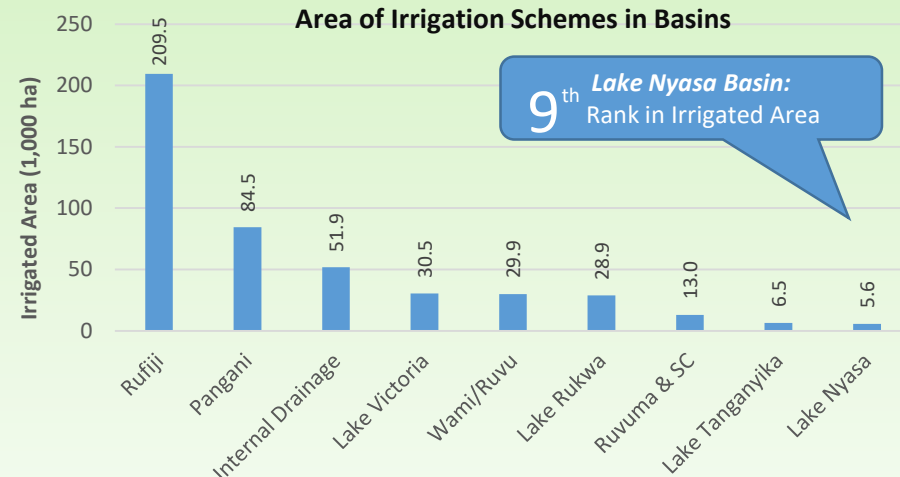
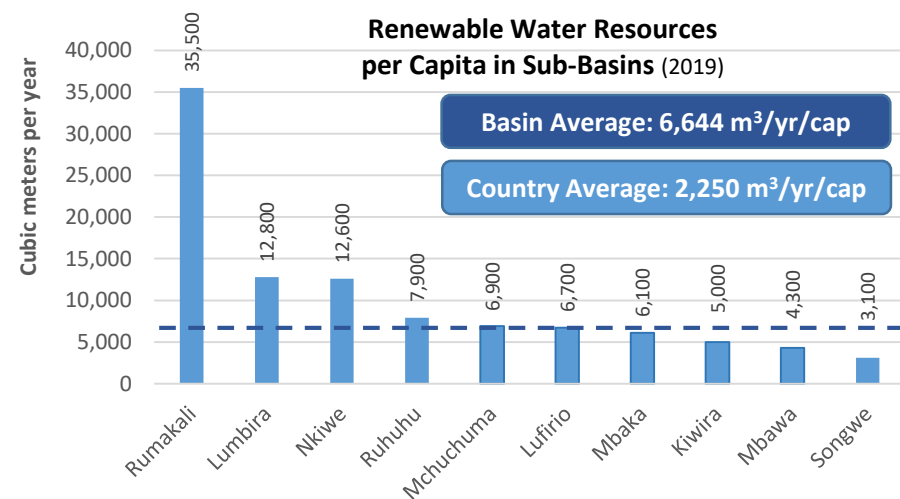
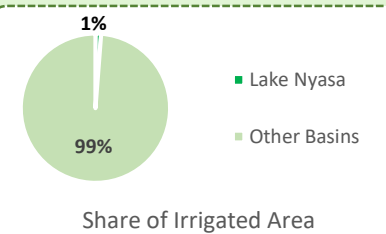


