Community based sustainable fisheries in wetlands through integrated approach in Rashtriya Krishi Vikash Yojana (RKVY) in Birbhum district of West Bengal

– a success story of community development

Implemented by

Department of Fisheries, Aquaculture, Aquatic Resources and Fishing Harbours

Government of West Bengal

Title: Community based sustainable fisheries in wetlands through integrated approach in Rashtriya Krishi Vikash Yojana (RKVY) in Birbhum district of West Bengal

Category:

The floodplain wetlands are among the worldôs most productive environments. They provide tremendous economic benefits to mankind through fishery production where thousands of poor fishermen are dependent on these water bodies for their livelihood.

In West Bengal the beel fisheries is contributing a significant role in rural economy as it is one of the potential fishery resources in the State. The development of beel fisheries are being implemented through active participation of fishermen community.

Challenges :

Two wet lands - Parkandi Beel and Jhikadda beels of Birbhum districts were totally weed chocked. There were no pisciculture activities since long. Pre - project condition of the beels are given below:

a) **Parkandi Beel:** The beel comprising an area of 10.20 hectare was totally aquatic weed chocked with broken dykes; not suitable for pisciculture.
b) **Jhikadda Beel:** The beel, comprising an area of 78.10 hectare was totally aquatic weed chocked with broken embankments; not suitable for pisciculture activities.

It was felt that a community development programme for fisheries activities of these wet lands need to be taken up with following objectives:

- To increase area of pisciculture
- Conversion of derelict/semi-derelict water bodies into culturable water bodies
- Adoption of scientific pisciculture in beels with integrated approach

Initiative:

It was felt that to meet up the challenges these two water bodies must be renovated at first and for maintenance of these water bodies two separate óUser Associationsô must also be formed as beneficiaries of these project.

Accordingly following two Fishermen Co-operative Societies were formed to maintain those water bodies:

i) A Tribal Fishermen Co - Operative Society - **ñParkandi Adibashi Matsyajibi Samabay Samiti Ltd**.ò having 22 local tribal members was formed at that area.. As per Govt norms that water body was handed over to the Society for pisciculture. The Parkandi beel was handed over to them.

(ii) A Fishermen Co - Operative society - **"Jhikadda Anchal Matsyajibi Samabay Samity Ltd**. having 27 members was formed in that area. As per Govt norms 26.67 hectare water body was handed over to the Society for pisciculture

With a view to integrated development of beel fisheries with active participation of fishermen community; the Fisheries Department, Govt. of West Bengal has taken a project **"Aquaculture Development through Integrated approach in the Beels"** under National Mission for Protein Supplement (NMPS) ï a sub scheme of RKVY since 2012-13

Project cost: Rs. 23.77 lakh per unit covering 10 hectare of water body

Components of the project:

- Renovation of water bodies
- Installation of Pen for one hectare of water area to rear fish seeds (fry stage to fingerlings stage)
- Cultural cost for rearing of fry to fingerlings
- Cultural cost for table fish production
- Other activities like construction of fish landing ghat, supply fishing accessories etc
- Plantation & supply of livestock birds.

With these objectives and financial assistance under NMPS- a sub scheme of RKVY; two projects had been started in the year 2013-14 in Birbhum district of West Bengal.

Initially each project was started with 40 - 50% of project cost of Rs. 23.77 lakh in the year 2013-14. In subsequent years remaining fund was released to these projects.

Key Result:

The process of implementation of the projects are given below:

- **Removal of aquatic weeds:** In the year 2013-14 clearance of aquatic weeds and renovation of beel were started; mostly involving local people.
- **Installation of pen - an enclosure, made up of bamboo & net for fingerlings production**: In beel fisheries advanced fingerlings (12 - 15 cm in size) should be released in the water bodies for better survival. As there were no nursery/rearing ponds in these beels, installation of pen ï one of the components of the project was taken up for each beel after clearance of aquatic weeds. The area of each pen was more or less one hectare where required quantity of fry were released and reared in scientific way for a period of 3 months for production of fingerlings (12 - 15 cm in size); suitable for release in the rest part of the beel to produce marketable table fish.
- **Grow out culture for table fish production:** The fingerlings having desirable size was released in the rest part of the beel for table fish production in scientific manner. The members were trained for scientific pisciculture.

