

Fish Nursery: Earnings for Odisha Farmer, Security for his Peers

Convinced that fisheries can bring prosperity, Bhagwan Naik a young tribal farmer from Odisha converted two acres of his paddy field into fish ponds. The change was thought through carefully, after experiencing the benefits, and was carried out gradually.

Cultivating paddy on their five-acre paddy farm has always been the mainstay for Naik's family; residents of Ramaguda village in Mathili block of Malkangiri district in Odisha. In a fish pond measuring an acre, Naik used to farm fish for household consumption. Training he received from the RRA Network's fisheries programme helped him learn technicalities of establishing a nursery. Now, apart from selling fish, he earns a significant income from selling seeds for aquaculture to farmers in the vicinity and supports the network's programme by providing seeds in time.

In 2012 a Fisheries programme was initiated by Revitalizing Rainfed Agriculture Network in Malkangiri district of Orissa. By 2013, the programme reached out to villages in Mathili block. Naik got wind of it and enrolled. The same year, the network selected him for a month-long fisheries training programme in the neighbouring district. Keen to enhance his earning from fisheries, he would meticulously implement the technicalities learnt during the training in his ponds. Follow ups by RRA network staff helped him take up fisheries in a scientific manner.

Why Naik Cannot Use Seed from ITDA Nursery?

Before his association with the network, Naik would practice aquaculture traditionally, by bringing in seed from a private nursery pond, about 70 kilometers from the village or the famous fish market in Naihati, West Bengal. This was because the seed from the ITDA run nursery in the vicinity is ready only by mid-August (as the Fisheries Department usually begins the breeding process once the monsoon sets). However, farmers who have water in their ponds for only six to eight months, cannot wait till August and prefer to stock seed soon after the first rains (usually in July). As a result, the seed produced by the

department is generally only useful for the larger tanks and reservoirs in the district, that have the advantage of being able to stock at any time of the year.

For the fisheries programme of the RRA network to run successfully, need for an alternate source of seed was imperative. Naik was explained the technicalities involved in setting up a nursery pond and he decided to invest a part of his earnings in establishing one. The network linked him with the Fisheries Department FFDA (Fish Farmer's Development Authority) scheme, under which he dug three more water bodies.

Naik is a member of Dular Dei Fishery Producer Group (FPG) which was formed in 2013 when the fishery programme commenced. The FPG is a common interest group whose main activities include savings, credit, maintenance and management of the group's common assets. The FPG comprises a total of eleven members at present. The group collectively decided that Naik would produce and sell fingerlings to the members' ponds, after which he would be allowed to sell to non-members as well. He released 30 kgs of fry worth Rs. 18,000 in July 2015 and reared them for two months.

RRA Network provided him an initial support of Rs. 20,000 as a revolving fund for pond cleaning, stocking with fry and supplementary feed through Mathili's *Subhash Bose Anchalik Sheba Kendra* (Cluster Resource Cell, a block level community institution for farmers). He met other costs for labour, packing material and supplementary feed. After 45 days of nursing the fry into fingerlings, he sold them at 550/kg to his group members and farmers of other groups (approximately 22 farmers).

By 2018, owing to increased demand for seed in the area, Naik had to scale up production. He now cares for seven fish ponds stretched over two acres of land; on which he previously grew paddy.

EXPENDITURE PARTICULARS	UNIT	PRICE
Pond Preparation	Lumpsum	500
Fry	30 kg	18000
Feed	Lumpsum	600
Gas cylinder	15 kg	700
Polybag	2kg	500
Total	20300	

(This case study has been taken from a compendium 'Experience from the grassroot' which showcases work of Revitalizing Rainfed Agriculture Network).

CASE STUDY - 2

Revives Hope For Livelihoods: Fisheries Nursery in a Remote Jharkhand Village

Announcements and fliers distributed during an awareness campaign caught Satyendra Kumar Singh's attention. 'Earn through breeding fish in your own village, learn from us!' iterated the speakers. Vikash Sahayog Kendra (VSK), a local NGO ran this campaign to create awareness about adopting fisheries as a means of livelihood.

