EXPERIENCES OF THE SOIL EROSION CONTROL AND AGROFORESTRY PROJECT (SECAP) WITH INTEGRATION OF WOMEN INTO AGRICULTURAL EXTENSION

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INTRODUCTION

Lushoto District is located in the north-eastern part of Tanzania being one out of six Districts of the Tanga Region. The biggest share of the District territory is occupied by the West Usambara Mountains.

The West Usambaras cover a total of 4,500 km^2 of which presently some 70% are under agricultural cultivation. Altitudes range from 900 to 2,200 metres above sea level. The average annual rainfall varies between 600 and 1200 mm.

Nowadays major food crops grown are maize and beans. Besides these round potatoes and rice play a considerable role as food crops in some areas. Vegetables are regarded as major cash crops and intensively cultivated in valley bottoms. Other crops grown are bananas, sugarcane, cassava, wheat, sweet potatoes, coffee, tea and fruit trees, i.e. pears, applies, plums, peaches, avocadoes.

The population is growing at a rate of 2.8 - 3.2% with a total population of 357,255 in 1988. The West Usambaras are a densely populated area with an average number of 102 inhabitants per km^2. In some parts density of more than 400/km^2 occurs.

The average family size is 10-11 persons, 5-6 of whom are physically-able ones. In the age group between 20 to 30 years women outnumber men by 2 to 1 as a result of out-migration of male labour to urban areas with employment possibilities.

The average farm size is 2.0 ha ranging between 0.8 and 3.0 ha in different areas. Presently, approximately 10% of the farm land is situated on hill tops, 20% in valley bottoms and 70% on slopes.

Among domestic animals, cattle and goats make up the biggest number. Depending on the agro-ecological zone between 65% to 85% of households keep cattle.

In the past the Western Usambaras were virtually covered with natural forests and thus well protected against erosion. The comparatively small number of people in relation to the available arable land did not interfere with their system of shifting cultivation.

Traditional Washambaa agricultural practices were described as complex: a large variety of crops, different growing seasons, multistorey systems, use of irrigation channels. Such farming practices sustained for a long period not only a growing population (the Usambaras were inhabited also by Wapare and Wambugu) but produced even surpluses (Kjekshus, 1977, p.33).

During colonial times new crops like tea, coffee, tobacco, European vegetables and fruits were introduced to the area. These crops occupied more and more fertile land to such extent that farm land became scarce for the indigenous population.

After independence the increasing land scarcity and population pressure finally led to the decision to declare substantial parts of natural forests as new settlement area. Thousands of hectares of mountainous rain forests were cleared for farming purposes.

With increasing human population the number of farm families was rising accordingly and so was the number of cattle. Contrary to that, the available farm size per family unit decreased since the traditional system of land inheritance is still practiced.

The increasing human population demanded more food and at the same time, the increasing number of cattle demanded more grazing land. This situation resulted in deforestation and in traditional land-use practices being gradually replaced by unsuitable ones like the following:

- deforestation due to increasing demand for firewood, poles, timber and for more farm land
- cultivation of sensitive areas like hill tops, steep slopes and water catchment areas
- cultivation of former grazing grounds, in particular, valley bottoms
- free grazing of cattle on slope areas
- shorter/no fallow period
- removal of trees from the fields
- burning/removing crop residues from the fields
- clean weeding
- monocropping, mainly of maize.

These practices of exhausting the land, naturally lead to severe soil erosion, loss of soil fertility and disturbed water balance, again resulting in decreasing yields per unit area causing food shortage. This has become a vicious circle, difficult to break up to now.

Recently, a number of efforts have been made to arrest the environmental destruction. One of these efforts was the establishment of an agroforestry project. The Soil Erosion Control and Agroforestry Project (SECAP) which is sponsored by the German Agency for Technical Cooperation started operating in 1984 after having completed a three year pilot phase.

The overall goal of the project activities is the stabilization of the ecological balance in the Western Usambaras. The project activities are aimed at a broad application by farmers of soil erosion control measures and agroforestry systems which are ecologically sound, sustainable and which can increase productivity.

In collaboration with the regular district extension staff, SECAP uses an integrated approach which links the sectors of Agriculture, Livestock and Forestry for the goal of conserving soil and environment.

The basic soil erosion control measures farmers are advised to use are the establishment of contour lines with different permanent crops across the slope farms, destocking of cattle under the light of crossbreeding with high potential diary cattle, practice zero-grazing and manure application the field, reestablish parts of forests and use agroforestry trees in the farms.

