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EXPERIENCE OF CIFT IN TRANSFERRING FISHERIES TECHNOLOGIES FOR EMPLOYMENT GENERATION AMONG FISHERWOMEN

M.K.KANDORAN, R.THIAGARAJAN, V.ANNAMALAI and MARY THOMAS
Central Institute of Fisheries Technology
Cochin-682029

INTRODUCTION

Fisherwomen of many fishing villages do not have any regular specific occupation except their house-hold work. A major part of their time is wasted at present. CIFT has explored the possibilities of utilising their idle time in manufacturing and marketing fishing nets and diversified fish products. This paper deals with the technology transfer programmes undertaken by Central Institute of Fisheries Technology for employment generation among coastal women. CIFT has been involved in conduct of several training programmes, demonstrations, film shows, exhibitions, personal discussion, consultancy service, radio talk, answering technical queries, distribution of literature pertaining to fishing, fish processing and related aspects etc. for disseminating the viable technologies for adoption by coastal women. As the previous surveys had shown that manufacture of fishing nets and production of value added products from low cost fish were the two potential areas for employment generation for coastal women, emphasis was given by the

Institute to transfer the new and improved technologies pertaining to these items.

TECHNOLOGY TRANSFER PROGRAMMES

1. Manufacture of fishing nets

CIFT conducted a Lab-to-Land programme in Kuriyadi beach, Badagara on fabrication of modern fishing nets. Eighty nine fisherwomen from the local fishing villages participated in this programme which lasted for one month. Scientists from the Gear Division of CIFT conducted theory and practical classes. Detailed aspects of design reading, cutting and tailoring of webbings, fabrication of nets etc. were dealt with during the training programme.

i. Characteristics of the clients

The characteristics of coastal women trained under this programme were observed in general. The age, educational level and the family income of the trainees and their habit of newspaper reading and radio listening were studied and a brief account of such characteristics is presented below:

a) Age

Table 1. Classification of women trainees on the basis of their age

N:89

Category	%
Below 20 years	47
20-30 years	28
30-40 years	16
40-50 years	8
Above 50 years	1

Table 1 shows that maximum (47%) number of trainees were aged below 20 years and the minimum number aged above 50 years.

b) Education

Table 2. Classification of women trainees on the basis of their education

N:89

Category	%
Illiterate	9
Primary School	25
Secondary School	53
S.S.L.C.	12
College education	1

As revealed in Table 2, the trainees with secondary school education constituted the largest group based on educational level. It is interesting to note here that even a college educated girl took interest to join this training programme and find an opportunity for self-employment in the traditional field of net making.

c) Newspaper reading

Table 3. Classification of women trainees on the basis of newspaper reading

N:89

Category	%
Reading regularly	2
Reading sometimes	0
Not reading	98

Table 3 shows that the coastal women in this region do not have opportunity or habit of reading newspapers generally.

d) Radio listening

Table 4. Classification of women trainees on the basis of radio listening

N:89

Category	%
Listening regulary	3
Sometimes	0
Not listening	97

As in the case of newspaper reading, radio listening also has got a very poor ranking (Table 4) among the coastal women in this area.

e) Family income

Table 5. Classification of women trainees on the basis of family income

N:89

Category	%
Annual income below Rs.1,000/-	2
Rs.1,000/- to Rs.1,500/-	10
Rs.1,500/- to Rs.2,000/-	17
Rs.2,000/- to 3,000/-	38
Rs.3,000/- to 5,000/-	26
Above Rs.5,000/-	7

Table 5 gives a picture of the family income of the fisherwomen. Maximum number (38%) of families have annual income in the range Rs.2,000/- to Rs.3,000/- and minimum number of families (2) have annual income below Rs.1,000/-.

ii. Establishment of production unit:

After receiving the training, about 30 fisherwomen organised together as a society and started production and marketing of fishing nets. This party is supplying nets and webbings to Govt. Departments and private parties as per orders. Sometimes as reported by the trained fisherwomen, the earnings from net making exceeds the other total income of their families. When the society is not able to finish the fabrication work in specified time, it distributes the raw materials to other trained fisherwomen and entrust the fabrication work partially.

