

**CASE STUDIES ON
SUCCESSFUL WOMEN ENTREPRENEURS IN
AQUACULTURE SECTOR IN TAMIL NADU**



B. Shanthi, M. Krishnan, V.S. Chandrasekaran and A.G. Ponniah

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केन्द्रीय खारा जलजीव पालन अनुसंधान संस्थान,
भारतीय कृषि अनुसंधान परिषद,
75, सन्थोम हाई रोड, राजा अण्णमलैपुरम, चेन्नै-600028
CENTRAL INSTITUTE OF BRACKISHWATER AQUACULTURE
(Indian Council of Agricultural Research)
75, Santhome High Road, R.A. Puram, Chennai – 600 028
Phone : 91-44-24617523 (Direct) 24616948, 24610565, 24610311
Fax No: 91-44-24610311 E-Mail: director@ciba.res.in



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CASE STUDIES ON SUCCESSFUL WOMEN ENTREPRENEURS IN AQUACULTURE SECTOR IN TAMIL NADU

Basic objective of involving women in fisheries development is to make them equal partners to men. This will enable them to participate productively and independently to improve their family's nutritional and living standards. They need appropriate knowledge, adequate skills, and appropriate technologies to contribute socially and economically to their community's welfare. These needs should be provided directly to them and not through the men, as was done before.

Woman in fisheries activities have carried out significant impacts and have brought about greater awareness. There is now an opportunity to heighten this awareness through the exchange of information and research results in the different countries

To ensure rapid economic development, removal of gender imbalances should be established as a priority. This would mobilize the remaining fifty percent of the country's human resources and would result in the smooth movement of the economic wheel. Regular sharing of experiences between different agencies would help in breaking several barriers in addressing this complicated social issue.

To achieve gender equity, changes have to occur at several levels. The existing gender-related programs have resulted in awareness on gender issues. This awareness needs to be translated into more visible actions. Continued and coordinated efforts are necessary to bring about long-lasting changes in the area of gender.

It is imperative that these approaches targeted towards women is conducted, so that appropriate interventions and policies changes are implemented, to ensure that women are not left out of mainstream development, and are accorded the basic rights, which all humans are entitled. These suggested approaches may be successful for sustainable development, resource conservation and fisheries management.

This study analyses the information and shows that there are opportunities to improve women's participation in aquaculture and avenues of opportunities to get more women involved. Case studies were prepared from 12 successful women entrepreneurs who were engaged in shrimp farming and culture, crab and culture, crab fattening in cages, pens and concrete tanks, sea bass farming and culture, shrimp hatchery management, crab hatchery management, live feed farming and processing, shrimp processing, fish meal formulation and feed development, aquaculture accessories business manager and crab exports in Tamil Nadu.

1. Women hatchery manager

Mrs. Tamilselvi Eraniyappan, is the manager in Periyar Mud Crab Hatchery, Mugaiyur, Cheiyur Taluk, Kancheepuram District, Tamil Nadu. Only women employees are exclusively employed in this hatchery and twenty women employees work under her supervision. She is educated only upto elementary level and possesses a strong expertise in hatchery management.

Expertise:

She is having a strong expertise in seed production of fresh water prawns and hatchery production of mud crabs. She is having a good knowledge in brood stock maintenance, induced maturation, spawning / hatching, larval rearing, live-feed culture, post-larval rearing, maintenance of biological stock, seawater supply system, air-supply system, cleaning of brood stock and larval tanks and monitoring of water quality parameters.

Highlight:

She has her unique ways of establishing rapport among the poor and the rural youth and she gains their confidence by guiding them in generating reliable livelihood and income. Mrs. Tamilselvi Eraniyappan, is a Jamsetji Tata National Virtual Academy (NVA) Fellowship awardee for the year 2007. She was awarded this fellowship by MS. Swaminathan Research Foundation (MSSRF) nominated by Central Institute of Brackishwater Aquaculture (CIBA), Chennai for her expertise in hatchery management. Mrs. Tamilselvi Eraniyappan, possess leadership qualities, good knowledge and experience in fresh water prawns and mud crab hatchery management.



