

FISHERIES EDUCATION IN PAKISTAN*

by

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ABSTRACT

After discussing the needs of fisheries education in Pakistan, an account is given of the existing training institutes in West and East Pakistan for training of fishermen as well as technicians and scientists.

NEED FOR FISHERIES EDUCATION IN PAKISTAN

Pakistan has a coast line of 500 miles in the West and 200 miles in the East. In order to develop marine resources the first step was taken to mechanize the fishing boats at Karachi in 1956 with the help of FAO. Jan-Olof Traung came to West Pakistan many times and then on his advice Henry Magnusson, a naval architect was assigned to examine the fishing (sail) boats of different types and advise on how to mechanize these or construct other types of boats to enhance catch capacity. Consequently, a report was published by FAO in 1955 on "The Mechanization of West Pakistan Fishing Boats" (FAO Report No. 403). In the first phase six new fishing boats were mechanized in Karachi and later 22 boats in East Pakistan and 11 boats were mechanized for the Mekran Coast. The programme has progressed with the result that now the number of mechanized fishing boats has increased to over 900 in West Pakistan at Karachi, consisting of trawlers, gill-netters, trawlers-cum-gill netters. The number in East Pakistan and on the Mekran Coast remained more or less constant. Eight trawlers were imported from abroad by private parties.

In West Pakistan, in the initial stages, training was given to fishermen in mechanized fishing on the two departmental trawlers and then a training class was opened at Karachi for a period of $2\frac{1}{2}$ years;

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20 fishermen were given training in trawling and navigation every six months. Trainees came from all parts of Pakistan. This scheme was later transferred to West Pakistan Directorate of Fisheries which however did not continue it.

There is great need for training fishermen in both the wings of Pakistan in the marine sector so that they may handle their boats and use the nets efficiently.

In East Pakistan, a Fisheries Development Corporation has been formed which is constructing mechanized fishing boats for coastal waters and imparting onboard training at Cox's Bazar under the supervision of an FAO technician. In inland waters, in the lake of Kaptai some fishing has been started with outboard motors under another FAO expert. In inland waters of East Pakistan some mechanized fishing boats and carrier boats are under trial and more are being constructed.

It is considered that in order to increase the efficiency, at least 500 masterfishermen, 500 fishermen, 500 marine diesel engineers be trained for efficiently handling the mechanized fishing boats in West Pakistan and the number of trained personnel should be at least half that number for East Pakistan.

In inland sector in both the wings at least 200 fishermen and pisciculturists should be trained every year to handle efficiently fish culture and take other measures to increase production and organize transport and marketing of fish in different parts of the country. The inland resources are very vast in East Pakistan and quite extensive in the Western region.

It is necessary that the training facilities be expanded soon to meet the shortage of trained personnel. Steps being taken in this matter are briefly described later under the appropriate heads.

CURRENT PAKISTAN TRAINING

There is a school near Lahore in the West and an another at Chandpur in the East imparting training to pisciculturists.

i) Name of Project

- a) Fisheries Training Institute, East Pakistan.
- b) Fisheries Training Class, West Pakistan.

ii) Location

- a) Chandpur - East Pakistan
- b) Goth Abdul Malik - West Pakistan

iii) Nature of Training

East Pakistan

- 1) There are two types of training in fisheries viz.:
 - a) Training of fisheries personnel in East Pakistan and
 - b) Training of fishermen for proper development and maintenance of fisheries resources as well as for their judicious exploitation in the most efficient and economic manner. Copies of the relevant schemes and the prescribed syllabus are given below. For training of fisheries personnel a project "Scheme for the Establishment of a Training Institute for Training of Fisheries Personnel" was executed in the second plan period. The scope of activities of this scheme has been extended by another scheme namely "Scheme for Expansion of Activities of Fisheries Training Institute for Training of Fisheries Personnel in East Pakistan" during the 3rd five year plan. For the category (b) above a scheme for the "Establishment of Vocational Centres for Training of Fishermen in East Pakistan" was executed in the second plan period.