2. Production of diversified fish products

Several fisherwomen in different parts of Kerala have been trained in the production of fish wafers, fish soup powder, pickles from prawns, fish, clams and mussels, fish cutlets, dried fish, shark fin rays etc. Training programmes were conducted directly by CIFT and also in collaboration with M/s MATSYAFED, Department of Science and Technology, Govt. of India and Krishi Vigyan Kendra, Cochin.

i. Characteristics of clients

As in the case of the previous study, the characteristics of coastal women trained by CIFT in the production of diversified products were also studied and presented below based on the information received from 125 women trainees.

a) Age

Table 6. Classification of women trainees on the basis of their age

N:125

Category	%
Upto 20 years	15
20-30 years	60
30-40 years	20
40-50 years	4
Above 50 years	1

Table 6 shows the classification of trainees on the basis of their age. It is found that 60% of the trainees (maximum) belong to the age group of 20-30 years and only 1% (minium) was above 50 years old.

b) Eoucation

Table 7. Classification of women trainees on the basis of their education

N:125

Category	%
Illiterate	1
Primary school	20
Secondary school	35
S.S.L.C.	34
College education	10

As per the Table 7, women trainees with education upto

secondary school is the largest group (35%) closely followed by those with SSLC (34%). The illiterate was only 1%.

c) Newspaper reading

Table 8. Classification of women trainees on the basis of newspaper reading

N:125

Category	%
Reading newspaper regularly	70
Reading sometimes	25
Not reading	5

As shown in Table 8, the trainees who regularly read newspaper constitute 70% of the total respondents, 25% read sometimes and 5% do not read newspaper.

d) Radio listening

Table 9. Classification of women trainees on the basis of radio listening

N:125

Category	%
Regularly	69
Sometimes	27
Not listening	4

Table 9 shows that 69% of the trainees regularly listen to radio, 27% listen sometimes and 4% do not listen to radio.

e) Family income

Table 10. Classification of women trainees on the basis of their family income

N:125

Category	%
Annual income below Rs.1,000/-	30
Rs.1,000/- to Rs.1,500/-	42
Rs.1,500/- to 2,000/-	11
Rs.2,000/- to 3,000/-	13
Rs.3,000/- to 5,000/-	4

Table 10 presents the data on family income of the trainees. It is seen that maximum number of trainees (42%) have annual family income Rs.1,000/- Rs.1,500/- and minimum number in the range of Rs.3,000/- to Rs.5,000/-

ii. Establishment of production units

Many of the trained women have formed societies in different parts of Kerala and started production of fish wafers, pickles, cutlets and dried fish. M/s MATSYAFED and M/s Kerala Fisheries Corporation are the marketing agencies of these products. Some parties trained by CIFT have made their own arrangements and started production and marketing of diversified products. Table 11 gives an overall picture of the training given and the products prepared. Out of 80 women trained in the production of fish wafers, 54 members (67.5%) started its production. Similarly 68 women were trained in the production of pickles from fish and shell fish which were later produced by 64 trainees (94.12%). Training in production of fish cutlets was given to 52 women and

51 members (98.08%) started its production. Training in production of dried fish was given to 79 members and 48 (60.76%) of them started its production. Training in the production of fish soup powder and shark fin rays was given to 74 members and 40 members respectively while none of them started the production of these items.

Table 11. Particulars of training given and production units started

	Wafers from fish/ prawn	Pickles from fish/ prawn/ clams/ mussels	Fish cutlets	Dried fish	Fish soup powder	Shark fin rays
Number of women trained	80	68	52	79	74	40
Number of trainees who started production	54 (67.5%)	64 (94.12%)	51 (98.08%)	48 (60.76%)	Nil	Nil

The table shows that maximum number of women started the production of fish pickles followed by fish wafers, fish cutlets, and dried fish. The order given here is based on the number of trainees involved in the production.

ECONOMICS OF PRODUCTION OF A FEW FISH PRODUCTS

Fish pickles, fish wafers and dried fish have a good market potential and can be produced by small scale units. The economic viability of production of these products has been worked out and given below. Though

adjustments may be required to compensate for price variation from time to time, the cost worked out here is fairly representative of any commercial venture into the production of these items.

1. Fish pickles

Table 12 gives variable cost composition for the production of 100 bottles of fish pickles.