Mrs. Tamilselvi Eraniyappan with the investigator



Women technicians at work in Periyar Mud Crab Hatchery

2. Women crab farmer

Mrs. Sussammal Nazareen is basically a fisherwoman possessing a “Vallam” (boat) of her own for fishing. Her other allied occupations are fish marketing and agriculture.

A 2 decade enterprise:

The mud crab farming was started in 1992 by Mrs. Sussammal Nazareen and her group at Punnakyal village 20 km South of Tuticorin town. Mrs. Sussammal Nazareen is the first woman crab farmer who has been culturing crabs for the last 15 years. She is 45 years old and has education up to primary level. She is a leader of the local Women Self Help Group. She supports her group members and husband in crab farming activities. Mrs. Sussammal Nazareen and her husband are pioneers in mud crab culture in ponds (both short term and long term). They are perhaps the longest standing crab farmers in the state. She also encourages the local farmers to take up crab culture in the village selflessly.

Culture practices:

Crab farming is being practiced in earthen ponds. Crab species *Scylla tranquebarica* is being cultured for about 9 months in a year. The culture is being done in a water spread area of 250 acres consisting of 25 ponds of varying sizes (0.1 to 1.0 ha) each with a depth of 2-6 ft. These ponds are actually frontier ponds, where seawater is passed through one pond after another and finally reaches the salt pans for salt production. Water crabs were purchased on the daily basis from Chennai and were transported to Tuticorin by train and by road. Availability of water crabs is restricted during the months January to March. Water crabs with a size ranging from 50g -750 g are stocked in each pond. The water crabs were purchased @ ₹ 75 - 180/kg. Trash fish was fed to these crabs @ 10 % of the body weight of the crabs.

Marketing:

Partial harvest is being carried out from April. Crab with an average weight of 800g and above will be collected from ponds by hand picking and are sold live to the exporters. Crabs with a size below 500g (medium) were sold @ ₹ 300/- and crabs with a size of 500g were sold @ ₹ 400/kg and crabs with a size of 750g – 1kg were sold @ ₹ 500/-

Highlight:

Mrs. Sussammal Nazareen is versatile and has good traditional knowledge in crab farming and marketing. The most important observation is that Mrs. Sussammal Nazareen is a very bold lady operating alone on her farm without any fear. Sometimes when there is no transportation facility to move the crabs to the market, she herself carries them as head load to the nearby places. She also supervises her crab farm daily. Mrs. Sussammal Nazareen, is a Jamsetji Tata National Virtual Academy (NVA) Fellowship awardee for the year 2007. She was awarded this fellowship by MSSRF nominated by CIBA, Chennai for her expertise in crab farming. Thus, Mrs. Sussammal Nazareen, plays a major role as a flag bearer of mud crab fattening by women in Tamil Nadu and is a role model in the village and plays a major part in community development.



Mrs. Sussammal Nazareen, in the field

3. Crab farmers (Crab fattening in FRP Cages)

Under the leadership of Mrs. Arulselvi, a Women Self Help Group (WSHG) consisting of 15 members are engaged in mud crab fattening in eight fiber glass cages at Allambarai Kuppam, Kadapakkam of Kancheepuram district.

Fattening process:

Fiber glass cages with 6 and 9 compartments were used for crab fattening. Each compartment was stocked with 1 crab each weighing 500g -700g. The four sides of the cages are well perforated for free circulation of water. Periodical checking was done during the culture period. After use, the cages were dried and cleaned for next stocking. Trash fish collected from the landing centers were fed @ of 10% of the biomass of the crab. Feeding was done twice a day. Dry fish was used as feed when trash fish was not available. In case of algal, and barnacle fouling on the crab carapace, they were removed by brushing. Harvesting of fattened crabs was carried out by hand picking and by using scoop net.

Marketing

Hardened crabs were packed in bamboo baskets and marketed in live condition. Wet seaweed was placed in the baskets to keep the live crabs cool and moist. Harvested crabs were transported to crab export market at Chindhadrpet, Chennai by auto rickshaws. Sales were done through the middlemen. The water crabs weighing 500 g – 1000 g were purchased @ of Rs.150 – 180 per kg and hardened crabs weighing 500 g – 1000 g and above were sold @ ₹ 300/- to ₹ 450/- per kg. Water crabs are purchased from export companies at Chennai by Mrs. Arulselvi.

