

**IMPROVEMENT OF HUMAN RESOURCES IN THE FISHERIES SECTOR -  
THE CONTRIBUTION OF THE GHANA/NETHERLANDS REGIONAL TRAINING AND APPLIED RESEARCH  
PROGRAMME FOR ARTISANAL FISH PROCESSING IN WEST AFRICA, 1988-91**

by

Mrs G. Nerquaye-Tetteh  
Food Research Institute  
PO Box M20, Accra, Ghana

**ABSTRACT**

An insight is given into the training aspect of the programme as a means of improving the human resources in the artisanal fisheries post-harvest sector, through six-week training courses in artisanal fish handling and processing mainly for female extension workers. The courses involve lectures, demonstrations, practical work in villages and discussions.

**RESUME**

Un aperçu est donné des activités de formation dans le cadre du programme, visant à l'amélioration des ressources humaines dans le secteur après capture de la pêche artisanale, à travers des cours de formation d'une durée de six semaines pour animatrices et vulgarisateurs. Les cours comprennent des conférences, démonstrations, travaux pratiques dans les villages et discussions.

**1. INTRODUCTION**

The main objectives of the above-mentioned project are the following:

Long-term objectives

- To contribute to the increased availability and access to quality of fishery products for the rural population through improved fish preservation including handling at sea, processing, storage and distribution.
- To reduce post-harvest losses in fisheries and to enhance the income position of the economic sector involved in artisanal fishery activities through improved fish preservation.

Immediate objectives

- To establish institutional cooperation in the field of fish preservation technology and extension between the executing agencies in Ghana and the Netherlands.
- To carry out a training programme to instruct key extension personnel from West Africa in the technical background of fish preservation as well as in the social and economic factors influencing the extension of improved technology.
- To implement an applied research programme to adapt and/or develop appropriate fish preservation methods and equipment at intermediate technology level for the artisanal fisheries of West Africa.

The direct target group of the project is personnel involved in extension and related activities in the field of fish preservation. The indirect target group is the sector of the population involved in artisanal fisheries. The country of execution of the project is Ghana and the executing agencies involved are:

- Food Research Institute of Council for Scientific and Industrial Research, Accra, Ghana
- Fisheries Department, Ministry of Agriculture, Accra, Ghana
- Women Farmers Extension Division, Ministry of Agriculture, Accra, Ghana
- National Council on Women and Development, Accra, Ghana
- Department of Nutrition and Food Science, University of Ghana, Legon, Ghana
- Agricultural Extension Department, University of Ghana, Legon, Ghana
- Institute for Fishery Products, Division for Nutrition and Food Research, Organisation for Applied Scientific Research, The Hague, the Netherlands
- Programme for Rural Extension Services, Ministry of Agriculture and Fisheries, The Hague, the Netherlands.

The regional training programme consists of a yearly training course of six weeks' duration for extension personnel and is aimed at training participants from relevant government and non-government organizations in extension methods and the introduction of improved fish handling and processing practices. The training is expected to help reduce post-harvest fish losses and contribute to the increased availability of good quality and safe fish and fishery products. It will also contribute to raising the income of the fishing communities and lead to improvement in their quality of life.

Admission requirements as stipulated in the brochure are as follows:

- GCE "O" Level with general science/equivalent;
- employment in an organization whose activities are relevant to the theme of the course;
- proficiency in the English language;
- experience in extension methods is advantageous.

## 2. COURSE PROGRAMME EXECUTION

The project, which is of four years' duration, commenced with an initial curriculum workshop held for two weeks in October 1987 in the Netherlands. Representatives of Ghanaian and Dutch organizations involved in the project participated in this initial curriculum workshop. The main aim of this workshop was to plan the training programme. During the workshop, a time schedule for the first course, a detailed curriculum for the training as well as possible topics for the applied research programme were discussed and a draft programme for the 1988 course was designed.

In addition, the following decisions were also made in connection with the course execution:

- considering the facilities available, the total number of participants was fixed at 20
- the first yearly training course was to be for Ghanaian participants only, in order to test the curriculum and facilities provided
- FAO could offer assistance in the recruitment exercise
- the sex ratio of participants should, as far as possible, reflect the sex composition of the indirect target group which is largely female. At least 50 percent should be female
- specially designed brochures and application forms to be used for participant recruitment.