Table 12. Variable cost composition of fish pickles (100 bottles)

Input	Quantity	Cost (Rs.)	Percentage to total variable cost
Fish	65 Kg	390.00	40.46
Oil	6.2 Kg	124.00	12.86
Ingredients	-	125.00	13.00
Packaging and labels	-	235.00	24.38
Labour (man days)	5	80.00	8.30
Fuel, electricity and water	-	10.00	1.00
		964.00	100.00

As may be seen from this table, variable cost of production of fish pickle comes to Rs.964/- for 100 bottles at an average of Rs.9.64 per bottle of 360 gm pickle.

2. Fish wafers

The variable cost of production of 10 kg fish wafers is given in Table 13.

Table 13. Variable cost composition of fish wafers (10 kg)

Input	Quantity	Cost (Rs)	Percentage to total variable cost
Fresh fish (to get 7 kg picked meat)	20 Kg	100.00	29.2
Tapioca flour	7 Kg	49.00	14.3
Corn flour	3.5 Kg	38.50	11.3
Fuel and electricity	-	20.00	5.9
Labour (man days)	8	128.00	37.4
Packaging	-	6.50	1.9
		342.00	100.00

Variable cost of production of 10 kg fish wafers comes to Rs.342/- at an average cost of Rs.34.2 per kg.

3. Dried fish

Unlike fish pickle and fish wafers, a high market price cannot be expected for dried fish. Therefore production of dried fish should be restricted to such varieties of fish and such seasons when raw fish could be procured at an average price of Rs.4/- per kg or less. Cost composition worked out for dried fish is given in Table 14.

Table 14. Variable cost composition of dried fish (50 kg)

Input	Quantity	Cost (Rs.)	Percentage to total variable cost
Fresh fish	150 Kg	600.00	92.80
Salt	30 Kg	30.00	4.70
Labour (additional man days)	1	16.00	2.50
		646.00	100.00

As the labour engaged in the production of wafers and pickles can be utilized here also, only one additional labour is taken for production of dried fish From the variable cost composition, it is seen that the cost of production of 1 kg dried fish comes to Rs.12.92.

4. Fixed cost of the unit

The fixed cost of the unit is estimated for the production of 100 bottles of fish pickles, 10 kg fish wafers and 50 kg dried fish and is presented in Table 15.

Table 15. Fixed cost composition

Items of fixed cost	Estimated cost (Rs.)
1. Drying platform (6 numbers)	1500.00
2. Processing table (2 numbers)	2000.00
3. Grinding machine (1 number)	2000.00
4. Gas stove (1 number)	2000.00
5. Aluminium trays (30 numbers)	900.00

Table contd.

6. Cooking vessels and other utensils	2000.00
7. Plastic buckets (8 numbers)	400.00
8. Working dress (20 numbers)	1200.00
	12,000.00

5. Financial analysis

Being a small scale production unit, the products should be sold and cash realised in two weeks time, A larger time span would require more working capital and increased interest charges. This should be avoided and the cash out of sales should reach the unit in two weeks time. On this assumption the following investment requirement is worked out. This unit can be launched with in an initial outlay of Rs.40,166/- to be apportioned on different items of investment shown in Table 16.

Table 16. Investment requirement

Item	Amount (Rs.)
A. Fixed capital	12,000.00
B. Working capital	
i. For production of 100 bottles of pickles per day for 12 working days (Rs.946 x 12)	11,568.00
ii. For production of 10 kg of fish wafers per day for 12 working days (342 x 12)	4,104.00
iii. For prooduction of 50 kg of dried fish per day for 12 working days (646 x 12)	7,752.00

Table contd.

C. Rent for a shed for one year @ Rs.200 per month (200 x 12)	2,400.00
D. Contingency expenditure @ 10% of the working capital	2,342.00
	40,166.00

The unit can be launched with an initial capital outlay of Rs.40,116/- to be apportioned on different items of investment shown in Table 16. The total cost of production of the three items are worked out and given in Table 17. Common cost such as depreciation on fixed cost, interest and rent charged are apportioned in the ratio 50:20:30 on the three products pickle, wafers and dried fish, roughly on the basis of their working cost.

Table 17. Total cost of production

	Fish pickle 1200 bottles) Rs.	Fish wafers (120 kg) Rs.	Dried fish (600 kg) Rs.
1. Variable cost	11,568.00	4,104.00	7,752.00
2. Interest in investment of Rs.40166 @ 15% for two weeks $\frac{6025}{24}$ = 251/- apportioned in the ratio 50:20:30	126.00	50.00	75.00
3. Depreciation @ 20% of fixed capital Rs.2400/- for two weeks = Rs.100/-	50.00	20.00	30.00

Table contd.

