

A NEED BASED PROGRAMME OF TRAINING IN GEAR FABRICATION
AND GAINFUL EMPLOYMENT SCHEME FOR FISHER WOMEN

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In about 3000 fishing villages spread all along the 5600 km coast line, there exists a large mass of backward and economically weaker section of the rural community - the fishermen. From time immemorial fisherfolk irrespective of caste, race or religion happened to be the most sensitive and exploited section of the rural population of any country. Eventhough, they form a powerful income and employment generating sector producing the main stay of the fishery resources are still far below the average national per capita income group.

Indian fisherwomen constituting nearly half of over 1.5 million fisherfolk involved themselves directly and indirectly in the various fisheries activities are still kept at a very low status in the social heirarchy. They share with men in fish distribution and marketing, fish processing, curing, preservation, net making and other allied tasks (Meenakumari 1981). Unless our planners and developmental and funding agencies realise the potential of this section and the developmental programmes are aimed for the uplift of this weaker section and our

technological innovations are moulded and translated to suit their requirements, there cannot be any real progress. The fisherfolk irrespective of men and women are the best masters in their occupation and they can be the best managers also if they are properly groomed.

Even though the role of the fisherwomen in the management of the post-harvest aspects of the traditional sector is well appreciated by all, their silent but active participation in supplementing their counterparts in the harvest side is still unnoticed. The study conducted by BOBP (Drewes, 1982) reveals that 7 out of every 10 fisherwomen are skilled in net-making. The fisherwomen do not take active part in the actual fishing operations. In India they are engaged in the subsistence fisheries like collection of crustaceans or shell fish in the coastal area with better skill than men. In Barisal and Rajshahi districts of Bangladesh women are involved in fish capture (BOBP, 1980). In Sri Lanka in the Puthalam area women engaged themselves in fishing with beach-seines and they even own beach seines and boats. With all their skill, they will be best suited for net making and mending as in the case of spinning and weaving in the traditional sector.

Net making had assumed the level of a cottage industry until about a decade ago. But, with the introduction of nylon yarn and net making machines, most fisherwomen have given up making their own nets (BOBP, 1982). Now some make nets to order in their home, and few private companies and individual fishermen give the fisherwomen yarn for net making on contract basis and exploit their skill. Their skill can be developed by arranging a compact and comprehensive package of short-

term training programme exclusively for fisherwomen in twisting of twines and ropes, manufacture of webbings, design reading, tailoring of webbing and assembly of modern fishing gear like trawls, seines etc. Such a programme can open up avenues for a chain of small scale industrial complex all along the coastal villages for the manufacture of fishing gear and accessories. By giving fisherwomen access to the new technology, the common belief that they are less capable of acquiring mechanical skill can be dispelled. They can be made aware of the various types of nets, their fabrications and can function as suppliers of ready made gear.

Some state governments have already taken steps to support net-making as a cottage industry and to protect the interests of the female labour force engaged in net-making by placing limits on the establishments of net factories (BOBP, 1980). Most of the states in the east coast also are proposing regional projects for net-making at the intermediate technology level.

Programme of training

The programme of training can be moulded into a compact package of information on the various aspects prepared in a simple language, and all complicated technical and scientific aspects could be translated with a practical approach.

Let us see how such a training programme would be by taking the most complicated aspect - the shaping or tailoring of webbing. With the traditional background and experience in the art of fabrication they need first of all familiarisation of terms like mesh, bar, point, knot etc. with their local synonym. The second stage is

to make them understand the different type cuts and their effects on the webbing. Here we have to make them understand that there can be four types of cuts. They are (1) Point cut or N-cut (2) Mesh cut or T-cut (3) Bar cut or diagonal cut and (4) Mixed cuts like (a) point and bar cut and (b) mesh and bar cut. It is here they would be made to understand the following:

- 1) A point cut is a vertical cut, cutting two bars on the same side of the knot one each of the upper and lower loops and such a cut will result a vertical movement of one mesh in a straight line without any shift to right or left.
- 2) A mesh cut is a horizontal cut, cutting two bars on the same side of a knot from same row of loops and such a cut will result a movement of one mesh in a straight line horizontally without any vertical movement.
- 3) A bar cut is a diagonal cut separating two adjacent vertical rows of knots by cutting the common bar separating the lower and upper half of the meshes formed by odd and even rows of loops respectively resulting in simultaneous movement of half mesh vertically and horizontally also in a straight line.
- 4) A mixed cut on the other hand will always be in the zig-zag forms and the movement will always be both vertical and horizontal and the sum total of the movement of the cuts.
- 5) Angle formed by a point and mesh cuts will be 90° and that between a point cut and bar cut or mesh cut and bar cut will be 45° .

