

**STREAM**

**Support to Regional Aquatic Resources Management**



**DFID NRSP Research Project R8100**  
**Investigating Improved Policy on Aquaculture Service Provision to Poor People**  
**March 2002 – May 2003**

**State-level Workshops**

Purulia, West Bengal

*3 October 2002*

Ranchi, Jharkhand

*4-5 October 2002*

Bhubaneswar, Orissa

*7 October 2002*

**In Association With**  
**Gramin Vikas Trust (GVT)**

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Dr Graham Haylor  
Mr William Savage  
Dr S D Tripathi

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- Mr J S Gangwar, Project Manager of GVT East, who facilitated the arrangements for the workshops and enabled members of his staff to work with us.
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We thank each participant for working with us in such a productive and collaborative manner, and look forward to continuing our association with these friends and colleagues in West Bengal, Jharkhand and Orissa.

Appreciation is also expressed to DFID and its Natural Resources Systems Programme (NRSP) for the support it has provided to do this work, and for their keen interest in its progress.

## The Workshops

The three State-level Workshops were held at the Akash Hotel in Purulia, West Bengal (3 October 2002); the Social Development Centre in Ranchi, Jharkhand (4-5 October 2002) and the Crown Hotel in Bhubaneswar, Orissa (7 October 2002). Participants (Appendix 1) represented GVT and other NGOs, state- and district-level Departments of Fisheries, Indian Council of Agricultural Research (CIFA), a university, Panchayats and recipients. Depending on location, discussions, reportbacks and documentation took place in Bangla, Hindi, Oriya and English.

The aim and objectives of the workshops were:

### **Aim**

Contributing to “giving people a voice” in policy-making processes that have an impact on their livelihoods

### **Objectives**

Understanding a process for transacting institutional and policy change

Providing feedback on Case Studies which document experiences of rural aquaculture services provision from the perspectives of representative recipient groups

Reviewing and refining emerging “indicators of change”

Providing input into the subsequent Stakeholders Workshop

The State-level Workshops followed an Inception Visit in March 2002, the “Rural Aquaculture Service Recipients and Implementers Workshop” held from 9-10 May 2002 in Ranchi, Jharkhand and an August 2002 Planning Visit. Reports of these activities are available in separate documents.

During the May 2002 workshop, a strong recommendation was made that it would be worthwhile holding these State-level Workshops before the Stakeholders Workshop.

A general agenda (Appendix 2) for the State-level Workshops was adapted for each of the three locations. The contents of this report are structured according to the outcomes of the three workshops, rather than following the three-state workshop sequence.

In providing an update on the project, reference was made to the original draft Component Concept Note Excerpt (Appendix 8) and the Project Flowchart (Appendix 9).

## Opening Remarks

*Purulia, West Bengal: Mr P K Das, Additional District Magistrate*

Mr N K Sinha of GVT welcomed the ADM Purulia, Mr P K Das. The ADM in his inaugural speech mentioned that life has five important components of which water is one. The fish lives in this important component which is all pervading and needs to be preserved if life is to go on. Both water conservation and maintenance of its quality are aspects that deserve our utmost attention. Fish is a part of the daily menu of the people of this state and has a high nutritive value. It is nice to see that the GVT has taken up a project to increase fish production and is now working in collaboration with NACA/STREAM to identify requirements of recipients in terms of services and provisions that would finally require a policy change.

*Ranchi, Jharkhand: Mr J S Gangwar, Project Manager, GVT East*

Mr Gangwar traced the history of the GVT that was initially set up by the government as KRIBHCO, a farmers' organization. It was soon realized that a separate and independent organization was needed for village development, called the Gramin Vikas Trust (GVT). Two separate projects were established, one each in the east and west. The eastern side, with the support of DFID, initiated a five-year project on rural aquaculture that received a three-year extension expiring on 31 March 2003. A request for a further extension of two years has already been made and it is hoped that it would be granted. The GVT is also operating several other projects besides that on aquaculture and is involved with the rural sector in a big way. It has by now reached 252 villages in the three adjoining states of West Bengal, Orissa and Jharkhand. Another 550 villages have been covered indirectly through its jankars. The project has dug wells, provided seed of quality fruits and undertaken trials for rice varieties.

GVTs aquaculture development programme was initiated by a visit of Dr Graham Haylor in 1996 with the idea to utilize the large number of seasonal ponds for maximum production. In the course of time, the project has been able to spread the aquaculture programme and also realized the constraints in the process. These should be useful to the present study that seeks to bring about a policy change in the services provided by the government.

*Bhubaneswar, Orissa: Dr V S Tomar, CEO, GVT; Mr J S Gangwar, Project Manager, GVT East; Mr Satyabrata Sahoo, IAS, Director of Fisheries, Orissa*

*Dr V S Tomar:* Welcoming the participants, Dr Tomar indicated that the aim of the workshop is to see how the voices of farmers can reach policy-makers, to enable them to participate in the process of policy-making to enhance their livelihoods. While NACA is working exclusively for aquaculture, GVT is looking after several other components of the village in six states covering Rajasthan, Gujarat and Madhya Pradesh in western India and Jharkhand, Orissa and West Bengal in eastern India. Tracing the birth of GVT, he mentioned its working system in some detail.

*Mr J S Gangwar:* Welcoming the Chief Guest, Mr Satyabrata Sahoo, Director of Fisheries, Orissa, and the participants, Mr Gangwar said that the GVT was formerly the Eastern India Rainfed Farming Project that had started in 1995 in the three eastern states of Orissa, Jharkhand and West Bengal. The funding for this project is received from DFID through the Government of India and therefore the project is accountable to government audit. The

project had covered 250 villages until March 2000 but the Review Mission suggested that the project should cover 550 villages. Initially, the rural aquaculture project was set up in 1995 for five years, but later extended by another three years until March 2003. A proposal for a further extension of two years has been submitted, and is expected to be approved in light of the fact that some unspent money is available and the targets set have also to be achieved.

There are 80 core villages in Orissa with Community Organisers in agriculture and social sciences, one man and one woman, save in exceptional cases. About 400 self-help groups (SHGs) are also functional. Some of them have large savings to the tune of Rs 1 lakh. The SHGs maintain their records and have passbooks. Some of them have been linked to financial institutions and have obtained loans up to Rs 3 lakhs. Besides other farming components like soil and water management, horticulture, processing units and income generating activities, aquaculture is a big component. Some of the farmers are planning to establish cashew processing units. Starting with aquaculture in perennial ponds, work in seasonal ponds was also undertaken to utilise the abundant resource lying unused in rural areas. Large-sized fingerlings raised in seasonal ponds could be utilised for stocking in perennial ponds. Orissa has been considered a priority state by DFID, so he requested of the Director of Fisheries, professionally qualified staff for increased aquaculture activities in the state.

*Mr Satyabrata Sahoo:* Thanking the organisers, Mr Sahoo mentioned that as Director of Agriculture he had already known of the good work being done by the GVT. He was equally aware of the NACA programme on shrimp farming that was attended by him in Chennai a few days ago. He invited NACA to consider Orissa as one of the centres for shrimp farming in view of its vast resources. He mentioned that the vast freshwater resources of the state comprise 7.13 lakh ha of reservoirs, of which only 3 lakh ha have been scientifically utilised. Of the 1 lakh ha of brackishwater area, Chilka alone comprises 79,000 ha and another 32,000 ha are available for culture, but only 15,000 ha have been utilised. The production from Chilka has increased three times ever since its mouth was dredged three years ago. The state has a coastline of 480 km and is the nesting site of olive ridley turtles. The production from the sea is 125,000 mt.

As regards freshwater aquaculture, the state was experiencing acute shortages of fish seed of the order of 15 crores, despite a number of hatcheries and farms in the government, corporation and private sector. He informed that the government has planned to set up 100 hatcheries in the Tenth Five-Year Plan. He suggested that the farmers of the state should undertake fry production in seasonal ponds where an income of three times over the investment is possible in one month. He also invited entrepreneurs and unemployed fishery graduates to utilise the government hatcheries for seed production and participate in the state's efforts to meet the seed shortage. There is no policy as regards reservoir development and out of a total of 1,473 reservoirs, only 69 have been developed so far. The department has now planned to develop the reservoirs on a participatory basis with "oustees" being given the first preference, followed by SHGs. In case there are none from these two categories, the reservoir will be auctioned. For their management, it is also planned to have captive nurseries for fingerling production for stocking the reservoirs, from which the government would also earn a revenue of Rs 70 lakhs as a return on government investment.

The state has 63,000 tanks and about 2,000 tanks are dug every year owing to drought conditions. The average production is quite low and needs to be increased through proper guidance and training of farmers. The lease-holders would be given short-term training to enable them to increase fish production.

Mr Sahoo also mentioned that the department has started Janashree Bima Yojna (insurance scheme) for fish farmers between 18-60 years of age. It has already insured 2,500 fishermen and plans to cover about 10,000 persons by year-end. He further suggested that freshwater prawn could be introduced as an additional component in carp polyculture system for increased income. It is planned to distribute about 70 lakhs of prawn seed this year. He invited the GVT to extend its area of operation to Kalahandi, Bolangir and Sambalpur districts which are backward.

### **Closing Remarks**

*Purulia, West Bengal: Mr N K Sinha, Senior Field Specialist M&E, GVT West Bengal*

Mr Sinha thanked Mr P K Das for kindly sparing his valuable time despite being busy, and assured him that his suggestions would be carried out. He also thanked all others who had come from different departments such as CIFA and the DOF. He thanked all participants as well.

*Ranchi, Jharkhand: Mr Rajiw Kumar, Director of Fisheries, Jharkhand*

Mr Rajiw Kumar, Director of Fisheries, Jharkhand, delivered the valedictory address. Thanking GVT, the STREAM Initiative and DFID-NRSP, involved in studies on recipients' and implementers' experiences regarding services provided in support of aquaculture for poor and tribal groups, he said that he is presently engaged in assessing the requirements of the state and its potential through proper surveys. He was also trying his best to develop the potential that exists in the state to see that adequate seed is produced to meet the growing requirements, and that locally produced fish is sold in the markets rather than depending on fish from other states. There are about 92,000 ha of water areas available in the state in the form of irrigation tanks, besides about 12,000 ponds that cover 18,000 ha. Three hatcheries have already been set up that will go into production next year as broodstock is being developed presently. Delayed rains have adversely affected the aquaculture programme this year. However, he wanted that farmers should also set up hatcheries in the private sector or come forward to utilize the government hatcheries and seed farms for seed production, which the department would be ready to share. He also invited the NGOs to work as partners in seed production using the departmental farms.

He also indicated that the department would be providing ice boxes, balances and a set of weights to fisherwomen to enable them to sell fish in good condition. He agreed that the department will be in a position to approach insurance companies for life and group insurance, provided he gets proposals from primary cooperatives organised into an apex body of the state. He also said that the department is trying hard for the welfare of fishermen of the state and already 800 houses have been proposed to be constructed in different districts in the state this year.

Mr Gangwar, Project Manager, GVT East, thanked Mr Kumar for taking time off to participate in the State-level Workshop and for the cooperation that the GVT has been receiving from the department in its aquaculture programme. He opined that the GVT in a way is supporting the government's programmes and carrying its messages and policies to rural areas. He hoped that these ties will grow stronger day by day and that the two organisations will be able to work together, leading to increased seed and fish production and



improving the quality of life of poor and tribal people. Based on its work, GVT shall bring to the notice of the government such problems that need a policy change.

*Bhubaneswar, Orissa: Mr P K Mishra, State Coordinator, GVT Orissa*

Mr P K Mishra closed the workshop by thanking those responsible for its organization and those who participated.

### **Chance Meetings, Visits and Presentations**

*Dr Ram Dayal Munda, Former Vice Chancellor, Ranchi University*

On 4 October 2002, there was a chance meeting with Dr Ram Dayal Munda, former Vice Chancellor of Ranchi University, at the Social Development Centre (SDC) where a conference of the tribal population of the state was also organised. Mr Munda had stayed in the USA for 18 years after his education and was a Professor of Anthropology at the University of Minnesota Minneapolis. On his return, Dr Munda had occupied several positions in India including that of the Vice Chancellor of Ranchi University. He is presently involved in the Movement of Indigenous People in which the original inhabitants of almost all the countries of the world are participating and he is going to attend a workshop on the same issue in Bangkok. He was aware of the participants from Bundu who belonged to his own area and expressed satisfaction at their involvement in the workshop. Dr Munda considered aquaculture to be one of the activities that would transform the rural scene and provide lucrative employment to the local population, besides nutritional security. He was also interested in reclaiming the coal quarries, which are in great abundance in the area, and lying unutilized. Mr Savage gave him a brief of the STREAM activities and requested him to participate in the Stakeholders Workshop to be held in Ranchi in the next few months. He agreed to attend, provided he was not otherwise occupied.

*Dr Janaki Ram, Director, Central Institute of Freshwater Aquaculture, Kausalyaganj, Bhubaneswar*

The Director was requested to participate in the State-level Workshop at the Crown Hotel being held on 7 October 2002, but he expressed his inability as CIFA was holding its Research Advisory Committee meeting on the same day and the whole Institute was involved in the exercise. He however agreed to meet the STREAM consultant, Mr William Savage, at the hotel on his way to the airport to receive the RAC Chairman. Mr Savage gave the Director a brief on the project and provided him with the various reports. The Director was requested by Mr Savage to visit the STREAM website and contribute success stories for the *STREAM Journal*. Dr Ram invited the consultants and GVT staff to join the RAC team on the field visit the same afternoon. While Mr Savage could not go, Dr S D Tripathi, Mr Ashish Kumar, Deputy Director (Fisheries), Jharkhand, and Dr K P Singh, Field Specialist (Aquaculture), GVT, joined the group on the field visit. The team visited Sarkana and Buddhipara. The work done by the Institute through its KVK/TTC extension wing was seen and found useful as it was directly related to the objectives of the STREAM project, that is trying to realise the needs of poor and tribal communities.

