

SAFE-World Project/Initiative Summary

Country: Tanzania

Project/Initiative Title: The Uluguru Mountains Agricultural Development Project (UMADEP) - Morogoro Rural District

Nos. farmers: 200

Hectares: 200

Agro-Ecological Zone: III/VI

Improvement types

1x	2	3	4	5x	6x	7	8	9
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Success and Limits to spread

Success	Limits
1b	3a, 3c, 5a

A. Key Impacts

A1 - Productivity

	Before/Without	After/With	% change
Potato			New crop
Vegetables			New crop
Goats milk			New food

A2 - Impacts on natural capital

Although an attempt has been to introduce biological control of plant pests, this has not much impact yet. Attempts are also made to diversify the vegetables grown in the area. So far about 5% of the farmers are growing a local vegetable called "mnavu" for home consumption, and green beans for sale, while 30% are growing tomatoes are grown during the "off-season" when not many other areas are producing tomatoes, thus fetching good prices.

A3 - Impacts on local community (social capital)

?? The project currently works with 21 farmers' groups involved in savings and credit, inputs supply, marketing and production. As a result many farmers can now buy inputs at the village, some on loan.

?? Some of the groups are involved in environmental issues. One group called "Man an Environment" is concerned with producing tree seedlings for sale and exchange and with learning soil conservation techniques.

A4 - Impacts on households and individuals (human capital)

Those groups specifically involved in inputs procurement and supply are able to buy their supplies directly from suppliers and to stock them in their shops. They determine type of inputs to stock and the price to sell to each other, they are thus better able to control the supply and prices of these inputs. They are still not able however to control the marketing of their agricultural produce.

A5 – Key changes in farm / regional system

- ?? About 10% of the farmers are growing round potatoes to supplement maize as a food crop, because maize takes too long to mature. Also about 5% of the farmers are keeping dairy goats and now get about 2 litres of milk per animal, which is now an important part of the diet. Previously there were no potatoes, nor milk in the diets of people. There is, currently a lot of demand for potato seed and dairy goats.
- ?? The population of the project area is about 3000. About 1/3 of the population has adopted one or other of the technological innovations or belongs to a farmers' group concerned with one activity or another.
- ?? Through farmers' exchanges, farmers in another Division (Mkuyuni) are also beginning to adopt contour planting or pineapples on their hilly farm plots, and to start savings and credit groups.

B. Types of Sustainable Agriculture Improvements

- Type 1: Better use of available renewable natural capital
- Type 2: Intensification of single sub-component of farm system
- Type 3: Diversify by adding new productive natural capital and regenerative components
- Type 4: Better use of non-renewable inputs and technologies
- Type 5: Social and participatory processes leading to group action for making better use of natural capital
- Type 6: Human capital building through training-learning programmes
- Type 7: Access to Finance
- Type 8: Add value by processing to reduce losses and increase returns
- Type 9: Add value by direct or organised marketing of produce to consumers

	Yes/No	Narrative
Type 1		<ul style="list-style-type: none"> ?? Contouring (how to construct contours and terraces) ?? Planting of fodder trees and grasses (for goats) on the contour lines ?? Making and using compost ?? Tree nursery management (for fruit and other trees) ?? Biological control of insect pests in vegetables by e.g. using trap plants
Type 2		
Type 3		
Type 4		
Type 5	x	<ul style="list-style-type: none"> ?? The main factors of success have been working very closely and consistently with farmers, in trying out new innovations, and involving farmers at all stages of testing and assessing the innovation. ?? Also working with the village community in a Participatory Rural Appraisal (PRA), to assess the general socio-economic situation of the village, and in determining priority areas for intervention.
Type 6	x	<ul style="list-style-type: none"> ?? Also working through farmers groups, and facilitating a process of networking of these groups to exchange experiences and views.

Type 7		
Type 8		
Type 9		

C. Key Lessons: Success, Spread and Constraints

C2 – Aspects of local/national context contributing to success

The main factors have been the commitment of a multidisciplinary team of Scientist backed by the University, the length of the presence of the project (8 years so far) in the area, and the lack of rigid predetermined program of activities, relying instead on the needs and interests of the farmers as they are identified, and on the general situation as it unfolds.

C3 – Limitations preventing spread

- ?? Inability of farmers to influence prices due to lack of information, lack of solidarity and lack of involvement in policy decision making.
- ?? Poor road infrastructure which makes it difficult to move produce especially during the rainy seasons when a lot of perishable produce is destroyed.
- ?? Lack of group leadership skills on the part of farmers as well as project staff which make some of the farmers' groups fail to be sustained or to perform as expected. A few groups have collapsed or have been mismanaged.
- ?? Rigid rules and procedures on the University which do not recognize the importance of working with farmers in development programs.

