

## **Draft Initial Environmental Examination for Smallholder Irrigation Development Component of the Smallholder Agricultural 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 because construction and 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 intention that improved crop 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. Reconstruction of 300m feeder canal to scheme with expanded capacity. Estimated diversion is 10% of Ruvu River median low-flow volume (currently app. 7%).

Minimal re-leveing 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 (2 growing seasons/year)

- **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.

**3.2 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 develops and submits a plan for monitoring soil chemistry for any early indications of soil degradation.

## **Draft IEE for District Hospital Expansion and Rehabilitation Component of the Maternal, Child & Rural Health Support Program (MCRH)**

### **1. Background and Activity Description**

#### **1.1 Purpose and Scope**

- This is an activity-level IEE supplementing the existing sector-level IEE covering the “Maternal, Child & Rural Health Support Program” (MCRH)
- 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 “District Hospital Expansion and Rehabilitation” component of the MCRH.
- This IEE is necessary as rehabilitation and expansion of major health care facilities is not covered by the existing IEE

#### **1.2 Background**

- District hospitals are key “anchors” of the public health system. In addition to providing treatment for more serious cases (and quarantine of potentially epidemic diseases), they serve as supervisory, data-collection, stocking and distribution centers for the clinics and health posts in their districts.
- Many district hospitals, particularly in the MCRH target areas, are 35–40 years old, and have undergone no significant expansion or rehabilitation since construction.
- Survey of existing facilities has determined that overall MCRH program objectives will not be met unless hospital facilities themselves are significantly upgraded.

#### **1.3 Description of activities.**

5 District hospitals in MCRH target areas will be chosen according to criteria developed in consultation with the Ministry of Health. For each hospital:

- **Construction of new ward blocks & rehabilitation of existing ones.** The expected result is a 50% increase in bed capacity at beneficiary hospitals (usually ~ 60 beds), with significant improvements to lighting, ventilation and hygiene over existing conditions.
- **Construction and installation of new facilities for management of sharps and “red bag” waste.** At all facilities surveyed, existing incinerators are operating poorly or are non-functional. They are largely non-reparable. New incinerators will be constructed/installed , per attached specification. On-site waste pits will be provided at all hospitals.
- **Rehabilitation and new construction of latrine blocks**
- **Repair or construction of perimeter fences, walls, construction or reconstruction of drainage**

- In consultation with each facility, **development of management plans** for infectious waste, **associated training of staff**, and **implementation monitoring**.

## **2. Country and Environmental Information**

### **2.1 Locations affected.**

- Individual locations vary, but most hospitals eligible for this scheme are in built-up areas. Many were originally peri-urban but are now urban. Often they are co-sited with schools or other public facilities.
- In some cases, adjacent settlement is informal and hospital fencing/walls are in poor repair or non-existent. In these cases, dwellings have been erected inside hospital grounds.

### **2.2 Applicable Host Country Environmental Policies and Procedures**

The scheme has been developed in consultation with the Ministry of Health. It will be implemented in active coordination with the Ministry of Health and the Administrator of each hospital. Ministry will have responsibility for consultation with the office of the District Commissioner. No further permits or studies are required.

## **1. Evaluation of Project/Program Issues with Respect to Environmental Impact Potential**

- Construction in built-up areas has nuisance impacts (dust, noise and vibration). In the hospital environment, these impacts can have significant adverse effects on patient health, e.g. on the safety of surgical procedures.
- As environments are urban /peri-urban , no adverse impacts on ecosystem functions or biological resources are anticipated.
- Hospitals in operation produce a number of waste streams with potentially significant adverse impacts. While MCRH is not responsible for hospital operations *per se*, facilities installed under this project will clearly affect waste streams and their management.

These impacts are expected to be beneficial:

1. The effect of this project should be to improve existing waste management of the most biologically hazardous waste streams: sharps and “red bag” waste.
2. Rehabilitation of wards, construction & rehabilitation of latrines, and drainage improvements will produce a healthier environment for patients, staff and community.
3. Repair and construction of perimeter fences will reduce opportunities for community exposure to infectious material (particularly by children & livestock).

## **Recommended Threshold Decisions and Mitigation Actions, including Monitoring and Evaluation**

- A **negative determination** is recommended for all **construction** activities subject to the **conditions** that:

1. Good construction management practices specified in the *Small Scale Guidelines* are followed
2. For each hospital, MCRH develops a **mitigation and monitoring plan** to minimize the impacts of construction on patients and hospital operations, that this plan give the Hospital Medical Director clear authority to require immediate halt and remedy, and that this plan be approved by the Hospital administrator and medical director.

A **categorical exclusion** is recommended for **development of management plans for infectious waste, training of staff, and implementation monitoring** pursuant to §216.2(c)(2)(i) (education, training and technical assistance).