*Dr Radhey Shyam, Senior Scientist and Training Organizer, Central Institute of Freshwater Aquaculture, Kausalyagang, Bhubaneswar*

The Orissa workshop was concluded by a presentation by Dr Shyam on “Problems in Rural Aquaculture”, the main points of which are included as Appendix 7.

## Case Studies

An important objective of the State-level Workshops was “providing feedback on Case Studies which document experiences of rural aquaculture services provision from the perspectives of representative recipient groups”. The six Case Studies are:

1. A Proactive Village – In Support of Aquaculture for Poor and Scheduled Caste Groups (Jharkhand)
2. A Successful Tribal Farmer Conducting Aquaculture (Jharkhand)
3. Contrasting Case Studies of Service Provision and Participation (Orissa)
4. Group-building, Production Success and the Struggle to Prevent Capture of the Resource (Jharkhand)
5. Recipients’ Experiences of Services Provided by NGOs in Support of Aquaculture for Poor and Tribal Groups (West Bengal)
6. Service Provider’s Perspectives on the Implementation of Government Schemes in Support of Aquaculture for Poor and Tribal Groups (West Bengal)

Indeed, the wisdom of the May 2002 workshop recommendation – that there needed to be these state-level workshops – was borne out in the constructive feedback on the six Case Studies in their various stages of progress.

## Feedback on the Case Studies

In each of the three states, the respective Case Study descriptions (from the Planning Visit report) were translated and provided to participants for review and feedback. The Case Study descriptions (following) in this State-level Workshops report have been revised to reflect discussions in the workshops, but all the feedback has not yet been fully incorporated. Likewise, there are pieces of text (indicated by state below), that are included in their original form. These two tasks will be accomplished as the Case Study descriptions are prepared in full before the Stakeholders Workshop. In addition, Principal Investigators will need to interpret the preliminary findings of the Case Studies in terms of issues which have policy change implications. These will then be input to the Concensus-building Process.

### *West Bengal (Case Studies 5 and 6)*

Dr Tripathi met with GVT staff, jankar and community participants to discuss the description of Case Study 5. Mr Ashish Kumar met with the DOF participants to discuss Case Study 6. These served as a planning discussions since these two Case Studies were not yet under way.

It was decided that Mr Gautam Dutta and Ms Jhinuk Ray would work with Dr Tripathi as Principal Investigators. For Case Study 5, it was also decided that the research teams would be comprised of the Principal Investigators, GVT Community Organiser, jankar and villager.

*Jharkhand (Case Study 4)*

Mr Pandeya, the Principal Investigator along with Dr K P Singh, presented the description of Case Study 4 and the preliminary findings. The two pieces of text have been appended to the descriptions following. For the purposes of providing feedback on Case Study 4, participants were asked to work in groups of:

- Recipients
- Jankars
- Birsa Agricultural Univeristy-NGOs-DOF
- GVT

*Jharkhand (Case Studies 1 and 2)*

Mr Ashish Kumar, Principal Investigator, presented the descriptions of Case Studies 1 and 2. The two draft storyboards of the video documentaries follow the respective descriptions. Participants gave feedback from groups of:

- GVT CO
- Recipient
- Jankars

*Orissa (Case Study 3)*

Mr Sahay and Mr Pandeya, Principal Investigators, presented the description of Case Study 3. The text of their preliminary findings follows the description ahead. Participants worked in six groups to review the case and provide feedback:

- Dhenkanal and Keonjhar jankars
- Mayurbhanj jankars
- DOF
- NGOs
- GVT Community Organisers
- GVT Project and State staff

### **Case Study 1: A Proactive Village – In Support of Aquaculture for Poor and Scheduled Caste Groups (Jharkhand)**

A Case Study from Jharkhand proposed by Ashish Kumar, Deputy Director, DOF Ranchi, Jharkhand, in association with Dr K P Singh, Field Specialist Aquaculture GVT, Ranchi, Jharkhand, William Savage and Graham Haylor, September 2002 – February 2003

#### *Duration*

The Case Study began in September following its setting up in August. It is intended to run through February, with opportunities to report progress and get feedback on two occasions: the State-level Workshop in October and the Stakeholders Workshop in January. Final presentation of the Case Study outcomes and outputs will be at the Policy Review Workshop in April 2003.

#### *Location*

The location is Fulwar Toli, Bundu block, Ranchi district, where government support to fishermen has been available from the Fisheries Department.

#### *Principal Investigator*

Mr Ashish Kumar, Deputy Director, DOF Ranchi, Jharkhand

#### *Key Informants*

Key informants include people who participated in the May 2002 workshop and others. These would include Bhim Nayak and fellow fishers of Fulwar Toli, and the officer of the Bundu “notified area” office.

#### *Method*

The method is individual interviews and issue-focused small-group discussions. As Principal Investigator, Ashish Kumar is taking charge of organising and documenting the outcome. A professional documentary film-maker from the ETV channel is working with Mr Kumar on the storyboard for the documentary, using the information from the interviews which were fully drafted for comment and recommendations at the October workshop, supported by photographs. Following the workshop and any amendments, the film crew will commence on-location filming and editing to produce a final output in time for the January Stakeholders Workshop. Final editing and provision of the video documentary and ten CD copies will follow.

#### *Media*

A well-prepared short documentary video highlighting key issues emerging from discussions with villagers about how government policies are impacting on their livelihoods.

*Content*

The Case Study video documentary includes footage and commentary to help policy-makers understand:

- The level of development of the livelihoods of the fishing community in Bundu (including experience of different government schemes)
- Their inclusion and exclusion from government schemes (and reasons), including:
  - Process for the selection of beneficiaries, including key actors from DOF and BDO
  - Mechanism for provision of loans
  - Process for supply of material inputs
  - Mechanism for provision of training
  - Process for communicating (about government schemes and technical extension messages, any systems for feedback, cross-checking and streamlining the system)
  - Marketing support, networking and strategies and the role for farmers, the DOF and banks in decision-making

The draft storyboard appears on the following pages. Feedback needs to be provided to the Principal Investigator by STREAM colleagues before the filming of the video takes place.

## Case Study 1: A Proactive Village

Location: Fulwar Toli village, Bundu block, Ranchi, Jharkhand, India

### STORYBOARD (draft)

The Fulwar Toli village of Bundu block is waiting for a set of government schemes. Generally known as a fishing village since ancient times, today the inhabitants are dependent more on daily labour than on fishing. Out of 115 families, 85 are totally dependent on the daily labour they do at Bundu or in Ranchi. This fishing village is full of human and natural resources, but there is the need of a friend, philosopher and guide in the village.

*(Shots of village and its inhabitants)*

The fishermen, who are not really part of the mainstream, do not know what are the government schemes, how they can benefit from them and who to contact for them. Early in the morning, the men go in the nearby pond for fishing and on returning to the shore, the women buy the fish and sell them. Sometimes the men are engaged the whole night in fishing and face hazards. The fishing and purchasing by the women is completed as early as 6 a.m. One can imagine how early they start to get two square meals every day. With the changing times, they are switching over to other activities to sustain their families, like piggery, tanning of hides, beating drums in marriages and festivals and rickshaw pulling.

*(Shots of fishing, buying of fish, selling of fish, piggery, tanning, rickshaw pulling)*

Some years ago, government officials of the Scheduled Caste Cooperative Development Corporation showed some interest in their development and loans were distributed to them for various activities, but except for the drumming band, none could succeed. Later, training and distribution of materials like nets were conducted by the officials of Department of Fisheries (DoF). Even around 50 mud houses were converted into brick houses with the help of DoF and tube wells were constructed to provide them with pure drinking water. But, as the whole of Bundu town, of which Fulwar Toli is a part, has been declared a “notified area” (semi-urban area), they are deprived of many other schemes like SGSY loans and Indira Awas Yojna houses, which are meant for rural people. All these have direct effects on the livelihoods of all these people. Even their children are deprived of good education by this situation.

*(Shots of houses, tube well, drumming band and children playing around)*

In other government departments, there are few schemes for the development of these scheduled caste fishing communities. This is the reason that for these villagers there is limited infrastructure available for their traditional occupation. Even facilities for training in fish culture and provision for space to sell fish are not available. Often they have to sell fish on the roadside. Shortage of ice and high transport costs also prevent them from selling their fish at Ranchi where they can fetch better prices. In addition, to buy fish from the fishermen, they take loans from the local moneylenders at high interest rates. They face hardship in paying the loans back to the moneylenders.

*(Shots of fisherwomen selling fish on the road)*

In spite of all this, the people of Fulwar Toli are happy that the officials of DoF are quite cooperative with them. They visit them regularly and acquaint them about the schemes of the department. Mr Bhim Nayak from this village is a member of the managing committee of the FFDA, Ranchi. He attends meetings of FFDA, which are held under the chairmanship of the Deputy Commissioner at Ranchi. But Bhim explained that there is no provision of any traveling allowance for attending the FFDA meetings and all representatives of fishermen and fishermen cooperative societies have to pay from their own pockets. Government should think about this for the benefit of all the non-government FFDA members.

*(Interview with Bhim)*

Although ten years back they received training and some materials, which included nets, from DoF, they have not been provided with anything during the recent past. There is no sign of any government scheme in the village except for some houses, tube wells and a community hall.

*(Shots of mud houses, pigs and children playing around)*

Still, the fishermen of Fulwar Toli are quite hopeful. They often organize meetings to discuss their situation and to decide what are their objectives. In one such meeting, they decided the following:

1. Proper arrangements for stall and market for selling fish
2. Provision of soft loans for carrying out fish marketing
3. Ice factory in Bundu
4. The Bundu Bara Bandh<sup>1</sup> should be repaired so that it can retain water throughout the year and fish can be cultured
5. Insulated boxes for selling fish
6. Stocking of fish seed in the Bundu Bara Bandh

However, with the guidance of Bhim Nayak, the villagers are quite hopeful of doing better by themselves even though no one takes care of them. Bhim brings all the issues and problems of the fisher families to the notice of officials and public representatives. He has organized the village youth in some bands who earn income by beating drums in marriages and festivals. Bhim also runs a non-formal school without any fees so that the children of the village can be educated. Due to his efforts, more than 20 village students have passed matriculation in the past few years.

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<sup>1</sup> Pond in Bundu has a water area of 99 acres

## **Case Study 2: A Successful Tribal Farmer Conducting Aquaculture (Jharkhand)**

A Case Study from Jharkhand proposed by Ashish Kumar, Deputy Director, DOF Ranchi, Jharkhand, Dr K P Singh, Field Specialist Aquaculture GVT, Ranchi, Jharkhand, William Savage and Graham Haylor, September 2002 – February 2003

### *Duration*

The Case Study began in September following its setting up in August. It is intended to run through February, with opportunities to report progress and get feedback on two occasions: the State-level Workshop in October and the Stakeholders Workshop in January. Final presentation of the Case Study outcomes and outputs will be at the Policy Review Workshop in April 2003.

### *Location*

The location is Chhota Changru village of Silli block in Ranchi district where government support has been available.

### *Principal Investigator*

Mr Ashish Kumar, Deputy Director, DOF Ranchi, Jharkhand

### *Key Informants*

Key informants include people who participated in the May 2002 workshop and others. The focus will be Mr Ras Behari Baraik and fellow fishers of Chhota Changru village, and the officer of the Fisheries Department.

### *Method*

The method is individual interviews and issue-focused small-group discussions. As Principal Investigator, Ashish Kumar is documenting the outcome. A professional documentary filmmaker from the ETV channel is working with Mr Kumar on the storyboard for the documentary using information from the interviews, which was drafted by October and presented at the State-level Workshop for comment and recommendations, supported by photographs.

### *Media*

A well-prepared short documentary film highlighting key issues emerging from the discussions with villagers about how the successful venture has impacted their livelihoods. A short documentary video will be shot on location between October and the Stakeholders Workshop in early January. Final editing, taking account of recommendations from the January workshop, will be completed thereafter.



## *Content*

The focus of the Case Study is to:

- Document Ras Behari's success and show how tribal farmers can lift themselves out of poverty through their own efforts
- Understand why Ras Behari has been successful [because he provides fish seed "in character issue" – according to Ras Behari, a huge problem is supply of Catla which only breeds at large size; breeders are in short supply; traders cheat by providing seed of other less good species such as Rohu and Mrigal which perform less well, especially in seasonal ponds (most commonly used by tribal farmers); many farmers can not identify the difference].

The documentary will highlight his imperative need, his exposure to aquaculture and his education, which involved walking to school barefoot; how he acquired skills, such as the process by which he buys seed – knowing the size of the brooders used, his skill in identifying the species at small size, his acquired skills in husbandry and disease control (including the use of his knowledge by others locally and not so locally), and his ongoing and future plans including his breeding arenas.

Also considered will be his experience of government schemes including:

- Mechanism for provision of loans versus use of local money lenders (he prefers to take the money locally at 5% per month rather than fill in forms and not get cash in a timely manner)
- Process for supply of material inputs
- Mechanism for provision of training (and his views about access to proper training)
- Process for communicating (about government schemes and technical extension messages, any systems for feedback, cross-checking and streamlining the system)

Other issues may include marketing support and problems in marketing (rent-seeking at district and state borders), networking and strategies, the DOF's and banks' roles in decision-making about harvesting and its impact on market opportunities.

The draft storyboard appears on the following pages. Feedback needs to be provided to the Principal Investigator by STREAM colleagues before the filming of the video takes place.

