

Virtual Field Visit Briefing

Proposed Smallholder Irrigation Project/Kilombero Valley, Tanzania

The Government of Tanzania is interested in USAID support for the construction of surface water-based irrigation schemes in Kilombero District.

The construction of these irrigation schemes will involve the development of new weir diversions, distribution canals, secondary control structures, drainage, flood control embankments, and on-farm access roads. The schemes will be gravity-fed, eliminating the need for pumping infrastructure. The irrigation schemes will be designed to supply water during the dry season and prevent water logging during the rainy season.

The proposed irrigation schemes will allow beneficiary farmers to grow crops during the dry season; previously, under the rain-fed agriculture regime, farmers grew crops only during the wet season. The system will be managed and maintained by user associations, which will be established and trained by the Ministry of Agriculture Extension Office.

The beneficiaries of the irrigation schemes are smallholder farmers.

Development Objectives

FTF Tanzania's development goals are to:

- Increase yields of target crops by at least 50%.
- Increase area under irrigation in Tanzania by 15% through the development of smallholder irrigation schemes in Morogoro Region and Zanzibar.
- Increase market access by rehabilitating at least 3,000 kilometers of rural roads, thus reducing post-harvest losses for maize and rice from 20% to 10%.
- Increase trade in the target value chain by at least 25% through improved rural infrastructure and improved value chain efficiency.

Rice was selected as the primary value chain for investment based on a regional analysis that shows that Tanzania has a comparative advantage in rice production, although there are opportunities to enhance competitiveness. Rice is the second most important food in terms of consumption in Tanzanian diets, and has been increasing as a proportion of the diet, and also has the potential to provide regional market demand. Since nearly one in five farmers is involved in rice production, advances in this value chain are expected to support broad-based growth.

Agriculture

Low productivity continues to hamper the growth of Tanzania's agricultural sector. Most of the staple grain crops have yields of less than one ton per hectare (t/ha). The 2002/03 agricultural census showed that Tanzania's average yields in maize of 0.75 t/ha are far below the African average of 1.29 t/ha, and the average yields for rice of 0.95 t/ha are well below the African

average of 2.3 t/ha. These low levels of productivity in cereals are mainly due to a dependency on rain-fed agriculture and low usage of fertilizer, improved seeds, and pesticides. Expanding irrigated land will greatly enhance Tanzania's productive potential.

Kisegese

The proposed Kisegese irrigation scheme is located about 50 km west of Ifakara Town. The proposed project area is estimated to cover 7707 hectares. The Kisegese scheme will be fed by the Ruipa River. The proposed site of the headworks for the scheme is located at the foothills of the Udzungwa Mountains, in the forest reserve managed by the Udzungwa Mountains National Park (UMNP). The scheme abuts the Kilombero Nature Reserve, which extends into the UMNP.

Social

Often the most significant social issue arising from irrigation development is resettlement of people displaced by the flooding of land and homes or the construction of canals or other works. Village Land Use Plans divide land into agricultural, pasture, social services, forest, and settlement/resettlement areas. In many districts, land is yet to be surveyed.

The Valley used to harbor hundreds of pastoralists and thousands of head of livestock that had encroached into KGCA and surrounding village lands. They have been evicted by Government to safeguard the ecological integrity of the Valley and reduce farmer-pastoralist conflicts.

Economy

Many villagers in the Kilombero Valley have low incomes as they produce very little for subsistence and commercial purposes. Cash crops, such as rice, are sold cheaply in the fields during harvesting season. The income obtained does not sustain family needs. In areas where small income generating activities (processing and alternatives to agricultural income generation) have been initiated there is substantial improvement in household incomes.

The Kilombero Valley offers local communities with land to farm (paddy and maize are predominant crops in the Rufiji Basin); fisheries; and wild animals to hunt. The wetland also offers land and water for domestic use and irrigation (mainly traditional) and for grazing livestock.

Local communities can hardly pay the pricey hunting licenses and hence resort to poaching. One tourist hunting company in the KGCA, Kilombero North Safaris Ltd., specializes in buffalo and leopard hunting. The GoT charges \$1,900 for a tourist hunting a buffalo and \$3500 for leopard.

Environment

The forest cover in the Kilombero Valley has been under severe pressure from agricultural and livestock activities, as well as from excessive tree cutting for fuel wood and other domestic

uses. The government and community responses to these destructive forces include promotion of tree planting and forest conservation initiatives plus demarcations of more land as forest reserves.

In Kilombero District, most of the reserves cover mountainous areas of Udzungwa, which receives high rainfall. The main purpose of declaring a forest reserve is protection of catchments and production enhancement.

Tanzania has nine drainage basins; the largest (of all basins in East Africa) is the Rufiji Basin, which covers an area of 183,791 square kilometers (about 20% of Tanzania) and drains into the Indian Ocean.

The Kilombero Valley contains one of the largest freshwater wetlands in East Africa, forms part of the Great Selous Ecosystem, a World Heritage Site, and is designated a Ramsar Site. The Kilombero floodplain covers an area of approximately 14,000 km².

The Kilombero Valley contains the largest seasonal wetland in East Africa at 796,735 hectares. The wetland is an important source of nutrients and sediment for downstream areas and the globally important Mafia-Rufiji mangrove, seagrass, and coral reef complex.

The high density of wild animals in the Kilombero Valley prompted the GoT to gazette a large area into a Game Controlled Area (see Annex D, Figure D-9) for the previous and the most recent delineations of the Kilombero GCA) aimed at regulating the hunting of wild species. Puku is the flagship of the Kilombero Valley. The puku formerly occurred widely in grasslands near permanent water, within the savannah woodlands and floodplains of south-central Africa, but has now been reduced to fragmented and isolated populations and is listed as Near Threatened on the International Union for the Conservation of Nature Red List.

Marginal woodlands and marginal grassland also contain zebras, warthogs, elephants and elands.

The Valley is important for the migration of large mammals, such as elephant. Historically, elephants and other large mammals have crossed the Valley to migrate between the Udzungwa Mountains and the Selous, moving down into the floodplain during the dry season and going back to the miombo woodland during the rainy season. However, in recent years the increased agricultural encroachment into the Valley has put increasing pressure on the only two remaining wildlife corridors, the Magombera Corridor and Ruipa Corridor

Climate

The climate in the Kilombero Sub-basin is highly variable between the highlands and the lowlands, and the valley is hot and humid. Mean annual rainfall varies from 1,100 mm to 2,100 mm.

The largest amount of annual rainfall (80-90%) occurs during the rainy season between December and April, while the period from June through September is relatively dry with typical monthly amounts below 10 mm, except in the Udzungwa Mountains.