Highlight

Mrs. Arulselvi, plays a major role in the diversification of aquaculture species by taking up crab fattening as an alternative livelihood for SHG members. Allambari Kuppam fishing village has become a role model for establishing crab fattening in cages and this has led to the introduction of improvised method of crab fattening in pens among the other WSHG members in the village. The leadership qualities and the drive found within Mrs. Arulselvi, has led to the success of adopting this venture among the groups.



Crab fattening in cages

4. Woman crab farmers (Crab fattening in pens)

4.1. Woman crab farmer, Allambarai Kuppam, Kadapakkam of Kancheepuram district.

Under the leadership of Mrs.Mala a WSHG consisting of 15 members are engaged in mud crab fattening in pens at Allambarai Kuppam, Kadapakkam of Kancheepuram district.

Fattening process:

Crab fattening is carried out by Mrs.Mala and her group in small pens of 0.1 to 0.5 ha in size with water depth of 1.5 m. Fencing with height of 0.5 - 1.0 m and the dyke is done with nylon materials. Materials like bamboo pieces, cement pipes or stones are placed inside the pond to minimize mortality due to cannibalism. Water crabs more than 550 g are stocked @ 1 crab/1 to 3 m². Crabs are fed with bivalve meat or trash fish daily @ 5 to 10% of body weight. The duration of fattening was 20 days.

Harvesting:

Crabs are harvested by Mrs. Mala and her group after the shell becomes sufficiently hardened and before the next molting. Harvesting was done using scoop nets and ring nets with baits in the early morning or evening hours to prevent mortality of crabs caused by overheating of water at noon time. In a year 9 to 10 cycles of fattening was done from each pen. Harvested crabs were sold at the local markets in Kadapakkam and Kovalam and water crabs are purchased from the same retailers.

Highlight:

Mrs. Mala, started mud crab fattening in pens with an aim to generate additional income for the group members. Every day she and her group members devote most of their time for crab fattening activities. Mrs.Mala, is a Jamsetji Tata National Virtual Academy (NVA) Fellowship awardee for the year 2009. She was awarded this fellowship by MSSRF nominated by CIBA, Chennai for her expertise in crab fattening in pens. The experience of Mrs. Mala and her group illustrates how the SHG concept can be a tool to improve the living standards not only of women members but of the whole community.



Crab fattening by Mrs. Mala & her group

4.2. Crab farmer, Kattur Village, Minjur Block, Ponneri Taluk, Tiruvallur Dst.

Mrs. S. Jayabarathi, lives in Kattur Village, Minjur Block, Ponneri Taluk, Tiruvallur Ds, Tamil Nadu. She is a crab farmer. Smt. S. Jayabarathi, is the leader of 'Annai' WSHG.

Mode of operation

Crab fattening is carried out by Smt. S. Jayabarathi and her group in small pens with fence ranging from 100 to 200m² in size with water depth of 1.5 m. Fencing with height between 0.5 - 1.0 m and the dyke is done with nylon materials. Materials like bamboo pieces, cement pipes or stones are placed inside the pond to minimize mortality due to cannibalism. The tidal water floods through the creek causes sufficient water exchange in the pens. The water crabs in the size range of 350 to 1500g are stocked @1 to 3/m³. Crab fattening takes about 3 to 4 weeks. Crabs are fed with bivalve meat or trash fish daily at the rate of 5 to 10% of body weight. The crabs are harvested after the shell becomes sufficiently hardened and before next molting. The harvesting is done using scoop nets and ring nets with baits. The harvested crabs are sold by her at Pulicat the local market and in Chindadripet the city markets.

About the WSHG

There are 12 members in Mrs. S. Jayabarathi's group who are actively involved in crab fattening in pens in Kattur Village. She and her group devote most of their time for improving the crab fattening enterprises. This group is a successful group. They are also having good savings in the local commercial bank. This bank has also provided the group with a loan amount of Rs. 60,000/- for crab fattening activities. Each day she and her group members walk more than 4 km to reach the work spot.

