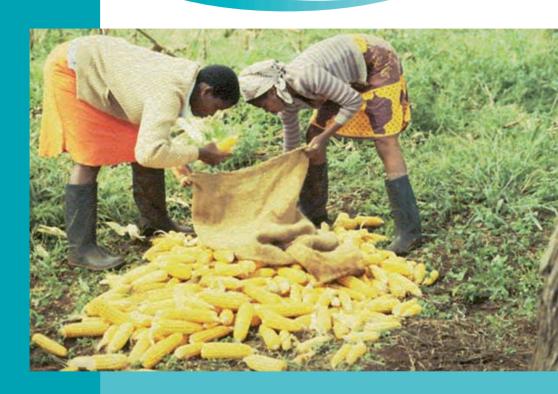
**Education for Rural People** 



# **Education and Training for Food Security**

Capacity building and good practices in five African countries



# **Education and training for food security**

**Capacity Building and Good Practices** in five African Countries

Research and Extension Division NRR Knowledge Exchange and Capacity Building Division KCE

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS Rome, 2007

The designation employed and the presentation of material in this book do not imply the expression of any opinion whatsoever on the part of FAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

All rights reserved. Reproduction and dissemination of material in this information product for educational, capacity building and training or other non-commercial purposes are authorized without any prior written permission from the copyright holder provided the source is fully acknowledged. Reproduction of material in this information product for resale or other commercial purposes is prohibited without written permission of the copyright holder. Applications for such permission should be addressed to the Chief, Publishing Management Services, Information Division, FAO, Viale delle Terme di Caracalla, 00100 Rome, Italy or by e-mail to copyright@fao.org

#### Published by:

Food and Agriculture Organization of the United Nations Viale delle Terme di Caracalla 00100 Rome, Italy

email: erp@fao.org

FAO web site: http://www.fao.org

# **Contents**

Introduction by Lavinia Gasperini	v
Acknowledgements	vi
Acronyms	ix
Chapter 1. Education and Training on Forestry  Gambia: Capacity Building in Community-based Forest Enterprise	1
Chapter 2. Education and Training on Junior Farmer Field and Life Schools (JFFLS)  Mozambique: Education on Agriculture and Life Skills Knowledge in Junior Farmer Field and Life Schools (JFFLS) in Africa by Daniela Bruni, Carol Djeddah and Paolo Israel	9
Chapter 3. Education and Training on Fisheries  Guinea: Improving Fish-Smoking by Daniela Bruni, Audun Lem and Yvette Diei Ouadi	17
Chapter 4. Education and Training on Land and Plant Nutrition  Niger: Promotion of the Use of Agricultural Inputs by the Organizations of Producers by Daniela Bruni, Bruno Poitier and Walter Burgos Léon	23
Chapter 5. Education and Training on Communication  Mali: Rural Radio by Riccardo Del Castello	31
Conclusion	37
References	39

## Introduction

Education for Rural People (ERP) is crucial to achieving by 2015 the Millennium Development Goals (MDGs) of eradicating extreme poverty and hunger (No. 1), achieving universal primary education (No. 2), promoting gender equality (No. 3) and ensuring environmental sustainability (No. 7).

The World Food Summit, held in Rome in 1996, highlighted the need to increase access to education for the poor and the members of disadvantaged groups, including rural people, in order to achieve poverty eradication, food security, durable peace and sustainable development. The 2002 World Summit on Sustainable Development (WSSD), held in Johannesburg, also emphasized the role of education. As the majority of the world's poor, illiterate and undernourished live in rural areas, it is a major challenge to ensure their access to quality education. The lack of learning opportunities is directly related to rural poverty. Hence, education and training strategies need to be integrated within sustainable rural development strategies, through plans of action that are multisectoral and interdisciplinary. This means creating new partnerships among policy-makers and practitioners working in agriculture and rural development and those working in education.