## Case Study 2: A Successful Tribal Farmer Conducting Aquaculture

Location: Chhota Changru village, Silli block, Ranchi, Jharkhand, India

### STORYBOARD (draft)

It is said that where there is a will there is a way. Ras Behari is an example of such struggle and hardship. Once leading a life of poverty, today he employs 50-60 people of his village. Now the life of this tribal villager from Chhota Changru village of Silli Block, has completely changed.

#### *(Opening dialogue)*

The boy, who used to walk barefoot to school, sometimes tying leaves to save his feet from burning on the hot sand, became unemployed after passing matriculation. He started helping his father in his business of fish seed selling, which he had started to save the family from hunger. His father used to bring fish seed from Purulia and Bankura of neighboring West Bengal state. Somehow the family was getting two square meals.

#### *(Shots of a boy walking to school)*

One day, Ras Behari was sent to Bankura by his father to bring fish seed. He was overwhelmed when he saw the huge market of the fish seed business there. He could not stop himself from asking an experienced farmer Shyamal Bose whether or not this production of fish seed from fish spawn could be taken up at Silli. Bose said it's quite possible and he taught him many techniques of fish seed culture.

#### *(Interview with Ras Behari)*

Ras Behari got a pond leased in the name of his father from FFDA Ranchi and started production of fish seed. He sold the seed to the local fish farmers. Ras Behari's efforts brought success and people reported back that the seed grew well in their ponds. Farmers got better return from seed purchased from Ras Behari. The number of farmers increased the next year. Ras Behari says that the reason for his success is that he declares to the farmers what variety of seed he is selling. Mostly other seed growers don't disclose about the varieties of fish to the customers. There is a heavy demand for seed of Catla (*Catla catla*) among farmers as it is a fast growing variety and is most suitable for the seasonal ponds of Jharkhand. So by offering Catla seed to the farmers, Ras Behari gained their confidence and the business boomed.

#### *(Shots of Ras Behari selling seed)*

Ras Behari is quite cautious in buying seed from the hatcheries. He first finds out the size of the brooder and only then does he purchase the seed. He claims to be an expert in identifying Catla seed. He has developed his own way of identifying Catla seed by carefully listening to the metal bowl in which the seed is kept and if a sound similar to that of chicks comes he confirms the seed to be of Catla.

*(Shots of Ras Behari listening to the metal bowl)*

He also has good expertise in disease control. He says that DoF has been quite cooperative all through his success by excavating twin ponds for seed production, and supplying feed, seed and nets. DoF has also given him short-term training in aquaculture but he says that if he and other farmers of this area are sent for training to CIFA, Bhubaneshwar, or CICFRI, Barrackpore, they will benefit more and can increase their income.

DoF keeps in touch with the farmers. This is the reason that officials of DoF visit villages and inform the farmers of the new schemes for their benefit. Generally, information about the new schemes is displayed on the notice board of the Block office. Direct communication between DoF and farmers keeps them acquainted about the schemes and new technologies. Ras Behari said that due to this frequent communication, farmers feel that the officials are being open about the government schemes. DoF supplies materials in time and people have confidence about the quality of the materials supplied by the government.

*(Shots of ponds and nets supplied by the government)*

Although there is provision of loans from banks, farmers like Ras Behari could not benefit from these loan schemes as the time involved in the sanction of the schemes is too long, by which time the activity is over. Therefore, Ras Behari and other farmers depend on local moneylenders, even if their rates of interest are much higher than the banks.

DoF also helps Ras Behari in selling the seed by sending prospective buyers. To supply seed to far-off places, Ras Behari bought a small truck. But, because he does not possess any official license for transporting and selling seed, he faces problems when crossing district borders. He has to stop many times, which delays the trip and causes seed mortality. If he and other seed growers could be provided with some sort of license, it will be easier for them to transport the seed without any complication on the way. Ras Behari sells around 5,000-6,000 kg of seed every year.

*(Shots of his truck and containers)*

To supply large orders, seed is transported by the truck in iron containers, while the men continuously move their legs in the water to keep oxygen levels high in the containers. It is a tiring activity and two farmers can work for six hours at a stretch. Immersing the legs in water for such long hours causes bruises and wounds on the toes for which they apply ointment. If scientists develop some other method for transportation of more seed to far-off places, that will be immensely helpful.

*(Shots of transportation of seed)*

This fish seed business has changed the lives of the villagers of Chhota Changru. They get employment for at least six months of the year. Some of them work with Ras Behari while others buy seed from him and sell it in different villages. The men, women and even children are being attracted towards this business and they want to join it. Ras Behari has shown a new path to the villagers.

Suggestions of Ras Behari in the May workshop:

- Large dams should be constructed in Jharkhand
- A list of fish farmers should be prepared by the government
- Government should see that those who are engaged in aquaculture by themselves should not have any trouble so that their morale remains high
- Seed of exotic fish varieties should be distributed free of cost to farmers
- Revenue tanks should not be settled with those who are not in this business
- Fish farmers of the state should be sent on study tours to places like Andhra Pradesh, Bhubaneshwar, Kerala and West Bengal before the 10<sup>th</sup> Five-year Plan starts
- Training certificates should be given to honour the farmers
- Most of the fish farmers of the state are illiterate so field visits will be useful for them
- Shops for fish feed and medicines should be opened in the state
- Soil and water testing should be provided for farmers
- There should be clear demarcation between ponds for fish culture or for irrigation

### **Case Study 3: Contrasting Case Studies of Service Provision and Participation (Orissa)**

A Case Study from Orissa proposed by Dr K P Singh, Field Specialist Aquaculture GVT, Ranchi, Jharkhand, Mr P K Mishra, GVT State Coordinator for Orissa, William Savage and Graham Haylor, September 2002 – February 2003

#### *Duration*

The Case Study began in September following its setting up in August. It is intended to run through February, with opportunities to report progress and get feedback on two occasions: the State-level Workshop in October and the Stakeholders Workshop in January. Final presentation of the Case Study outcomes and outputs will be at the Policy Review Workshop in April 2003.

#### *Location*

The locations are Khajuria and Haladikundi villages and Patagoan village, all in Dhenkanal district where government and GVT support has been available, and Patagoan village where government support has been available.

#### *Principal Investigators*

Mr S N Pandeya, Assistant Field Specialist M&E, and Mr B K Sahay, Field Specialist Social Development, GVT East, Ranchi, Jharkhand

#### *Key Informants*

Key informants include people who participated in the May 2002 workshop and others. The focus will be Damodar Sahoo, Ashok Kumar Sahoo and Mr Pabita Mohan Baral.

#### *Method*

The method is individual interviews and issue-focused small-group discussions. The Principal Investigators, Mr Pandeya and Mr Sahay, are conducting interviews and documenting the outcomes. Interviews took place in September and will be completed by October and presented at the State-level Workshop for comment and recommendations, supported by photographs.

#### *Media*

A well-prepared PowerPoint and photo storyboard highlighting key issues emerging from the discussions with villagers about how the successful venture has impacted on their livelihoods.

## *Content*

The focus of the Case Study is to:

- Document Khajuria and Haladikundi village success and show how tribal farmers have a strong community ethic, the capacity for collaboration and the vision and practical commitment to address their development needs
- Understand why Damodar Sahoo and Ashock Kumar Sahoo have been successful

The Case Study will highlight the objective and imperative need for the undertaking (that all the profits are being saved towards the private provision of a village school, as children currently have to walk four kilometers to the nearest government school).

The key informants' experiences of GVT services and government schemes including:

- Mechanism for provision of loans versus use of local money lenders
- Process for supply of material inputs
- Mechanism for provision of training
- Process for communicating (about government schemes and technical extension messages, any systems for feedback, cross-checking and streamlining the system)

The Case Study from Orissa will also highlight the contrasting case of neighboring Batagoan village and their experience of government service provision (where a tank was constructed on land that does not hold water, costing Rs 100,000), highlighting the reasons for this outcome. The key informant from Batagoan village is the Pradhan, Mr Pabita Mohan Baral.

In addition, the cases will include marketing support and problems in marketing (rent-seeking at district and state borders), networking and strategies, the DOF's and banks' roles in decision-making about harvesting and its impact on market opportunities.

The text of the presentation by the Principal Investigators appears on the following pages. Feedback needs to be provided to them by STREAM colleagues before the final version of the Case Study presentation is prepared.

### **Case Study 3: Contrasting Case Studies of Service Provision and Participation**

State: Orissa; District: Dhenkanal; Villages: Khajuria, Haldikundi and Batagaon

#### *Case 3a: Community Managed Pond of Khajuria and Haldikundi*

##### Pond History

- Perennial pond with area of approximately 4.5 acres.
- 60% and 40% of the pond area falls under the villages of Khajuria and Haldikundi respectively.
- The pond was first excavated in 1952 through the scheme of food for work.
- Until 1979, weed fish and catfish were being grown and distributed among villagers of both villages.
- In 1980, villagers of both villages started aquaculture jointly.
- Cost of aquaculture and profit distributed in the ratio of 60:40 by villages of Khajuria and Haldikundi respectively.
- In 1989, the profit from the pond was donated for starting the school in Khajuria village.
- In 2000, 18 members were selected from Khajuria and Haldikundi and a fish development committee was established by the facilitation of GVT.
- In this year, aquaculture was started by that committee.
- In 2000, GVT organized a training programme for members of the fish development committee.
- In 2001, fry were stocked but the bund was broken due to flooding.
- With the help of the Panchayat, the villagers got Rs 70,000 for repairing the pond.
- In 2002, the aquaculture programme is continuing by the village committee of both villages.

##### Community Success Realisation

- Conducting the aquaculture programme in a joint manner has led to better understanding, planning and implementation.
- The profit generated through the activities has increased the group fund and access of the community to credit.
- Through the joint efforts of both villages, a high school started in 1989.
- Rs 5,000-6,000 per year is donated towards school development through the aquaculture programme.
- Villagers from Batagoan and Koi villages have learned from this village and started a school.
- KAJU plantation of 10 acres commonly belongs to Khajuria and Haldikundi and has been denoted for meeting the financial requirement of the school.
- Influencing the Panchayat has resulted in a sanction of Rs. 70,000 for pond repair.

##### Loan Mechanism

- The community prefers to take loans from private moneylenders because the process is easy with timely loan availability, but not from the government due to procedural delay.

### Marketing

- Marketing of fish is not a problem for the community.
- Selling the fish in Kamkhya Nager, Bhuwan, at Rs 40/kg for big fish and Rs 20-25/kg for small fish.

### Constraints in Aquaculture

- Unavailability of fry and fingerlings from government agencies in the local area.
- Quality of seed is not assured (private seed supplier gives 50% of the money back if seed is not of good quality).
- Seed provided by the fisheries department has the complaint of long head and small body.
- No village-based practical training programme.
- Lack of low-cost technology.

### Community Feeling

- There should be a fry selling center at Panchayat level.
- There should be a government fry production center at Panchayat level.
- High quality seed should be ensured.
- Field-based training programmes with economic inputs should be introduced.
- Site selection for pond excavation should be done with its technical feasibility.

### *Case 3b: Bata Gaon Pond*

- The community pond (5.6 acres) was dug in 1962 with an investment of about Rs 2,000.
- In 1989, redigging was done under the watershed development programme at a cost of about Rs 20,000.
- In 1992, Rs15,000 was invested for digging under the JRY scheme.
- The pond is given to an individual by government on a three-year lease.
- The payment for the lease varies from Rs 2,500-3,000/ year.
- The pond is constructed on hard soil.
- Water stagnation is only for 4-5 months.

### Community Realization

- Lease to individuals reduces common access to the pond.
- Short-term lease leads to poor management of the pond.
- Stocking and harvesting are only done by the lease-taker; no input is given in the pond.
- There is no provision of any technical input by the government.
- There is no provision of group-based aquaculture programmes in government ponds.



**Case Study 4: Group-building, Production Success and the Struggle to Prevent Capture of the Resource (Jharkhand)**

A Case Study from Jharkhand proposed by Dr K P Singh, Field Specialist Aquaculture and Mr Pandeya, GVT Ranchi, Jharkhand, William Savage and Graham Haylor, September 2002 – February 2003

*Duration*

The Case Study began in September following its setting up in August. It is intended to run through February, with opportunities to report progress and get feedback on two occasions: the State-level Workshop in October and the Stakeholders Workshop in January. Final presentation of the Case Study outcomes and outputs will be at the Policy Review Workshop in April 2003.

*Location*

The location is Amber Toli, Nehalu cluster, Ranchi district

*Principal Investigators*

Mr S N Pandeya, Field Specialist Monitoring and Evaluation, and Dr K P Singh, Field Specialist Aquaculture, GVT East, Ranchi, Jharkhand

*Key Informants*

GVT self-help group (SHG) members belonging to the “Young Generation” group, comprising all 36 households of Amber Toli.

*Method*

The method is individual interviews and issue-focused small-group discussions. The community organizers of GVT know well the individuals and groups in the clusters of villages that have received their support for many years. The Principal Investigators for this study are Dr K P Singh and Mr Pandeya, who is also the former Community Organizer for Amber Toli.

*Media*

The experiences of the provision of services by the NGO will be documented and presented as PowerPoint presentations on CD. A photo storyboard will also be prepared.

*Content*

People’s experiences of group building and operation; experiences of the initial technical success of aquaculture operations undertaken and the subsequent history of the group and their experience of maintaining control of a valuable resource against the interest of more powerful stakeholder interests.

The text of the presentation by the Principal Investigators appears on the following pages. The first piece was written several years ago, with the second being an update based on the current Case Study fieldwork. The two pieces need to be combined, and feedback provided to the Principal Investigators by STREAM colleagues before the final version of the Case Study presentation is prepared.

## **Case History of Perennial Pond Aquaculture in the KRIBP-E Project**

Amber Toli, Nehalu cluster, Ranchi district, Bihar State

Group: Young Generation (all 36 village households)

Visited village on 9 April 1997. Activity going on with KRIBP-E started by Mrs M J Tete in 1996. Cleaning of pond, removing weeds, use of lime.