Highlight

Mrs. S. Jayabarathi, is a versatile personality possessing good leadership qualities, dynamic character, good knowledge and experience in crab fattening in pens and cages. She is self confident and has her unique way of establishing rapport among her WSHG and crab marketing agents. She gains their confidence to stock water crabs and supply harvested crabs to the retailers and crab marketing agents. She builds the capacity of the coastal WSHGs in 'Crab Fattening'. Mrs. S. Jayabarathi started this WSHG with an aim to generate additional income for her and for the group member's family. She has strived hard to bring in the diversification in the livelihood among her co- members by making them understand that they

need not depend alone on the income earned by their husbands. Mrs. S. Jayabarathi, plays as a role model to portray that, the SHG concept works as good model in improving the living standards of women Self Help Group members and the community as a whole. In spite of the difficulties which they face while walking long distance every day to reach their work spot; the motivation given by Mrs.S. Jayabarathi, to her group has made them sustain in this avocation.

Mrs. S. Jayabarathi is one of the Jamsetji Tata National Virtual Academy (NVA) Fellowship awardee for the year 2010. She was awarded this fellowship by MSSRF and nominated by CIBA, Chennai for her expertise in crab fattening in pens. The experience of Mrs. S. Jayabarathi and her group illustrates how the SHG concept can be a tool to improve the living standards not only of women members but of the whole community.



Crab fattening in pens by Mrs. S. Jayabarathi & her group

5. Crab farmers (Crab fattening in concrete tanks)

Mrs. Manickavalli, aged 54 years heads a WSHG at Akkaraikoddi, Cuddalore, Tamil Nadu. There are 20 members in the group who are practicing crab fattening in concrete tanks. Mrs. Manickavalli and her group are having an experience of 3 years in crab fattening in concrete tanks. Only Mrs. Manickavalli's group is engaged in this enterprise and other WSHG in the village are found involved in other non – aquaculture activities. The training given by the Department of Fisheries, in Tamil Nadu has really motivated Mrs. Manickavalli and her group to take up crab fattening in concrete tanks. This group is also supported by the local NGO. This group under the leadership of Mrs. Manickavalli, had made good saving and was granted loan from the Indian Bank. The profit gained from this enterprise was used for repaying the loan and the remaining amount was shared within the group members.

Mode of operation

Ten concrete cement tanks were constructed for crab fattening. These tanks were erected on the banks of the brackishwater canal. This facilitated them to do easy water exchange. A concrete tank of 10 ft x 6 ft x 5 ft was used for stocking the water crabs. Sixty six water crabs weighing 23 kg of size 300 – 400g were stocked @ of 6nos/tank. Total height of the tank was 5 ft and the water level was maintained upto 2.5 ft. Water exchange was done daily. The culture period was 45 days. Trash fish @ 10% body weight of the crab was given as a feed. Feeding was done twice a day. Harvested crabs were transported to the markets by bullock carts and auto – rickshaws.

Highlight:

Mrs. Manickavalli, generated additional income for her group members by the adoption of crab fattening in concrete tanks. This was a new innovative technique adopted by this WSHG in Tamil Nadu. Under the leadership of Mrs. Manickavalli, the group understood that this enterprise can serve as an alternate livelihood and continued sustained in this venture. The technical knowledge gained by Mrs. Manickavalli by participating in the training programme conducted by the DoF had helped her to support her group members to take up this enterprise. Self –confidence, leadership qualities and the drive within her had benefited both her family and her group members with the additional income earned from this enterprise.



Women SHGs in crab fattening in concrete tanks, Cuddalore

6. Crab exporter

Mrs. S. Vijaya is a partner in Madras Sea Food Exports at Chindadripet, Chennai. She is supported by her husband Mr. Sekar. She possesses 5-6 years experience in crab exports. She is educated upto primary school level.

Source of supply and markets

She purchases both water and hardened crabs from Orissa, Andhra Pradesh, Tamil Nadu, Karnataka, Kerala, Maharashtra and Andaman. 1 - 2 t (600 kg crabs) of crabs are exported to different places from her company daily. Five hundred to 800 kg of crabs is stocked in the company. Fattened crabs are sold to domestic markets in Mumbai and New Delhi and in international markets like Singapore, Taiwan and Bangkok.

Highlight:

Mrs. S. Vijaya has the advantage of experience and exposure in marketing. By supporting her husband in this business she has gained good knowledge in crab marketing. Her interest in this business has given an opportunity to become a partner of this company. She is capable of handling the staff in the company and run the business even in the absence of her husband. Despite being only primary school educated, she has used her knowledge and intimacy with the staff in the company and with the other crab export traders to learn the techniques involved in the business and also to keep track of the day to day market rates through Internet. Her innovativeness, self confidence, keen interest has led her to thrive in this business.