To address these challenges, the Directors-General of FAO and UNESCO jointly launched the flagship programme on ERP (http://www.fao.org/sd/erp/) during the World Summit on Sustainable Development. ERP promotes inter-agency collaboration to facilitate targeted and coordinated actions. Moreover, ERP is a flagship to alert donors and other stakeholders of the need for systematic action and investment in education, training and capacity building related to MDGs one, two, three and seven.

This book was prepared by the FAO Interdepartmental Working Group on Training for Technicians and Capacity Building within the framework of ERP. Previous titles of ERP publications, prepared in collaboration with the UNESCO International Institute for Educational Planning (IIEP) or other partners, are listed at the end of this book.

FAO is the UN lead agency of the ERP Flagship external network whereas the Interdepartmental Working Group on Training for Technicians and Capacity Building (IDWGTT) is the ERP network within FAO. The Group aims at strengthening the capacity of technicians working in the development of food security, agriculture, forestry, fisheries, sustainable rural development and natural resources management. ERP shares with member countries and UN organizations the knowledge generated and managed by FAO during the last decade in the area of education and training.

The new developments in information and communication technology have increased the demand for training materials available on the Web. Technicians are the massive and basic target of the capacity building efforts, with often limited access to conventional training materials. Access to virtual training materials in the area of agriculture and food security represents an enormous potential for enhancing and enriching the capacity of technicians, especially of those working in rural areas.

ERP is making available online a coordinated series of learning materials for people working on practical issues related to achieving a reliable supply of safe, nutritious food and providing income-generating opportunities for rural populations. These materials may be consulted by trainers of extension workers, extensionists, researchers, literacy and school teachers, self-learners, communities and may be retrieved from the ERP Toolkit, available on the Education for Rural People Web site (http://www.fao.org/sd/erp/ERPtktoolkit\_en.htm). The Toolkit allows technicians, as well as ERP members, policy makers involved in ad hoc capacity building initiatives, and the general public to consult, use or adapt key learning tools in agriculture, food security, rural development and natural resources management.

ERP encourages its partners (member countries, NGOs, the Academia, etc.) to share their knowledge on education and training for technicians.

Lavinia Gasperini Senior Agricultural Education Officer Research and Extension Division

# **Acknowledgements**

This book is a collective product of the FAO Interdepartmental Working Group on Training for Technicians and Capacity Building<sup>1</sup> who conceived the initiative and provided the feedback to the authors work.

Special thanks go to FAO Officers who worked on the different chapters: Sophie Grouwels of the Forestry Policy and Institutions Service (FONP); Audun Lem and Yvette Diei Ouadi of the Fish Utilization and Marketing Service (FIIU); Walter Burgos Léon of the Plant Production and Protection Division (AGP); Carol Djeddah of the Economic and Social Development Service (ESWD); and Riccardo del Castello of the Research and Extension Unit (NRRR).

Daniela Bruni, Education Expert of FAO contributed greatly to the preparation of this book.

Overall coordination was provided by Lavinia Gasperini as Chair of the Working Group.

We are also grateful to all those who have made various contributions, in particularly to Bruno Poitier of the *Projet Intrants* in Niger, Mama Yawa of the TeleFood Project in Guinea and Paolo Israel of the JFFLS in Mozambique who participated in the development of the projects.

Many thanks go to Elena Mazza, who edited the book, and to Nadia Pellicciotta, who worked on the desktop publishing.

Isabel Alvarez (NRR); Olivio Argenti (AGSF); Daniela Battaglia (AGAP); Caterina Batello (AGPC); Magdalena Blum (NRR); Kevin Gallagher (TCOS); David Hallam; Jennifer Heney (AGSF); Audun Lem (FIIU); Maya Pineiro (AGNS); Marjon Fredrix (AGPP); Julian Martinez Beltran (AGLW); Richard Moon (AFHO); Ellen Muehlhoff (AGNP); Melbsa Reantaso (FIMA); Ilaria Sisto (ESDWG); Pieter VanLierop (FOMR).

