

# Investment Opportunities in the Ethiopian Water Sector

TRAIDE Ethiopia

Ethiopia is one of the fastest growing countries in the world. Economic development and population growth strain the already limited water resources, a situation which will become further aggravated by climate change impacts. The Government of Ethiopia (GoE) has embarked on a long-term strategy to address water-related challenges and to improve the sector's overall performance. The GoE aspires to provide safe water to all Ethiopians, reduce the impact of wastewater on natural resources, and to increase the uptake of enhanced irrigation techniques to increase food production. The Dutch water sector has a long history of co-operation with Ethiopia and can provide technologies and services to address Ethiopia's water challenges.



## ETHIOPIA

Land area: **1.13 million km<sup>2</sup>**



Arable land: **513,000 km<sup>2</sup> (45%)**

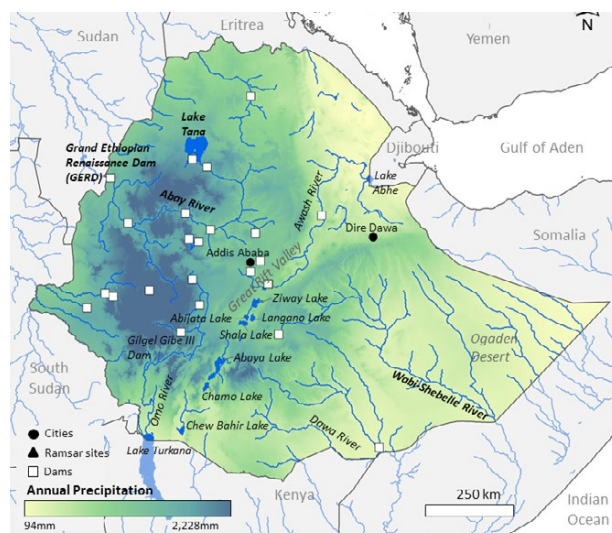


Population: **115 million (2020)**

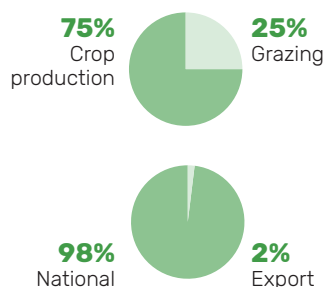


GDP: **USD 107.6 billion**

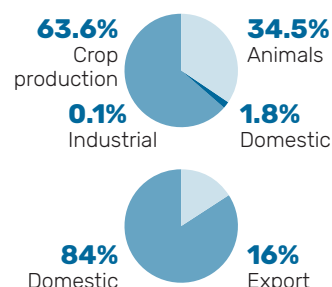
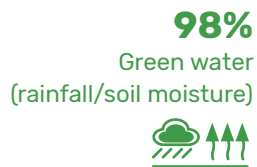
Surface water resources and annual precipitation values for Ethiopia



## WATER USE IN ETHIOPIA



Water use in Ethiopia: **77.2 billion m<sup>3</sup>**



## CHALLENGES IN THE ETHIOPIAN WATER SECTOR

### 1. CLIMATE CHANGE IMPACTS

- Increased evaporation (higher temperatures)
- Longer drought periods
- Increased flood risks (higher rainfall intensity)

### 2. CATCHMENT DEGRADATION

- Erosion
- Sedimentation & eutrophication of reservoirs

### 3. GROUNDWATER

- Lack of data on availability and use
- Unregulated groundwater development

### 4. DRINKING WATER

- Low access to at least basic drinking water services (especially in rural areas)
- Drinking water pollution (especially high salinity and fluoride)

### 5. IRRIGATION / AGRICULTURE

- Low water use efficiency
- Unregulated water use
- Flooding

### 6. INDUSTRY

- Discharge of untreated wastewater
- Insufficient enforcement of pollution regulations

### 7. FOR BOTH HOUSEHOLDS & INDUSTRY

- Insufficient municipal wastewater treatment facilities
- Insufficient cost recovery of water supply

## DEVELOPMENT PLAN

### Water-related goals of the Government of Ethiopia outlined in their 10-year development plan

In the new water policy of 2022, more emphasis will be placed on Private Sector Development and Integrated Water Resources Management as a guiding principle.