The major activities which are supported by SECAP and carried out by the staff from the Ministry

- establishment of village bull centres which are run by the villagers

- raising of forestry and agroforestry-tree seedlings by village communities, by women groups, by hamlets or by individuals
- planting of trees by farmers around their homesteads, in their farms or in water catchment areas

- establish macro-contourlines with permanent crops (fodder grass, trees, bushes or food crops like bananas, sugarcane, pineapples or cana) across the slope farms

- farmers to practice physical structures like 'fanya juu' - systems, cut-off drains or terraces in their farms.

Right from the beginning the project regarded the whole village community as potential target group for all activities. No distinction was made between different interest groups within the village, like village government, cattle keepers, subsistence farmers or others. Therefore, women farmers had not been addressed specifically but were somehow thought to be under the general umbrella of "farmers".

THE POSITION OF WOMEN

Socially the Washambaa society was organized in patrilineal descent groups (descent traced through the father's line only). Traditionally, households were characterized by clear-cut division of labour among male and female household members.

During precolonial times women were responsible for subsistence farming to feed their families, whereas men met family responsibilities: bridewealth, fines or purchase of food in times of severs famine. Although a wife had no legal claims on her land, she was considered the trustee of her sons' land and, thus had a moral claim to it. As long as there was enough land, this did not seem to have caused any major conflicts.

During colonial time, market-oriented farming had already encroached upon the subsistence sector. The women had not only to fight the demands of their husbands on the land to which they (the women) were entitled but had also to fight against new demands on their time and their labour. Instead of husbands assisting their wives as before in land preparation, women had to contribute time and labour to help their husbands in the cultivation of cash crops.

Independence brought no significant disruption to the traditional land tenure practices. Subsistence of the whole family is still considered the women's responsibility. Today, the Usambaras are a staple food importing region. The cash crop sector is still growing and competition over land has become a matter of survival. Women are on the losing end:

- They are losing the claims over their land; more and more fertile plots are taken away by husbands for cash crop production and food production is pushed to marginal areas, like steep slopes and hill tops.

food crop activities or not; women are getting weak due to frequent births since men do not any longer stick to traditional birth control practices.

- Women are losing time: distances to marginal fields, to water sources, to fire wood sources are getting further away.

Some 80% of all required labour in fields on slopes, steep slopes and hill tops is carried out by women entirely. Additionally, women assist their husbands in land preparation and harvesting of cash crops; women carry the major part of weeding cash crops.

PILOT PHASE ON WOMEN PROMOTION

After an evaluation of the Soil Erosion Control Project in 1988 the report pointed out that women were insufficiently reached by the extension service. As a consequence, in May 1988 a section for Women Promotion and Primary Schools was created under SECAP. By then, for the Usambaras hardly any information was available nor experiences gained about women farmers, their priority needs or a possible extension approach. Therefore, it was decided to start the women promotion programme under SECAP with a two years pilot phase. The objective of the pilot phase is to modify the existing extension approach in a way that the full participation of women farmers in soil erosion control measures is ensured. This should go on simultaneously with the adoption of the technical package to women farmers needs.

In July 1989 the pilot phase on women promotion started in five selected villages which represent the different agro-ecological zones of the area. A strategy was elaborated for the first year of the pilot phase which comprised of following main steps:

1. **Selection of pilot villages**

2. **Problem Identification**

The aim of the problem identification was

a) to find out which general problems women face in the pilot villages

b) to identify the rank of agricultural related problems for the women, in particular, the problem of soil erosion

c) to arrange all problems according to their priority in women's lives.

3. **Solution finding**

During the solution finding process the women were assisted to discuss and think of possible solutions to the problems identified by them.

4. **Implementation**

During the implementation stage the project (Women section) took-up proposals of the women which were aiming at overcoming agricultural-related problems. The women were assisted with technical knowledge and inputs to implement small projects. Non-agricultural problems were forwarded to other relevant institutions or agencies.

5. **Evaluation**

A project internal evaluation was to investigate the effectiveness of the above steps and to make proposals for further action.

6. **Planning workshop**

A planning workshop with target group participation was to elaborate on the adjustment of SECAP's extension approach and to decide future activities.

The results of the first pilot year were briefly as follows: The problem identification in the five pilot villages indicated that female farmers are negatively affected by consequences of deforestation, of soil erosion and decline of soil fertility. In four out of the five villages, women identified water and firewood as their priority problems. These two were closely followed by yield loses leading to hunger. Furthermore, it became obvious that women are highly interested to take action against progressing erosion but they lacked the necessary skills and time.