Members of the Interdepartmental Working Group:

# **Acronyms**

AESA Agroecosystem Analysis

CCFAD Comité de coordination et formation des actions de développement

CFMA Community Forest Management Agreement

ECCO Education through Communication and Culture Organisation

EUPD Entraide universitaire pour le développement

FAO Food and Agriculture Organization of the United Nations

FIS Farmer Field School
FLS Farmer Life School

GAP Good Agricultural Practices

GCP Government Cooperative Programme
GFMC Gambian Forest Management Concept

GGFP Gambian-German Forestry Project

GLP Good Life Practices

JFFLS Junior Farmer Field and Life School MA&D Market Analysis and Development

NACO National Consultancy on Forestry Extension Services and Training

OP Organization of Producers

OVC Orphans and Vulnerable Children

PM&E Participatory Monitoring and Evaluation

RTM Mali Radio and Television

TCP Technical Cooperation Programme

URTEL Union of Radio and Television Broadcasting

WFP World Food Programme

# **Chapter 1**

# **Education and Training on Forestry**

Gambia: Capacity Building in Community-based Forest Enterprise Development TCP/GAM/2904 (T), by Daniela Bruni and Sophie Grouwels

## 1. Background

The Gambia, with a land area of 11 300 km<sup>2</sup>, is one of the smallest countries in Africa. At present, 43 percent of the total land area is under forest, but 78 percent of the forest area belongs to the degraded tree and shrub savannah forest category. The consequences of deforestation and resulting environmental degradation and enhanced poverty of the rural population were acknowledged by the Gambian Government in a timely manner. In the mid-1980s, the Community Forestry concept was introduced. The Forestry Department realized that it would never be able to implement even the most adapted and less cost-intensive natural forest management strategies on a large scale without local communities' participation. Hence, the concept of community forestry was first elaborated in 1989, and the first community forests were established in 1990. The basic idea of community forestry in the Gambia was to transfer ownership rights back to villagers to stimulate an attitudinal change towards forest protection and to encourage the sustainable utilization of resources through the creation of benefits for the communities. The community in forest management was achieved through a two-stage process leading to full ownership rights of the forestland by communities (Community Forest Management Agreement, CFMA).

At the end of the year 2000, the Department of Forestry identified the Market Analysis and Development (MA&D) approach of the Food and Agriculture Organization (FAO) to address the critical need to assist communities with incomegenerating activities from community forests in line with the requirements of the Gambian Forest Management Concept (GFMC).

In order to do this, in January 2001 the Community Forestry Programme of the Gambian Forestry Department, with the support of the Gambian-German Forestry Project (GGFP), started the implementation of the MA&D methodology in a pilot area of the Western Division. The pilot area included 14 villages managing 11 community forest areas.

After the promising results obtained from the pilot implementation in the Western Division (WD), the Forestry Department decided to extend the use of the methodology on a wider scale in the country, in three divisions: Western Division (WD), Central River Division (CRD) and Lower River Division (LRD). It also

expressed an urgent need of capacity building of its personnel in Community-based Enterprise Development to ensure the sustainability of its national Community Forest Programme and requested FAO support, through the Capacity Building in Community-based Forest Enterprise Development project, TCP/GAM/2904 (T) to ensure a timely and appropriate use of the MA&D methodology and replicate at a national scale the process initiated in the pilot communities in the Western Division. By doing so, the Forestry Department personnel trained in the MA&D methodology could then facilitate the development of enterprises based on resources, products or services from community forests. The enterprises would improve livelihoods of forest-dependent people while providing incentives for sustainable natural resource management of community forests in the Gambia. The Forestry Department was supporting the activities related to community-based forest enterprises not only through the enforcement of the forest policy for participatory forest management, but also with a serious personnel and institutional commitment.

## 2. Learning objectives

The MA&D approach aimed at strengthening the capacities of field-level facilitators and forest users to systematically identify and develop sustainable micro and small-scale tree and forest product enterprises. Through training on MA&D methodology, villagers were not only more knowledgeable in forest products and in carrying out necessary market surveys, but also in revealing existing illegal exploitation and trade of forest products. The MA&D methodology helped communities to directly link forest management and conservation activities to income-generating opportunities.

