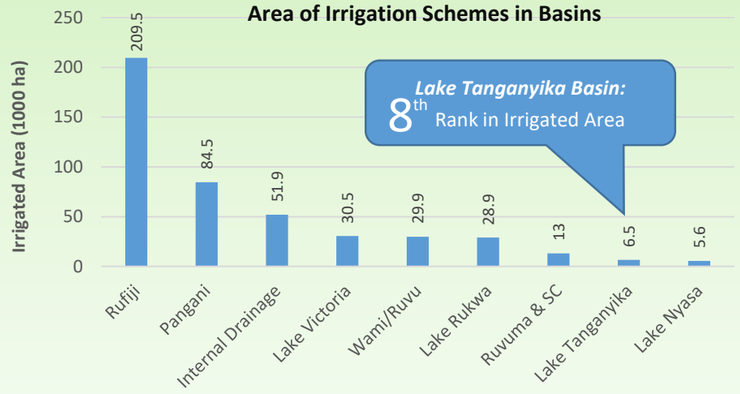
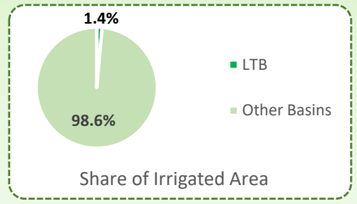
Water Resources Division

Lake Tanganyika Basin
Water Demands Key Figures

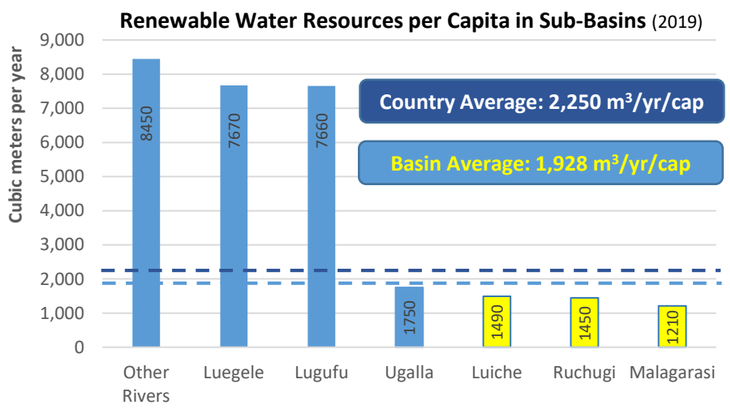
Area of Irrigation Schemes in Basins



Tanzania's Total Irrigated Area: 460,300 ha



Renewable Water Resources per Capita in Sub-Basins (2019)

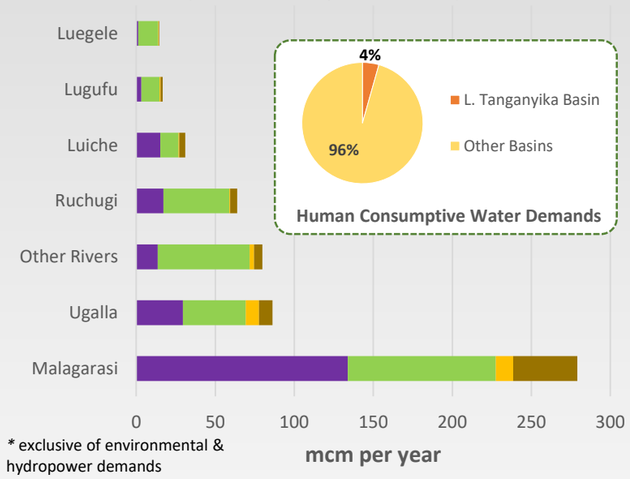


The Falkenmark Water Stress Indicator

Available Renewable Water per Capita (m³/yr)	Indication
< 1700	Water Stress
< 1000	Water Scarcity
< 500	Absolute Water Scarcity

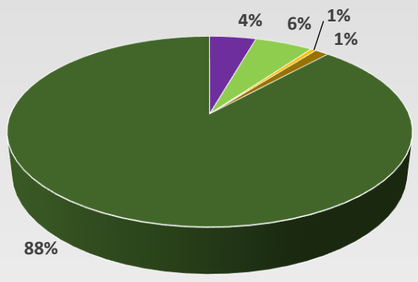
77% of people in Lake Tanganyika Basin are experiencing water stress.