Desperate in search of some occupation, Satyendra, a farmer from Karwar tribe, in his thirties, got keen. His village Sardamdag, under Panchayat Palheya in Manika block of Jharkhand lacks jobs due to influence of left-wing extremism. Despite financial issues, he succeeded in completing a masters' degree, and was willing to take up any work which could earn him some income. Unable to find a suitable occupation, he started looking after the family's farm. Through the help of VSK, using funds that his wife borrowed from a cooperative, Satyendra built ponds. His nursery pond earned him good income and laurels from the state department of fisheries. And for fish farmers in the vicinity, it now saves the time and cost of travelling 225 kilometres, to get the seed.

For Satyendra, things had got tough after his marriage and harder to make ends meet. The thought of finding more ways to earn started occupying him. The announcements during the campaign brought a ray of hope. His relatives and friends, too, got curious about the prospect. Soon, they gathered more information about fisheries; the rearing

techniques, pond and disease management practices, what to feed the fish, the cost involved etc.

With the intention to know more on the subject, Satyendra contacted Lalit Oroan - a trained community resource person of Palheya panchayat, working with VSK. Satyendra's enthusiasm got him selected for the three-day Community Resource Person (CRP) training organized by the state fisheries department at Dhurwa in Ranchi. He also attended the regular block level trainings organized by VSK. During the training, he learnt that the fisheries department was aiding fisheries enterprises through a subsidy scheme. Having understood the business plan of a Nursery Pond Enterprise, he decided to build one, after consulting with his wife Laxmi Devi.

The fisheries team of VSK helped him with site selection, layout & design of two nursery ponds and the budget for construction. The estimated budget for construction was around Rs. 40,000. Borrowing Rs. 37,000 at the interest rate of 2% from a cooperative and investing Rs. 3000 out of their pocket they built the ponds.

Fry Now Available Literally in the Backyard

Immediately after the first rain Satyendra purchased spawn (baby fish just out of the eggs) at the rate of Rs. 3460 and stocked it. Eventually farmers approached Satyendra Singh and his wife for fry

(week-old spawn). The couple fixed the price at Rs. 300 per kilogram based on prices in local market. They earned Rs. 71,400 by selling 238 kilograms to the breeders of 24 water bodies in Palheya Panchayat and to farmers in neighbouring panchayats. Their nursery eliminated the cost and time needed to fetch spawn/fry from Ranchi, 225 km away from the village.

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CASE STUDY - 3

Why Migrate When Fish Earns Us Enough? Quips Matsyamitra, Rajdev Mahto from Jharkhand

Rajdev Mahto, a native of Resiyapa village in Palamu district of Jharkhand, had to migrate for work at the tender age of 12. From surviving on a meagre income earned from pulling a cycle rickshaw in Varanasi, to maintaining railway tracks and driving a transport vehicle in Mumbai; his journey had been arduous.

Having contracted tuberculosis he was forced to return home after 20 years. The one-acre family farm yielded too little for sustenance. Rajdev began looking for new sources of income. Fisheries caught his attention and building his business steadily earned him laurels from the state fisheries department and the title of '*Matsya Mitra*' – The fish friend.

His stint with fisheries began with undergoing training from the state fisheries department. His business improved after joining the programme run by Revitalizing Rainfed Area Network.

“At the training, we met people who narrated how they earned more money by turning their farms into ponds, and that inspired me to experiment.” says Rajdev. Thankfully he jointly owned (with his extended family) a five-acre *Ahar*; a ditch where rainwater collects due to natural slope of the land with embankments on three sides. “In the very first year, I bought spawn (three-day-old offspring) worth Rs 2,800 and earned Rs 70,000 profit by selling 7 quintals of fish produced. This was after giving away the share of my three uncles.” he claims.

In 2015, Rajdev made a profit of Rs 1 lakh. Now he is getting a small pond dug with support under the rural job guarantee scheme. “People now prefer fish to

The fisheries department also rewarded them with a motor cycle. Inspired by their nursery, a lot of young farmers have ventured into fisheries.

poultry since it is local and naturally produced. They don't like the big fish that is imported from Andhra Pradesh. So, the market is ready, just the supply needs to be increased.” says Rajdev.