# 3. Training objective and calendar

The objective of the training was to build the capacity of the Forestry Extension staff operating in villages in the MA&D methodology so that they were able to facilitate the development of enterprises based on resources, products or services from community forests. At the beginning of the project, the forest extension staff training was assigned to the Forestry Department and to the Gambian-German Forest Project, with the support of FAO expertise.

By extending the project on MA&D methodology to others divisions in the country, it was necessary to involve the National Consultancy on Forestry Extension Services and Training (NACO), a local NGO that supported the Gambian Forestry Department with the implementation of the Community Forestry concept, specifically with regards to extension and training. NACO played a key-role in the training of facilitators. Four training sessions were organized for forest extensionists and facilitators.

The training, developed over 12 months, focused on:

- assessing the situation and short-listing potential products for the community-based enterprises;
- > conducting a series of surveys (including market surveys) for final products selection;
- > creating interest groups for selected products;
- > developing enterprise development plans; and
- linking with appropriate sources of enterprise development support.

## 4. Training methodology

MA&D is a step-by-step participatory methodology for capacity building, organized in three phases that systematically consider social and environmental concerns alongside the technological, commercial and financial aspects of enterprise development. It uses a series of general tools that need to be adapted to local reality to achieve specific results in the development of business ideas.

The three main phases of the methodology are:

#### Phase 1: Assess the existing situation

Participants learn the livelihood strategies of the local community, identify a target group of small entrepreneurs within the community, obtain an overview of the available natural resources and products, define problems and opportunities, and short-list a range of products. Village motivators further trained in MA&D methodology are also identified.

### Phase 2: Identify products, markets and means of marketing

Participants gather information for analysing the feasibility of short-listed products and decide on the most viable enterprises that can be developed.

#### Phase 3: Plan enterprises for sustainable development

Participants, after having formulated an enterprise development plan and implemented a pilot phase in which the enterprise is established, are trained to be able to adequately respond to the needs of targeted markets.

#### 5. Trainers and trainees

One Senior Forest Officer (Forestry Department) and one Junior Technical Advisor from the Gambian-German Forestry Project (GGFP) were assigned the responsibility of the training of forest extension staff while the supervision was assigned to FAO expertise.

Forty forest extensionists and six NACO members were trained. National trainers provided also technical support to the field staff for the implementation of the MA&D approach at village level.

#### 6. Didactic materials and curriculum

At the Forestry Department level, it was felt that the MA&D concept should have been best integrated into operational concepts like the Gambian Forest Management Concept.

An MA&D Field Manual has been designed to guide field practitioners who assisted local people in conducting the MA&D process. It consists of six booklets (A-F) and a map of process. Field Facilitators Guidelines complemented the Field Manual and provided easy-to-follow descriptions of practical methods and field tools that may be used to turn villagers into successful small-scale entrepreneurs. Users of the guidelines do need to be experts in business management in order to implement them.

Certain aspects of the MA&D approach had already been incorporated into the Community Forestry Implementation Guidelines and Field Manual produced in English and in two local languages, Madinka and Wollof.

A review of the Kafuta School for Forestry was carried out and changes were made to the curriculum to include the MA&D methodology. The MA&D approach was first introduced at the Kafuta School for Forestry in June 2004. This approach was a completely new concept for both the school and the students. After observing the MA&D approach in the field, the future foresters showed great enthusiasm about its effectiveness.

# 7. Learning assessment

The assessment of villagers' learning was important to understand how they were developing income-generating enterprises, also taking into account the commercial and financial aspects of small enterprises development. Villagers created associations on their own initiative demonstrating the degree of assimilation of the new knowledge and their familiarity with the MA&D process.

It is also interesting to note that the MA&D process started a new way of thinking which is now used for the marketing of other resources (crops, fruits, etc.). Villagers realize now that they have a much stronger bargaining power when they are well organized and better informed.

# 8. Training infrastructure

The training course first took place in the Forestry Department but it was later organized in the official buildings of Administrative Divisions.