Mrs. S. Vijaya supervising the work in the crab export company

7. Woman shrimp farmer

Mrs. R. Swarnalatha, Papakoil, Nagapatinam district, aged 38 years is a BS.c (Home Science) graduate. She started shrimp farming in 1994. She has got expertise in shrimp farming and *Sea bass* farming since 1997. She also works as a consultant for other shrimp farms located in Papakoil, Nagapatinam and helps her husband as consultant for fish feed export. She basically belongs to an agricultural family. She could adapt to aquaculture without any difficulty and her aim is to support her husband in aquaculture activities. Her self interest and motivation given by family members encouraged her to take up brackishwater shrimp farming seriously.

Culture practices:

Shrimp seeds were purchased at the rate of 25 – 35 paise/PL. Six lakhs seeds were stocked in her farm i.e. 1 lakh/ ha. For 6 hectares 3 tones of shrimps are harvested and therefore the total harvest / year is 6 tones. The harvested shrimps were sold @ ₹260/- kg (30 counts). The harvested shrimps were sold to Liberty Sea Foods, Nila Sea Foods and Baby Marine Sea Foods.

Labour and employment

There are fifteen men and three women workers working in the farm. The age group of labourers ranged from 25 – 40 years. The average experience among the labourers was 10 years. The work done by the women labour in the farm was scrapping, pond preparation, weeding and hand picking. The wages paid for men was ` 125/- day and for the women were ₹80/- day. Social problems like poaching, labour problems and technical problems in the farms were also experienced.

Highlight:

Thus, Mrs. R. Swarnalatha, is a pioneer in generating local employment and income. She is also a role model for shrimp farmers to bring forth their best in income earning activities.



Mrs. Swarnalatha at work.

8. Woman ornamental fish farmer

‘Ornamental Fish Culture’ is being practiced by 5 ‘Irrular’ WSHGs at New Perungulathur, Chennai. Smt. D. Vijaya, is a ornamental fish farmer. She is a leader of ‘Pournami’ WSHGs. The traditional occupation of Smt. D. Vijaya and her group is catching snakes and rats. She has strived hard to bring in diversification in livelihood among her group by making them understand that they need not depend on the income earned by their husbands alone. Each day she and her group members work hard and have established an ‘Ornamental Fish Culture unit’ at New Perungulathur, Kancheepuram Dst. She and her group devotes most of their time in managing this unit.

Ornamental Fish Culture

Six varieties of ornamental fishes are being cultured by Mrs. D. Vijaya and her group. The size of each fish is measured as M size, S size and MN size. The breeding time is 15 days. 200 fish is stocked / tank. The rate at which these fishes are sold ranges from 70 ps. – Rs. 300/- Fish traders from different places around Chennai come here to purchase these fishes.

About the WSHG

Mrs. D. Vijaya, is the leader of ‘Pournami’ Irrular’ tribal WSHGs, New Perungulathur, Kancheepuram Dt. TamilNadu. There are 15 women members in her group who are actively involved in ‘Ornamental Fish Culture’ at New Perungulathur, Kancheepuram Dst.. These WSHGs have undergone training at TANUVAS, Kattupakkam. They are being supported by TADCO, NGO. They have also received a bank loan of Rs.2,00,000/- from Swarna Jayanthi Self Employment Scheme. This group is a successful group. They have got good savings in the local commercial bank. The bank has also provided many loans to this group considering their prompt re-payment of the loan amount. They have also received 2 awards from the State Government for being a very successful WSHG.

Highlight

Mrs. D. Vijaya, is a ‘Irrular’ tribal woman who possesses expertise in ornamental fish culture. She has her unique way of establishing rapport among her WSHGs and ornamental fish marketing agents and gains their confidence to stock and supply ornamental fish to the retailers and wholesalers. She builds the capacity of the coastal WSHGs in ornamental fish culture. She started this WSHG with an aim to generate additional income for her and for the group

members. Smt. D. Vijaya, plays as a role model to portray that, the SHG concept works as good model to improve the living standards of women and the community as a whole. She is unique for having identified ornamental fish culture since it is a new developing area of growth.



