-type: none"> <li>He expressed the necessity of the exchange program for students through organised talk on natural resources.</li> <li>He emphasized on the interest for initiating actions of people participation and cooperation.</li> <li>Regarding alternative source of income, he concerned on different livelihood programs for women and youth, particularly people in this area should be given a chance to work for eco-tourism.</li> </ul>	<ul style="list-style-type: none"> <li>The facilitator could not organise the workshop with preliminarily requested more than 100 numbers of participants. Facilitation and proceeding by the NGO was also not sufficient.</li> </ul>	<ul style="list-style-type: none"> <li>Villagers were mostly participative but majority of the participants was from fisher's wives.</li> <li>There was some noise disturbance by other villagers within the village, so that the workshop often affected by the sound.</li> </ul>
	Block: Krushnaprasad					
	Researchers	60 Male: 50 Female: 10	<p><u>Evaluation:</u> Consciousness of the fishers about fishery resources management is relatively good, and fishers derived some idea what should be done for better resource condition of Chilika. However, when holding further discussion in the village in future, it is important to involve the issue on alternative source of livelihood options which can be suggested for the village.</p>	<p><u>Evaluation:</u> <b>FEO:</b> Although the speech was covered on fishery resources and current condition of Chilika, the discussion was limited on general issues. More details by the view of the Fishery department could be suggested.</p>	<p><u>Evaluation:</u> The preparation of the workshop was well in overall. However, the facilitation by the NGO was weak in the workshop, so that the villagers could not be motivated in a large extent.</p>	<p><u>Evaluation:</u> Participativeness by the villager is good. However, discussion on the fishery resource management was done by limited part of the villagers.</p>

Sector	Village	Workshop Date	Opinions from villagers on fishery resource management	Interaction by Resource Person	Facilitation by NGOs	Participativeness of villagers
<b>Outer Channel sector</b>	<b>Gabhakunda</b> (& Mizarpur, Raipur, Palodipur)	27 <sup>th</sup> Aug, 2008	<ul style="list-style-type: none"> <li>• Due to the opening of the new natural sea mouth, our nets, boats are not safely kept.</li> <li>• The support for livelihood improvement, jetty construction and saline embankment are requested.</li> <li>• As for the alternative livelihood options, eco-tourism can be suggested.</li> <li>• The main contribution for increasing fishery resources in Chilika is the restriction of catching juvenile and mother fish.</li> <li>• The migration routes for juveniles should be clear by not obstructing them by using zero nets.</li> <li>• Commercial trawler boats are destroying fishery resources as well as polluting the area with the oil on the surface.</li> </ul>	<b>Range Officer, Chilika Wildlife Division, Satapada</b> <ul style="list-style-type: none"> <li>• It is not a good option for villagers to sub-lease the area for non-fishers, since limited person share the most part of profit.</li> <li>• Juveniles catch in the mouth and important channels by using of zero nets will decrease the volume of fish population in Chilika.</li> <li>• Ecosystem including the existence of sea turtles, residential and migratory wild birds in this area have a considerable correlation with fisheries, thus they should be protected in order to develop the fishery resources.</li> </ul> <b>Scientific Officer, CDA</b> <ul style="list-style-type: none"> <li>• He explained the fishery resource conservation and management through scientific system of fishing. Per capita income is decreased due to more boats in Chilika.</li> <li>• He focussed on how fishing pressure would be reduced through alternate income generation through goatery, duckery, petty business and focus on women empowerment.</li> <li>• He advised not to block mouth areas which are the eco sensitive areas. Alimi and Box nets should not be used in Chilika mouth.</li> </ul>	<ul style="list-style-type: none"> <li>• The facilitator could not organise the workshop with preliminarily requested 100 number of participants.</li> <li>• There found less presence during the workshop by the NGO.</li> </ul>	<ul style="list-style-type: none"> <li>• There were limited number of villagers but most of them remained till the end of the workshop.</li> <li>• The villagers were calm and not so active to participate the discussion during the workshop.</li> </ul>
	Facilitating NGO	Appx nos. participants				
	Researchers	70 Male: 50 Female: 20		<u>Evaluation:</u> Consciousness of the fishers about fishery resources management is moderate. However, it was observed in the workshop that the fishers tended to bring the issue of opening of new natural sea mouth, and to request the governmental support due to the environmental change in the area.	<u>Evaluation:</u> <b>RO:</b> He explained the overall issues found within his jurisdiction. If further discussion requires the wildlife protection by the fishers, then variable suggestion will be expected from the DFO.	<u>Evaluation:</u> Organising of the workshop was not satisfactory. Facilitation ability of the NGO can not be evaluated fully since the facilitation was jointly carried out with nearby NGO.