# 9. Institutional arrangements

FAO, as Technical Agency, implemented the project with the executive support of the Government of the Gambia while the State Department for Fisheries, Natural Resources and Environment represented by the Forestry Department was responsible of the project execution.

## 10. Impact

The implementation of the project on MA&D methodology had a very positive impact on the life of local people in the Gambia. Twenty-six villages are actively employing the MA&D methodology and manage 11 different products effectively marketed: firewood, logs/timber, honey, Netto fruits, palm oil, handicrafts from Rhun palm based products, Rhun palm splits, ecotourism, forest walks, tree nurseries and Kembo posts. A number of other products, such as local ropes and bush fruits, were eliminated during Phase 2 because of environmental concerns, lack of appropriate markets and seasonality. More than 484 interest group members are directly engaged in MA&D activities. The positive impact on local people is clear by examining social and economic aspects like a greater community participation and women's involvement in the activities, new employment opportunities and increased economic incentives for local forest users and community forest committees as well as a higher revenue to the Forestry Department through the National Forest Fund (NFF) royalties.

# 11. Sustainability

The institutional environment related to community forestry is very well developed in the Gambia. There is no or little uncertainty about forest ownership rights, the Forestry Department is fully committed to the countrywide implementation of community forestry and the communities have gained experience in managing their forests. This enabling institutional environment has been a key factor for the success of the MA&D approach. The approach is now clearly contributing to the strengthening, the long-term sustainability and the expansion of community forestry. The Gambian experience can be seen as an example for a successful and gradual transfer of forest ownership rights and responsibilities. The report of the National Market Survey commissioned by the project clearly indicated that some of the outcomes of the project can be used by the Forestry Department for the development of policy instruments like a strategy for the prevention of the looming fuel wood crisis in the country (e.g. planting fast-growing trees for firewood production).

## 12. Project evaluation

The institutional context has been well developed, through the adoption of MA&D methodology as part of the Forestry Department policy for participatory forest management and the inclusion of the MA&D training package into the technical forestry school curriculum. Additionally, it was made clear in the report of the National Technical and Market Survey that some of the outcomes of the Technical Cooperation Programme (TCP) can be used as a policy instrument for the Forestry Department's forest utilization strategy.

### Description of some experiences in Western, Central and Lower River Divisions

# Buram and Berefet villages, Western Division

In the village of Buram, villagers who used to sell a truckload of firewood for 3 000 dalasis are now able to sell it for 28 000 dalasis because of better market intelligence. Similarly, in the village of Berefet, firewood and logs are now sold directly on the market place instead of selling to vendors, and much higher revenues are collected. Also the market for branch wood (dead wood collected in the forest) is now better structured and organized.

# Brefet village, Western Division, Jombonbantang tourist camp

The Brefet Forest Committee decided to establish a camp for ecotourism after considering different options using the MA&D approach. A village youth group was in charge of managing the camp and through that process familiarized itself with the concept of sustainability. Because of the villagers' commitment and the sound planning process, the committee was also able to attract funding from the German Embassy (100 000 dalasis) and other organizations such as ECCO Gambia to support the project. The daily rate for food and lodging is 350 dalasis per person. About 50 percent of the revenues were used to cover overhead costs and the balance for village development and forest management activities.

#### Tabanani village, Central River Division (CRD)

In the CRD, six villages were involved in the TCP, Tabanani, Korup, Baroba on the south bank and Dobo, Bustaan, Kunting on the north bank. Just over one year after the introduction to the MA&D approach, the six villages decided to establish an association or *kafo* to coordinate their activities. The name of the *kafo* is *Kambeng* or "one voice". The idea of establishing the *kafo* came directly from the participating villagers as they quickly understood that through the association they would be in a much stronger position to access information and to negotiate the sale of their forest products. The president of the *kafo* confirmed that villagers are now in a position to ask for better prices. They already contacted other villages to encourage them to follow the same approach. The vice-president of the *kafo* indicated that without the MA&D methodology they probably would never have been able to manage their