Ornamental fish culture by Smt. D.Vijaya & her group

9. Women shrimp processors (Small - scale cottage industry)

Mrs. S. Selvi, is a leader of a WSHG at Royapuram, Chennai, Tamil Nadu. Twenty five coastal women SHG members headed by Mrs. S.Selvi are engaged in processing white shrimps *Fenneropenaeus indicus*. Mrs. S. Selvi and her group members have 2 - 7 years of experience in this venture.

Processing of white shrimps *Fenneropenaeus indicus*

White shrimps *F.indicus* is used as an ingredient for making live feed for the brooders and shrimp seeds stocked in the hatcheries. White shrimps *F.indicus* are purchased by Mrs. S. Selvi and her group members from Pulicat and Annamalai Kuppam of Tiruvallur district. The WSHG lead by Mrs. S. Selvi are involved in the following processing steps like, collection of white shrimps from local villages, weighing the shrimps, processing and ice packing. The ice packed shrimps are supplied to the hatcheries. The women in the group will have work only on alternate days and when they get orders from the hatcheries. After processing, the shells of white shrimp also have a market value. They are dried and supplied to the poultry feed companies.

Mode of operation

The raw white shrimps *F.indicus* purchased for processing is first weighed and then divided into different quantities by Mrs. S. Selvi. She then distributes the divided portions to the members in her WSHG for processing. One kilo of shrimps will be peeled either individually or as a group. The processed shrimps will be returned to Mrs. S. Selvi. Each member will be paid the wage for the shrimps processed by her. Every day 25 - 40 kgs white shrimps will be processed and supplied to the market agents and hatcheries. Raw white shrimps is bought @ ₹ 80/- per kilo and the processed shrimps is sold @ ₹160/- kg. The processed white shrimp is supplied to Periyar Hatchery, Vandalur and Mother Prawn Hatchery, Needugundaram, Tamil Nadu.

Highlight

This small - scale cottage industry to process white shrimps was started by Mrs. S. Selvi to generate reliable livelihood and income for her group members. This venture is her traditional occupation. She possesses good leadership qualities, knowledge and experience in white shrimp processing. She has her unique way of establishing rapport among the group members and the hatchery operators. She is very prompt in rendering her service. She is very reliable and has gained good knowledge in marketing of processed white shrimps. She organizes the supply of white shrimps to various hatcheries. She is also responsible for negotiating the price of the shrimp they handled for processing. She ensures continuous availability of raw materials, availability of ice for packing and also ensures continuous availability of manpower for processing especially during the rainy season. She is also responsible for managing training in hygiene handling and processing of white shrimps for improving the acceptability in the market.

She also ensures that the members of the SHG get alternative occupation during off-season. This ensures that the members of Mrs. S. Selvi WSHG remain faithful and loyal to her. In this way Mrs. S. Selvi, displays tremendous leadership qualities to keep her group happy both economically and socially.



Processing of white shrimps by women SHG members

10. Women shrimp processing plant technicians

Mrs. Santhanalakshimi and Mrs. Thenmozhi, are pioneer technicians leading a women wage labours group at Premiere Marine Products, Liberty Groups of Companies (Tamil Nadu Fisheries Development Corporation) Mandapam, Tamil Nadu. They are educated upto primary level. First they joined as labourers in this company. They possess 10 -12 years of experience. This experience has helped them to gain good knowledge in processing, packing, maintaining the official records of the workers and market techniques.

Mode of operation

The duty of Mrs. Santhanalakshimi and Mrs. Thenmozhi begins with the collection of raw fish stocks from the marketing department in the company, taking attendance of the women wage earners, deciding the day's work for the workers and distribution of raw materials that needs to be processed by the labourers.

The processing operations are done by women wage labours in the company under the supervision of Mrs. Santhanalakshimi and Mrs. Thenmozhi. The operations include, de-heading, peeling, removal of alimentary canal, back scraping, final checking and packing. Allotting labour for each processing activity and quantity to be processed is also decided by both Mrs. Santhanalakshimi and Mrs. Thenmozhi. One hundred and fifty women wage earners who work in this processing plant are supervised by both Mrs. Santhanalakshimi and Mrs. Thenmozhi.