Sector	Village	Workshop Date	Opinions from villagers on fishery resource management	Interaction by Resource Person	Facilitation by NGOs	Participativeness of villagers
Outer Channel sector	Arakakuda (& Sanapatna)	8 <sup>th</sup> Aug 2009	<ul style="list-style-type: none"> <li>Fishers will cooperate each other by the initiative of PFCS for sustainable resource utilisation.</li> <li>Traditional way of catching fishes is more sustainable than catching fishes by the introduction of modern tools and equipment.</li> <li>The introduction of modern tools and equipment would be responsible to kill all sizes of fishes with in very short span of time.</li> <li>Fishers will get united and go for fishing together, accumulate the catch and distribute it amongst the villagers in a cooperative process.</li> <li>The villagers support the ban or restriction of fishing activities for one or two month during the breeding time since it is beneficial to them, but they suggested simultaneously some alternative programmes in this period to sustain their livelihood.</li> </ul>	<p><b>FEO, Fishery Dept. (Marine), Puri</b></p> <ul style="list-style-type: none"> <li>We use to exploiting the resource resulted deterioration of the resource.</li> <li>The situation of the Chilika lagoon has reached in such a deteriorated condition, which is no more capable to feed our increasing population.</li> <li>There are some supporting schemes for marine fisheries, such as subsidy for nets, diesel and motorized engines, etc.</li> <li>The Fishery Department will take further course of action in materialising for alleviation of poverty. Some of the training programs being conducted by the department.</li> </ul> <p><b>Range Officer, Chilika Wildlife Division, Satapada</b></p> <ul style="list-style-type: none"> <li>The human beings are largely responsible for all these environmental degradation.</li> <li>C Instead of putting pressure on the lake for our livelihoods, we must find out alternative livelihood options suitable to our soil, climate and available resources.</li> </ul> <p><b>Scientific Officer, CDA</b></p> <ul style="list-style-type: none"> <li>We do not have any control over nature, so we have to cope up with situation and changes being made time to time and shifting of mouth from one place to another place.</li> <li>Regarding fishery resource, he emphasised on wise use of natural resources otherwise we will face disasters in future.</li> <li>He stressed on not to catch brood fishes especially mullets those are going to sea for breeding. The Alimi nets and Box nets used by the fishers in new mouth should be strictly prohibited.</li> </ul>	<ul style="list-style-type: none"> <li>Workshop preparation and organising is well done.</li> <li>The facilitator summarises every end of the speech and discussion.</li> </ul>	<ul style="list-style-type: none"> <li>Villagers are quite keeping their concentration and positive attention to hear those interactions delivered by JICA-CDA project side as well as by resource persons.</li> <li>Most of the villagers remain till the end of the programme.</li> <li>Villagers control within themselves not to create any disturbances during the workshop.</li> <li>Leadership by the village Sarpanch is high for uniting the concentration and motivation amongst villagers during the workshop.</li> </ul>
	Block: Krushnaprasad					
	District: Puri	The PEOPLE	130 Male: 60 Female: 70	<p><u>Evaluation:</u> Consciousness of the fishers about fishery resources management is relatively good, and fishers also have given their acceptance on necessity of regulatory measures to maintain the fishery resources in Chilika. However, when holding further discussion in the village in future, it is important to involve the issue on alternative source of livelihood options which can be suggested for the village.</p>	<p><u>Evaluation:</u> <b>FEO:</b> Overall issues of fishery resources in Chilika were expressed. The governmental scheme has explained in the discussion, however, the supporting scheme is for marine fishing activities. Thus the applicability to the fisheries in Chilika will be separate issue and requires further discussion. <b>RO:</b> It was notable that he explained the issues found within his jurisdiction. If discussion on alternative livelihood options take place particularly tourism development by the area, variable suggestion would be expected from the DFO.</p>	<p><u>Evaluation:</u> It was very well organised in overall. Necessary facilitation was given by the NGO so that the meeting could build a fruitful discussion during the workshop. It is worth noting that the facilitator summarised time to time on every discussion points, which gave the villagers further understanding of the discussion.</p>

## ANNEX 2. Evaluation Matrix of workshop in each village for Fishery

Sector	Village	Workshop Date	Opinions from villagers on fishery resource management	Interaction by Resource Person	Facilitation by NGOs	Participation of villagers	