#### WATER ACCESSIBILITY



#### WATER LOSS



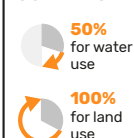
#### INVENTORY OF WATER RESOURCES



#### IRRIGATION NETWORKS



#### EFFICIENCY IN EXISTING IRRIGATION SCHEMES



#### SEWERAGE SYSTEMS



#### EXCESSIVE FLUORIDE



#### INTEGRATED RIVER BASIN DEVELOPMENT



#### MODERN IRRIGATION TECHNIQUES



## Opportunities in different water sub-sectors



### CATCHMENT MANAGEMENT

Assistance regarding measures to tackle catchment degradation can be provided in the form of **hydro(geo)logical assessments, consultancy** on catchment management plans and **capacity building** for management agencies. In the execution of management activities, there is a need for catchment **monitoring tools and equipment**, including remote sensing-related services. Community-based watershed approaches can further be developed to counteract catchment degradation processes.



### DRINKING WATER

The ongoing efforts to increase drinking water availability present opportunities in urban, large-scale **water service delivery settings**, as well as for **small-scale household drinking water solutions**. In rural settings, smart **low-tech** solutions for water abstraction and treatment are needed. In remote areas where fuel shortages pose problems for pumping systems, **off-grid solutions** (solar, wind) are promising options. With regards to drinking water pollution in urban settings, opportunities exist for large-scale drinking water **treatment facilities and technologies**. In rural settings, household **purification technologies** are needed to provide safe drinking water.



### WASTEWATER TREATMENT

The ongoing development of industrial parks presents good opportunities for the **construction** of industrial wastewater treatment equipment and technologies. Promising opportunities also exist in providing industrial wastewater treatment **equipment and technologies** (including measuring and monitoring equipment) for high-end exporting industries. Another opportunity is to implement **circular approaches** where treated wastewater is reused for a variety of purposes. The absence or poor condition of municipal wastewater treatment facilities in many cities creates opportunities for installing **in-situ solutions**, such as compact containerised water treatment systems, but also solutions like reed-bed systems.



### FLOOD RISK REDUCTION

Possible opportunities include **technical advice**, such as GIS mapping and hydrological modelling, linked to land use planning and water management. Besides flood mitigation activities, **adaptation-related efforts** such as flood forecasting and early warning mechanisms are also needed. Other opportunities exist in **infrastructure development**. In particular, **nature-based solutions** (such as the 'Room for the River' approach) provide promising approaches to flood risk management in the Ethiopian context.



### IRRIGATION

**Availability mapping** of (ground)water resources and advice on their use and management is necessary for sustainable resource development. In addition, there is a need for **capacity building** on sustainable water use. Further **consultancy opportunities** exist in monitoring agricultural water use, in terms of tools and advice, both in-field and using remote sensing techniques. Moreover, irrigation equipment and spare parts are vital to develop and sustain the irrigation schemes. The fast-growing agricultural export businesses also present business opportunities for **irrigation equipment and water monitoring tools**.



### GROUNDWATER

**Hydrogeological assessments and bore-hole mapping studies** are needed, next to **monitoring equipment** and **capacity building** relating to groundwater management. Exploring 3R (**Recharge, Retention and Reuse**) solutions to enhance rain-water harvesting and sub-soil infiltration as alternative water source provides another opportunity.

#### Interested in doing business in Ethiopia?

TRAIDE aims to increase sustainable business between The Netherlands and Africa. Are you also interested in doing business in Ethiopia? We are here to help you.

#### Interested in the water sector in Ethiopia?

TRAIDE developed an extensive Business Opportunity Report. Reach out to [ethiopia@traide.org](mailto:ethiopia@traide.org) to receive it.

#### CONTACT:

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