West Pakistan

Fish cultural practices, conservation, introduction of exotic fishes, use of different types of nets and boats, control of aquatic vegetation and other steps to be taken to increase production.

iv) Programme (Duration terms)

East Pakistan

- (a) Scheme for the establishment of training institute for training of fisheries personnel:

There are two courses under this scheme viz.:
(i) Training for the Graduate Students and (ii) Training for the Under-graduate Students. Duration of the Graduate Course is 12 months and that of the Under-graduate Course is 18 months.

- (b) Scheme for the establishment of vocational training centres for training of fishermen:

In the scheme the duration of training was envisaged for six months; but it was ultimately extended to 12 months because of the fact that in East Pakistan fishing goes on throughout the year, different species of fish become available in different seasons and the methods of fishing differ from season to season.

West Pakistan

Each term is for 6 months. Besides the above, officers and students are given departmental training for a period of six months.

- v) Number (at each course, and number already passed through)

East Pakistan

- (a) Scheme for the Establishment of Fisheries Training Institute:

There was a provision of granting admission to 4 trainees in the graduates course and 8 trainees in the under-graduate course in each session. Total number of trainees passed through during execution of the scheme is 10 graduate trainees and 24 under-graduate trainees. Another batch of 8 under-graduate trainees who were admitted before the period of execution of the scheme was over, continued training. After this batch gets through, the total production of under-graduate trainees will stand at 32. In the expanded scheme the number of graduate and under-graduate trainees has been increased to 7 and 15 respectively from 4 and 8. In addition to the trainees already passed out from the original scheme, a batch of 7 graduate and 15 under-graduate trainees are continuing training under the expanded scheme.

(b)

<u>Name of the scheme</u>	<u>No. of trainees scheduled for each season</u>	<u>No. of trainees passed during the period of execution</u>	<u>Remarks</u>
Scheme for Establishment of Vocational Training Centre for Training of Fishermen in East Pakistan.	200	466	Another batch of 145 trainees are continuing training.

West Pakistan: 33 in each course. Number already passed, not available.

vi) Entrance Requirements

East Pakistan

- a) Scheme for the Establishment of Fisheries Training Institute for Training of Fisheries Personnel:- For the graduate course, the candidate should be a science graduate with zoology as one of the subjects. For the undergraduate course, the candidate should be a matriculate.
- b) Scheme for Establishment of Vocational Training Centre for Training of Fishermen:- The candidate should possess some educational qualification and knowledge of English language. Preference is given to candidates from the Fishermen Community.

West Pakistan

Local language, knowledge of English preferred.

vii) Assistance (Financial and Others to Trainees)

East Pakistan

- a) Scheme for Establishment of Training Institute for Training of Fisheries Personnel:- In the second plan period scheme there was a provision of stipend amounting to Rs.50/- and Rs.25/- per month for the graduate and the under-graduate trainees. The rate of stipend has been increased to Rs.60/- and Rs.40/- per month respectively in the expanded scheme.

In all cases the trainees are allowed free accommodation in the dormitory attached to Institute.

- b) Scheme for Establishment of Vocational Training Centre for Training of Fishermen:- A stipend @ Rs.40/- p.m. is awarded to each trainee.

West Pakistan Rs.50/- p.m. to each trainee.

viii) Diploma Awarded

East Pakistan In case of both the schemes the trainees are awarded certificates after completion of their courses.

West Pakistan Certificates awarded after completion of training.

ix) Evidence on the Success of the Project

East Pakistan Graduates and under-graduates trained under the Fisheries Training Institute have helped to solve the problem of manpower requirement of the Directorate of Fisheries and East Pakistan Fisheries Development Corporation. People trained under Vocational Training Scheme have in most cases taken to fishing.

West Pakistan Has proved very useful for pisciculturists who start their own farms.

x) Any Special Operational Problems

East Pakistan

a) Training Institute Scheme: Nil.

b) Vocational Training Centre: There was a provision of 4 Training Officers in the Scheme who were supposed to be foreign experts, but none was available. Number of instructors was less than what was required for smooth running of the scheme. The boats were received very late.

West Pakistan Nil.

PROPOSED PAKISTAN TRAINING

i) Name of Project

East Pakistan

- (a) Vocational centres for training fishermen.
- (b) Training institute for training fisheries personnel.
- (c) Training of masterfishermen and marine diesel engineers (Marine fisheries).