4. Rent and contingency for two weeks =Rs.100/- + Rs.98/- = Rs.198/-	99.00	40.00	59.00
	11,843.00	4,214.00	7,916,00

As may be seen from Table 17, the total cost of 1200 bottles of pickles works out to Rs.11843/-, that of 120 kg wafers to Rs.4214/- and cost of 600 kg dried fish to Rs.7916/-. Cost of production of a bottle of pickle would be Rs.9.80, that of 1 kg of wafers Rs.35.00 and that of 1 kg of dried fish would be Rs.13.20. These cost levels should be treated as break even points where there is no profit no loss. But, as this is a self-employment scheme of coastal women, the labour charge itself is an income for them. However, the retail price may be fixed adding a margin upto 40% over the cost to cover marketing cost and to allow a small percentage of profit.

EXTENT OF KNOWLEDGE GAIN AND RETENTION BY FISHERWOMEN

We have to transfer the new technologies to the coastal area with a view to generating employment among coastal women. Among several factors involved in the adoption of these technologies and the establishment and operation of small scale production units, knowledge gained and retained by fisherwomen after training is very important. The following investigations were carried out during various training programmes organised by CIFT to throw light on the extent of knowledge gain and knowledge retention by fisherwomen. The knowledge gain and knowledge retention were measured by structured schedule. It is hoped that this information will be useful to carefully and effectively

approach and handle the client system during the technology transfer programmes.

1. Extent of knowledge gain by different extension methods:

Three extension methods viz. 1) lecture alone, 2) lecture aided with charts and 3) lecture aided with slides were selected and administered to three groups of a total of 89 coastal women. The messages selected were preparation of fish wafers and fish pickles. The results of the study are given in Table 18. This table shows that lecture aided with slides is more effective followed by lecture aided with charts and lecture alone. Between the two subjects tried, it is found that knowledge gain is more in the production of fish wafers than of fish pickle. A lower knowledge gain for fish pickle may be due to the higher number of ingredients and more number of steps involved in the production process.

Table 18. Knowledge gain in relation to extension methods

Product	Extension method	Mean gain	't'
Fish wafers	Lecture alone	56.99	11.27**
	Lecture aided with charts	73.01	15.54**
	Lecture aided with slides	91.20	39.84**
Fish pickles	Lecture alone	52.08	17.54**
	Lecture aided with charts	66.67	27.06**
	Lecture aided with slides	72.12	33.59**

**Significant at 1% level

2. Knowledge gain in relation to the age of fisherwomen:

Table 19 shows the knowledge gain of women trainees in relation to their age. Among the young, mid-adult and late-adult women trainees, the young women gained maximum knowledge followed by mid-adult and late-adult women.

Table 19. Knowledge gain in relation to age

Sl.No.	Age group	Mean value
1	Young women	23.00
2	Mid-adult	21.27
3	Late-adult	14.60

3. Knowledge gain in relation to the education of the trainees:

Table 20 illustrates the relation between the educational level of the women trainees and their knowledge gain. It is seen from the table that knowledge gain is maximum in the case of women with high educational level followed by those with medium and low educational level.

Table 20. Knowledge gain in relation to education

Sl.No.	Educational level	Mean value
1.	High	24.38
2.	Medium	19.24
3.	Low	16.53

4. Combined effect of age and education on knowledge gain:

Table 21 presents the data on the combined effect of age and education of fisherwomen on their knowledge gain. It is found that young women with high education got maximum knowledge gain and late-adult with minimum education got minimum knowledge gain.

Table 21. Combined effect of age and education on knowledge gain

Sl.No.	Age and educational level	Mean value
1	Young with high education	25.17
2	Mid-adult with high education	25.09
3	Mid-adult with medium education	20.38
4	Young with medium education	19.40
5	Young with low education	19.33
6	Mid-adult with low education	17.30
7	Late-adult with high education	17.00
8	Late-adult with medium education	13.50
9	Late-adult with low education	8.50

5. Knowledge retention of women trainees:

Table 22. Extent of knowledge retention by fisherwomen

Sl. No.	Interval	Extent of knowledge retention
1	Immediately after exposure	100
2	At an interval of 15 days after exposure	86.25
3	At an interval of 30 days after exposure	75

Table 22 shows a gradual reduction in the knowledge gained as time passes on. The knowledge gained immediately after exposure is taken as 100. About 13.75% of the knowledge gained is lost with an interval of 15 days of exposure. The loss is upto 25% with an interval of one month. This situation shows that an immediate follow up action after the training is required for adopting the technologies trained in.