Labour management

One hundred and fifty women wage workers in this processing plant are supervised by both Mrs. Santhanalakshimi and Mrs. Thenmozhi. The age group of these women ranges from 18 – 35. They work in 3 shifts (8 am – 4 pm; 4 pm – 12 am; 12am – 8am. Ten women process 20 kgs of shrimp in an hour. 800 kg of shrimps /day is processed by each woman. The wage paid per day is ₹100 – 150/-. 7 tones of fish is processed every day. The workers in the processing plant are provided with boots, slippers and working coats. They have a separate room for rest. During peak season women are also hired for processing work from Kaniyakumaari, Nagapatinam and Kerala. This is also coordinated by Mrs. Santhanalakshimi and Mrs. Thenmozhi. They take care of in the women workers grievances and problems and also support them in availing all welfare measures announced by the State Government.

Season & export

Fifteen to 24 tones processed fish products are exported (on order) every day from this processing plant. The peak season for processing work is during the months of May – September. The processed shrimps are exported to Japan, UAE, Australia and USA by sea.

Highlight

Mrs. Santhanalakshimi and Mrs. Thenmozhi, are very loyal, sincere and hard working technicians in the company. Although being women with minimizing formal education, leadership qualities, good management techniques adopted in handling the labourer has led to the growth of this company and facilitated many women wage workers to take up this work with ease.



Women in Shrimp Processing at Rameswaran

11. Women clam collector (Live feed processor)

Mrs. Navaneetham of Kundrakadu, Kovalam, Kancheepuram district, Tamil Nadu, is a clam collector and a clam marketing agent. She supplies clams to hotels in Kovalam and to hatcheries in Mugaiyur and Vandalur as a feed for crabs and shrimps. She supplies clams to hotel and hatchery at Kovalam, around Chennai.

Mode of operation

The step involved in clam collection is collection of clams and meat separation from clam shells and drying the clam shells. Only when they get an order form the hatchery of hotel they go for clam collection. The work starts at 6 am and ends at 3 pm. The WSHG members help Mrs. Navaneetham in clam collection process.

The group members wear very light clothing and do not consume food when they go for clam collection in the brackish water canals or rivers. Frequently they keep changing their areas for collecting clams. Once, they understand that the availability is less in a particular place. They visit some other area for collection. They give a long gap and then reach the original area for clam collection. By this they help in the growth of clams.

Mrs. Navaneetham and her group members move in rows in the brackish water canals or rivers. Though they know swimming they only swim to a shallow depth area in the water and by experience they can identify the areas where clams are available in the canals or rivers. They stay drenched for more than 6-7 hrs per day collecting clams. They stay in the canal or river till they get a good collection of clams.

Occupational hazards

The job demands light clothing, non – consuming of food. Only when they return to the shore they have there food or even skip their food because of nausea feeling created by swallowing the brackishwater in the canal or river. They often get hurt on the feet and palms due to sharp mussel shells found in the bed of the water bodies. Tolerating these wounds they continue clam collection to earn their daily bread.

Highlight

Mrs. Navaneetham, is 40 years of age, educated upto VIII standard. She is basically a fisherwoman and a women SHG leader. She has good leadership qualities, dynamic in character, self confident and perseverant in nature and possesses good knowledge in her subject of clam collection and extraction of meat from clams. Sometime, she herself collects the clams from the river, creeks and canal when she is in need. She also collects clams from other women groups and serves as an agent for clam supply.

She is a woman of great mettle for field work. She rides motor bikes and travels 60 km per day to supply clam meat to hotels and hatcheries. She gives employment to more than 100 women in the village through this enterprise of clam meat collection. She is duty conscious and prompt in her service of supplying clams to hotels and hatcheries without any delay. She plays a vital role in the community development and capacity building of rural coastal women.

Mrs. Navaneetham is a Jamsetji Tata National Virtual Academy (NVA) Fellowship awardee. for the year 2007. She was awarded this fellowship by MS. Swaminathan Research Foundation (MSSRF) and Central Institute of Brackishwater Aquaculture (CIBA), Chennai for her expertise in clam collection and processing. She is a role model to other women in this field of clam collection.