As an outcome of the solution finding process women started forming groups at hamlet level and focused on three major activities supported by SECAP. These activities were:

1. Cultivation of a wider range of food crop varieties
2. Raising of tree-seedlings for their own use
3. Soil conservation measures adopted to their needs.

The project internal evaluation in May 1990, found that out of the initially formed 32 women groups 26 were still in function and progressing well. The small plots which the women cultivated as communal fields were an ideal opportunity to transfer technical know-how on one side and to multiply seeds of different crops for individual use on the other.

The planning workshop with target group participation was held in August 1990. Some specific extension instruments were added to the existing ones. These were an awareness creation exercise on women's burden in the villages separate women's meetings were women could freely discuss their problems without the presence of men, stepwise problem identification process and specific women farmers field days. Another outcome of the workshop was the extension of the pilot phase for another year so as to determine the extension instruments which could be implemented via the regular male extension staff and which ones needed specific support from the Women Section.

PRESENT STATUS

Up to now 92 women groups with a total number of 725 members in 11 villages have been formed and are presently operating. All these groups are in one way or the other supported by SECAP. Some 28 groups have been formalized meaning that constitutions have been adopted and group officials like chairlady, secretary, treasurer elected. All these groups received training on book-keeping and accounting.

Twenty four groups out of the 92 are raising tree-seedlings this season totalling 90,000 seedlings of different species. These seedlings are meant for the plots of the individual group members and the surplus for sale to other farmers.

In the crop diversification programme for this vuli-season 38 groups were supplied with a total of 840 kg of groundnuts; 5 groups with 110 kg of wheat seeds; 17 groups with 54 kg of sunflower seeds and 2 groups with 25 kg of bean seeds. All newly formed groups receive a certain amount of seeds free of charge. Others which have been operating for more than two planting seasons have to pay cash at delivery. This system has been accepted by the groups and is functioning quite well. The following figures underline this statement: For vuli-season 1991 48 groups cultivated beans from their own source, 15 groups groundnuts and 18 groups maize. for the cultivation of wheat the masika-season is the more suitable one.

Under soil conservation up to now a big number of women have established macro-contourlines in their fields which are planted with small grass species like makarikari, vetiveria or with food crops like sugarcane, pineapples, bananas and cana. Furthermore, physical soil conservation measures are getting more and more popular among the women farmers. For the women the most acceptable ones seem to be cut-off structures for water harvesting combined with "Fanya-juu"-systems. These measures lead to the conservation of soil and water, leading to a better yield. Todate 47 women in 4 villages have established these structures in their slope farms. The assistance given by SECAP for this activity is two trained labourers from each village who measure the structures and start excavation for demonstration purpose.

SUMMARY OF FINDINGS

During the two-years pilot phase on women promotion a lot of information was gathered about women farmers, their needs, their problems and restrictions they face. Experiences were gained by the Women Section staff as well as the regular extension staff in working with women farmers.

The findings were discussed with the senior staff and with the village extension workers. In brief the following conclusions can be made:

1. Majority of farms on medium an steep slopes are cultivated entirely by women, who have to rely exclusively on these farms for subsistence of the whole family.

2. Deforestation and soil erosion affect women farmers negatively as they lead to insufficient water, unavailability of fire wood and declining soil fertility, thus making these priority problems for women in the Usambaras.

3. Women farmers are not only ready but forced by circumstances to look for solutions to these problems but this is hampered by their traditionally low social and financial status and time limitations.

4. Women in the Usambaras respond unexpectedly well to the idea of organizing themselves into small groups of common interest at hamlet level. It can be assumed that this is one way for women to partly counteract their low social status.

5. Through the groups the individual women farmers have much better access to technical advice, inputs and any kind of information reaching the village than any individual women would have on her own.

6. Government extension workers stated that despite the traditional barrier between

long as the male extension workers behaved acceptably in the village.

7. Members from women groups claimed that their husbands tolerated the male extension workers communicating with them since they (the women) are members of a group officially recognized by the village.

8. In their food-crop plots the majority of women are allowed by their husbands to implement innovations. Any kind of improvement of the fields is highly appreciated by husbands. This includes physical structures as well as tree-planting.

9. Women farmers have genuine interest in the improvement of their farms. They take action on it if time and labour allows.