## 3. COURSE CURRICULUM

The course comprises of extension and fish technology topics. Subjects covered under extension include the following:

- communication skills
- extension approach
- group formation/dynamics
- role played
- action planning
- good demonstration.

Some of the fish technology topics treated in the course are:

- fish microbiology
- fish post-harvest losses
- fish catching techniques
- fish in nutrition
- fish preservation by salting, drying, fermentation and smoking
- fish marketing techniques
- storage
- demonstrations.

In general, it is practically oriented with field activities playing a very important role. During the field activities, participants work in two groups in two selected pilot villages (i.e. one group to each village). The way the course is structured, theories taught in the classroom are demonstrated in the field work.

## 4. ACHIEVEMENTS OF TRAINING PROGRAMME

A grand total of 71 participants out of the projected number of 80 (29 males and 42 females) have so far benefited from the training as indicated in Table 1. Organizations that have benefited from the training programme include Fisheries Departments, sponsored fisheries projects, relevant Non-Governmental Organizations and the Department of Community Development.

The 1988 course was run jointly by Ghanaian and Dutch lecturers and facilitators. The 1989 course was run with very little assistance from the Dutch partners whilst the 1990 and 1991 courses were completely handled by the Ghanaians.

**Table 1** Achieved Output - Training Programme 1988-91

Year	Country	Number of Participants		Total	
		Male	Female	Projected	Achieved
1988	Ghana	10	8	20	18
1989	Ghana	4	7	20	16
	Sierra Leone	1	2		
	Nigeria	-	1		
	Tanzania	1	-		
1990	Ghana	2	5	20	18
	Sierra Leone	-	4		
	Nigeria	-	2		
	Tanzania	1	-		
	Cameroon	2	1		
	The Gambia	-	1		
1991	Ghana	4	5	20	19
	Sierra Leone	1	1		
	Nigeria	1	3		
	The Gambia	1	-		
	Kenya	1	-		
	Tanzania	-	2		

## 5. FOLLOW-UP OF PROGRAMME

Good follow-up is essential in training activities. The Ghana/Netherlands Regional Training Project has identified two types of follow-up activities, namely:

- follow-up of the course participants
- follow-up of the fish processors in the pilot villages where participants carried out field activities.

### 5.1 Follow-up of course participants

The objectives of the follow-up of participants are two-fold:

- to find out about the effect of the course on the work situation of the participants
- to give advice to ex-participants on extension matters as well as on fish technology aspects in order to stimulate them to use the acquired knowledge.

### 5.2 Follow-up of project pilot villages

For each year's training programme, two pilot fishing villages are selected for the field activities. The total number of project pilot villages after the four-year course is therefore eight.

There are a total of seven field days in the course period, during which participants work with the fish processors. Through the joint efforts of participants, women fish processors and facilitators, a number of Chorkor smokers are constructed in the villages and used for smoking demonstrations. After the training programme, follow-up activities are organized by the project in the pilot villages.

The follow-up activities in the pilot villages include the following:

- regular visits to the villages
- contacts with village authorities
- inventory of activities after the project's initial intervention
- strengthening of group formation started by course participants
- introduction of banking systems and procedures to the women
- advising women on raising of sheds over smoking ovens and maintenance of ovens
- organization of seminars in the villages to create awareness in community development
- involvement of other government and non-government organizations for the development of the villages.

## 6. COURSE EVALUATION

An evaluation of the course forms a very important aspect of the whole programme since it is useful in the running of subsequent courses. Information is gathered from former participants through personal contacts and the use of designed questionnaires.

Also, at the end of the course, participants are requested to write letters to themselves about what they plan to do when they get back to their workplaces as part of the evaluation exercise. These letters are mailed to the participants four months after the course for their reaction. In addition to the letters, participants also prepare an individual plan of action for a year after the training. These are also mailed to them after six months to find out what has happened to them.

Comments and remarks made in the evaluation exercises carried out during and at the end of the courses are used in modifying subsequent course programmes. Therefore, there has been steady improvement on each year's training programme.

## 7. RESEARCH PROGRAMME

### 7.1 Research projects

Research projects have been started on the following subjects:

- Studies on the handling, distribution and marketing of fresh landed fish in Ghana.
- The introduction of fish processing technology: the case of the Chorkor smoker.
- Baseline socio-economic studies of pilot fishing villages.
- Improvement of the Chorkor oven - the use of draught control unit.
- Studies on the traditional storage of smoked anchovies in Tema "U" compound.