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Increasing Crops through Traditional Irrigation

Dar-es-Salaam residents consume a lot of vegetables, Irish potatoes and beans, in which a few of them know exactly which parts of Tanzania produce such crops. These include Lushoto, Arumeru, Same, Mwanga, Iringa Rural, Kilosa and Mpwapwa.

A study conducted by the Irrigation Department in 1986/87 together with Freedom from Hunger Campaign and the Netherlands Development Organization (SNV) showed that harvests were deteriorating each year due to poor irrigation techniques.

The Traditional Irrigation Improvement Programme (TIP) Manager, Mwadhini Myanza, said the results made the Ministry of Agriculture to approve the establishment of co-operation together with the District Councils to start the improvement programme in the respective areas.

Mr. Myanza said TIP was launched as a programme for improving traditional irrigation areas in 1988 under the Netherlands Development Organization (SNV) then with its headquarters in Dar-es-Salaam. The TIP headquarters is now in Moshi, Kilimanjaro region.

He said TIP's overall objective is to accomplish a durable improvement of living standards of the population in the traditional irrigation areas in the county, with regard to gender balance and equality. Also, through sustainable development of catchment areas with regard to irrigation, soil and water conservation, and improved efficiency of land use and water resources, TIP started implementation of the programme in Lushoto in 1989.

It worked through the district as a strategy to reach small scale-farmers living in the catchment areas of traditional irrigation systems in the country. According to the Lushoto TIP Manager, Justine Mzoo, Lushoto district has a total of 350,000 hectares out of which 200,000 hectares are under agriculture.

He said the potential irrigable area is about 10,000 hectares out of which 3,000 hectares are under traditional irrigation and about 2,000 hectares under traditional improved irrigation systems.

Mr. Mzoo said the main crops grown under irrigation are vegetables, Irish potatoes and beans.

Lushoto district has more than 200 irrigation (channels) most of which are either abandoned or partly functioning due to lack of intakes, destruction of the main

channels due to land slides and lack of sufficient irrigation water. The implementation of the programme has been in three phases.

The first phase lasted from September 1989 to June 1992 while the second was from July 1992 to June 1997. The third phase, which started in 1997, will end in 2000. The first two phases introduced the TIP package. Over 80 per cent of the small scale-traditionally irrigated area in Lushoto district is in the steep slopes of the Usambara Mountains. Soil and water conservation is therefore, an important input for water users.

The Lushoto Manager explained that the district's potential irrigation area was divided into three main zones. They include the Soni River basin covering the Lushoto and Soni divisions, the Baga River basin in Mgwashi and Bumbuli divisions and the Uмба River basin in the divisions of Mtae, Mlalo and Uмба.

The TIP has adopted a step-by-step approach, involving introduction, request, intake, evaluation, assessment, implementation, and follow up. During implementation, the programme provide water users with organizational strengthening and gender which include formation of water user groups, training the group leaders in leadership aspects, awareness creation and gender issues, training in financial management and bookkeeping.

In soil and water conservation, Mr. Mzoo said the programme gives technical advise to the water users, lays out physical conservation structures, trains the water users on tree nursery establishment and planting as well as training of village technicians (para-professionals). Other activities include farmers training in a lay out of conservation structures, providing hand tools and materials to water users e.g. hammers, spades and wheelbarrows, farmers excursion, tree seeds and polycups and transportation of materials.

The last activity is irrigation itself, which involves technical services such as surveys, design and supervision in the construction of irrigation structures, provision of construction materials, which are locally available, transportation of construction materials, masonry, training the water users in water management and training in low pressure sprinklers.

The water users contribution to the activities includes labour and locally available materials and services such as stones and sand for construction purposes. The farmers have to demonstrate that they manage at least 50 per cent of their irrigatable land before they will be assisted to expand their irrigation schemes.

Mr. Mzoo said TIP Lushoto has been involved with 75 Water User Groups (WUGs), 12 of which have received a full project package. The rest, which are 63 WUGs, have received partial project package.

Nine dams have been constructed. They are Kwasimba Juu, Nkindo, Butui, Goka, Kwetonga, Mzungu A, Mzungu Kwemashai and Kwasimba Chini.

Eight irrigation intakes have been constructed in Wanga, Mlesa, Mwangoi, Mambo Kwemziagembe, Tema Nkelenge, Tewe Lunguza na Simba Matui. Other achievements include rehabilitation of 20 irrigation channels in Irente, Shashui, Tekwa, Tewa and Mlesa just to mention a few. One aqueduct has been constructed at Mwangoi, one domestic water sprinkler has been installed at Magila/Kwasimba and one cattle drinking trough was constructed.

Crops grown by water users have changed from low value to high value, and crop production especially of beans. Irish potatoes and vegetables have risen by 50 – 100 percent. In Arumeru district, TIP has been conducting similar activities to upgrade the living standards of the small-scale farmer.

According to the Arumeru manager, Liberatus Lokissa, the project continued to concentrate its efforts on the two river basins, which are Nduruma and Themi. Mr. Lokissa said the aim was to concentrate the effort so that the achievements could easily be realized rather than scattering them.

The programme improved 24 irrigation constructions, constructed 3 intakes, canal linings 2 km long, assisted groups in acquiring their water rights and improvement of the on the farm water use.

Other activities conducted in Arumeru included training of small-scale farmers on water management, crop production, extension services, introduction of new crop quick maturing and of high quality value, linking with external buyers and marketing opportunities.

TIP in cooperation with other organizations introduced new crop varieties, which are quick maturing, and of high value like vegetable, flowers and chillies. The Arumeru TIP Manager said this year a lot of vegetable production did not find their way to the markets and most of the produce were left to rot. Mr. Lokissa said in order to help the farmers reduce the risk of losing, TIP is cooperating with other organizations to introduce food processing techniques, like mango and tomato dries.