Community pond owned by villagers and used by all the people for bathing, cleaning animals, bathing, irrigation. Perennial pond of 1.96 acres.

Whole village organised meeting and decided to go for aquaculture programme, so stocked in June with seed from SRI (10,000 fingerlings of 30 mm). Villagers developed a schedule, what they needed from the project, what can be provided and who will do it. Villagers provided manure by basket, about 60-70 kg dry cow dung per week. From the project, came lime, rice bran, KMNO<sub>4</sub> precautionary treatment. Fingerlings added to hapa, treated and released.

There was at that time no outlet facility so they could not get good harvest so they harvested in March and got Rs 6,000 for 1-2 kg of fish. They had no big net and were not trained. They brought a net from another village, rented at Rs 200.

In 1997, they repeated but also added 2 kg of fingerlings purchased from the local market. Rs 9,000 of fish harvested in 1997, some of the older fish now were 3-3.5 kg. This time a net was borrowed from Birsa Agricultural University. Tried to check the outgoing fishes by making bamboo net. But due to heavy rain they could not succeed and so like in 1996, they lost many fish. So they decided unless and until there could be a proper outlet, they could not succeed, so they raised a proposal for that. With the help of the GVT project, an outlet was constructed with an investment of Rs 60,000.

Group savings are presently about Rs 17,000 (12,000 in bank at 12% annual interest; 6,000 in credit and savings at 5% per month). The lending rate in the village is 10% per month.

Marketing:

If they harvest 30-40 kg, they sell amongst the group and to outside persons. When they harvest in March, a big crowd gathers. First they sell to the group at Rs 30 then to neighbours at Rs 40; only then to outsiders but there is never any left.

In 1998, outlet construction was completed. The 1999 harvest has not happened yet but test harvest revealed large fish. They harvest rainy season fishes with a mosquito net; fish are 4-5 cm.

Conflict:

When the outlet construction was in progress in 1998, Mr Somnath Bhoghta of the same village (who lives at Ranchi), who is employed in the survey office represented to Mr I B Singh, Bihar State Coordinator (SC), that this pond belongs to him, and is his personal property so please stop the work. But by that time the construction of the outlet was 80%

finished. So the man was consulted and told to talk with the villagers to settle the matter amicably. Meanwhile the application was forwarded to Circle Official Bero for proper enquiry about the ownership of the land, requesting the officer to give feedback to KRIBP-E. The papers represented were doubtful as he had no record in the revenue register for that land and also had not paid the revenue to the office which is required and supposed to be one of the major papers relating the ownership of the land. Mr Bhoghta returned to the office with two other persons to discuss the matter with Bihar SC and Nehalu Community Organiser. They agreed that there was no objection to constructing the outlet for the benefit of the community so construction was completed.

The DDC Ranchi visited in February 1998 and sanctioned a hatchery project (Rs 600,000), with the first instalment of Rs 100,000 received in October or November. Visited the site to plan and demarcate the hatchery. Again Mr Bhoghta complained, so KRIBP-E requested the circular officer to make ownership clear, so papers were sent to LRDC (Land Reform Deputy Collector, Ranchi) and the response not yet received.

Mr Bhoghta's paper (1977) was 27 years old; there is no record in the LRDC. The paper shows that the plot 2098 is fallow land while the Circular Office record is saying that this plot has a "bandh" – big earthen bund – which can not be personal property. The earthen bund on the plot has been paid by the block office, i.e., constructed by the government. in 1970. Therefore this must be government land.

In 1970 there was a mass transfer of government land to the people – "distribution of Pata" – without following proper procedures. Mr Bhoghta's paper relates from this time.

This is a civil case to be judged by the LRDC. The LRDC has recently been transferred; the DDC has been transferred and the CO has also been transferred. The CO Nehalu is now the Field Specialist M&E.

Mr Bhoghta is employed in the survey office from which his paper derives. He had never made any claim to the land before the community fish harvest was demonstrated to be so valuable.

## **Case Study 4: Group Building, Production Success and the Struggle to Prevent Capture of Resources**

State: Jharkhand, District: Ranchi, Village: Nehalu (Ambatoli )

### **Consultation Process**

1. Personal interviews with “Young Generation Group” and jankars
2. Discussion with group members
3. Group records

### **Description**

- Community pond (Maria bandh) with an area of 1.96 acres used by the whole village for bathing, cleaning, animal bathing and so on.
- Before 1996 there was no culture fisheries.
- In 1996, the Young Generation Group (self-help group) of Ambatoli, with members from all 36 households started aquaculture activity.
- The group received training from KRIBP-E and stocked 10,000 fingerlings from SRI.
- The group also decided the roles and responsibilities of group members for feeding, watching and other management practices.
- In 1996 there was no proper outlet and the group could not receive a good yield.
- The total sale value was worth Rs 6,000.
- In 1997, the community continued the activity and added 2 kg. Fingerlings came from the Bharno local market.
- Harvesting of fishes this year was comparatively better and they sold fishes worth Rs 9,000.
- By this time, the community and jankars received a good number of training inputs by the project and their skills developed considerably.
- This year again there was loss of fish due to the heavy rain and the bamboo net used by the villagers could prevent it.
- In 1998, with the help of the project, an outlet was constructed with an investment of Rs 60,000.
- The community members also provided labour on 50% charge of the labour rate.

### **Encroachment by the Individual and Community Struggle**

- In 1998 when the construction work of the outlet was in progress, an individual of the same village, who resides at Ranchi and is an employee of the survey office, made his claim to the project that the pond belongs to him.
- By this time the construction work was almost finished.
- The claimant (Mr Somnath Bhoghta ) was requested by the project personnel to settle it with the community amicably.
- Meanwhile the claim paper presented by him was forwarded to the Circle Office Bero for verification and his claim was found not genuine as there was no record in the revenue register.
- The DDC Ranchi visited the pond in 1998 to see the aquaculture activities of the group and sanctioned Rs 6 lakhs for construction of a hatchery.

- Looking into the success of the pond and government assistance, Mr Bhoghta again claimed to the project and Circle Office about the ownership of the pond.
- He also tried to harvest the fish by hiring some musclemen, but the villages united and prevented him from harvesting.
- Mr. Bhoghta also lodged FIR in the name of some group members and filed a court case for the ownership of the pond.
- The villagers conducted their meeting and collected the relevant papers related to the ownership of the pond.
- The case was transferred to the court of LRDC with recommendation of the Circle Officer in the favor of the community.
- The group members have also jointly represented the issues to the local MLA and he also recommended in favour of villagers to the LRDC that this is common village pond and does not belong to an individual.
- The case is still in LRDC court.
- The pond is presently under the complete ownership of the community and this year (2002), 6 kg of fingerlings have been stocked by the community.

### **Preliminary Findings**

- The group is very cohesive and has good understandings of their rights.
- They have strategic planning to fight with the probable emerging situations.
- In the worst situation, they are planning for the development of some other pond to continue this activity but will not allow their skills in aquaculture activities to dissipate.

### **Case Study 5: Recipients' Experiences of Services Provided by NGOs in Support of Aquaculture for Poor and Tribal Groups (West Bengal)**

A Case Study from West Bengal proposed by Gautam Dutta, Field Specialist Aquaculture GVT Purulia; Jhinuk Ray, Community Organiser, GVT Jhargram; Purnachand Soren, jankar, Nalbon village, Midnapur; Dhiren Singh, jankar, Banstola village, Midnapur; M Rahman, Community Organiser, GVT Purulia; Sakya Singha Mahato, jankar, Jabarra cluster; Laxmi Manjhi, jankar, Banstola village, Midnapur, September 2002 – February 2003

Planning discussions with Dr Tripathi during the State-level Workshop included all the above persons.

#### *Duration*

Originally proposed to commence in July, the Case Study was to begin in September following its setting up in August. However, it has been further delayed and will now begin in late October as decided in the State-level Workshop. It is intended to run through February, with an opportunity to report the progress and get feedback from the Stakeholders Workshop in January. Final presentation of the Case Study outcomes and outputs will be at the Policy Review Workshop in April 2003. The study fieldwork will run from 28 October – XX November 2002.

#### *Location*

Purulia district: Kaipara and Jabarra clusters; Jhargram district: Lalbona and Nardah clusters.

#### *Principal Investigators*

Dr S D Tripathi, Consultant, Mumbai, Principal Investigator, and Mr Gautam Dutta, Field Specialist Aquaculture and Ms Jhinuk Ray, Community Organizer, GVT Jhargram, Co-Principal Investigators.

#### *Key Informants*

GVT self-help group (SHG) members: Mahato Group Kaipara, Jubojagruti SHG, Naboratno Sangho, Jabsa Nabodaya, Kalyan Panihan, Joynajei Pollyunnaya, including key informants who participated in the May 2002 workshop

#### *Method*

The community organizers of GVT know well the individuals and groups in the clusters of villages that have received their support for many years. Instead of awareness-raising and building self-reliance to utilize local resources better, this time they will be swapping clusters to document ASHG's experiences of provision of services by GVT. In the State-level Workshop, it was decided that a group of three persons from the two clusters (Kaipara and Jabarra of Purulia district) will make cross visits along with the Principal Investigator, Dr Tripathi, and the Co-Principal Investigators, Mr Gautam Dutta and Jhinuk Ray, to document ASHG's experiences. The group will comprise a jankar, and a representative each of the

Gram Panchayat and ASHG. Similarly, cross-visits will be organised between Lalbona and Nardah clusters of Jhargram district to document their experiences.

### *Media*

The experiences of the provision of services by the NGO will be documented and presented as PowerPoint presentations on CD. A photo storyboard and video clips will also be prepared.

### *Content*

People's experiences of:

- Group-building and operation
- The initial size of aquaculture operations undertaken, especially those of new entrants (starting small versus starting with a large investment)
- Risk and risk-taking (minimizing risk versus maximizing production)
- Extension processes (training, materials, processes, written and other media)
- Marketing processes
- Timeliness of the provision of inputs and services
- Accountability of group members
- Recommendations for change

### **Case Study 6: Service Provider's Perspectives on the Implementation of Government Schemes in Support of Aquaculture for Poor and Tribal Groups (West Bengal)**

A Case Study from West Bengal proposed by Kuddus Ansary, jankar, Khawasdih village, Barabazar; Dr Virendra Singh, GVT State Coordinator, Purulia; Dr K P Singh, Field Specialist Aquaculture GVT Ranchi, Jharkhand; Dr Snehashish Mishra, Research Assistant, Self Recruiting Species Project, Purulia; Mr Ashish Kumar, Deputy Director, DOF Ranchi, Jharkhand; Mr B N Baskey, CEO, FFDA Purulia; Mr N K Dey, District Fisheries Officer Co-operatives, Purulia; Mr Nitai Mishra, Manager, Central Fishermen's Co-operative Society, Purulia, September 2002 – February 2003.

In the State-level Workshop, planning discussions with Mr Ashish Kumar and Dr Tripathi were held with Dr T Mandal, Assistant Director of Fisheries, Purulia, Mr N K Dey, Mr B N Baskey, Mr Nitai Mishra.

#### *Duration*

Originally proposed to commence in July, the Case Study was to begin in September following its setting up in August. Owing to further delays, it will now begin in November and run through February, with opportunities to report progress and get feedback from the Stakeholders Workshop in January. Final presentation of the Case Study outcomes and outputs will be at the Policy Review Workshop in April 2003. The study fieldwork will take place from 14-25 Nov 2002.

#### *Location*

The location initially proposed was Hura block with the possibility to consider Barabazar and Balarampur blocks too, all in Purulia district, where both GVT and government support has been available. During discussions, it was decided to cover Keshargarh village in the Hura Block and Chhotogado and Bara Urma villages in Balarampur Block, as the concerned Fisheries Extension Officers are located in these two blocks.

#### *Principal and Co- Principal Investigators*

Dr S D Tripathi, Consultant, Mumbai, Principal Investigator and Mr Gautam Dutta, Field Specialist (Aquaculture), Purulia, and Ms Jhinuk Ray, Community Organizer GVT, Jhargram.

#### *Key Informants*

Key informants are people who participated in the May 2002 workshop and others. These include the District Fisheries Officer (Co-operatives<sup>2</sup>), Assistant Director Fisheries Purulia District, Fisheries Extension Officers of the concerned blocks, central and primary fishermen co-operatives, NGOs such as Pradhan or Ram Krishna Mission, Panchayat Raj Institutions, Saphapatis<sup>3</sup>, Pradhan<sup>4</sup>, Karmadhyakhyas<sup>5</sup>, banks and financial institutions (these vary from

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<sup>2</sup> These are fishermen's cooperatives which are often recipients of service provision for aquaculture, including pond leasing, fry sale or receipt and extension.

<sup>3</sup> The chairperson of the Panchayat at district level.

<sup>4</sup> The subdivision-level officer of Panchayat.

<sup>5</sup> A West Bengal local government position, Head of the village Panchayat, the lowest unit of local governance.



block to block; service banks in the proposed blocks include SBI, UBI, NABARD and MGB<sup>6</sup>), and local traders for seed and fish.

### *Method*

The method will be individual interviews and issue-focused small-group discussions. The Principal Investigator, Dr S D Tripathi, will take charge of conducting interviews and documenting the outcome. Mr Gautam Dutta, Field Specialist Aquaculture, GVT Purulia, and Ms Jhinuk Ray, Community Organizer, GVT Jhargram, will support the conduct of individual interviews, meetings and writing. All district officials and lead banks are based in Purulia; *gramin* banks are at block level. It is proposed to select Hura block because both GVT and government provide services to poor groups for aquaculture. (Where issues may be found to also support policy change insights, and time and funds permit, other blocks will also be covered, such as Balarampur block.)