- **Application of Feed:** For better production; partial feeding was done in stocking portion of the beel applying of artificial feed.
- Fishing accessories like boats, hundies etc were provided to the societies.
- During operation of culture & post operation of harvest a fish landing ghat for each project was constructed.
- Plantation was also done in the project site.
- Beneficiaries were also provided ducklings for additional income.

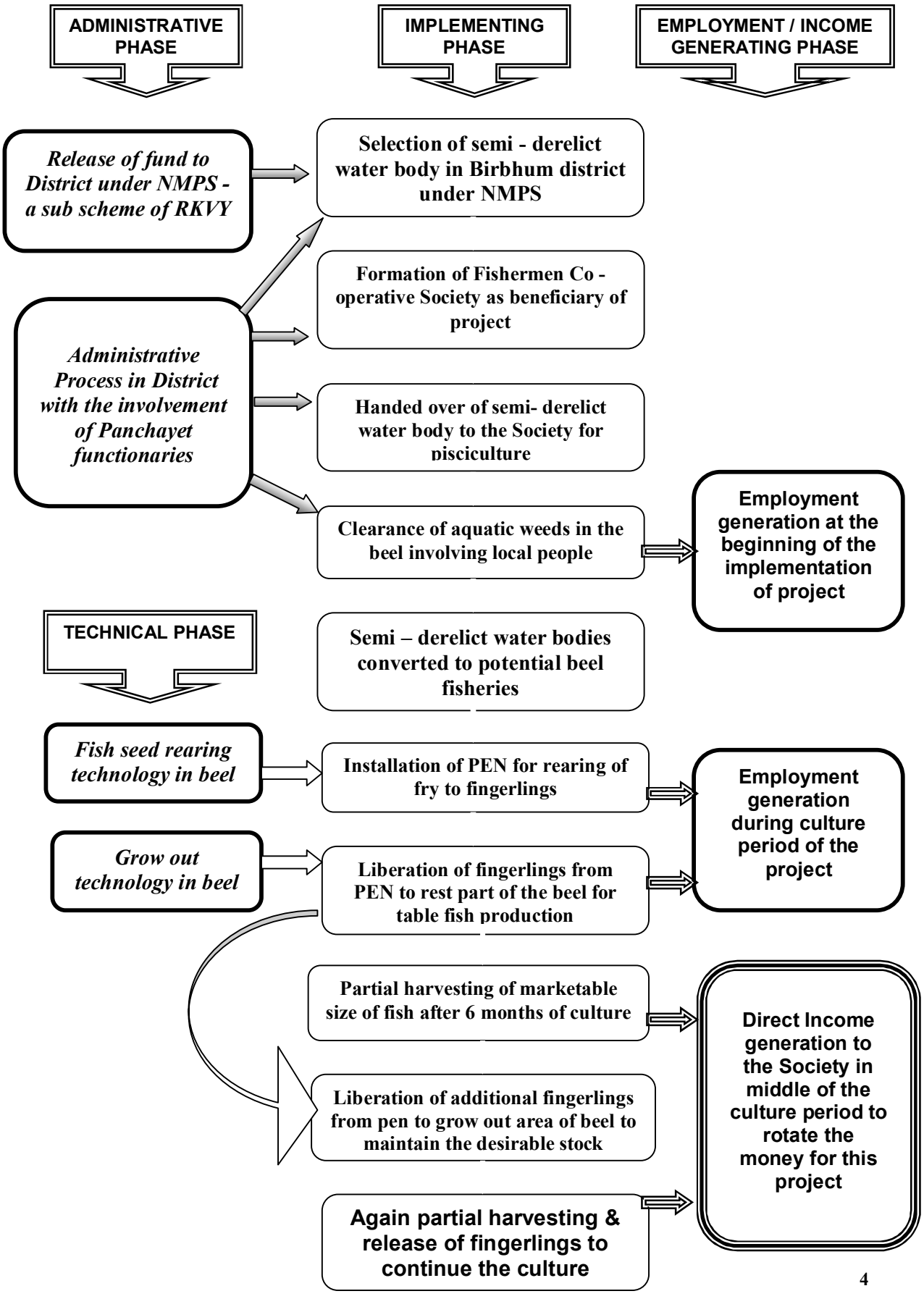
Impact:

Production: In beel fisheries full harvest of fish at a time is not practiced. Phase wise harvesting has been recommended. In these beels partial harvesting of fish were started after 5 - 6 months of culture in the stocking area of beels. It was estimated that 7 to 8 ton of fish was harvested in each beel (with a value of Rs 7.00 ï 7.50 lakh) after 6 months of culture. After partial harvesting; the stocking area of beel was again stocked with required number of fingerlings, reared in the area of pen. The methodology of phase wise stocking of fingerlings and partial harvesting of table fish are being carried out in these beels.