Northern sector	Sorana Block: Chilika District: Khurda	27 <sup>th</sup> May, 2009	<ul style="list-style-type: none"> <li>Silt deposition and Nalagrass (Phragmites karka) propagation encroach on fishing area. It is disturbing fishing activities as our livelihood. It needs to be controlled in this area.</li> <li>In order to avoid silt deposition, dredging of Palur canal and demolition of Gherys in Magarmukh area should be done.</li> <li>Rules and regulations should be strictly implemented in Magarmukh area and Palur canal.</li> <li>Ban on the use of Alimi net and zero net in Magarmukh area and other sensitive areas should be enforced.</li> <li>Fishers should be included in the operation of Ghery demolition.</li> <li>The catching of juveniles and wasting the juveniles should be banned.</li> <li>For the growth of fishery resources, 3 to 4 months fishing ban is acceptable but alternate livelihood options should be provided to fishers during ban period.</li> <li>Shore line of Chilika should be demarcated clearly to avoid Ghery construction in the lagoon.</li> <li>Special administrative arrangement with Police Station in Chilika to control Gherys in the lagoon is necessary.</li> <li>Fishers should visit other lakes to gain knowledge.</li> </ul>	<p><b>DSF,FEO (B&amp;T), Fishery Dept., Balugaon</b></p> <ul style="list-style-type: none"> <li>Chilika lagoon should be managed under one department with judicial and magistrate powers for proper enforcement of legal provisions.</li> <li>Persons involved in illegal fishing and giving areas on sub-lease illegally to outsiders for Ghery should be penalized.</li> </ul> <p><b>Additional Chief Executive, CDA</b></p> <ul style="list-style-type: none"> <li>CDA is working for improvement of lake eco-system and socio economic development of the surrounding areas in coordination with the govt. departments like Fishery Department, Forest Department, Revenue Department and Wildlife Department and NGOs &amp; local people but is not the enforcement agency.</li> <li>There are a number of loopholes in the drive for Ghery demolition for which the real culprits are being escaped and only the labour class people taken to task.</li> <li>Desilting activities in Chilika are being handled by CDA in technical assistance from IIT Chennai. The objective of such programme is to maintain the saline gradient of the lagoon.</li> <li>Control of Nalagrass (Phragmites karka) at Kalupadaghat and Rahanbilli areas has been started on experiment basis and it would be continued in other affected areas.</li> <li>A Fishery Resource Management Plan (FRMP) is being prepared for Chilika in consultation with fishery officials, fishery experts from India and Japan, suggestions of fishers, representatives of PFCS's &amp; Unions and the policy planners of the state.</li> </ul> <p><b>Scientific Officer, CDA</b></p> <ul style="list-style-type: none"> <li>Fishing pressure is high due to decrease in area of Chilika lagoon and increase of population.</li> <li>Japanese Scientists have come to Chilika for research and survey of fishery resources,</li> <li>Juveniles should not be caught and they can grow to bigger sizes if allowed to grow for some time. Most of the fish come to Chilika from the sea for breeding and feeding.</li> <li>Environmental awareness among the people of Chilika is essential.</li> <li>Due to blocking of the mouth and Palur canal, entry of fish to the Lagoon is restricted, so these areas should be protected (without any blockage) for fishery resources development in Chilika Lagoon.</li> </ul>	<ul style="list-style-type: none"> <li>Workshop preparation is good and organizing is well done</li> <li>Facilitation and proceedings by NGO were sufficient but some disturbance and arguments observed among the participants in the workshop.</li> </ul>	<ul style="list-style-type: none"> <li>Most of the villagers were positive towards discussion and the majority of the participants were from fisher community.</li> <li>There was some disturbance among the villagers during discussion.</li> <li>Villagers realized the difficulties around Chilika and expressed positive efforts in the discussion.</li> <li>Most of the villagers remain till the end of the programme.</li> </ul>	
	Facilitating NGO	Approx nos. participants					
	WORD (Woman Organization of Rural Development)	80 Male: 60 Female: 20		<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>Consciousness among fishers on the existing fishing regulations is very good, but the regulations are not practically followed in practice.</li> </ul>	<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>The officials mainly stressed on the existing legal provision and its implementation.</li> <li>It was opined that awareness among fishers is essential for fishery resource development by all resource persons.</li> </ul>	<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>Performance of the NGO in facilitating the workshop is very good.</li> </ul>	<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>There is awareness among villagers and fishers are more vocal in raising their demands.</li> </ul>

Sector	Village	Workshop Date	Opinions from villagers on fishery resource management	Interaction by Resource Person	Facilitation by NGOs	Participation of villagers