ATTRIBUTES OF TECHNOLOGY

The perceived attributes play a significant role in the adoption and continuation of any technology. If the perceived attributes fall in the negative direction, the possibilities of non-adoption as well as discontinuance occur. Study was conducted to throw some light on the perceived attributes of 50 representative fisherwomen trainees on the production of diversified fish products. Attributes of fish processing technology were classified as economic, educational and psychological, physical and environmental and social and cultural and are briefly discussed below.

1. Economic attributes

Sixty percent of the trainees perceive that the investment involved in the production of diversified fish products is high. Seventy percent of the fisherwomen perceive that financial returns from the production of diversified products is moderate. Returns are sometimes delayed as perceived by 66% of the women. Regarding the availability of fish for production of diversified products, 76% of the trainees perceive that procurement of fish is very difficult. It is highly difficult to procure loans in time as perceived by 64% of the fisherwomen.

Eighty four percent of the trainees report that marketing of fish products prepared in the unit is very difficult for them.

2. Educational and psychological attributes

Sixty six percent of the fisherwomen report that it is easy to understand the new technologies in the production of diversified products. The results of using the technologies are observable to a great extent as revealed by 80% of the fisherwomen. Eighty two percent of the trainees perceive the high possibility of trying the technology on a small scale. Fifty four percent of the fisherwomen report that the required management skill for adopting the technology in their situation can be easily acquired.

3. Physical and environmental attributes

Seventy two percent of the trainees perceive that it is feasible to get suitable physical conditions to adopt the new technologies in their situations.

4. Social and cultural attributes

Eighty six percent of the fisherwomen feel that the production of diversified products as per the new technologies is compatible with their cultural norms, values and beliefs and the new methods are highly acceptable to their social system. They generally perceive that the new technologies have several social advantages over the existing system of utilisation of low cost fish.

CONSTRAINTS IN THE PRODUCTION OF FISHING NETS AND DIVERSIFIED PRODUCTS

The survey revealed a number of constraints which adversely affected the establishment and functioning of small scale production units of fishing nets and diversified products. The major constraints observed are given below:

1. Lack of marketing facilities
2. Lack of finance
3. Inadequate training facilities
4. Scarcity of fish and high cost of raw materials
5. Low price of finished products in the market
6. Lack of easy, timely and adequate inputs
7. Lack of information about the potential markets
8. Lack of community processing centres with proper facilities
9. Lack of suitable transport facilities
10. Lack of coordination and effective linkages among various developmental agencies.

SUGGESTIONS FOR IMPROVEMENTS

1. Provision of marketing facilities

The trainees belong to very poor fishermen families located in coastal villages. They do not have facilities to market their products. Normally the manufactured items have to be taken into distant places where there is demand for these items. There should be some agencies to look after the marketing part of this system with a nominal commission. The efforts made by M/s MATSYAFED Ltd. and M/s Kerala Fisheries Corporation for marketing the diversified products manufactured by the small scale units should be revitalised and

streamlined. These agencies should try to identify suitable areas and establish marketing units for marketing various items. Government should also encourage, guide and finance the trainees to form cooperative societies to take up marketing.

2. Provision of finance

Several trained poor coastal women reported that there was no financial support available to start small production units. Financing agencies like Nationalised banks should be more liberal to give loans to individuals or societies for producing fishing nets and fish products. Government agencies for rural development should also give grant/subsidy/loan to the trained coastal women to start production units. It should also be seen that the trainees are getting the financial support in proper time.

3. Provision of adequate training facilities

Even though some new technologies could be transferred to limited centres, this could not be done on a larger scale due to lack of sufficient man power. Fishermen families are scattered all along the coastal belt of our country. A few research institutes cannot reach all these people to convey the message of new developments. State Fisheries Departments/Corporations have to play a vital role in disseminating such information to their respective regions. It is suggested that all State Fisheries Departments should get some of their officials trained in new technologies at technology generation centres and after training, they should transfer such technologies to their respective

states. These officials should be trained in general extension methods also so that they can undertake the technology transfer programme much more effectively. They should conduct training programmes, demonstrations, discussion with the fishermen/ fisherwomen, film shows, exhibitions, distribution of technical leaflets etc. to persuade the trainees to adopt new and viable technologies.