Outcomes of Projects:

- **Horizonatal development of fisheries** i.e. conversion of semi derelict water bodies into culturable water bodies.
- **Vertical development of fisheries** i.e. adoption of scientific & integrated approach to enhance fish production.
- **Community development:** Local people were brought under one umbrella i.e. formation of Fishermen Cooperative Society. More local peoples are now coming forward to become a member of these societies.
- **Economic upliftment and supply of protein to the rural people**: Around 250 - 300 nos of families of the surrounding villages are being benefitted directly/indirectly through this projects.
- Migratory birds that forgot the way to these water bodies are now coming frequently to these wetlands.

Flow Chart of NMPS Project under RKVY



Lesson Learned:

- Participation of local fishermen through community development approach.
- Utilisation of untrapped water bodies into income generating water bodies through adoption of scientific pisciculture
- Employment generation through renovation of derelict water bodies into culturable water bodies
- Involvement of panchayet functionaries and local administration for formation of society and handing over to govt water bodies to the beneficiaries
- Economic upliftment of local people.

The success came from the sincere effort & hard work of the local people, involvement of panchayet functionaries and proper use of technology with financial assistance from RKVY. It is expected that present enthusiasm of the local people will turn these water bodies into an **"Eco-Tourism Centre"**, **particularly Jhikadda Beel**, in future, if local administration will give more focus to these water bodies to overcome the existing problems, particularly issue of water retention capacity of theses water bodies.

However, with limited financial support of RKVY; the local people who had earlier passed their time in seasonal works in stone quarries or in agriculture lands as daily labour are now actively engaged in fisheries activities which give financial support to them as well as supply of protein which is the main objective of "National Mission for Protein Supplement".

Additional information:

1. **List of all project partners i.e. beneficiaries:**

Sl No	Name of beneficiary	Address	Total members	Gender wise no of members		Category wise no. of members				
				Male	Female	Gen	SC	ST	OBC	Minority
1	Jhikadda Anchal M.S.S.Ltd	Vill-Krishnanagar, P.O-Mahurapur, Block- Mayureswar-I District: Birbhum	27	27		9	8		3	7
2	Parkandi Adibashi M.S.S.Ltd.	Vill-Parkandi, P.O- Gug, Block-Rampurhat-I District: Birbhum	22	21	1			22		

2. **Contact person for this Story:**

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3. Need of the project:

The project is now running successfully; but in summer, water retention capacities of these beels have been declined drastically leading to a serious problem for pisciculture**. In near future; desiltations of these beels with installation of few submersible pumps are essentially required to provide water during extreme summer**. Other infrastructures like hatchery, office ï cum- community hall are also required for better management.

Check List:

No	Question to consider	Yes	No
1	Is the story interesting to the target audience of the project / activity report?	Yes	
2	Does the story explain what new insights the project brings? What is the main lesson learned from this story? Does the story describe a key insight on what works and what doesnôt and something that future projects could build on	Yes	
3	Does the story describe the outcomes the project produced and the people who are benefitting? What change ï in skills, knowledge, attitude, practice, or policy ï has the project brought about and who is benefitting from these changes?	Yes	
4	Does the story make a compelling point that people will remember? Does the story show how the project makes a differences to improving livelihoods and lessening poverty?	Yes	
5	Does the story provide an interesting fact that people will remember? For, example, how yields increased, how many hectares of land could become more productive from this innovation or technology?	Yes	
6	Does the story explain what kind of impact this innovation or technology could have if scaled up?	Yes	
7	Does the story show which partners contributed and how?	Yes	
8	Does the story include quotes from stakeholders or beneficiaries?		No
9	Have I provided links to other media (journal articles, website news, news letter, blogs, annual report or other programme / project) that also feature this story?		No
10	Have I provided the contact details of person who can provide more information?	Yes