Water Demands in Basins*
(human consumptive demands)



* exclusive of environmental & hydropower demands

Water Demands by Sector (%)
Lake Tanganyika Basin



- Domestic (215 mcm)
- Irrigation (269 mcm)
- Hydropower (0.3 mcm)
- Livestock & Aquaculture (24 mcm)
- Industries & Mining (64 mcm)
- Ecosystem & Wildlife (4287 mcm)

Ecosystem is the largest water user in Lake Tanganyika Basin. About 32% of the renewable water resources in the basin is required for replenishment of environmental demands, and less than 5% is currently utilised for domestic, industries, irrigation, and livestock sectors. In the latter portion, Irrigation sector accounts for about 47% of human-consumptive uses, which makes it the second rank in water demands, followed by domestic water uses making up 38% of human water uses in the basin.

THE UNITED REPUBLIC OF TANZANIA
Ministry of Water
Water Resources Division

Water Resources Fact Sheet
Lake Tanganyika Basin

Physiographic Profile

Land Area	**160,800** km²
No. of Sub-basins	**7**
No. of Major Lakes	**4**
Protected Areas	
No.	**184**
Area	**82,654** Km²
Dominant Soil Texture	**Sandy (Clay) Loam**
Dominant Productive Formation	**Migmatite/ Granitoide/ Meta-Sediment Complexes**
Mean Vegetation Index	**0.34**
Forest Cover Change (2000-2015)	**-0.56** %/yr
Average Slope	**4.4%**
Altimetry	
Highest:	**2,474** m.a.s.l*
Lowest:	**760** m.a.s.l
Mean Elevation	**1,200** m.a.s.l

** m.a.s.l: meters above mean sea level*

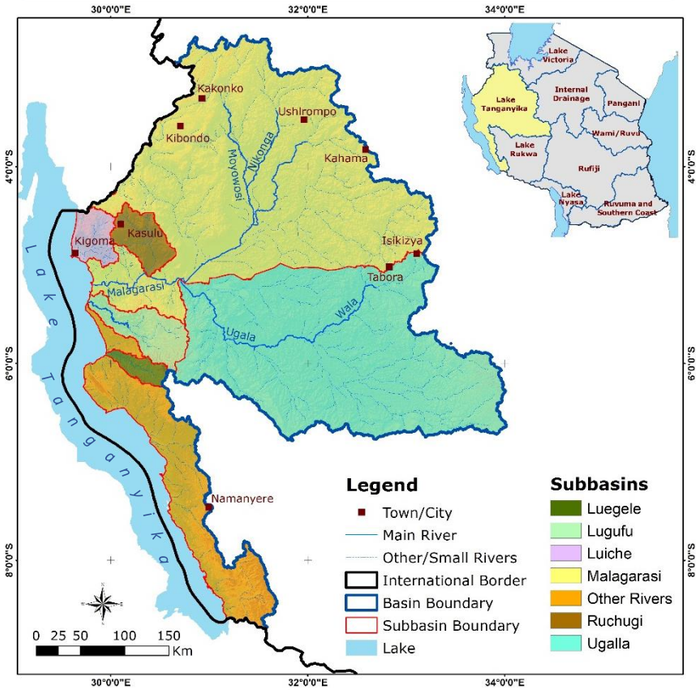
Socio-Economic Profile (2019)

Population	**6.95** million
Population Density	**43** person/km²
Water per Capita	**1,928** m³/yr