- 6) Any angle can be made by permutation and combination of point and bar or mesh and bar cuts.

Suppose for a piece of webbing of 100 mesh depth to be shaped from a rectangular webbing piece with 100 mesh at the top and 150 meshes at the bottom, the cut will not be a point, mesh or bar cut alone as there is a movement outward at one side (or both side) and we know that combined movement can be attained by bar cut. Since the requirement is only 50 mesh side wise movement (or 25 mesh each on either side) and this can be attained by 100 bars (or 50 bars each from both side), the cut has to be a combined cut of point and bar and hence zig-zag. By cutting 100 bars the webbing has gone vertically down by 50 meshes and there are 50 meshes more to reach 100 mesh depth this has to be cut at points. So the total cuts will be 100 bar cuts and 50 point cut if the cuts are made from one side or 50 bar cut and 75 point cuts on either side. This cuts are to be distributed to make a smooth zig-zag. Then the cut will be 50 points 100 bar i.e. 1 point 2 bars 50 times for a 50 mesh increase or decrease on one side or 75 points 50 bars, i.e. 3 points 2 bars 25 times each on either side.

For a trawl net the normal cuts are (a) all point cuts (N-cuts)

(b) All mesh cuts (T-cuts)

(c) All bar cuts (diagonal cuts) and

(d) a few mixed cuts like

1P1B, 1P2B, 1P3B, 1P4B, 1P5B, 1P6B, 2P1B, 2P3B, 2P5B,
2P7B, 3P1B, 3P2B, 3P4B, 3P5B, 3P7B, 4P1B, 4P3B, 4P5B, 4P7B
etc.

When the point and bars are more than one i.e. 2P3B, 3P4B, 4P5B, etc. it is better to redistribute the cuts as (1P2B + 1P1B), (1P1B + 1P2B + 1P1B), (1P1B + 1P2B + 1P1B + 1P1B) or (1P2B + 2P1B + 1P2B) etc. respectively. In case instead of depth the increase is in width the point cuts only (N cuts) are to be substituted by mesh cut (T-cuts). Since all designs cutting ratio are given there is no need to go into the angle and ratio relation.

The fisherwomen should be active participants rather than passive recipients. An survey made in the villages of Madras (Drewes, 1982) have found that only 15% of women are interested to take part in training programmes conducted outside the village. So it can be drawn to conclude that training courses for women have to be organised in the village itself so that women who are restricted by tradition and household activities can be benefitted.

Their values can be ardently and significantly influenced by films. So short films on the training programme also are helpful. Formation of small womens association would be necessary. These associations coupled with higher income generating opportunities for women, could initiate changes in women thus redefining their roles in the family and the community. Co-operative societies also could provide a forum for formulating and implementing action plans.

Women should be trained in the use of treadling machines, and provided funds for the purchase of machines and twines through a bank credit scheme. They also could be trained in the care, maintenance and mending of nets. Thus by actual implementation and follow up action an

important income - generating scheme should be organised which will help the fisherwomen to play a vital role not only to their families but also to the village economy as well by setting up a cottage industry owned and managed by fisherwomen co-operative society. Such an industrial complex will have:-

- (a) An administrative office cum stores
- (b) A yarn and twine twisting factory of about 100-150 kg of twine per day
- (c) A rope twisting factory of about 100-150 kg of ropes per day
- (d) A small net making factory with 2 or 3 small net making machine with a total capacity of nearly 100-125 kgs of webbings per day
- (e) A net shaping and assembling hall

An establishment of the above nature require a capital investment of nearly Rs.25-30 lakhs and an additional working capital of Rs.5 lakhs. This can generate an employment potential of 20 fisherwomen on full time basis and another 20 fisherwomen on part-time basis. In addition this can provide employment on contract basis for 30-40 fishermen. The total turn over is expected to be of the tune of Rs.40-45 lakhs with a net profit of Rs.24-28 lakhs after payment of salary of Rs.6 lakhs and 10 lakhs as contract and overhead charges and a profit of about Rs.5 lakhs after payment of interests and servicing of loan, and other payments.

With all this employment potential and income generation, change cannot be introduced overnight, it takes more time to be understood and absorbed especially among the weaker sections of the society. So continued efforts only could bring any result.

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