Mrs. Navaneetham in clam collection and riding bike

12. Women fish meal processor

Mrs.Vijayanthimala is educated upto primary level. She and her group reside at Thonirevu, Pallaverkadu fishing village, (Pulicat Lake), Tiruvallur district, Tamil Nadu. They are fish meal processors. She possesses an expertise in fish meal production.

Mode of operation

Fish meal production process involves trash fish drying, storing, powdering, sieving, drying and packaging. Fish meal prepared by Mrs.Vijayanthimala and her group is supplied to ornamental fish units at Kolathur, Redhills, Oothukottai and to fish traders in around Chennai city. Fish meal developed by her and her group and also the prepared fish meal was tested at CIBA and the test report certifies that the fish meal quality was up to the standard.

About WSHG

She is a leader of her group named as 'Sakthi WSHG' consists of 18 women and who were involved in fish meal production in her village. Fish meal is produced with the savings money of the group and the profit is finally shared among the group.

Highlight

Mrs. Vijayanthimala, acts as a role model in the village. She possesses good leadership qualities, dynamic character; good knowledge in the subject of fish feed preparation, self confidence and perseverance. Mrs. Vijayanthimala is a Jamsetji Tata National Virtual Academy (NVA) Fellowship awardee for the year 2007. She was awarded this fellowship by MS. Swaminathan Research Foundation (MSSRF) and Central Institute of Brackishwater Aquaculture (CIBA), Chennai for her expertise in fish feed processing. She builds capacity of the rural women by giving employment opportunity in her feed meal production unit.



13. Women aquaculture accessories business manager

Mrs. R. Revathy is the Managing Director of Shri Hariharan Aquatech, Choolaimedu, Chennai. She possesses a post graduate qualification. She was also working as a Manager of Pharma Gem (INDIA), Chennai. She is having an experience of 10 years in this aquaculture accessories business. She is supported by her family members and friends in managing this business.

Mode of operation

Mrs. R. Revathy supplies the following products like shrimp feeds, medicines, probiotics, chemicals and farm implements like net, aerators, tubes, air stones, air valves, filter cloth, bags, lead weight and tube rolls required for shrimp farms, crab farms and hatcheries in Tamil Nadu, Andhra Pradesh, Kerala and Karnataka. In Tamil Nadu and Pondichery the inputs are supplied to hatcheries like 'Rank Marine', BMR Groups, Oceanic Shrimping Ltd, Vaishali, Tropical Bio marine and Sono hatcheries. Inputs are also supplied to shrimp farms at Vedaraniyam, Pattukottai, Cuddalore, Marrakkanam and Cheiyur.

Business seasons, investment, decisions and investments

Peak season for her business is from January – April and from July – August (the months when shrimp farms go for stocking) and the lean period is from May – June and September – November (when most of the shrimp farms do not stock). No credit and loan is availed for the business. The income from the business is again invested in the business and also used for household expenditure. Information about the market rates of the inputs are gathered from

newspapers, aqua magazines and thorough Internet. The profit earned is again invested in the business.

Highlight

Mrs. R. Revathy, has emerged as a successful women entry in the field of aquaculture accessories business management. She has been innovative in recognizing a niche area for self employment in aquaculture.



Mrs. R. Revathy at Shri Hariharan Aquatech

CONCLUSION

Recognition of the contributions being made by women to the sector can be made effectively at a global level. This can be achieved by promoting and exchanging technical information between women through TCDC principles, and requiring the support of international and bilateral agencies. This will also encourage the multilateral, bilateral and national agencies, and donors to continue their policies to favour the integration of women in the sector.

Greater awareness of women's participation in aquaculture is required. This can be achieved through the better use of opportunities, particularly in published materials. Consumer education uses this technique almost entirely, but there are opportunities at all levels to make readers or viewers more aware of women active in aquaculture. Such initiatives can be instigated at a global level.

The level of support required to enhance the participation of women in the aquaculture sector is clearly determined by the status of national aquaculture development in each country, and particularly by the respective government policy towards the sector. The government, after all, is responsible for the development of all economic sectors in the country, including the emergent sector of aquaculture. However, an economic sector cannot be developed in isolation, and aquaculture is proving to be a sector of far-reaching consequence. It continues to be tied closely to both agriculture and fisheries. It is therefore important that all national policies and plans for economic development include consideration of an aquaculture component, and identify women as key participants among the human resources required.