

AwF-Toleo foundation funded project in Sunderbans West Bengal , India

Background

Joygopalpur Grameen Vikas Kendra is a village level NGO established in 2000 in Sunderbans to strengthen the capacity of people in solving the problems by themselves. AwF identified this



organization as a potential organization and supported the project submitted on carp seed production and promotion of fish culture in the area using the funds received from the Toleo Foundation. The organization has established the hatchery successfully using the funds

provided and initiated the seed production activity during this year from April to July 2009. However, the devastating cyclone “Aila” during 2009 affected several thousand families in the area and a large number of families who had undertaken fish culture lost their fish seeds in the floods. The brave farmers continue to overcome all the adversities and earn their livelihood necessities by undertaking various activities. A visit was undertaken by Prof. M.C.Nandeesha, Co-Chair to understand the ground situation and help the organization in carrying out the proposed activities under the AwF supported project. In the first part of this report , JGVK genesis , its effort to bring the technical expertise to benefit people and programs on agriculture activities with focus on organic agriculture is presented. In the second part , efforts made by JGVK to implement the aquaculture activities is presented.

Sunderbans and JGVK

Sunderban area is densely populated and inhabited largely by the people who have migrated from other areas, including a large migrant population from Bangladesh. These people have small land holding and battle on daily basis to counter various natural calamities like floods, cyclone, entry of wild animals in to village area , etc. In addition, major social problems like oppression of women

has been wide spread and they have been the target to receive all the anger of men. In order to address some of these problems, a statewide movement called as “**Tarunthirtha**” (youth pilgrimage) was initiated in the area.almost two deacades ago. The main focus is on bringing awareness in youth through cultural programs .

The secretary of JGVK, Mr. Biswajit has been actively involved in the Tarunthirtah program and mobilized youth to address social, environmental and economic issues



through a number of cultural and economic activities. Seeing the benefits of these movements which focused only on youth, encompassing all age groups including the children. Based on the experience gained from that

program, Mr. Biswajit took the initiative to establish JGVK with the involvement of local villagers and by adopting participatory approaches in every stage. He had by then had over fifteen years of experience of working with other social organizations on voluntary basis and helping them in carrying out the activity.

Danish people support

From the early stage, they were fortunate to have the support of Danish people through the good



will of Mr. Ganesh Sengupta, an Indian born Danish citizen with a commitment for the improvement of the people in India by generating resources and bringing technical input to solve the problems prevailing in the villages. All these efforts have now led to the establishment of a well founded institution with

projects dealing on various aspects of social issues, agriculture and micro-finance. The training institute established with essential facilities help people stay in their place and receive training. There are over 200 employees working in different projects in 4 districts of West Bengal and one district Orissa. In all projects/cases they have made an effort to employ local people with

honorarium and flexible work time to enable potential people to carry out the family obligations and also contribute for societal development by receiving small financial support as an incentive.

Linkage with Danish technical institutions

Danish institutions also have been actively involved in helping this organization through the involvement of their staff and students. During the visit, two students from the Technical University of Denmark, with specialization on environmental engineering were on a two month stay to help with sanitation programs as well as teaching the staff on the use of GPS system. Prof. Henrik Bregnehoj environmental Prof. from the university has been organizing the visit of students to the place every year. A Danish NGO known as UBU has been helping interested students to undertake the voluntary work by providing the support. Mr. Rasmus Dahl and Bo Matthiensen are the students now doing the voluntary work out of their own interest with the help of the NGO. When they were asked about the experience, they appreciated the fast learning capability and friendly nature of the people. Because of the lack of ability of people to speak English, they have not been able to (were not been able to) communicate much though; they could use other means of communications like demonstrating and showing the actual activity. Their advice for others- it is a great place to work, but do not plan too much, be flexible, since, people do not keep promises all the time.



A French student of Architecture who came to Kolkota to study the old buildings, not only fell in love with the great architecture, but also found a life partner on a visit to Sunderbans. He is now settled for a decade in the area and is helping people in various ways while earning his livelihood by working in an Architect company in Kolkota. He is designing a building for JGVK for marketing their produce.

Demonstration farm



With a view to train people on various aspects of agriculture and animal husbandry, an effort is now made by the organization to build a demonstration farm. They have acquired three hectare land wherein they have initiated rice

Production activity and are testing the suitability using the system rice intensification method for rice cultivation, rice–fish culture, organic farming of vegetables, production of different types of compost, vermicompositing, etc. The Centre produces organic



products and sell them locally. The strategy adopted by them to sell the product and educating people to prevent the use of pesticide in vegetable cultivation is a novel idea . They have designed a tricycle with mike attached to announce the organically produced product availability along with effective advertisement like one that can be seen in the picture above. A Cuban volunteer who stayed on the farm helped on the initiation of organic farming activity and a simple method of compost making process developed by him is now named as Eduardo process of compost making.

Aquaculture activities

Impact of fish seed production



Farmers in the area have been getting the seed from Kolkota, which is over two hour's journey. As the seed are generally transported by the traders without oxygen, majority of the stocked seed (always) ended with mortality. Further, quality of the seed was always a major concern. As a

result , farmers generally ended up in investing large money on seed and getting very poor production. To address this main problem, JGVK initiated fish seed production program with an objective of encouraging enterprising farmers to undertake seed nursing and sell the nursed to other farmers in the area. After nursing of seed, farmers can continue with the left over seed for the

production of table size fish in the remaining period. In each village based on the number of ponds, seed nursing will be encouraged / developed and they would provide quality seed to other people in the area.