Hydro-Climatic & Water Resources Profile*

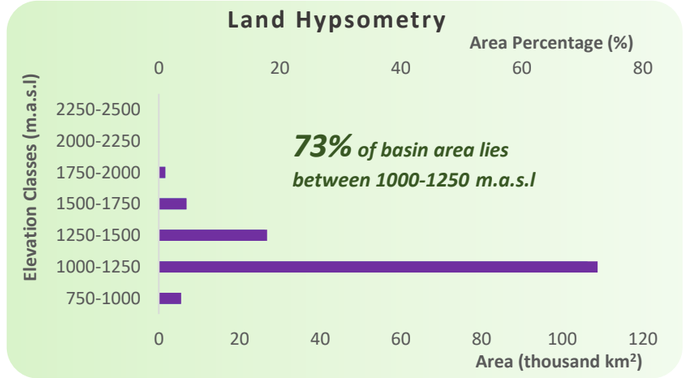
Average Precipitation	**1,007**mm/yr
Average Temperature	**25.0** °C
Average Evapotranspiration	
Potential	**1,420** mm/yr
Actual	**821** mm/yr
Average Renewable Water Resources	**13,396** mcm/yr
Surface Water	**10,641** mcm/yr
Groundwater	**2,755** mcm/yr
Water Demands	
Averaged Total	**4,860**mcm/yr
Human Consumptive	**572** mcm/yr
Water Resources Vulnerability Index	**4.3** %

** According to Lake Tanganyika Basin IWRMDP, 2015*

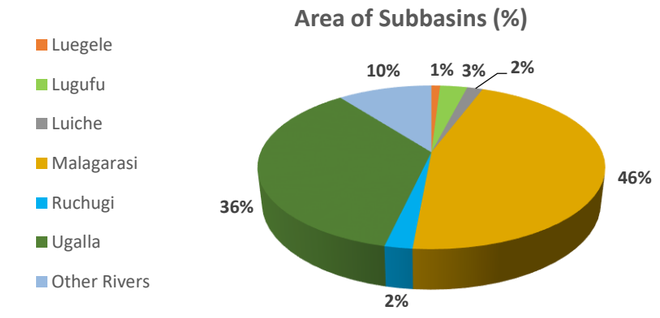


Map of Lake Tanganyika Basin

Land Hypsometry



Area of Subbasins (%)

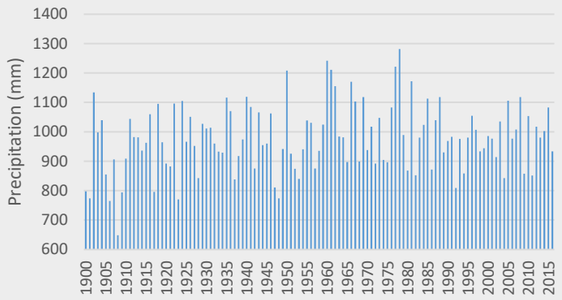


Tanzania mainland is comprised of nine hydrologic basins. Lake Tanganyika Basin is the 2nd largest basin that encompasses about 17% of the area of the country. The basin is stretched from central parts of Tanzania to the west and alongside the western borsers, where Lake Tanganyika is located. Being the upstream headwaters of Congo River, Lake Tanganyika is shared between Tanzania, Congo, Burundi, and Zambia.