<b>Central sector (West coast)</b>	<b>Baulabandha (&amp; Nairi)</b> Block: Chilika District: Khurda	20 <sup>th</sup> Feb, 2009	<ul style="list-style-type: none"> <li>• Non-fishers from other areas are entering into Chilika forcefully and catching fish, it is necessary to stop them.</li> <li>• Fishers agree not to use Alimi and Zero net around mouth and near mouth area for fish to come into Chilika from sea.</li> <li>• Fishers suggested to have a ban on fishing in November and also suggested to demolish Gherys around mouth area for fish migration to Chilika.</li> <li>• Enforcement of regulations which is targeting prawn mafias should be strengthened to stop illegal fishing and encroachment for prawn culture.</li> <li>• It is necessary that the authority enforce a ban on the use of motorized boats during night hours and control the number of motorized boats.</li> <li>• Fisher's wives requested to make some arrangement for alternate source of income because they have difficulties to run their family.</li> <li>• Central Society used to regulate / control lease of fishing areas in earlier time in a better manner. Accordingly similar system should be reintroduces in spite of FISHFED.</li> </ul>	<p><b>Assistant Director Fishery, Balugaon</b></p> <ul style="list-style-type: none"> <li>• Don't use Zero nets and small fishes, crabs and prawns should grow to bigger size.</li> <li>• Don't block the mouth, fish needs secured migratory routes between ocean and Chilika Lagoon.</li> <li>• If fishers obey the rules and regulations, they would not face difficulty for their livelihood.</li> <li>• The license of the boat is compulsory and it must be renewed every year. All should register their fishing boats within March – 2009.</li> <li>• Insurance facilities under "Janashree Bima Yojana" and low cost housing scheme under NWFF for fishers are in operation, and fishers should take advantage of the programmes.</li> <li>• Fishers should start alternate livelihood options including fishing such as business activities on dry fish marketing under hygienic condition, making prawn Pampad, diary etc. to reduce the fishing pressure in Chilika</li> </ul> <p><b>Additional Chief Executive, CDA</b></p> <ul style="list-style-type: none"> <li>• Use of Alimi nets / Zero nets, box nets etc. in Chilika are banned and are being enforced by Fishery Department under the provisions of OMFR Act.</li> <li>• Suggestions of fishers, i.e. the stakeholders of Chilika, are necessary to formulate the plan for sustainable fishery in Chilika.</li> <li>• Illegal entry of non-fishers in to Chilika for fishing is not justified in the interest of fishers and should be restricted as per the provisions of law.</li> <li>• 70% of fish in Chilika are migratory in nature i.e. from sea to Chilika and their migration should be ensured by removing the blockages on their route.</li> <li>• Small fishes i.e. juveniles of crabs and prawns should not be caught and be allowed to grow to bigger in size.</li> <li>• Removal of blockages and ban on fishing around mouth area &amp; Palur canal should be strictly enforced for fishery resource development of Chilika.</li> <li>• Income generating activities other than fishery are presently operating in four pilot villages around Chilika and if found successful the same can be replicated in other villages.</li> </ul>	<ul style="list-style-type: none"> <li>• Arrangement of meeting by the NGO is satisfactory.</li> <li>• Facilitation done in accordance of the agenda.</li> <li>• Motivation by NGO to participate in the workshop is appreciated.</li> </ul>	<ul style="list-style-type: none"> <li>• A considerable number of villagers attended the workshop till the end and participated in the discussions on resource management of Chilika.</li> <li>• All villagers are in agreement to follow the rules and regulations to save livelihood in Chilika and in favour of stringent punishments for violation of rules.</li> </ul>
	Facilitating NGO	Approx nos. participants				
	NJNS (Nabajagarana Narisangathan)	120 Male: 70 Female: 50	<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>• Fishers are not against fishing regulations in Chilika, but opposing the non-fishers and illegal prawn culture in Chilika.</li> </ul>	<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>• Officials stressed on existing legal provision acquired regulations for fishing resource development.</li> </ul>	<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>• Facilitation of workshop and motivating people to participate by the NGO is very good.</li> </ul>	<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>• Villagers are more respective and positive in their approach.</li> </ul>

Sector	Village	Workshop Date	Opinions from villagers on fishery resource management	Interaction by Resource Person	Facilitation by NGOs	Participativeness of villagers
<b>Central sector (East coast)</b>	<b>Khatiakudi</b> (& Raskudi Khamuhaman)  Block:  Krushnaprasad  District: Puri	13 <sup>th</sup> Feb, 2009	<ul style="list-style-type: none"> <li>Fishers should obey the rules and regulations for the development of fishery resources in Chilika.</li> <li>Fishers are against the Gherys which makes a lot of problems in their life. Eviction of Gherys should be done in permanent manner.</li> <li>Fish cannot be seen in shallow water area due to disturbance of Gherys,</li> <li>Fishers have to go to deep water area and sometimes are hit by storm or strong wind. This is a life risk factor for them.</li> <li>It is difficult to maintain the family in this condition and expect any kind of alternate source of income generation activity promoted by the government.</li> </ul>	<b>FEO (B&amp;T), Fishery Dept., Balugaon</b> <ul style="list-style-type: none"> <li>The rules and regulations as per the provisions of OMFR Act, such as ban on the use of zero net and Alimi net is not followed by the fishers in Chilika.