### *Media*

A well-prepared PowerPoint presentation, highlighting key issues emerging from the work that relate to policy and recommendations for changes, will be presented in Ranchi at the January Stakeholders Workshop and refined for presentation in Delhi in April 2003. This will be made available also on CD. A photo storyboard and video clips will also be prepared.

### *Content*

The focus of the Case Study will be implementers' perceptions of:

- Mechanism for leasing of ponds
- Mechanism for provision of loans
- Process for supply of material inputs
- Timeliness and scheduling of loans, inputs and services
- Process for the selection of beneficiaries including key actors from DOF and Panchayat Raj Institutions and their interactions
- Process for communicating (about government schemes and technical extension messages, any systems for feedback, cross-checking and streamlining the system)
- Marketing support, networking and strategies and the role for farmers, the DOF and banks in decision-making about harvesting and its impact on market opportunities.

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<sup>6</sup> The acronyms relate to various local development banks.

## Emerging Indicators of Progress

On the holiday between the team's arrival in Purulia, and the workshop day, Dr Tripathi, Dr K P Singh, Mr Ashish Kumar and Mr William Savage met for planning discussions in an Akash Hotel room. They reviewed and discussed the outcomes of previous project activities, with reference to the various documented outcomes. They then drafted a statement of "Emerging Indicators of Progress Towards Transacting Institutional and Policy Change" (Appendix 4).

Of note, is that the original policy recommendations in the draft Component Concept Note, were incorporated into the "Emerging Indicators ...". This was then the primary workshop instrument about which participants were asked to provide feedback. Using the "Indicators" draft as the starting point, participant responses and reactions to it will be incorporated through a review of the data – feedback from the discussion groups. Comments about the groupwork follow.

### Feedback on the Emerging Indicators of Progress

In West Bengal, there were four groups:

- Purulia jankars
- Jhargram jankars
- ICAR-CIFA and DOF
- GVT

In Jharkhand, three groups were formed:

- GVT Community Organisers
- Recipients
- Jankars

And in Orissa, participants worked in six groups:

- Dhenkanal and Keonjhar jankars
- Mayurbhanj jankars
- GVT Project and State staff
- NGOs
- GVT Community Organisers
- DOF

## Evaluation

At the end of each workshop, participants were asked to respond to some evaluation questions. The outcomes appear in Appendix 6.

- How much have we achieved the objectives of the workshop?
- What do you think about the workshop sessions and methods?
- How do you feel about your own participation and contributions?
- What have you learned over these two days?
- Anything else?

## Follow-up Activities and Actions

### Consensus-building Process

One of the realizations of the State-level Workshops was that the material for discussion during the Consensus-building Process must be the “Emerging Indicators of Progress”, once they have been revised to take into account the feedback documented in this report. In addition, it is advisable to wait until the communications from the Fisheries Commissioner have reached the intended participants of the Consensus-building Process, to ensure optimum participation.

### Stakeholders Workshop

It was also realized that it would be wise to postpone the Stakeholders Workshop from December until the last week of January, with proposed dates of 29-30 January 2003. This will allow for all Case Studies to be near completion and for there to be enough time for the Fisheries Commissioners letter to reach Department of Fisheries participants.

### Policy Review Workshop

The Policy Review Workshop will take place as scheduled towards the end of April 2003. Dates should be identified and finalized as soon as feasible so that participants can arrange their schedules.

### Follow-up Actions

What	When	Who
Reconfirm Stakeholder Workshop dates with Dr Nair, Dr Ayyappan, Dr Tomar, Mr Gangwar, GVT State Coordinators, DFID	31 October	GH
Follow-up with Dr Nair on letters for DOF participation	31 October	GH, SDT
Request Virendra Singh for Gautam Dutta and Jhinuk Ray to be Principal Investigators on Case Studies 5 and 6 with Dr Tripathi	31 October	GH
Discuss revised schedule and street-play writing with Rakesh Rahman	31 October	GH
Follow-up on Case Study revisions with Principal Investigators (see page 6)	31 October	WS
Carry out fieldwork for Case Studies 5 and 6	28 October – 25 November	SDT, GD, JR
Revise “Emerging Indicators of Progress”	November	WS, GH, SDT, AK
Finalize participants in Consensus-building Process	November	WS, GH, SDT
Initiate Consensus-building Process	December	WS, GH, SDT
Plan for Stakeholders Workshop	December	WS, GH, SDT

*Appendix 1 Participants*

**West Bengal**

<i>NGO</i>	
1. Dr Virendra Singh	State Coordinator, GVT West Bengal
2. Mr Nihar Kumar Sinha	Senior Field Specialist M&E, GVT Purulia
3. Mr Gautam Dutta	Field Specialist Aquaculture, GVT Purulia
4. Mr A S Ray	Senior Community Organiser, GVT Purulia
5. Ms Jhinuk Ray	Community Organiser, GVT Jhargram
6. Dr Snehasish Mishra	Research Associate, SRS Project, Purulia
7. Mr Chandan Maiti	Data Entry Operator, GVT Purulia
8. Mr Kuddus Ansary	Jankar, Khawasdih village, Barabazar, Purulia
9. Mr Sakya Singha Mahato	Jankar, Jabarra cluster, Hura block, Purulia
10. Mrs Kalpana Sarangi	Jankar, Kaipara, Bara Bazar, Purulia
11. Mr Dhiren Singh	Jankar, Banstola village, Midnapur
12. Ms Laxmi Manjhi	Jankar, Banstola village, Midnapur
<i>State and District</i>	
13. Mr K P Das	Additional District Magistrate, Purulia (Chief Guest)
14. Dr T Mandal	ADF Purulia (seed, supplemental feed, plankton net distribution)
15. Mr N Mishra	Manager, Central Fisherman Cooperative Society Ltd, Purulia
16. Mr B N Baskey	CEO FFDA Purulia
17. Mr N K Dey	DFO Cooperative Purulia (registers cooperatives, sees if they are running smoothly, decides geographical area to avoid conflict, may canvas for applicants for government schemes)
18. Mr Nabagopal Rana	DFO Training Purulia
<i>Indian Council of Agricultural Research</i>	
19. Dr P P Charaborty	Senior Scientist, Central Institute of Freshwater Aquaculture
20. Mr Ajay Kumar Singh	Senior Research Fellow, CIFA, Kalayani
21. Mr Asim Kumar Bhowmik	National Bureau Soil Science ICAR, Kolkata, Salt Lake SRF
<i>Panchayat</i>	
22. Mr Badal Das	Jabarrah Gram Panchayat Pradhan Purulia (Panchayat-level – may be one or more villages =1000 people) from PRI (proposes people for training and sites for pond construction, mini-kit distribution, “the gateway” to the village for all line agencies) system operating in West Bengal for 27 years; system due to start in May
23. Mr Purnachandra Soren	Aquaculture Jankar, Nalbon village, Midnapur, cum Member of Panchayat Samiti
24. Mr.Jagadish Singh	Member of Gram Panchayat, Bandhgora, Jhargram
<i>Facilitators</i>	
25. Mr Ashish Kumar	Consultant, Ranchi, Jharkhand
26. Dr S D Tripathi	Consultant, Mumbai
27. Dr K P Singh	Senior Field Specialist Aquaculture, GVT East, Ranchi
28. Mrs Smita Shweta	Community Organizer Aquaculture, GVT East, Ranchi
29. Mr William Savage	NACA-STREAM Initiative, Bangkok, Thailand

**Jharkhand***NGO*

- |     |                       |  |
|-----|-----------------------|--|
| 1.  | Mr J S Gangwar        | Project Manager, GVT East, Ranchi, Jharkhand                 |
| 2.  | Mr S K Verma          | GVT Jharkhand State Coordinator, Ranchi                      |
| 3.  | Dr K P Singh          | Field Specialist Aquaculture, GVT, Ranchi, Jharkhand         |
| 4.  | Mr Mithilesh Kumar    | Field Specialist Training, GVT, Ranchi, Jharkhand            |
| 5.  | Mr S N Pandeya        | Assistant Field Specialist M&E, GVT East, Ranchi, Jharkhand  |
| 6.  | Ms Smita Shweta       | Community Organizer, GVT, Ranchi, Jharkhand; co-facilitator  |
| 7.  | Mr Rajesh Kumar       | Senior Computer Staff, GVT, Ranchi, Jharkhand                |
| 8.  | Mr Gulshan Arora      | Community Organizer, GVT, Ranchi, Jharkhand                  |
| 9.  | Mr K D D Singh        | Community Organizer, GVT, Bagda, Jharkhand                   |
| 10. | Mr Birendra Kumar     | Community Organizer, GVT, Hazaribagh, Jharkhand              |
| 11. | Mr Devnarin Prasad    | Jankar, Ganeshitand village, Hazaribagh, Jharkhand           |
| 12. | Ms Poonam Devi        | Jankar, Ganeshitand village, Hazaribagh, Jharkhand           |
| 13. | Ms Ranjita Minj       | Jankar, Ganeshitand village, Hazaribagh, Jharkhand           |
| 14. | Mr Md Rushtam Khan    | Jankar, Lakhnu village, Hazaribagh, Jharkhand                |
| 15. | Mr Bhukal Singh Munda | Jankar, Merhi village, Ranchi, Jharkhand                     |
| 16. | Mr J D Louis          | Tribal Humanity Development Activity, Ranchi, Jharkhand      |
| 17. | Dr K Bhattacharjii    | Society for Rural Industrialization (SRI), Ranchi, Jharkhand |
| 18. | Mr Arun Bhokta        | Ram Krishnan Mission (RKM), Ranchi, Jharkhand                |

*State and District*

- |     |                 |   |
|-----|-----------------|---|
| 19. | Mr Rajiw Kumar  | Director of Fisheries, Jharkhand                |
| 20. | Mr Ashish Kumar | Deputy Director of Fisheries, Ranchi, Jharkhand |

*University*

- |     |                   |   |
|-----|-------------------|---|
| 21. | Dr A K Singh      | Assistant Professor, Birsa Agricultural University, Ranchi, Jharkhand |
| 22. | Mr Niraj Kr Verma | Birsa Agricultural University, Ranchi, Jharkhand                      |

*Recipients*

- |     |                      |  |
|-----|----------------------|--|
| 23. | Mr Bhim Nayak        | Falwar Toli village, Bundu, Jharkhand  |
| 24. | Mr Krishna Machhua   | Falwar Toli village, Bundu, Jharkhand  |
| 25. | Mr Ras Behari Baraik | Chotachangru village, Silli, Jharkhand |
| 26. | Mr Manohar Naik      | Goradih village, Silli, Jharkhand      |
| 27. | Mr Mahato Bhagat     | Nehalu, Ranchi                         |
| 28. | Mr Birendra Bhagat   | Nehalu, Ranchi                         |

*Facilitators*

- |     |                   |   |
|-----|-------------------|---|
| 29. | Dr S D Tripathi   | Consultant, Mumbai                        |
| 30. | Mr William Savage | NACA-STREAM Initiative, Bangkok, Thailand |

*Media*

- |     |                  |                         |
|-----|------------------|-------------------------|
| 31. | Mr K V Binod     | <i>Prabhat Khabar</i>   |
| 32. | Mr Ganouri Ram   | All India Radio, Ranchi |
| 33. | Mr Pramod Kr Ray | All India Radio, Ranchi |

**Orissa**

<i>NGO</i>		
1.	Dr V S Tomar	CEO, GVT
2.	Mr J S Gangwar	Project Manager, GVT East, Ranchi, Jharkhand
3.	Mr P K Mishra	GVT Orissa State Coordinator, Baripada
4.	Dr K P Singh	Field Specialist Aquaculture, GVT East, Ranchi, Jharkhand
5.	Mr A G Das	Senior Community Organizer, GVT Baripada, Orissa
6.	Mr A K Singh	Senior Community Organizer, GVT Mayurbhanj, Orissa
7.	Mr Kamalendu Paul	Field Specialist Social Development, GVT East, Baripada, Orissa
8.	Mr Debapriya Ghosh	Community Organizer, GVT Keonjhar, Orissa
9.	Mr Keshabanand Patra	Community Organizer, GVT Baripada, Orissa
10.	Mr K C Mahapatra	Community Organizer, GVT Dhenkanal, Orissa
11.	Mr B K Sahay	Field Specialist Social Development, GVT East, Ranchi, Jharkhand
12.	Mr S N Pandeya	Assistant Field Specialist M&E, GVT East, Ranchi, Jharkhand
13.	Mrs Smita Shweta	Community Organizer Aquaculture, GVT East, Ranchi, Jharkand
14.	Mr Susanta Kumar Singh	Chairman, Palli Chetana, Mayurbhanj, Orissa
15.	Mr A Rath	People's Institute for Participatory Action Research (PIPAR), Dhenkanal
16.	Mr Nayan Mishra	Women Resource Centre (PHAR), Bhubaneswar, Orissa
<i>State and District</i>		
17.	Mr Satyabrata Sahu, IAS	Director of Fisheries, Orissa
18.	Mr S K Pradan	DFO Baripada
19.	Mr Narendra Kr Pradhan	DFO, Mayurbhanj, Orissa
20.	Mr P R Rout	ADF Dhenkanal, Orissa
21.	Mr Ranjit Keshari Das	Deputy Superintendent of Fisheries, FFDA Dhenkanal, Orissa
22.	Mr Prafulla Kr Choudhury	Fisheries Extension Officer, FFDA Dhenkanal, Orissa
23.	Mr P K Das	Deputy Superintendent of Fisheries, Keonjhar
<i>Indian Council of Agricultural Research</i>		
24.	Dr Radhey Shyam	Senior Scientist and Training Organizer, CIFA, Bhubaneswar
<i>Recipients</i>		
25.	Mr Pabitra Mohan Baral	Pradhan, Batagaon village, Dhenkanal, Orissa
26.	Mr Ashok Kumar Sahoo	Jankar, Khajuria village, Dhenkanal, Orissa
27.	Ms Beenapani Sahu	Jankar, Koi village, Dhenkanal, Orissa
28.	Mr Kshetrabasi Naik	Jankar, Padmakeswarpur, Nuakaraman, Keonjhar, Orissa
29.	Mr Raisen Murmu	Jankar, Badbilla village, Mayurbhanj, Orissa
30.	Mr Pratulla Chandra Behera	Jankar, Jamapani village, Dhenkanal
31.	Mr Purendra Mahato	Jankar, Natuo village, Mayurbhanj
32.	Mr Bonamali Mahakud	Jankar, Nichintpur village, Keonjhar
33.	Mr. Rajendra Marndi	Jankar, Nischinta village, Nischinta cluster, Mayurbhanj
<i>Facilitators</i>		
34.	Mr Ashish Kumar	Consultant, Ranchi, Jharkhand
35.	Dr S D Tripathi	Consultant, Mumbai
36.	Mr William Savage	NACA-STREAM Initiative, Bangkok, Thailand

