

Draft IEE for Project 1: *(in bullet-point form for quick reading)* Small-holder Irrigation Development Component of the Small-holder Agric. Productivity and Market Access Program (SAPMA)

1. Background and Activity Description

1.1 Purpose and Scope

- This is an activity-level IEE supplementing the existing sector-level IEE covering the “Smallholder Agricultural Productivity and Market Access Program (SAPMA)”
- Its purpose is to provide the first review of the reasonably foreseeable effects on the environment, as well as recommended Threshold Decisions, for the new “Pilot Smallholder Irrigation Activity” of the SAPMA.
- This IEE is necessary as construction & operation of Irrigation Projects is not covered under the parent SAPMA IEE.

1.2 Background

- SAPMA is intended to boost smallholder agricultural productivity with improved varieties and cultivation practices, and to support cooperative processing & marketing
- SAPMA was designed with the intent that improved varieties and practices would be applied to existing smallholder plots. However, experience in the field shows that lack of irrigation infrastructure is a key barrier to smallholder productivity.
- This activity will rehabilitate and expand the 200 Ha Bagamoyo Irrigation Development Project (BIDP) smallholder irrigation scheme, train farmers, and hand-off management to an existing cooperative. Larger roll-out of this approach (8–10 such schemes) in the next SAPMA phase is anticipated.

1.3 Description of Activities

- **Rehabilitation and expansion:** Pump station and intake structure on the Ruvu river. Re-construction of 300m feeder canal to scheme with expanded capacity. Estimated diversion is 10% of Ruvu River median low-flow volume (currently ap 7%).

Minimal re-leveling of 200 Ha site, rehabilitation of primary and secondary canals and control gates. Leveling of 50Ha expansion areas; rehabilitation of new secondary canals.

Construction of 3 dwellings for households currently occupying the expansion site (see below)

Operation. SAPMA will operate the scheme for a 2-season training period (2growing seasons/yr)

Training and extension. Cooperative members will be (re-) trained in irrigated agriculture techniques (over 2 seasons) and cooperative and scheme management. TA/Extension services will be provided for an additional 2 seasons (1 year).

2. Country and environmental information

2.1 Locations affected

- Expansion site (50Ha) is state land. (The site was gazetted and cleared for a state-run plantation in the 1970s. The scheme was never completed.) It lies ~ 100m from the Ruvu river. Vegetation is grassland and scrub typical of the area.
- The expansion site is uninhabited except for three households informally occupying the land. Cooperative has already negotiated with these households and they have agreed to voluntary resettlement near ABC village, a settlement of 200 households ~0.5km away.

2.2 Applicable Host Country Environmental Policies and Procedures

Scheme has received approval from the office of the District Commissioner. No further permits or studies are required.

3. Evaluation of Project/Program Issues with respect to Environmental Impact Potential

Construction/rehabilitation of irrigation and intake structures can lead to downstream sedimentation.

Operation. *Note that operation is only in the purview of this IEE until hand-off to the cooperative.* Irrigation schemes have a number of potentially significant adverse impacts, including:

(1) salination of soils; (2) contamination of surface and shallow groundwater with seepage and discharge containing pesticides and fertilizers; (3) excessive diversion adversely affecting downstream uses and ecosystems; (4) increased incidence of some insect-borne diseases due to increase in standing and stagnant water. Regarding these potential impacts:

Significant salination is unlikely to occur within the period of SAPMA operation and technical assistance.

SAPMA will not be supplying pesticides. Any pesticide impacts are thus outside the scope of this IEE.

The scheme will be managed for minimal discharge. Any discharge will be to an existing wetland area adjacent to the scheme. Natural filtration and purification functions provided by the wetland should prevent any contamination of the Ruvu river via surface discharge. Groundwater is used neither on-site nor in ABC village, which receives piped water.

Impacts of water diversion on the Ruvu River are not expected to be significant.

Stagnant/standing water already exists due to proximity of wetland; any stagnant or standing water associated with the irrigation scheme will be minor in comparison.

Technical assistance and extension. Training and technical extension should have no adverse environmental impacts.

4. Recommended threshold decisions and mitigation actions, including monitoring and evaluation

- A **negative determination** is recommended for **construction** activities, **subject to the condition** that best construction management practices described in the *Small Scale Guidelines* are followed.
- A **categorical exclusion is recommended for technical assistance and extension activities, pursuant** to §216.2(c)(2)(i) (education, training and technical assistance).
- A **negative determination with conditions** is recommended for **operation** with the condition that the contractor develop and submit a plan for monitoring soil chemistry for any early indications of soil degradation.