</li> <li>Fishers should not allow the construction of Gherys in Chilika.</li> <li>Licensing of boats in Chilika lagoon is compulsory and all fishers are advised to register their boats to avail the advantages as per existing rules for claiming the compensations.</li> <li>Identity Card for each fisher will be issued very shortly.</li> <li>Fishers are catching and almost damaging the juveniles of fishes, prawns and crabs and not giving chance to grow to bigger size which affects the fishery resource in Chilika.</li> <li>There is life insurance scheme such as Janashree Bima Yojana which the fishers can enroll themselves</li> </ul> <b>RI, Krushna Prasad</b> <ul style="list-style-type: none"> <li>Fishers compelled to sub-lease the fishing area to influential persons for Ghery construction due to their poor economical condition.</li> <li>Persons / mafia engaged in illegal construction of Gherys should be punished in accordance to the legal provisions.</li> <li>It is observed that some fishers cooperate to non-fishers for illegal encroachment of Gherys.</li> <li>It has been observed that due to lack of leadership, fishers are not united and in many cases they do not cooperate to the enforcement authorities for demolition of Gherys.</li> </ul>	<ul style="list-style-type: none"> <li>Workshop preparation and organizing of meeting was well done.</li> <li>The inauguration of workshop and cultural programme by the NGO is appreciated to draw attention of villagers.</li> <li>Facilitation by NGO on agenda of discussion was very good.</li> <li>NGO motivated the villagers to participate in the discussions.</li> </ul>	<ul style="list-style-type: none"> <li>All the Villagers took active part in the workshop and gave a patient hearing to the proceedings and speeches by the resource persons.</li> <li>Most of the villagers remained till the end of the programme.</li> <li>Villagers responded well to the burning issues raised by the resource persons.</li> <li>Most of the women in the village took part in the discussion.</li> </ul>
	Facilitating NGO	Approx nos. participants		<b>Scientific Officer, CDA</b> <ul style="list-style-type: none"> <li>Reduction of fishery resources is due to catching of small fishes, crabs, and prawns and fishers should allow them to grow bigger size.</li> <li>Ban on the use of Box net and other nets for catching small fishes should be implemented and there should be some self imposed regulations on fishing by the fishers like "Ekadashi" and any other specific day of the month.</li> <li>Fishers have to avoid fishing near Nalabana area as the mother fishes come to this area for spawning.</li> <li>Alternate source of income can reduce the fishing pressure.</li> </ul>		
	NPSS (Netra Pitula Sisu Sangathan)	130 Male: 80 Female: 50	<u>Evaluation</u> <ul style="list-style-type: none"> <li>Fishers are very keen to follow regulations.</li> <li>At the same time they are concerned for illegal Gherys and its effect on the shoreline.</li> </ul>	<u>Evaluation:</u> <ul style="list-style-type: none"> <li>Shared on the existing rules and regulations for fishery resource development.</li> <li>Awareness among fishers about the advantages of fishing regulation is more essential.</li> <li>Fishery resource development can only be possible with people's participation and effective implementation of plans and schemes.</li> </ul>	<u>Evaluation:</u> <ul style="list-style-type: none"> <li>Facilitation by NGO was very good.</li> <li>Mobilization of fishers for the workshop is very good.</li> </ul>	<u>Evaluation:</u> <ul style="list-style-type: none"> <li>Villagers are positive in approach.</li> <li>Participation and understanding was excellent.</li> </ul>

## Southern sector

Sector	Village	Workshop Date	Opinions from villagers on fishery resource management	Interaction by Resource Person	Facilitation by NGOs	Participativeness of villagers
Southern sector	Kumarapur Block: Krushnaprasad District: Puri	29 <sup>th</sup> May, 2009	<ul style="list-style-type: none"> <li>• Due to illegal encroachments for Gherys, fish production decreased in Chilika and fishers used to go outside as bonded labourers.</li> <li>• Enforcement of the rules and regulations must be strictly implemented by the Government.</li> <li>• Restriction on the movement of motorized boat and cleaning the Palur canal should be done throughout the year.</li> <li>• Non-fishers activities in the lagoon and the leasing problems for fishery among the nearby villages should be the point of concern and should be solved.</li> <li>• Saving-cum-relief scheme should be implemented for fishers during the period of fishing ban for 3 to 4 months.</li> <li>• Training of fishers for alternate livelihood activities such as dry fish marketing, grocery and other activities should be implemented by govt.</li> </ul>	<p><b>Scientific Officer, CDA</b></p> <ul style="list-style-type: none"> <li>• Blockages in Magarmukh area and Palur canal should be removed and all illegal encroachments should be demolished.</li> <li>• It is important to protect the fish spawning areas and prawns near Rambha</li> <li>• As the fishery resource is the most important resource in the lagoon, it must be conserved by not catching mothers and juveniles of fishes, prawns and crabs.</li> <li>• Alternative source of livelihood like dry fish marketing, grocery and goat farming can reduce the fishing pressure in the lagoon</li> <li>• Fishers are the real stake holders for Fishery Resource Management Plan.