West Pakistan

- (a) Extension of training fishery personnel and fishermen in inland fisheries.
- (b) Training of masterfishermen and marine diesel engineers (Marine fisheries).

ii) Location

East Pakistan

- (a) & (b) - Chandpur.
- (c) - Chittagong and Narayanganj.

West Pakistan

- (a) - Lahore.
- (b) - Karachi.

iii) Nature of Training

- (a) This will be practical training in fishing in inland waters and estuarine areas.
- (b) Aims and objects will be the same as in the scheme already under operation for training fishermen in fish culture and other aspects of inland fisheries.
- (c) Experienced fishermen and marine diesel engineers will be trained in mechanized fishing, navigation, etc.

West Pakistan

- (a) Extension of present scheme. Aims remain the same.
- (b) 50 experienced fishermen, 30 marine diesel engineers will be trained for mechanized boats each year.

iv) & v) Programme (Duration and Terms)

East Pakistan

- (a) Yearly number not available. Total 2,000 fishermen will be trained. - One year.
- (b) 12 trainees - 4 for graduate course and 8 for undergraduate course. - One year.
- (c) 50 for masterfishermen's course and 30 for marine diesel engineers' course. - One year.

Total - 300 will be trained.

West Pakistan

- (a) 50 every 6 months.
- (b) 50 masterfishermen will be trained each year. - One year's course.

Total - 300 will be trained.

vi) Entrance Requirements

East Pakistan

- (a) Practical fishermen with knowledge of local language.
- (b) 4 - inter science - 8 matriculates.
- (c) Experienced in fishing for masterfishermen course. (Knowledge of English preferred). Same for engineers.

West Pakistan

- (a) Local language.
- (b) Same as in (c) above.

vii) Assistance(Financial and Other) to Trainees

East Pakistan

- (a) Rs.50/- per month each.
- (b) Rs.50/- per month for graduate course and Rs.25/- for under-graduate course.
- (c) Rs.100 to each trainee. (Free accommodation will be provided) for (a), (b) & (c).

West Pakistan

- (a) Same as (a) above.
- (b) Same as (c) above.

viii) Diploma Awarded

East Pakistan

- (a) & (b) - Yes.
- (c) - Yes.

West Pakistan - Yes, as above.

ix) Evidence on Success of the Project

Increase in production:

x) Any Special Operational Problems

Training will be imparted in the institutes and practical training in the field and departmental vessels.

Besides the above, training will be imparted by the Fisheries Development Corporation, East Pakistan in mechanized fishing and other aspects at 3 centres. Details not available.

The Agricultural University at Mymensingh in East Pakistan proposes to start a fisheries training course for a period of 3 years. The entrance requirements will be intermediate in science. Training will be imparted on inland and marine fisheries aspects. The courses are under preparation. A degree will be awarded to successful trainees.

DISCUSSIONS AND CONCLUSIONS

i) Inland Fisheries: The requirements in East Pakistan for training are two-fold. One aspect is to train fishermen and pisciculturists in fish culture including reclamation of derelict waters, construction of fish farms and other aspects. The number can not be assessed at this stage till a thorough survey of the fisheries resources is done. As a rough estimate 5,000 to 10,000 persons should be trained.

The second aspect is training fishermen in the operation of mechanized boats and use of nets. For every boat a trained mechanic (driver) will be required for operating the engine and the fishermen will work under a trained and qualified masterfisherman. Training facilities should be provided for such personnel. The institute should have all the arrangements with them. It would be better to organize the training for at least three years under some experts who might be recruited through FAO or Colombo Plan. In West Pakistan at least 100 should be trained every year as the resources are not so vast as in East Pakistan.

ii) Marine Fisheries: Training should be for fishermen in general for a short course of 6 months in which operation of fishing boats, handling of gear, navigation, etc., should be given - 100 a year for each wing.

The second course should be of higher training for masterfishermen for a period of one year and one or two successful trainees may be sent to foreign countries to acquire more knowledge - 50 a year for each wing.

Marine diesel engineers are in short supply. It is essential that these may be trained in both the wings and made available to the departmental as well as private fishing boats - 50 a year for each wing.

If the suggestions given above are followed the benefits will be immense and it would be possible to double the production within a period of 10 years.