resources in a sustainable way and said, "Now, we know how to use our forests". A visible impact of the TCP was that villagers now know exactly how best they can use their forest products thanks to better understanding of and access to the markets. They also identified new and more valuable uses of non timber forest products (NTFPs), such as the Rhun palm leaves. Rhun palm leaves were normally used by villagers as fencing material, mostly for their own utilization, but now they build furniture and sell it on the market. A chair is sold for 250 dalasis and a bed for 450. The project supported a twelve-day training course with a Senegalese crafts-man for the production of this furniture, which is selling well on the market and has already been ordered by some hotels. Moreover Rhun palm is a good substitute to the very much endangered Raffia palm.

All villagers are now aware of this result and increasingly realize the potential for income-generating activities through forest management. Because of the sharing of information, all villages are asking the same, have agreed prices for forest products and are not any more selling individually at a non-negotiated price. In addition to the obvious economic impact of the MA&D approach, a significant social impact was also obtained. A member of the *kafo* said, "At the beginning we were blind, now we can pave the way, we can see ahead of us. It brought us together. Forest management is just another way of farming. We have learnt how to catch a big fish but not to eat it". Through the MA&D, they understood their previous mistakes in forest management. For example, they felled a mahogany tree (*Khaya senegalensis*) two years ago but the log is still lying in the forest because they cut it without knowing if there would be a market

## Bustaan village, CRD

This village was involved in community forestry activities, with its own community forest, and in the Joint Forest Management (JFM) of a neighbouring forest park (state owned). So far, revenue was generated only from the community forest. On the other hand, forest utilization in the forest park was hindered by the lack of a revenue sharing mechanism between the community and the Forestry Department. Despite the introduction of JFM in the Gambia a few years ago, the Forestry Department was unable to devise an adequate system for revenue sharing and this was a major obstacle for the management of forest parks.

The village of Bustaan was registered with the Attorney General and has a Certificate of Incorporation. The villagers paid the fee of 500 dalasis to register and they have contributed with further 500 to the *kafo* fund. Financial contributions from Gambian villagers always represent a good indicator of their involvement as their financial resources are very scarce and are only used for important reasons. To register with the Attorney General has a beneficial effect as it is an official and legal recognition of the association, facilitating the creation of partnerships or the support of different organizations. The village decided to implement the MA&D approach after a field trip they made in the WD.

# Jassobo village, Lower River Division (LRD)

Iassobo villagers obtained the permanent ownership of their forest in 1999. Since they started to be responsible of their forest during the transfer of ownership, about ten years ago, the forest has never been subject to any fire (fire is one of the main causes of forest degradation in the region). After having obtained the ownership of the forest, villagers did not know exactly how to benefit from it. Like in other villages, they sold their products to individual and occasional buyers without realizing they were selling at a loss. The host villagers provided a good and clear explanation of the MA&D process to the visitors. Their ability to define a selling price based on production costs generated a high interest in the community. The MA&D process took one and a half year to complete and created a visible sense of empowerment among them. As an example, they are now selling a truckload of logs for 17 000 dalasis, while previously they were selling it for 2 000. Moreover, the village is now willing to extend its community forest and to develop an ecotourism activity. In addition, they are also planning to create an association together with four other villages. Under the guidance of the extension staff from the Forestry Department, the selected communities short-listed a range of potential products by assessing their socio-economic situation, making an inventory of existing and potential resources available and studying the market system in which they operated. Market surveys in the pilot area showed that currently several forest products originated in surrounding countries were marketed in the Gambia. The same products could also be harvested, processed and marketed by the local population in a profitable and sustainable way. The implementation of MA&D methodology showed awareness-raising opportunities among concerned village groups in order to obtain good margins through increased production of available forest products.

The community forest committee members highly participated in the activities carried out by the villagers. Valuable forest products and services, which had not been previously considered by the communities and the Forestry Department, were identified through investigations on local and international markets.

#### 13. Cost

The total cost of the project was US\$164 000.