*Appendix 2 Agenda*

- 0830 Arrival and registration
- 0900 Lighting of the lamp
  - Inaugural speeches
  - Welcome and workshop aim and objectives
  - Introductions
- 0930 Overview of the workshop
- 0945 Project update
- 1015 Emerging “indicators of change”
- 1030 Break
- 1045 Presentation: Case Studies
- 1130 Feedback and discussion
- 1230 Lunch
- 1330 Emerging “indicators of change” revisited
- 1500 Break
- 1530 Discussion: Policy Recommendations and Stakeholders Workshop
- 1600 Workshop evaluation
- 1630 Finish

### *Appendix 3 Feedback on Case Studies*

#### **Jharkhand**

##### *Case Study 4*

##### Recipient Group

- Awareness about the rights due to group formation and support from GVT.
- The farmers of Nehalu should remain united and face the challenges. They should wait for the government's decision but at the same time, see that unscrupulous elements do not take an upper hand. They should also be proactive and establish that the tank is that of the community and government.

##### Jankars Group

- Organization of the group by GVT and encouragement from time to time.
- Regular meetings organized by the group for preparation of profit-and-loss statements.
- Selection of tanks by GVT officially.
- Awareness created by group meetings.
- Cooperation between members.
- High percentage of literate (70%) and trained farmers who had undertaken study tours is responsible for increased awareness of the rights and privileges.

##### BAU-NGO-DOF Group

- Detailed study of rules and regulations adopted by the villagers (for self-help groups).
- Role of GVT service provided and opinion of the villagers should be studied.
- Reasons of diversion in aquaculture practices if any after GVT support.
- Declaration of community pond by government by clear-cut demarcation of the pond.
- Government should make clear-cut rules and regulations in the matter of community pond.
- Techniques of aquaculture, economics of culture and annual benefit of group members.

##### GVT Group

- Due to intervention of GVT staff.
- Frequent visit of Community Organizers of GVT.
- Literacy
- Strength-building through cohesive strong group.
- Regular intervention with government officials through GVT.
- Awareness-building through exposure and community training.
- Income generated from fish leads them to tackle the situation.

##### *Case Study 1*

##### GVT CO Group

- Government will develop facility and resources for aquaculture programme.
- Proper monitoring and motivation through government officials for pisciculture programme.
- This community comes under notified area and fisherman society and should not barrier in government schemes.
- Marketing facility should be developed.
- Provide some honorarium during training and seminars.
- Develop information system especially about government schemes.



### Recipient Group

- Having been declared a “notified area”, Fulwar Toli village in Bundu block does not receive any facilities from the welfare department nor from IRDP (Integrated Rural Development Programme) or NREP (National Rural Employment Programme).
- Education needs to be emphasized and spread among all age groups.
- Emphasis on health needs to be given and use of alcohol prohibited.
- Provision of land needs to be made as they are landless and hence cannot have personal ponds.
- Bara Talab (big pond in the village) needs to be reclaimed and renovated and handed over to the society.
- All government tanks should be reclaimed and renovated.
- Subsidy and loan should be provided by the government.
- More houses need to be constructed for the fisher community.
- Training in short- and long-term programmes in aquaculture.
- Water conservation should be done to create water bodies for aquaculture.
- Scheduled caste community should also be considered by the government while constructing ponds.
- Hatcheries need to be constructed in the government sector for seed production.
- Fisheries department and GVT should organize training programmes and provide encouragement from time to time.

### Jankars

- Lack of information and facilities from the government on account of being declared the notified area.
- Loaning facilities from the banks to be made easy.
- Transport and market facilities to be improved.
- Extension services needed.
- Information regarding provision of government facilities to be provided.
- Fish farmers to be encouraged by the fisheries department.
- Diversion from traditional profession to be checked.
- Guidance for improved production.

### *Case Study 2*

#### GVT CO Group

- Develop proper exposure for aquaculture programme.
- Develop hatchery for quality seed production.
- Proper training for pisciculture.
- Easy loan facility.
- Improved leasing system for allocation of pond for poor beneficiaries.

### Recipient Group

- Difficulties in seed production owing to shortage of nursery and rearing ponds.
- Long-term lease of government ponds for the fisher community of the area.
- Renovation of leased-out government ponds for proper fish culture.
- Training to be organized at big centers.
- Fishermen’s education at higher level needs to be provided with provision for hostel facilities.
- Houses for fishermen and gear and tackle to be provided.
- Licenses to be issued to the fishermen for seed transport.
- Hatcheries in Silli for seed production of exotic species are also needed.
- The right of irrigation from aquaculture ponds needs to be controlled.

### Jankars

- Procedures for leasing of ponds should be simplified.
- Information about improved techniques.
- Nets, seed and feed to be provided at the right time.
- Integrated fish farming to be encouraged.
- Organization of loans from banks.
- A list of fish farmers to be prepared to be approached for solutions to their problems.
- Shop for fishery provision to be set up by the government in every region.
- Long-term training in aquaculture to be organized.

### Orissa

#### *Case Study 3*

#### Dhenkanal/Keonjhar

- For credit systems, they have to contact with the fisheries officers in time
- Before talking the aqua activities they have to make contact with the fisheries dept for fingerlings
- The lease contract should be from 5-10 years so that the community will get more benefits
- Government is organizing training programmes but the villagers don't know whether the topic is connected or not, or informed by beating the drum to inform them
- If government pond leases are given to the groups, that will be more helpful than giving to individuals

#### DOF Group

- The physiochemical parameters of the tank should be made in details prior to stocking of fish seeds and proper management measures need to be undertaken for extensive and semi-intensive culture to ensure better fish production instead of contributing any single factor for less growth and production
- Availability of quality fish seed from government agencies is not at all a constraint because in Kamakhya Nagar there is a government fish farm at where quality fish seeds of assured species combination is made available.
- Normally healthy and quality fish seeds are supplied from the departmental farm. Any deformities in fish seeds in the later growth phase is attributed towards malnutrition as well as poor management and water quality of the pond.
- Village-based practical training to fish farmers is not possible in consideration to the vast areas of the district administration, However, any specific training can be arranged by the dept on request without any financial assistance. [CIFA can provide this training and collaboration with NGOs is welcome]
- Low-cost technology and institutional finance (popularly called Kata-Fisheries finance) is available for extensive culture, submitted by government officers group.

#### NGO Group

- Haladikundi and Khajuria villages were involved in programming and management.
- Able to identify their primary need which is primary education.
- Could able to have pressure on Panchayat to avail of Rs 70,000.
- Group dynamism could enable them to unite two villages.
- Generated common fund to be utilized in social development sector – primary education.
- Became able to be a model before villages surrounded like Batagoan.

#### GVT COs

- Group norm of management (with regard to conflict management) and others
- Vision of group
- Socioeconomic study of group and village
- Detail of ponds and use in diversified activities

#### Mayurbhanj Group

- The community are doing RKM (rohu, catla and mirgal) aquaculture of certain species of fish, but if they did it with prawn there would be more profit
- If they have integrated with ducks, poultry there will be more profit.
- If the small ponds are used to raise fingerlings on the side on the ponds then they will get more benefits
- Instead of individuals, if the lease is given to SHGs then there will be more benefit of the community.
- If the community will get the 50% subsidies then they will get more benefit.

#### GVT PHQ/SHQ

- Committee with a vision of village development by involving all villagers. (How did they form themselves into a group before GVT came?)
- Group approach – Task fulfillment – able to influence and receive assistance from Panchayat.
- Availability of fingerlings on time at doorstep.
- In-field training to community and jankars for sustainability.
- Involvement of community in all the steps of development (like site selection, monitoring and evaluation).

*Appendix 4 Emerging Indicators of Progress*

Emerging Indicators of Progress Towards Transacting Institutional and Policy Change

**I. Opportunities identified to improve the delivery of aquaculture services and support by government and non-government actors**

1. Understanding built of the strengths, resource use priorities and constraints of farmers and fishers
2. Recipients play a role in defining the services and support they need
3. Feedback from recipients and implementers effectively communicated

**II. Priorities for institutional and policy change agreed by key actors**

1. Recipient suggestions for change incorporated, for example:

- Timeliness of service delivery and materials, support
- Participation of women
- Capacity-building in technical aquaculture and participation
- Government needs to change how information is made available to farmers, since information on its schemes to support fish culture are required to be known to the farmers.
- Periodical meetings (and support to attend) between fisheries officials and community groups
- Greater involvement of and collaboration with NGOs

2. Implementer suggestions for change incorporated, for example:

- Village-level posts like VAW created
- Leasing of pond should be given to groups and lease period should be a minimum of 3-5 years (current policy prevents lessees from extending, which is a problem since their livelihoods come to depend on the leased pond)
- Insurance schemes reviewed and improved for both fish and farmers

3. Project suggestions for change incorporated, for example:

- Diverse choice in the aquaculture system they employ
- Control over the supply of inputs
- Control over date of harvest
- Input into nature of loan
- Input into negotiation of repayment schedule
- Encourage the formation of self-selected Aquaculture Self-help Groups (ASHGs) based on common interests among farmers and fishers
- Provide support to establish group savings and micro-credit schemes among ASHGs
- Set up a commission to address disputes over access and leasing rights, which constrain aquaculture

4. Recommendations formulated for scaling up, for example:

- Capacity building in participatory and livelihoods approaches of fisheries officers
- Awareness raising of poverty-focused aquaculture options among fisheries officers
- Development of innovative extension and communication approaches, including the use of mass media and links with other service providers in Asia-Pacific
- Development of a STREAM National Communications Hub

**III. Policy change promoted by key actors within the government system based on multi-level consensus on priorities for change**

*Note: The project has not yet reached the point of discussions about the mechanisms of actual policy change. It is expected that indicators of progress for this will begin emerging during the Consensus-building Process and Stakeholders Workshop.*

## *Appendix 5 Feedback on Emerging Indicators of Progress*

### **West Bengal**

#### **Purulia Group**

- Information about the pond.
- Regular training and instruments required in time.
- Participation of women in aquaculture needs to be encouraged.
- For providing loans, bureaucratic attitude should be avoided.
- Service provider at Gram Panchayat level should be knowledgeable.
- Services should be available in time.
- Selection of proper participants through group discussion in village.
- Emphasis should be given for encouraging “backward classes”.
- Simplification of rules to get the government schemes.
- Financial support during drought and flood (natural disasters) as in agriculture.
- Arrangement for cold storage and feed production at block level.
- Discussions at each Gram Sansad are necessary in planning for aquaculture.
- Greater initiative is required on the part of government officials.
- How to make aquaculture an independent venture is required to be publicized along with the publicity of government policies.
- Adopting a district-specific policy is necessary.
- Increased collaboration is needed between government and NGOs.
- Insurance schemes for aquaculture.

#### **Jhargram Group**

- Proper planning in right time at grassroots level.
- Regular training in scientific fish farming should be organized in time at Gram Panchayat level.
- Wide and clear publicity about benefits or facilities provided by the government should be given at Gram Panchayat and Gram Sansad levels to make villagers aware.
- Need more and simplified communication from higher officials to recipients.
- Need simple rules and regulations to get the opportunity of government schemes.
- Subsidy or financial support in case of natural hazards.
- Appropriate projects need to be formulated for rainfed areas.
- Provide scientific instruments for measuring water quality.
- Selection of only those farmers who are interested in aquaculture, and not those who are not, for the purpose of service provision.
- Intensive publicity is required at Gram Panchayat level.

#### **ICAR-CIFA Group**

- I. 1. Database (using remote sensing) on water resources and farmers (registration and licensing)
- II. 2. Supply of fishery inputs from block and Panchayat
- Regular visit of officials to fish farms
- Leasing of ponds to FCS, FPG, retired fisheries technical staff, unemployed fishery graduates, fishermen and others on priority
- Increased use of non-traditional resources and systems
- II. 3. Formulation of act to ban culture of banned species
4. Increased bank loans to aquaculturists
5. Creation of emergency fund for disaster management

## GVT Group

### I. Opportunities identified

Marketing – through local cooperative (primary cooperative) society

Cold storage and fish processing units

For TOT (transfer of technology) at grassroots level, and material support, fixed norms and fixed time- period may be followed

Standardization of loan and leasing practices (sanctioned with 15 days for a minimum period of 4-5 years)

Stress on practical (resource-based) aquaculture

### II. Priorities

1. Ideal modification of scientific and technical aquaculture into a rural-based aquaculture (vis-à-vis wild fish, seasonal pond aquaculture)

Optimal use of locally-available agro-residues and by-products as fertilizer and feed inputs (PEI – production enhancing inputs)

Establishment, defining and identification of model aquaculture villages for the benefits to be disseminated to all hitherto untouched contiguous regions.