</li> <li>• Assistant Director Fishery, Balugaon</li> <li>• The rise in population and fall in fishing area and production of fish is the main cause of concern for Chilika.</li> <li>• As per the provisions of law (OMFERA), there should be no use of Khanda or nets in the migratory routes throughout the year.</li> <li>• Ban on the use of Alimi net and Zero nets near the mouth which kills juveniles should be strictly implemented.</li> <li>• Don't catch mother fishes and let them come to lagoon and there is ban on fishing in Nalabana area because it is the spawning ground for fish.</li> <li>• Registration of each boat and issue of identity Card to each fisher are compulsory in Chilika as per the existing rules.</li> <li>• Besides fishing, alternate livelihood for the fishers should be undertaken such as dry fish making in hygienic condition, Prawn Pampad making, goat farming, diary and agriculture.</li> <li>• Fishers should be aware of insurance schemes available for fishers and the schemes like low cost housing, saving-cum-relief etc. meant for fishers.</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop preparation and organizing is well done.</li> <li>• There was less attendance of male members in this workshop.</li> <li>• Facilitator proceeded along with the agenda and insisted the participants to take part in discussions from time to time.</li> </ul>	<ul style="list-style-type: none"> <li>• Villagers are quite keeping their concentration to hear those proceedings of the workshop.</li> <li>• People are very responsive to the discussions on enforcement of law.</li> <li>• SHG's groups of the village requested necessary input and training on alternate livelihood options.</li> </ul>
	Facilitating NGO	Approx nos. participants	<ul style="list-style-type: none"> <li>• Blockages of migratory routes lead less fish production and should be removed.</li> <li>• Demarcation of fishing area and patrolling in the lagoon should be done.</li> </ul>	<p><b>Additional Chief Executive, CDA</b></p> <ul style="list-style-type: none"> <li>• CDA is constantly monitoring the water quality, hydrological &amp; biological parameters, dolphins, birds, sea weeds, and other environmental factors of Chilika for its sustainable management.</li> <li>• Shore line of Chilika is the main spawning ground of fishes and construction of Gherys obstruct the mother fish to move to shallow area for spawning.</li> <li>• There should be strict enforcement of existing legal provisions, but at the same time the fishers should also follow the regulations in the interest of fishery resources in the lagoon.</li> <li>• There should be timely ban on fishing for some months and restriction of mesh size, length of Khanda, blockage around mouth and Magarmukh etc. for fishery resources management</li> <li>• Fishers should start alternate livelihood activities especially by the village youths women SHGs to reduce fishing pressure.</li> </ul>		
	NJNS (Nabajagarana Narisangathan)	90 Male: 50 Female: 40	<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>• Fishers are very conscious about the rules and regulations.</li> <li>• They realize the effect of blockages of migratory routes on Chilika fishery.</li> <li>• Are more concerned about demarcating lease area of fishing.</li> </ul>	<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>• Shared on the existing rules and regulations for fishery resource development.</li> <li>• Awareness among fishers about the advantages of fishing regulation is more essential.</li> <li>• Fishery resource development can only be possible with people's participation and effective implementation of plans and schemes.</li> </ul>	<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>• Facilitation by NGO is very good</li> </ul>	<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>• Participation of village women is better than men folk.</li> <li>• Attendance of women is also better.</li> </ul>

Sector	Village	Workshop Date	Opinions from villagers on fishery resource management	Interaction by Resource Person	Facilitation by NGOs	Participation of villagers	
<b>Outer Channel sector</b>	Arakakuda (& Sanapatna) Block: Krushnaprasad District: Puri	22 <sup>nd</sup> May, 2009	<ul style="list-style-type: none"> <li>Ban on the use of Alimi net, Zero net and Benti net in Chilika lagoon should be implemented throughout the year.</li> <li>Restriction on the catch of juveniles and mother fishes should be enforced in the mouth area.</li> <li>There should be restrictions on the movement of big boats (trawlers) inside and along the mouth area.</li> <li>Awareness and knowledge to start alternate livelihood are necessary for fishers, and SHG's should be encouraged to continue dry fish marketing, plantation, diary, poultry, and goat farming and grocery activities.</li> <li>Registration of boats and Identity cards should be made compulsory by Fisheries Department for all fishers to recognize fisher and non-fisher.</li> <li>Leased areas for fishing should be demarcated and managed properly for utilization by fishers.</li> <li>Due to lack of awareness fishers are not taking the benefits of govt. schemes.</li> <li>To resolve inter and intra village conflicts, there should be meetings with villagers to discuss sharing mechanism, fishing rights and market links etc.