Kessem-Tendaho
Multipurpose
Water Resources Development
Ethiopia

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Background

Ethiopia:

WR Potentials
- Annual runoff: 122 Bm3
- Hydropower: 160 TWh
- Irrigable land: 3.7 mill.

Development Status
- water Supply: 42 %
- sanitation: 17 %
- Hydropower: 670 MW (2%)
- irrigation: (about 5%)
The Awash basin WR Development and Issues

The Awash

- Annual runoff: 4.9 Bm³
- Catchment : 110,000 km²
- Climate:
  - Rainfall
  - Temperature :
- Irrigation Potential: >400,000 ha.
- Frequent drought and flood
  - Food insecure
  - Vulnerable for flood
- A single reservoir
The AWASH

• Suitable for integrated development
  - Most intensively studied Basin
  - Availability of land, WR,
  - Relatively well developed infrastructure
  - Favorable climate for agriculture
  - Strategic location
The Kessem-Tendaho Project

Objectives:
• Bring about socioeconomic development & growth
• Boost sugar production

Target:
- Creating alternative livelihoods for local community
- Meet the growing local sugar demand
- Target 2.5% global market share
- Co-generate about 100MW
- Substitute up to 20% of gasoline import with fuel ethanol
- Create employment opportunities for more than 80,000 people
Project components

- Dams & Irrigation system
- Agricultural Development
  - Diversified agri.development including Livestock
  - Development of Sugar estate
- Infrastructure development
- Establishment of Sugar factories
  - Sugar production
  - Economic use of by-products
  - (Power alcohol, co-generation of electricity, organic fertilizers)
- Hydropower development
Benefits and beneficiaries

- Regulation of the WR for productive purposes (industry, community)
- Establishment of an agro-industrial development in relatively an underdeveloped part of the country (Govt., community, industry)
- Integrated sugar development with highest multiplier effects (industry, community,)
- Creation of About 80,000 jobs (Govt. community)
- Flood protection for the lower Awash (community, farms)
- Fishery development (community, industry)
- Livestock development (community, industry)
Project impact

- Improved livelihood of pastoralists (improved forage varieties, food security through provision of water)
- Increased country’s foreign currency earning
- Drought and flood mitigated
- Job opportunity created
- Improved infrastructure
- Growth in the national economy

Likely negative impacts and mitigation measures

- Sedimentation of reservoirs (Watershed magt.)
- Prevalence of malaria and other infectious diseases
  (biological, chemical and environmental control of malaria, provision of health services)
- Resettlement of 3000 households (Proper resettlement plans)
- Possibility of GW rise and salinity (GW monitoring, drainage, etc.)
Key challenges

- Respecting the completion time of the Project
- Limited technical capacity
- Unavailability of specialized contractors
- Unavailability of Specialists
- Shortage of engineers, technicians, skilled and semi skilled labor.
- Shortage of supplies (e.g. equipment, spare parts)
Stakeholders involvement

Types of stakeholders
- Government (federal, regional, local)
- Public Enterprises
- Community
- CSO (women’s associations)

Means of involvement

Stakeholders are involved in project planning, implementation, decision making processes through:

- Consultations & review meetings and discussions
- Needs Assessment exercises
- Steering Committees
Sustainability

• Commitment to assure sustainability
  ➢ Process involved stakeholders’ needs à project acceptability
  ➢ Political commitment
  ➢ Special arrangements to ensure financial sustainability
  ➢ Intensive capacity building programme included in the Project
  ➢ Environmental Management Unit established
Lessons Learned

- Political commitment key for WR development
- Public sector should lead in irrigation development
- Consultation and involvement of Stakeholders: ensures sustainability
thank you