Regular and frequent visits of the Fisheries Officials to the production units, combined with their sound advice on problems needing immediate attention will create very good impact on the fishermen/fisherwomen. Adoption of improved quality control practices particularly non-monetary type will receive good response from the fishermen community. Effective supervision and technical support are essential for producing quality products.

4. Coordination among various agencies

Effort is being made by extension agencies within their limitations to popularise the viable technologies. Financial and marketing agencies are also extending help to the small production units in a limited way. But all these agencies are not having a strong liaison to simplyfy their efforts to help the fishermen. There is an urgent need for an integrated approach and effective linkage among different extension and supporting agencies to accelerate the transfer and adoption of new and improved viable technologies.

Close links should be established among research institutes, production units and marketing and extension agencies so that the problems of production units are

fed back to the concerned agencies for timely solution.

5. Supply of fish to production units

Cost of even miscellaneous fish has gone up in many fishing villages. Women trainees find it difficult to procure fish at reasonable rate for production of various value added products. Government should take some steps to supply fish at reasonable rate to the societies formed by trainees through Govt. Departments engaged in commercial fishing. Departments like M/s MATSYAFED engaged in fishermen welfare activities should make the provisions to supply fish to the production units even at subsidised rate through their fishermen beneficiaries engaged in fishing. Fishermen Co-operative Societies should also take steps to procure and supply fish to production units at reasonable rate.

6. Provision of community production centres

Any food item should be processed and handled in hygienic processing centres. Various facilities have to be provided in a fish processing centre to prepare quality fish products. It is practically difficult for fishermen trainees to construct such hygienic processing halls for production of fish products. It is suggested that Government or other developmental agencies should construct community processing centres with all facilities and provide to the fisherwomen trainees at nominal rent for production of diversified fish products.

7. Maintenance of quality of fish products

Quality of fish products should be maintained at any cost. License should be issued to standard production units maintained in proper conditions and production of diversified fish products should be allowed only in such units. Poor quality fish products should not be allowed to be sold and such items should be immediately removed from the godown and markets by health authorities.

8. Self-improvement of fisherwomen trainees

Trained fisherwomen are the ultimate users of the new technologies. They should analyse their situations, identify their problems and organise themselves to solve such problems with the assistance from research Institutes, extension workers and other supporting agencies. They should try to improve their socio-economic conditions and develop themselves by making use of the appropriate technologies and other facilities available to them. Other agencies can only provide favourable situations to adopt the technologies. The fisherwomen should be mentally prepared to adopt such technologies for their own benefits. They should show a receptive mind to other agencies.

SUMMARY

Experience of CIFT in transferring viable technologies to the poor fisherwomen for employment generation is projected in this article. The main technologies transferred are the production of fishing nets and diversified fish products like fish wafers, fish pickles, fish cutlets, dried fish, fish soup powder and

shark fin rays. Except soup powder and shark fin rays all other technologies mentioned above have been adopted by coastal women and small scale production units started. The economics of production of an integrated unit for the production of fish wafers, fish pickles and dried fish have been estimated and presented.

The knowledge gain and retention by fisherwomen on new technologies has been studied and presented. It is found that lecture aided with slides is more effective for knowledge gain followed by lecture aided with charts and lecture alone. Among the young, mid-adult and late-adult, the young women gain maximum knowledge followed by mid-adult and late-adult women. Similarly women with high education gain maximum knowledge followed by those with medium and low education. Regarding the combined effect of age and education, young women with high education gain maximum knowledge and late-adult women with low education gain minimum knowledge. A gradual reduction of knowledge gained is observed as time passes on. This situation calls for an immediate follow up action after training of the fisherwomen.

Various attributes of technologies as perceived by the fisherwomen have been studied and the results given in the article. Economic attributes, educational and psychological attributes, physical and environmental attributes and social and cultural attributes are the factors studied.

The major constraints observed in the establishment and running of production units by fisherwomen are lack of marketing facilities, finance, training

facilities, timely and adequate inputs, information about potential markets, community processing centres, suitable transport facilities and coordination and effective linkages among various agencies. High price of raw materials and comparatively low price of finished products are other constraints. Suggestions are made to improve this situation.

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