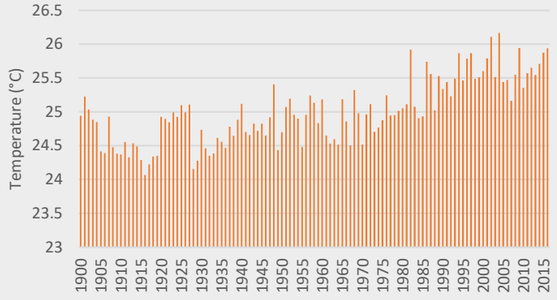
Water Resources Division

Lake Tanganyika Basin
Water Resources Key Figures

Historic Annual Precipitation (1900-2016)



Historic Average Air Temperature (1900-2016)



Averaged for Lake Tanganyika Basin; Source: Climatic Research Unit, University of East Anglia, UK, http://www.cru.uea.ac.uk/data

Long Term Rainfall Variation	
Rainfall Average 1900-1930	**966** mm
Rainfall Average 1985-2016	**1,008** mm
Difference in Long-term Average	**+42** mm

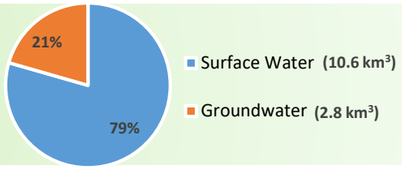
Difference in Rainfall*: + 4.4%

Long Term Temperature Variation	
Temperature Average 1900-1930	**24.65** °C
Temperature Average 1985-2016	**25.58** °C
Difference in Long-term Average	**+** 0.94 °C

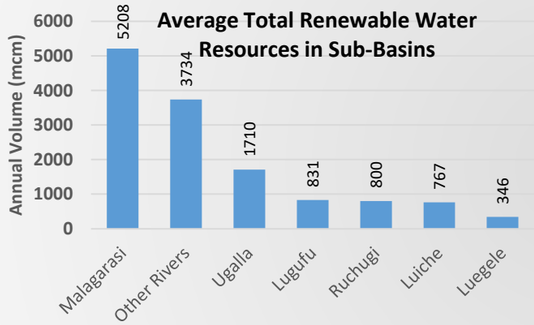
Difference in Temperature*: + 3.6%

** Over 85 Years (30-yr average values, centered on 1915-2000)*

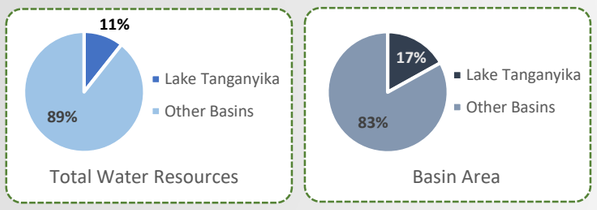
Annual Renewable Water Resources: 13.4 km³
(inside Tanzania borders)



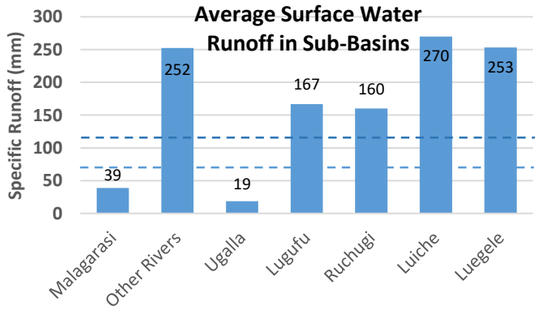
Average Total Renewable Water Resources in Sub-Basins



Share of Lake Tanganyika Basin in Tanzania's Renewable Water Resources



Average Surface Water Runoff in Sub-Basins



Average Country-wide Specific Runoff: 111 mm

Average Lake Tanganyika Basin's Specific Runoff: 67 mm

There is a large variation of runoff production within different sub-basins in Lake Tanganyika Basin:
- *Luiche sub-basin as high as 406% of average*
- *Ugalla sub-basin as low as 28% of average*

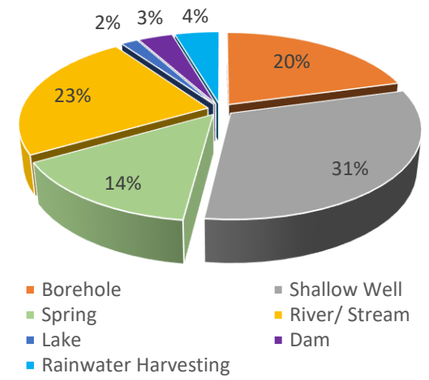
Lake Tanganyika Basin receives in average an annual precipitation of 161 km³ out of which as much as 147.6 km³ returns back to the atmosphere and about 13.4 km³ (8%) turns into surface and ground water as renewable freshwater resources.