Breeding trial



The hatchery built with the support of AwF-Toleo Foundation has become operational and have produced 334 bati of three day old carp seed during 2009. Bati is a local measuring unit for fish seed and each bati (cup) would hold about 25,000 spawn. Following the methods prevailing in the area, they have resorted to mixed

breeding of Indian major carps, comprising catla, rohu and mrigal and sell mixed species spawn to farmers for nursing purpose.

Nursing of fish seed by farmers



Among the farmers who undertook nursing, two farmers were met during the visit. The accomplishment of Mohammed Sahab Laskar Ali and his wife Mrs. Rabiah Ali Laskar engaged in seed nursing and selling the fingerlings to other farmers demonstrates the potential of the activity in meeting the quality seed to the farmers

and an excellent opportunity to improve the livelihood of people. Md. Ali has two sons out of which one son assist him in running a grocery shop. His wife takes care of feeding fish and managing all other animals in the house. They have at present three cows, nine goats and eighty broiler chicks. They have no agricultural land and the livelihood of family largely depends on pond for food as well as income, besides the income from the grocery shop. Among the two children, while one helps the father in grocery shop , another son is pursuing education at degree level. As the grocery shop

does not provide enough income to cover all family necessities , various animal husbandary and aquaculture activities are undertaeken.

Fish seed nursing helps to improve livelihood:



Mr. Sahab Ali Laskar has a pond of about 1500 m² area. Before stocking the pond he applied about 150 kg mahua oil cake ito remove unwanted fish. Followed by that , the tank water level was increased by pumping water from another pond and applied 800 kg cow dung along with 20 kg of super phosphate. After a week, the tank was stocked with spawn

procured from the hatchery. On the first day, they fed hatchlings with egg yolk and thereafter provide everyday 5 kg mustard cake as feed cum fertilizer to the pond. After 7 days, farmer applied again another small doze of 200kg cow dung with 5 kg single super phosphate. Application of mustard oil cake was continued for another 10 days. Thereafter farmer started selling grown up seed to other farmers. In the beginning seed was sold at the rate of Rs 400/kg and later it was reduced to Rs. 250/kg based on the demand and influx of seed traders from Kolkota as the season progressed. Altgether , farmer has sold 80 kg of fish seed to the farmers and from the sale of fish seed from the first crop, family has realized a benefit of Rs. 16,000/-, while an expenses of Rs. 8500/- was incurred. After sale of the first crop, family raised the second crop by stocking another 12 bati of fish seed. This time manure application was reduced to 200kg and it was combined with 10 kg of super phosphate. In addition ,soaked mustard oil cake application on daily basis at 5 kg for the pond was resorted . After growing fish for twenty days , farmer started selling the seed and could sell 45 kg of fish seed before the flood devastated the area. The fish left in the pond have grown to good size with catla, attaining nearly 700-800 g, rohu and mrigal attaining 400-500 g each. They may be able to harvest good amount of fish before starting the seed nursing again during April-May.

The family is very happy with the amount of profit realized and the likely benefit they may derive from the fish left in the pond. Although, the efficiency of production is low, farmer has been able to apply some of the technical knowledge to improve his productivity level based on the technical support provided the centre. Based on the experience gained by the farmer in rearing the seed in the last crop cycle, family intends to expand the seed nursing activity and help other farmers.

Meeting with the fish farmers:

Ten fish farmers involved with the fish culture activity around the center were met in an informal



meeting during the visit. These farmers have undertaken fish culture activity from the seed procured from the hatchery. They all were of the view that unlike in the past when they were encountering the mortality of seed after stocking the seed, no such mortality was observed during this year. Further the growth of stocked seed has been faster. Unfortunately,

the cyclone and the floods resulted in the heavy loss of fish from many ponds. Fish remaining in the pond continue to grow well. Interestingly , all the farmers use ponds as a source of of fish for household consumption. After meeting the family fish necessity , excess fish available in the pond are sold when they are in need of money. Hence the project has been able to help farmers to have enough fish for the family and also earn income. When the farmers were asked of what they expect from the project, they presented the following demands:

1. Timely supply of spawn to enable them to grow fingerlings. They intend to sell them to other farmers in the village. According to frmers , neighbors can buy the seed and pay the seed cost in installment . Nursing fish seed in the village would help farmers to stock ponds at the right time with quality seed.
2. Farmers expressed the need for training, regular monitoring and follow-up support.
3. Provision of credit to meet some of the fish culture expenses
4. Supply of quality fish feed from the center

Capacity of JGVK:

The organization has been using a local person with interest in fish culture to help the farmers. The Center initiated fish breeding activity by hiring an expert from the local area. Center has produced some technical information in local language . Recognizing the need for regular follow up support and based on the discussion with the Management of the Centre, an effort was made to seek the help of the Fisheries College located in Kolkota.

Dr. Jawahar Abraham volunteers to support JGVK:

Prof. T.J. Abraham from the College of Fisheries, Kolkota, has been involved in various voluntary service activities. He is popular among students and farmers in the area for his technical competence. When we approached him for help, it was learnt that he is a registered AwF volunteer and would be happy to help JGVK. Knowing the level of commitment to the tasks accepted by Prof. Abraham , it is hoped that JGVK and farmers will be benefitted from this partnership..

Conclusion :

Technically there is good scope to improve the productivity of ponds and income of people from the aquaculture activities. The involvement of the center in integrating the activity as part of their program and their efforts in building the capacity of local people to improve productivity gradually is appreciable. Such an approach is expected to result in the better integration of the activity, though it might take longer time , but would contribute to sustainability and spread of the activity. . As people in the area have developed greater confidence in JGVK and its participatory approach in development, it is hoped that with the involvement of Prof. Abraham and his team to provide the required technical support , the activity would expand. JGVK would develop a five year plan for the fisheries activities and how mechanisms to accomplish the planned activities.