</li> <li>The middle men in the process of marketing of fish should be gone away.</li> <li>Supply of juveniles to outside market i.e. outside states should be banned.</li> <li>The juveniles of Bhekki and crab caught in the mouth should be released into the lagoon.</li> </ul>	<p><b>Scientific Officer, CDA</b></p> <ul style="list-style-type: none"> <li>Fishing pressure has been increased in Chilika Lagoon due to a rise of fisher's population and encroachment for Gherys in the lagoon.</li> <li>Destruction of Prawn Gherys in the migratory routes area is very essential.</li> <li>Regulation of mesh size of the nets for fishing is important to save the juveniles from being caught and killed.</li> <li>Length of Khanda nets should not be longer than prescribed.</li> <li>It is important not to catch juveniles and let them grow bigger.</li> <li>Ban on the use of Alimi net in mouth area and removal of blockages in Magarmukh area should be enforced for fishery development.</li> <li>It is necessary to demarcate migratory routes with pillars and any kind of blockage should be cleared in the routes of migration.</li> <li>A saving-cum-relief scheme should be applied to fishers for fishing ban for 2 months.</li> </ul> <p><b>Additional Chief Executive, CDA</b></p> <ul style="list-style-type: none"> <li>There are fishing regulations as per the provisions of OMFR Act, but the enforcements and punitive actions have not been laid out in detail for which implementation of act is not visible.</li> <li>It is possible to implement saving-cum-relief scheme during fishing ban period and replicate alternate livelihood activities in this village which are being implemented in other village under pilot project.</li> <li>CDA in technical collaboration with JICA is planning to formulate a fishery resources management plan for Chilika Lagoon and the people living around.</li> <li>In the interest of fishery resource development in Chilika, demolition of illegal prawn culture (Ghery) is badly needed.</li> </ul>	<ul style="list-style-type: none"> <li>Workshop preparation was good and well organized.</li> <li>The NGO facilitated the discussions with explanation of the points raised by the resource persons from time to time</li> <li>The facilitator insisted the villagers to take part in the discussion</li> </ul>	<ul style="list-style-type: none"> <li>Villagers are mostly participative and majority of the participants were fishers community.</li> <li>Fishers were attentive to participate in the interactions.</li> <li>Most of the villagers attended the workshop till the end of the programme.</li> <li>Leadership by the village Sarapanch is highly appreciated which was the motivating factor for the villagers.</li> </ul>	
	Facilitating NGO	Approx nos. participants					
	The PEOPLE	80 Male: 64 Female: 16		<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>Fishers are aware about the fishing regulations in Chilika but taking pleas to defy.</li> <li>Intra-village conflicts is a cause of concern</li> <li>Advocate alternate livelihood option for fishers.</li> </ul>	<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>Stressed on fishing regulation for fishing resource development.</li> <li>Emphasized to take advantage of existing Government programme, intended for fishers and sea fishing.</li> <li>Sought for people's participation for enforcement of fishing regulations.</li> </ul>	<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>Workshop were well organized and facilitated by the Ngo</li> </ul>	<p><u>Evaluation:</u></p> <ul style="list-style-type: none"> <li>Fishers are more keen to know the Govt. programme.</li> <li>Participation by villagers was good.</li> </ul>

### ANNEX 3. Fisher's Opinions by Theme

Village Sector	Common Opinions in all village				Individual Opinions
	About Existing Fishing Regulations	About Non-fishers and Lease Area	About Ghery	About Alternative Livelihood options	
<b>Sorana</b>  - Northern Sector	<ul style="list-style-type: none"> <li>Rules and regulations should be strictly implemented in Magarmukh area and Palur canal.</li> <li>Ban on the use of Alimi net and Zero net in Magarmukh area and Chilika mouth to be strictly enforced.</li> <li>Excavation of Palur Canal to be done by Government for migration of fish.</li> <li>The lease areas of all PFCSs are to be clearly demarcated.</li> </ul>		<ul style="list-style-type: none"> <li>PFCS member/ Fishers should be involved in the operation of Ghery demolition.</li> <li>Shore line of Chilika Lagoon should be demarcated clearly by the embankment or other methods, so it can avoid Ghery construction in the lagoon.</li> <li>Special provision of Administration and Police Station to control Ghery in the lagoon is necessary.</li> </ul>	<ul style="list-style-type: none"> <li>Fishers agree for 3 to 4 months fishing ban for the growth of fishery resources but alternate livelihood options should be provided to fishers during ban period at least @ Rs.3000/- family.</li> </ul>	<ul style="list-style-type: none"> <li>Silt deposition and Nalagrass (Phramites karka) propagation encroach on fishing areas in the lagoon. These should be controlled effectively.</li> <li>In order to avoid silt deposition, dredging of Palur canal and clearing Gherys in Magarmukh area should be done.</li> <li>Fishers should visit to other lakes to gain knowledge.</li> </ul>