Water Resources Division

Lake Tanganyika Basin
Water Infrastructure Key Figures

Water Infrastructure Profile	
Water Points	
No. of Water Points	**9,374**
No. of Taps	**12,214**
No. of Monitoring Stations:	
Weather	**15**
Rainfall	**14**
Hydrological	**32**
Hydrogeological	**1**
No. of Dams and Reservoirs	**60**
Reservoirs Capacity	**55.7** mcm
Irrigation Schemes	
No.	**117**
Area	**6,501** ha
Irrigation Efficiency	**25%**
Main Crops (irrigated)	**Maize, Sorghum, Wheat, Beans**

Water Points by Sources of Water

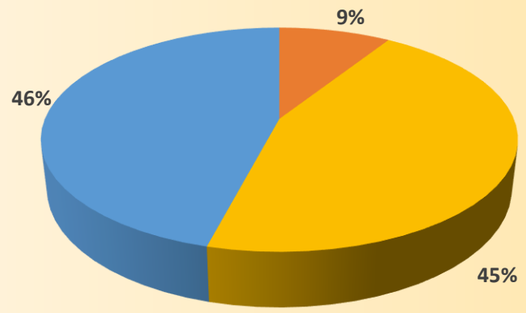


Average Gross Area per Water Point: 17 km²

Functioning Water Taps: 7,742 — **63%**

Water Points Supplied by Groundwater and Springs — **66%**

Extraction Technologies at Water Points



Water Points that Need Energy for Extraction of Water — **54%**

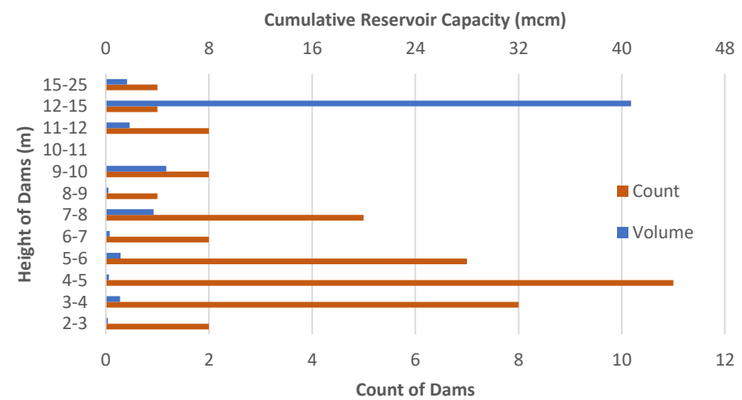
CED Pumps: *Conventional Energy-Driven Pumps (includes Thermal Electricity, Hydroelectricity, Gasoline & Diesel)*

NCD Pumps: *Non-Conventional Energy -Driven Pumps (includes Solar Electricity, Windmill)*

Hand Pumps: *(includes Lever Pumps, Mono Pumps, Rope Pumps, Play Pumps)*

Statistics of Dams in the Basin

There are 60 man-made dams constructed in Lake Tabganyika Basin with a total reservoir capacity of 55.7 mcm.
The largest reservoir pertains to Igombe Dam with a height of 12 m and capacity of 40.7 mcm constructed on Kigozi River in Tabora Region.



Water supply access in Tanzania – mainly in rural areas – is realised through "water points", i.e. usually a public place for people to obtain clean water.
Water from water points is potable water consumed for the people or livestock. Means of access to water at the supply points are usually in form of communal standpipes. However, other shapes of access to water are present such as water kiosks, water tanks, hand pumps, developed or undeveloped springs, and cattle troughs.