Provision of water-testing kits and know-how

2. Government officials to be proactive towards beneficiaries

Integrated aquaculture may be encouraged and loans and other facilities extended on a priority basis so that the farmers may not be stressed during aquaculture stress periods

3. Encouragement for initiation of mission mode (revenue-oriented, recycling) project-oriented approach for loans and leases

4. Exposure-cum-lesson-learning visits of jankars and NGO and GO officials to successful aquaculture sites and fish farmers cooperatives

Single-point under-one-roof service provision

## Jharkhand

### GVT CO Group

- Women should be trained for aquaculture.
- Identification of pond before starting aquaculture.
- Timely allocation of fund for purchasing inputs.
- Government officials should conduct meetings in the field.
- Emphasis on self-help groups in the meeting.
- Develop infrastructure for timely production of fingerlings at local level.
- More emphasis on extension system.

### Recipient Group

- Delay in receiving the bank loans.
- Difficulties in procurement of feed, medicines, implements and the like.
- Lack of skill in organizing proper facilities for fishing.
- Total lack of education.
- No habit of savings.
- Not realizing the importance of life and group insurance.
- Non-availability of insurance coverage for aquaculture.
- Non-availability of ice and space in the markets.
- Women's lack of knowledge about purchasing and selling fish.
- Strong habit of drinking among the fishermen.

## Jankars

- Identification of traditional fishermen for training in practical aquaculture.
- Coordination between beneficiaries and the government.
- Provision of shops for fisheries provision at block and district level.
- Provision of markets at district level.
- Avoid risk and uncertainties.
- Availability of material on time.
- Utilization of available natural resources.
- Provision of facilities for long-term practical training and field visits.
- NOC (No Objection Certificate) to be issued to fish farmers by the government.
- Meeting of fish farmers and officials of DOF at block and district level.
- Encourage farmers by organizing workshops and exhibitions.
- Necessity to develop a policy from village to state level, and to implement it at the ground level.
- Ensure participation of women along with men.
- Improve relations between government and NGOs.
- Provide benefits from government and NGOs on the basis of participation.

## Orissa

### Dhenkanal/Keonjhar

- People are getting funding from the government, but ... (issue of site selection)
- Support from government, every month the officials should provide training to the community
- Crop activities get subsidies, so aquaculture should also get subsidies, but perhaps this is because of lack of awareness that these are available
- Government should ban hawkers who move to the village and sell their fingerlings, and should get the fingerlings in time
- Community should not depend totally on the government, SHG should be responsible to manage all these things

### GVT PHQ/SHQ

I. Periodic visit by the service providers and to create a two-way system of communication.

II. Implementer suggestions:

Empowerment and capacity-building of local people

Formation of federation in a Panchayat for development and management of ponds for fund generation through integrated aquaculture (e.g., hatchery, duckery)

Encourage funders to work on aquaculture projects for the development of fish farming by providing economical support as the funds of government are limited.

### Mayurbhanj

- SHGs are to be formed for aquaculture.
- Jankars related to aquaculture should be given training on the subject.
- Women should be trained along with men members.
- On technical know-how, government policies related to aquaculture should be communicated through radio, TV and journals.
- Leases should be given for ten years to the SHGs.



### NGO Group

- Catalyst – GO and NGO
- Programming and management – CBOs
- Programme strategy—Promotion of SHGs with fishing communities and those interested in farming
- Tools and instruments – IEC activities, participatory planning (group and area-specific), micro-credit)
- Capacity-building – intermediary and community levels
- Infrastructure – free and subsidized
- Security – insurance coverage
- Resource centre – local resource centres for scientific research applications, availability of resources

### GVT CO

- Lease priority should be given to the well-ranking (graded) SHG on a long-term basis.
- Fish breeding farm at Panchayat level.
- Subsidy provision for tribal deficit farmer.
- Regular visit of local fishery officer.
- Training.

### DOF

#### I

Like inland aquaculture, in coastal states brackishwater aquaculture and marine fisheries development should be incorporated in the programme by NACA-STREAM.

Creating awareness among rural folk and farmers regarding production potential of the available water resources and their effective utilization and exploitation.

#### II

Capacity-building of the jankars and recipients and equipment of technical knowledge is essential on a priority basis as they are the main connecting link between the government, technology and the farmers.

Information on different government schemes and facilities needs to be displayed in the Gram Panchayat office premises and important public places through signboards, for example.

Integrated fish farming needs to be taken up instead of aquaculture only to provide better employment and effective utilization of land, water and available resources.

## *Appendix 6 Evaluation*

### How much have we achieved the objectives of the workshop?

#### **West Bengal**

1. We are going ahead as per desired objectives from morning to evening. If we go like this we achieve definitely.
2. We have achieved the objectives of the workshop as per the desired level.
3. From today's workshop, we have achieved the objectives as per the desired level, and we have learned the right method for organizing the workshop.
4. We have been able to achieve the objectives per the desired level and we have learned some valuable information related to aquaculture. If we go like this, it will be useful at grassroots level.
5. Four groups have expressed their views similar to each other and in my opinion, 80% of the objectives have been achieved, and the remaining objectives will be achieved after discussion at cluster level.
6. We have got some constructive and right ideas from four groups.
7. By this workshop, we have been encourage to think about rural development and show something in that direction.
8. We have achieved a lot but more thinking needs to be sincere.
9. Achieved the objectives.
10. The objectives have been fully achieved.
11. We have achieved the objectives more than 75% in this workshop.
12. We achieved the objectives of the workshop fully – gradation = 9/10.
13. The objectives have been achieved fully.
14. 80%
15. Satisfactory.
16. We have learned much from this workshop.
17. Good points had come up by the intellectuals participated in workshop.
18. It's successful in all aspects because all participants recommended and were vocal to put their views for better aquaculture services to the recipients to be forward for the next stage or stakeholders workshop.

#### **Jharkhand**

1. More assistance from government and NGOs should reach the fish farmers and training, lease of ponds, seed, feed and marketing should reach up to block and village levels.
2. We have learned a lot from this workshop and we can generate a new life in our lives and in the lives of other fishermen so that they can be happy.
3. I feel that the objectives of the workshop have been achieved to a great extent.
4. With the help of GO and NGO and the farmers, we can solve the problems of aquaculture and can progress.
5. The first and second seminar has shown a path to the government and GVT and I hope that it will help in making policies in the 10th Five-Year Plan.
6. The first and second seminar has shown a path to the government and GVT. I hope that people will think about these while making the plans.
7. Through these workshops, we could tell about our weaknesses and our problems before others.
8. We have achieved a lot about the objectives of the workshop, and for this, we have received great cooperation from government and NGO officials.
9. The problems faced by the fish producers and suggestions which came for solving them were very encouraging.
10. The achievement was satisfactory. In my opinion, if these workshops are organized after every three months, we could learn more and we can get better direction.

11. Through this workshop, I could know about so many policies of the government and we also indicated for some policy change.
12. We farmers and fish farmers feel more aware about the policy-making of the government now.
13. Through this workshop, I could know a lot about the government policies, and also about the changes they have made.
14. Through this workshop, I could know a lot about the government policies, and also about the changes they have made.

### **Orissa**

1. The objective has been fulfilled to the fullest extent.
2. The objective has been fulfilled up to 60-100%.
3. The discussion was made among the participants about fish cultivation and we obtained a lot of information which is of use to the community.
4. We got some information about NACA, STREAM and GVT.
5. The objectives were discussed with a lot of interactions.
6. A lot of care has been taken to highlight the objectives.
7. The objectives of this workshop has been fulfilled to the fullest extent.
8. Understanding of people regarding policy change has been achieved.
9. The opinions of the participants have been taken to understand the objectives of the workshop, and it is pleased to note it.
10. Until now, the objectives of this workshop have not been fulfilled. Therefore, state-level workshop are required to be conducted to fulfill the objectives.
11. Whatever the objectives were discussed in this workshop, much has been achieved.
12. We got some information about NACA, STREAM and GVT. Aquaculture may be a successful alternative for improvement in livelihoods of tribals and poorest communities. We could hear about policies on water and water bodies at state and central levels.
13. Due to the presence of the officers related to aquaculture, scientists and GVT, and their participation, the objectives of the workshop have been achieved.
14. About 75% of the objectives have been achieved.
15. The presence of administrator, scientists, policy-makers, NGOs and officers of DOF has made this workshop successful.
16. The objectives have been achieved to the fullest extent, and the discussion among the participants and their introductions has made this workshop successful

### **What do you think about the workshop sessions and methods?**

#### **West Bengal**

1. Today's workshop, the method by which it has been organized is very much liked by me. The task which was given to Mr Sinha, the translation from English to Bengali has been totally understood by me and appreciated by us.
2. Also we have learned the different methods for presentation and we have learned the difficulties to get the benefits from the government schemes.
3. We have learned how to get the benefit of the different government schemes related to aquaculture through simplification of government rules.
4. We have been able to know the difficulties to get the benefit of the different government schemes.
5. The method by which the workshop has been organized, we will go ahead definitely towards the objectives.
6. We have learned how small farmers can go ahead with the aquaculture programme.
7. The suggestions you got through this method will certainly lead to progress and prosperity.
8. Everybody has understood the necessity for "lab to land". Everybody has been able to express some ideas through their presentation.
9. The lessons and method which have been adapted in this workshop are right in my opinion.

10. The workshop has been conducted in the right method.
11. The methods of this workshop is good but it should be two days workshop and more GO, NGO and farmer participants are required.
12. Methods of workshop sessions is excellent, particularly group formation, presentation – gradation = 10/10.
13. Very good.
14. Very good.
15. Sessions were duly categorized and the methods followed were quite up to the mark to obtain qualitative inputs from participants.
16. I think that the session of the workshop is very good.
17. I was very short, effective and disseminative.
18. I think the sessions are methodological and effective, went on smoothly.

### **Jharkhand**

1. The NGOs and fish farmers should be given proper facilities for aquaculture so that farmers can take more benefits.
2. We learned a lot about intellectual knowledge by which the life standards of fishermen can improve. We also knew about the problems faced by the fishermen in importing and exporting fish and group insurance.
3. Obviously it was nice and pragmatic.
4. Case study was beneficial. We could know new things.
5. We have learned so many things about the policy, tanks, fish, assistance, from the government.
6. We have learned so many things about the policy, tanks, fish, assistance, from the government.
7. This shows the session and methods of the workshop.
8. During the sessions, next time a projector should be used, and the workshop should be documented.
9. The workshop sessions and methods are quite appropriate and things were expressed in a simple form.
10. We have positive thoughts about the sessions and methods because this workshop acted as a mediator between the government, NGOs and the jankars.
11. Through this workshop every participant could get an opportunity to express his problems.
12. The presentation of the workshop was good.
13. Through this workshop, members of different groups could share their problems and solutions.
14. Members of different groups could share their problems and solutions, and we could give our own indications.

### **Orissa**

1. Extension works on aquaculture and the profits to the community is one of the good objectives of the workshop.
2. The methods of this workshop should be known to everybody and trainings to the jankars should be given by GVT.
3. The sessions of this workshop should be done once in a month so that each and every fish farmer will benefit.
4. This workshop was participatory and interactive. The feedback of the community has been put forward through group representatives.
5. The methods of this workshop are OK, but we require that we should have given some more time.
6. The methods of this workshop are OK, but we require that we should have given some more time.
7. Very nice.
8. The sessions and the methods of this workshop were very good.
9. GVT personnel from different areas had attended this workshop, government and non-governmental officials have expressed their different opinions and we learned a lot from the jankars.

10. The sessions and the methods adopted in this workshop would have been better for the poor provided that this workshop had been conducted in their town.
11. A lot of discussions were made for improvement of the livelihoods of the people and participants need to tell to their community when they go back.
12. The workshop was organized in a nice manner. The methods adopted were also nice and the duration should have been two days for better results.
13. The workshop should be of minimum three days duration.
14. The sessions and methods were appreciated. If time of discussion would have been more, we could have got some more information.
15. This workshop should have been for two days instead of one day. More emphasis should have been given to technical aspects. The manner in which the workshop was conducted was very much appreciated.
16. In this workshop, different persons from different organizations have given a lot of information.

### How do you feel about your own participation and contributions?

#### **West Bengal**

1. I do not know how much I have participated in this workshop, but we are glad that our group has contributed some new ideas. Also in future we will be able to contribute more regarding our recommendations.
2. I cannot assess myself regarding my participation, but we are happy that our group has given some new ideas.
3. I felt that I cannot say rightly how much participation was on behalf of me. We are glad that our groups have been able to give some new ideas.
4. I cannot say exactly my quality of participation. We are happy that our group has been able to express some ideas.
5. Without active participation of the community, rural development is not possible.
6. I think that for any workshop, active participation is a must.
7. By my participation, I could know many new things and problems which could be solved.
8. As I am a research scholar, so I prefer transfer of technology which I always like. If transfer of technology is done properly, then it will make a great success and in the future also the workshop will also be successful.
9. I am really thankful for my participation in the workshop.
10. I am really thankful for my participation.
11. I am happy to all for attending workshop and I have learned more new thinking in this workshop.
12. I am feeling very comfortable in expressing my ideas in all sessions – gradation = 9/10.
13. Satisfactory.
14. I contributed as per my capacity.
15. Up to the mark.
16. I am satisfied about my participation and contribution.
17. The ideas given by me during the presentation will help a bit in policy recommendation.
18. My opinion or suggestions would be fruitful in changing the policy regarding this subject. None the community ready for Case Studies.