<b>Baulabandha</b>  - Central Sector  (West Coast)	<ul style="list-style-type: none"> <li>Fishers agree not to use Alimi and Zero net around mouth area for migration of fish into Chilika from sea.</li> <li>Demolition of prawn culture (Gherys) and ban on fishing in November around mouth area for fish migration entering into Chilika is suggested.</li> <li>It is necessary that the authority should enforce a ban on the use of motorized boats during night hours and regulate the number of motorized boats.</li> </ul>	<ul style="list-style-type: none"> <li>Non-fishers entered into Chilika forcefully and catch all fish, it is necessary to stop them.</li> </ul>	<ul style="list-style-type: none"> <li>Enforcement of regulations targeting prawn mafias should be strengthened to stop illegal fishing and prawn culture in the lagoon</li> </ul>	<ul style="list-style-type: none"> <li>Fisher's wives requested to make some arrangement for alternate source of income.</li> <li>There is scope for development of tourism in the area, which should be promoted.</li> </ul>	<ul style="list-style-type: none"> <li>The system of regulation of lease area to be done through the Central Society, as was done in earlier times in spite of FISHFED.</li> </ul>
<b>Khatiakudi</b>  - Central Sector  (East Coast)	<ul style="list-style-type: none"> <li>Fishers should obey the rules and regulations for the development of fishery resources.</li> <li>Migratory routes of fishes like Magarmukh channel &amp; Palur canal to be kept free from encroachment / fishing and should be maintained through dredging.</li> <li>There is increase of population and increase in nos. of boats in Chilika but fishing area is decreasing; which is a cause of concern.</li> </ul>	<ul style="list-style-type: none"> <li>There is conflict due to entry of non-fishers for fishing in Chilika. Entry of Non- fishers into Chilika should be regulated.</li> <li>All fishers in Chilika should be registered and should be provided Identity Cards.</li> </ul>	<ul style="list-style-type: none"> <li>Fishers are against the Ghery which makes a lot of problems in their life. Eviction of Gherys should be done regularly with strict enforcement of laws.</li> <li>Fish cannot be seen in shallow water due to disturbance of Gherys. Fishers have to go to deep water area and sometimes are affected by storm or strong wind, risking their lives.</li> </ul>	<ul style="list-style-type: none"> <li>It is difficult to maintain the family in this condition and expect any kind of alternate source of income from the government.</li> </ul>	<ul style="list-style-type: none"> <li>There is need for capacity building of PFCSs in general and fishers in particular</li> </ul>

<p><b>Kumarpur</b></p> <p>- Southern Sector</p>	<ul style="list-style-type: none"> <li>Enforcing the rules and regulations must be done strictly by the Government.</li> <li>Restriction on the movement of motorized boat and cleaning the Palur canal should be done throughout the year.</li> <li>Blockage of migratory routes leads to less fish production, which should be ensured regularly</li> <li>Demarcation of fishing area and patrolling in the lagoon should be done.</li> </ul>	<ul style="list-style-type: none"> <li>Non-fishers activities in the lagoon and the lease area problems with the adjoining villages should be solved through clear demarcation.</li> </ul>	<ul style="list-style-type: none"> <li>Due to Gherys, fish production decreased and fishers have to go outside as bound labour.</li> <li>Demolition of Gherys in a regular manner should be carried out throughout the year.</li> </ul>	<ul style="list-style-type: none"> <li>Saving-cum-relief scheme should be implemented for fishers during the period of fishing ban for 3 to 4 months.</li> <li>Training of fishers for alternate livelihood activities like dry fish marketing, grocery and other activities should be promoted.</li> </ul>	
<p><b>Arakhakuda</b></p> <p>- Outer Channel</p>	<ul style="list-style-type: none"> <li>Ban on the use of Alimi net, Zero net and Benti net in Chilika lagoon should be enforced throughout the year.</li> <li>Restriction on the catch of juveniles and mother fishes should be enforced in the mouth area.</li> <li>Restriction on the movement of fishing trawlers should be regulated / enforced in the sea near Chilika mouth.</li> <li>Supply of juveniles to outside market i.e. outside states should be restricted.</li> <li>Artificial release of juveniles of Bhekii and crab into the lagoon may be tried.</li> <li>Registration of boats and Identity cards for fishers should be made compulsory to recognize fisher and non-fishers.</li> </ul>	<ul style="list-style-type: none"> <li>Lease of fishing area must be demarcated properly for fishing by fishers.</li> </ul>		<ul style="list-style-type: none"> <li>Awareness and knowledge to start alternate livelihood options are necessary for fishers. SHG's should be encouraged to continue dry fish marketing, plantation, dairy, poultry, and goat farming and grocery activities.</li> <li>There is need for creating awareness and capacity building of fishers to avail the advantages of different welfare schemes introduced for fishers.</li> </ul>	<ul style="list-style-type: none"> <li>The middle men in the process of marketing should be removed so that the fishers can get better value for their catch.</li> <li>There should be meetings for fishers to resolve conflicts among villages relating to fishing rights, lease areas, etc.</li> </ul>