The only drawback is the seasonal nature of water bodies. Palamu district falls under unassured rainfall zone receiving less than 1200 mm of average annual rain. The sandy soil here doesn't retain much water resulting in high evaporation and seepage rate. “This means that the fish farming gets restricted to a half-yearly practice. Still, people are willing to do this because it's better [in terms of earning] than growing one-seasonal crop.” says Ashrita Tirkey, the project coordinator at Vikas Sahyog Kendra (VSK); the NGO tasked with implementation of RRA Network's programme.

Supplementary Income

Farmers have also found other fish-related livelihood options. For instance, Rajdev also prepares fish feed which is a unique initiative as farmers in this region mostly use cow dung mixed with crop residue in the ponds. He sold 25 kg of the fish feed to a farmer producers' organisation, also supported by VSK, at Rs 24 per kg. He also sells it in the open market which fetches a commercial rate of Rs 40 per kg. “Commercial fish farming has just started taking root, so it will take time for people to shift from traditional practices.” says Rajdev. He also prepares fertilizer with fish waste, like fins and bone, for use in fields, orchards and ponds. Looking at his performance, the State fisheries department provided him subsidy to buy a moped, which he now uses to sell fish in nearby Chattarpur town and other villages. The

department also awarded him the title, 'Matasyamitra' (friend of fish) to motivate other farmers in the area.

(This case study has been taken from a compendium 'Experience from the grassroot' which showcases work of Revitalizing Rainfed Agriculture Network).

CASE STUDY - 4

A New Identity Through Fisheries In Palamu district, Jharkhand

When we were done talking with Mithun Paswan, the bag he had laid down, with a live hen in it, was found empty. He looked around bewildered and spotted the bird in nearby bushes. It did not take him more than a minute to catch the escapee, without any help. Mithun's left hand is affected by polio, but he humbles you with his indomitable spirit to lead a happy and successful life. All of 24 years, the slim, ever-smiling Mithun runs three SHGs (self-help groups) which help poor families save money, is an expert craftsman at construction of brick kilns, gives maths tuitions and is soon going to set up an upper primary school in his village. And he got this firm footing from fisheries.

In India, people with disabilities are often perceived as unproductive and dependent. This perception is starker in rural India where lack of varied work options, poor public infrastructure and absence of assistive devices leave little scope for those with disabilities to realise their potential. Polio left him a limp left hand. Yet, Mithun Paswan a farmer from Resyapa village in Palamu district of Jharkhand, started catching fish like the others, since the age of 10. This is, why Mithun's story is unique and inspiring.

Determination and Hard Work Pave the Way
Mithun's extended family used to breed fish in their 2-acre *ahar* (area where rainwater collects due to natural slope of the land and embankment on three sides) at Resyapa village in Palamu district of Jharkhand. However, they could only earn around Rs 10,000-15,000. *"The practice was not at all professional. We would neither prepare the land for fresh rainwater and spawns, nor provide special feed but engaged fishermen from West Bengal, who would take half the produce as payment."* Mithun recalls. It was a tiff with

the hired fishermen that led to the then teenage boy taking over the fish farm. He had by then already saved some money from his work at the brick kilns. The Rs. 660 scholarship he got from school was also pooled in to buy spawn. Though the lack of expertise in catching fish remained, he was keen to learn. *"At least, now we were not dependent on outsiders and would get the whole produce. Since then, I have never engaged labourers."* he says.

The family was still very sceptical and asked him to go out for work like other men. Mithun went to neighbouring Chhattisgarh state, but could not gain much acceptance in industrial work because of his limp left hand. He came back to continue studies and focus on fish farming. The real push came in 2014 when he got in touch with Vikas Sahyog Kendra and underwent specialised training in from the state fisheries department. *"In the very first year, we saw a jump in income of Rs 50,000. After that we got another pond dug with financial support from the department and now the family income from fisheries touches Rs 1 lakh."* Mithun says. Of this, Rs 50,000 is given to Mithun as he manages all the work while rest of the money gets distributed among his four brothers. Now the attitude of people towards his disability has completely changed. *"Earlier, I was a disabled boy, now I am someone who gives business and education to others. They look at me with respect, not pity."* the 24-year-old says. In a region where fish farming is a new occupation, Mithun has already taken a big lead with his drive to succeed.

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