#### **Jharkhand**

1. I could bring my best thoughts in the workshop so that other farmers could benefit.
2. I expressed my feelings with other fishermen, agriculture officers and the facilitator, so that we can become self-reliant.
3. I have actively participated and contributed in the workshop.
4. I could learn from the farmers of Bundu and Silli blocks and I could know about the government policies.
5. I could know how I can increase my business after attending this workshop.

6. I could know how I can increase my business after attending this workshop.
7. About my participation, I think I have participated in every session.
8. Participation of myself and my friends in the workshop was satisfactory. This is the success of the workshop.
9. Everyone in the workshop participated nicely and simple and general Hindi language was used. I feel happy that I could understand the Hindi translation of the language of the facilitator from STREAM.
10. My participation and contribution in the workshop was satisfactory. Through this workshop, I could know about the government policies related to aquaculture and I also helped the government in policy change.
11. I could share so many things with others and I learned a lot and other fish farmers like me can benefit if they attend such workshops.
12. My role and my thoughts were important in the workshop.
13. I could share my feelings with others and learned a lot from the workshop.
14. I learned a lot about aquaculture in the workshop.

### **Orissa**

1. Due to my presence, I have learned more about aquaculture and I will distribute this knowledge in each village.
2. I have a self-interest to learning things and contribute the knowledge in the community.
3. I learned a lot about fish culture. This is one of the biggest opportunities that I had got in my life. Still I can do more if I educate others in this regard.
4. I learned about aquaculture services by attending this workshop, for improvement of the livelihoods of rural poor people, this aquaculture can be used as one of the tools.
5. I have improved my knowledge by attending this workshop. Besides knowing aquaculture in my village, I could learn from the practices adopted in other places.
6. This workshop is result-oriented and my attendance at the primary level is of great importance.
7. I learned about the problems of aquaculture in this workshop. I'll take all possible steps to solve the problems faced by the farmers as an official of the government.
8. I am satisfied with my presence and my contribution.
9. I learned how aquaculture can be done through groups from this workshop and expect such workshops in the near future.
10. By attending this workshop, I came to know that our state government and NACA-STREAM are doing a lot of work for our improvement, and I thank these organizations.
11. By attending this workshop, I learned useful things which I will tell to my people at the village.
12. My attendance is not up to the mark but I blame myself and the complexity of this subject.
13. By attending this workshop at the grassroots level to bring about changes in policy matters, and expressing the problems of fish farmers of district levels, I am grateful.
14. I am happy by putting forward my own views.
15. I am thankful to the organizers because I could get the chance to express my opinion and listen to others.
16. I learned about fish culture, duckery and technical know-how from this workshop.

What have you learned today?

### **West Bengal**

1. From the last workshop in Ranchi, lessons learned – we have been able to continue more in this workshop. My feeling is this – we are going ahead to serve the purpose.
2. Today from the workshop, we have learned the advantages and disadvantages to take up the aquaculture programme, and how to eliminate these through changes of policy.
3. Today from the workshop, we have learned how to eliminate the difficulties to take up aquaculture.

4. Today we discussed regarding constraints about aquaculture programme.
5. We have learned to take up the aquaculture programme in future.
6. We have understood that problems will not be solved, only creating pressure on government, but groups have to do something themselves on their own.
7. I knew how could I solve the problems and also I could know about new scientific thoughts.
8. If we can utilize natural resources (soil, water, etc.) in right direction, then something will be achieved for the country.
9. I have learned through picking up aquaculture programme, dependence will be reduced.
10. I have learned that through aquaculture I will be able to get profit.
11. I have learned the real problem which rainfed aquaculture farmers are facing due to there is no proper recommendation.
12. How to conduct a workshop very efficiently and how friendly well-defined methods with group participation can bring forth positive results or outcomes. This sort of participation of grassroots works, NGO, research personnel can always be useful.
13. Learned a lot regarding the process of getting feedback from participants' reactions to change of policy.
14. The proposals of registration and licensing of fish farmers, use of remote sensing technology in aquaculture and declaration of model fisheries village are really good suggestions which came out of the workshop.
15. A concerted effort from every related sphere could take the "blue revolution" a long way to making it successful.
16. I have learned about various aspects of aquaculture and technology.
17. Views of ICAR and government officials about the remote sensing was appreciated.
18. We've learned a lot from the community as well as from the scientists.

### **Jharkhand**

1. I learned how can fish farmers develop through GOs, NGOs and private organizations, and how assistance should reach from district to block level.
2. I learned about the Case Studies of my own village Bundu and the other village from Silli. I could also know about the emerging indicators of policy change and how I can benefit from them.
3. Yes, I have learned about the difficulties faced by the farmers in aquaculture and the constraint that needs to be improved through improvement in government policies.
4. Both can benefit from linkage with SHG and government.
5. I learned something about fish marketing and getting employment from fish marketing.
6. I learned something about fish marketing and getting employment from fish marketing.
7. I feel encouraged by the workshop in which I had the courage to express my weaknesses and I was also encouraged to move further. These types of workshops should be organized regularly.
8. Important suggestions about the difficulties in aquaculture, their solutions and policy change.
9. The thoughts of so many people about policy change for the development of fish production, were important.
10. I learned so many things about institutional and policy change and also indicated how can they become the policy of the government.
11. I could know through this workshop about the policies of the government regarding aquaculture and also where they need to be improved.
12. Government, foreign department and NGOs have raised a good question about policy change on fish business.
13. In this workshop, I could learn about government and NGO policies on aquaculture.
14. I learned many things about the government and NGO policies and up to what level they can be improved.

### **Orissa**

1. I got some information about aquaculture from participants of different organizations.
2. –

3. I learned how to do adopt proper practices for aquaculture which will be useful for regular practices.
4. Active participation is required for putting forward any alternative livelihood for the people.
5. Through this workshop I learned different stories about aquaculture and I heard suggestions for improvement from different people and organizations.
6. Successful Case Studies were heard which has influenced me.
7. A good coordination among government officials, NGOs, farmers, scientists and understanding will help to improve fish production.
8. The ongoing methods and the need for a change in policy were informed to me.
9. I learned about aquaculture, duckery and poultry. The services that are being provided by the government were also learned.
10. Through today's workshop, I came to know that state level workshops are being organized for improvement of villages.
11. I was happy to be in this workshop and I got an opportunity to interact with many participants.
12. I learned the present policy and future changes that are required. Project on aquaculture by GVT. The scope of freshwater aquaculture in Orissa. Integrated fish farming is one of the alternatives to our traditional agriculture.
13. I learned about the problems related to aquaculture in different places including from the current states.
14. There was an exchange of ideas about the problems on aquaculture and its solutions,. Different Case Studies were presented and the problems related to the Case Studies were discussed. Scientist from CIFA had also discussed about the problems and their solutions.
15. The policy change issues have been discussed for the development of rural people and farmers.
16. I learned a lot from today's workshop about aquaculture.

### Anything else?

#### West Bengal

1. The presentations so far done it was remarked that there was similarity across the groups. I feel that we are going in the right direction. Also my feeling is that if we can sit together and discuss something, definitely some outcome will come.
2. There are some ideas which have come from different groups which are similar. In future it is expected that it will be more fruitful.
3. The views which are raised by different groups are similar to each other.
4. The groups had views which were similar to each other in some points. If we can discuss with the right people of the community we will get good output.
5. I expect that for each workshop, translation from English to Bengali needs to be sincere.
6. In each workshop, every English should be translated into Bengali like in this workshop.
7. By organizing workshops like this, so many problems can be solved. I am grateful to the organizers.
8. As the pond consists of soil, sediment, water and agroecological regions, so it should have more clarity regarding those elements.
9. More workshops are required related to the subjects of this workshop.
10. More groups should be formed at cluster level.
11. –
12. If some scale of opinion be prepared for expression of evaluation.
13. –
14. Participation of DOF people for a very short period deprived of their valuable suggestions which could be of much more importance to the project.
15. The workshop gave a lot of insight into the policy decision and shortcomings than what it really took.
16. I am happy to participate in the workshop.
17. –



18. The recommendations or information given or provided by all must be very effective and inclusive.

### **Jharkhand**

1. I feel that there should be a long-term training in aquaculture.
2. This type of training should continue regularly in which knowledge about new things can be given.
3. Thanks.
4. We increase our thoughts through these meetings.
5. Fish farmers should be acknowledged about the policies of the government with the help of GVT.
6. Fish farmers should be acknowledged about the policies of the government with the help of GVT.
7. I think that whatever has been exchanged about policies should be implemented.
8. We should be made aware about what were the indicators which emerged through this workshop and what type of positive deliberations came in the workshop.
9. –
10. This type of workshop should be organized in Delhi so that we can know about the thoughts of good people and we can implement them in our village.
11. We should be made aware in future about any such workshop.
12. We should give a stress on making Jharkhand self-reliant in aquaculture.
13. This type of workshop should continue so that we villagers could learn new things.
14. This type of workshop be organized always.

### **Orissa**

1. One needs to be self-dependent and stop waiting for the services from different organizations and service providers. This is the way by which we can develop ourselves.
2. –
3. –
4. Workshop should have been for two days.
5. This type of workshop should have been conducted every year and it is needed to be done in the rural area.
6. In future, such workshops should be for more duration.
7. Training is required for fish farmers as well as extension officers.
8. I am thankful to GVT and NACA.
9. We could meet different persons, government officials and NGO officers in this workshop. We have met the facilitator at Ranchi and such type of workshop was conducted at Ranchi and West Bengal and in the near future, I expect such workshops to be conducted.
10. I am thankful to GVT for listening from government and NGO officials about aquaculture.
11. –
12. –
13. In every block of Orissa we should have this workshop.
14. –
15. –
16. By taking everybody's opinion, I express my thankfulness.

*Appendix 7 Presentation by CIFA Senior Scientist*

**Problems in Rural Aquaculture**

*Dr Radhey Shyam*

*Senior Scientist and Training Organizer, CIFA, Bhubaneswar*

In spite of all these efforts made so far, only 30% of the developed technology has reached in the farmer's field due to the following general problems:

**1. High Cost of Input**

Initial expenditure on line, fish toxicant, fish seed, fish feed, fertilizer, rent etc. may be estimated over Rs. 40,000/ha even more if water exchange and aeration are done. Most of the fish farmers belong to small, marginal and landless category who could not afford to invest such amount of the same.

**2. Poaching and Poisoning of Fish Crop**

As per recommendation, fish is grown for one year in composite fish culture to attain a size of about 1 kg. When farmers get the stock of sizeable fish crop, it is sometimes poached and/or poisoned.

**3. High Rent of Water Bodies**

Over 67% of fish farmers practice aquaculture in leased-out ponds. Every year the lease value of the water bodies increases due to its high demand.

**4. Short-lease Policy**

Gram Panchayat tanks and ponds are leased only for 1-3 years. A particular farmer is not sure whether he would be able to do fish culture in the same water body next year. Thus the fish farmers are reluctant to invest money.

**5. Third Party Right for Water**

In individually managed community ponds, there exists third party right of water for irrigation, bathing and other domestic use. They do not allow to apply organic manure, fertilizer etc. and take away nutrient loaded water for irrigation, making the pond shallow.

**6. Lack of Fund**

Rural fish farmers are generally very poor. Due to which they are unable to follow all the recommended practices. Many fish farmers, because of so many formalities in receiving loans from the bank, do not show interest to come forward.

**7. Multi-ownership of Water Body**

Due to different attitude of some members of multi-ownership ponds, the culture operation could not be continued.

### **8. Lack of Know-how**

Farmers are unaware to the operational steps of composite fish culture, fish seed rearing, induced breeding and integrated fish farming etc.

### **9. Lack of Quality Fish Seed**

Farmers are unable to get recommended quantity of quality fish seed in time.

### **10. Lack of Marketing Facilities**

Fishes are sold at lower price at the pond site. Essential farming tools/inputs are not available in the local market.

### **11. Disease Outbreak**

Outbreak of various fish diseases in ponds cause mass fish kills.

### **12. Natural Problem**

Sudden flood or drought and/or increased water temperature cause heavy loss to the fish.

### **13. Water Quality Problem**

In freshwater rural aquaculture, over 24% extensive and 12% semi-intensive ponds suffer with bad water quality problems, particularly due to DO (dissolved oxygen) depletion, algal bloom, entry of polluted water etc.

### **14. Less Knowledge of Extension Personnel**

In aquaculture extension network there are a subject matter specialist with less extension knowledge and extension specialist with less knowledge in subject matter. Both of these cadres' knowledge level need to be improved to serve the farming community.

*Appendix 8 Component Concept Note Excerpt*

**Component Concept Note (DRAFT)**  
**Aquaculture Diversification and Self-help Investment Support**  
**ADIVASIS**

**Policy Recommendations**

Establish a new component of a scheme called ADIVASIS (Aquaculture Diversification and Self-help Investment Support) based on a participatory approach to understand the strengths, resource use priorities and constraints of (poor) farmers and fishers.

Move towards a process rather than a target-oriented approach so that recipients play a role in defining the services they need (diverse choice in the aquaculture system they employ, control over the supply of inputs, date of harvest, nature of loan or repayment schedule). Key to this will be:

- Capacity building in participatory and livelihoods approaches of fisheries officers
- Awareness raising of poverty focused aquaculture options among fisheries officers
- Encourage the formation of self-selected Aquaculture Self-help Groups (ASHGs) based on common interests among (poor) farmers and fishers
- Provide support to establish group savings and micro-credit schemes among ASHG

Support the development of innovative extension and communication approaches, including the use of mass media and links with other service providers in Asia-Pacific.

Set up a commission to address disputes over access and leasing rights which constrain aquaculture. Even where leasing is controlled by legal statute, problems still exist.

**Policy Development Support**

If the component is proposed for the Tenth Five-Year Plan, the DFID NRSP project and the NACA STREAM Initiative would be able to work with Government of India and selected State governments to define and pilot the component.

*Appendix 9 Project Flowchart*