D. Contact Point for Project/Initiative

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E. Project Narrative

UMHODEP is a research and extension project in the Faculty of Agriculture of SUA, based in the Upper Mgeta ward of Morogoro District, on the slopes of Uluguru Mountains. The project area is famous for the production of temperate fruits such as plums and peaches, and vegetables such as cabbage, cauliflower, garden pea, bean, lettuce, parsley and leek.

More than 90 percent of the farmers in this area re engaged in horticultural production of commercial purposes (Paul, 1988). Because of favourable climatic conditions, the area suffers from high population density and the over-exploitation of the natural resources. Thus although the farmers have reached a high level of agricultural intensification the agro-ecological system seems to have reached its limited of supporting agricultural activities. In particular, the agricultural system in Upper Mgeta is faced with the following important constraints (Lassalle and Mattee, unpublished):

- ?? The high population density and the total lack of land for expansion of agricultural activities. The only option left is to further intensify on the existing farms and to migrate

to other areas with spare land.

- ?? The continued cropping of the cultivated areas without any fallow period for natural fertility regeneration has created a heavy reliance on fertilizers and other agro-chemicals, which ultimately will have serious consequences on the human and livestock population.
- ?? The long growing period (4-6 months) of the main staple crop maize, means that for all this period the land is tied and cannot be used for other purposes, while the low yields imply that household food security in the area is not guaranteed.
- ?? The difficult terrain, and the bad road from the area to Morogoro town pose a serious challenge to the marketing of the perishable produce. While the project area is only 45 km from Morogoro town, it takes up to 4 hours by truck to ferry a load of vegetables into Morogoro town. In addition, because of impassible roads, the produce has to be ferried on the head from the various villages in the area to a central market place, a task which is arduous, costly and time consuming. This also substantially cut into the earnings of farmers.
- ?? The highly organised teams of middle men who purchase the produce directly from the farmers and transport it to the various market centres in Morogoro, Dar es Salaam and Dodoma, ensure that they get a handsome profit, and frustrate any effort by farmers to deal directly with the centres of consumption in urban areas.

Participatory Technology Development.

A trial demonstration plot was therefore established in the village. The plot reflected the natural conditions obtaining in many farmers' fields. This plot is used as a forum where farmers and professionals meet and discuss technical changes. The overall design of the plot is an illustration of the professionals' conception of mountain agriculture, including terracing.

Several innovations were tried on the plot, including tomatoes and a local vegetable variety "mnavu", both of which had received no attention whatsoever by farmers or extension workers. A nursery of improved variety of peach and plum fruit tree was also started.

Regular training seminars were held at the plot side, where farmers observed, discussed and were given practical demonstrations. Initially only few farmers were willing to try these innovations on their own farms, but after observing the performance on the demonstration plot for two seasons, and also after getting satisfactory comments from the few farmers who tried out these new innovations now most farmers in Upper Mgeta grow tomatoes, and in fact, tomatoes is about to become the second most important cash crop, after cabbages. Quite a few farmers have mastered fruit nursery techniques, including grafting, and there are currently five fruit nurseries owned by individual farmers, and which are now receiving regular orders of improved fruit tree seedlings from other farmers.

In both cases, farmers' participation was a crucial component. Farmers were continuously involved in assessing the innovation at all stages, and the role of the professional was to guide the farmers and offer any technical explanations necessary for the farmer to make the right decision. Only in this way could the farmers view these innovations as being endogenous to them, and therefore with a higher chance of sustainability.

Farmers' Groups.

They therefore managed to convince their fellow farmers to organize themselves into a fruits and vegetable growers association, which is now formerly registered as Twikinde Malimbichi Cooperative Society. The first undertaking of the group was to start an inputs supply business so as to ensure that farmers obtained the necessary inputs in time and at reasonable prices.

With time the members of the group gained experience and confidence, and requested for a bigger loan to purchase a lorry to ferry produce to the market and inputs back to the village. The members, with assistance from the project, were able to construct a buying centre consisting of an inputs shop, a godown and an office to run their activities from.

The success of this particular group inspired the formation of other similar groups, in particular savings and credit groups, a dairy goat keepers association and a fruit tree nurseries group. All these groups have been formed on a voluntary basis (at the encouragement of the SUA professionals) to address a specific need which is common to all members of the group.

At a higher level, several such local networks and individual farmers' groups have agreed to form a national networking of farmers' group whose name MVIWATA , means "Mtandao wa Vikundi vya Wakulima", in Swahili, which is in the process of being formerly registered as an NGO Tanzania, Such an NGO will ultimately be in a position to influence various policies and programs of research, extension and training, to be more in line with the interest of small farmers, and will be in a position to fight for and protect the rights of small producers.