Lake Nyasa Basin Water Demands Key Figures



Tanzania's Total Irrigated Area:
460,300 ha

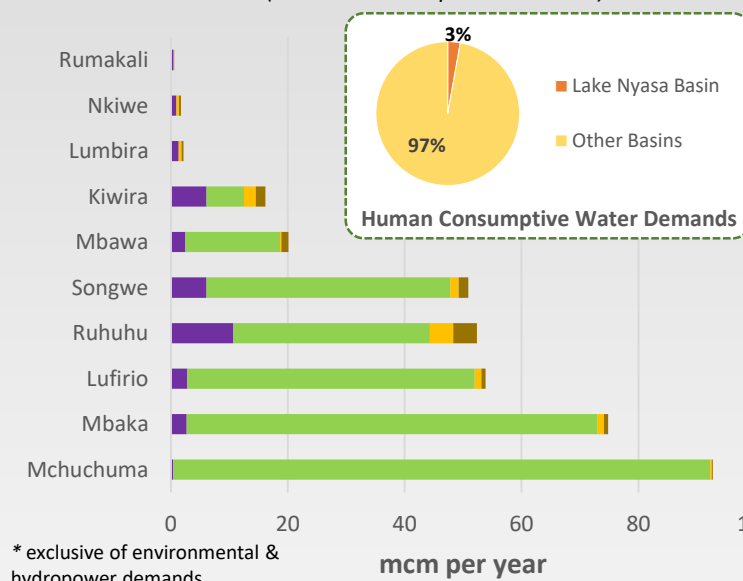


The Falkenmark Water Stress Indicator

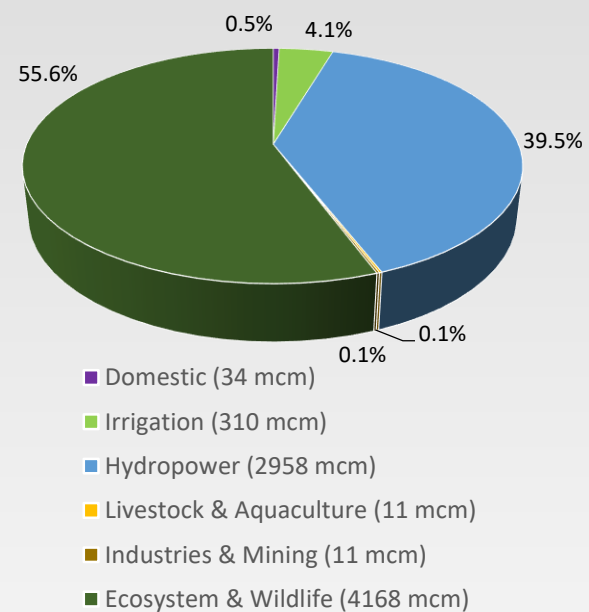
Available Renewable Water per Capita (m³/yr)	Indication
< 1700	Water Stress
< 1000	Water Scarcity
< 500	Absolute Water Scarcity

There is abundant "per capita" water in Lake Nyasa Basin

Water Demands in Sub-Basins* (human consumptive demands)



Water Demands by Sector (%) Lake Nyasa Basin



Ecosystem is the largest water user in Lake Nyasa Basin. More than 32% of the renewable water resources in the basin is required for replenishment of environmental demands, and nearly 3% is currently utilised for domestic, industries, irrigation, and livestock sectors. In the latter portion, Irrigation sector accounts for about 85% of human-consumptive uses. Hydropower generation requires 23% of the renewable waters, which is mostly considered a non-consumptive demand in the basin.



Physiographic Profile

Basin Area	33,900 km²
No. of Sub-basins	10
No. of Major Lakes	1
Protected Areas	
No.	12
Area	561 km²
Dominant Soil Texture	Sandy Loam
Dominant Productive Formation	Meta-Sediment/ Meta-Igneous Complexes
Mean Vegetation Index	0.362
Forest Cover Change (2000-2015)	-0.10 %/yr
Average Slope	15.6%
Altimetry	
Highest	2,953 m.a.s.l.*
Lowest	472 m.a.s.l
Mean Elevation	1,300 m.a.s.l

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

Socio-Economic Profile (2019)

Population	1.94 million
Population Density	58 person/km²
Water per Capita	6,644 m³/yr

Hydro-Climatic Profile*

Average Precipitation	1394 mm/yr
Average Temperature	20.3 °C
Average Evapotranspiration	
Potential	1276 mm/yr
Actual	941 mm/yr
Average Renewable Water Resources	12,882 mcm/yr
Surface Water	12,775 mcm/yr
Groundwater	107 mcm/yr
Water Demands	
Averaged Total	7,492 mcm/yr
Human Consumptive	366 mcm/yr
Water Resources Vulnerability Index	2.8 %

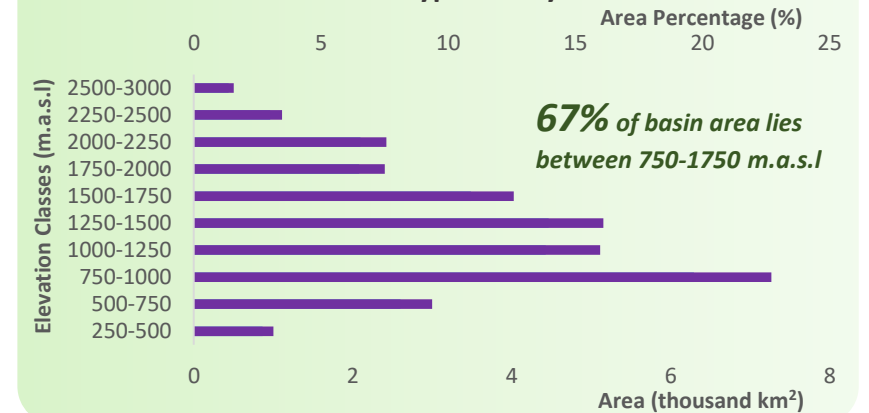
* According to Lake Nyasa Basin IWRMDP, 2015

Tanzania mainland is comprised of nine hydrologic basins. Lake Nyasa Basin is the smallest basin, which involves 3.5% of the area of the country. The basin is in the form of a relatively narrow strip that bounds Lake Nyasa along its shorelines in the south to southwest Tanzania. Lake Nyasa is internationally shared between Tanzania, Malawi, and Mozambique.

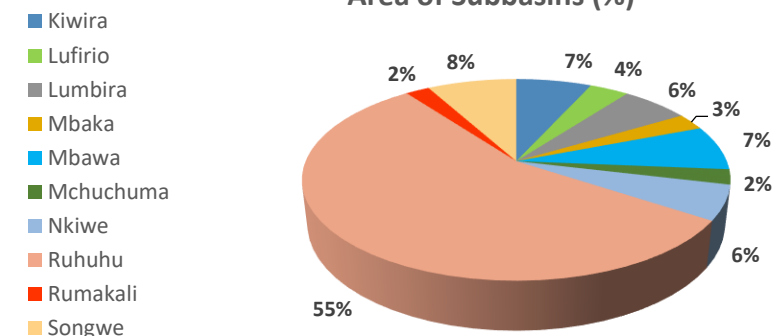
Water Resources Fact Sheet Lake Nyasa Basin



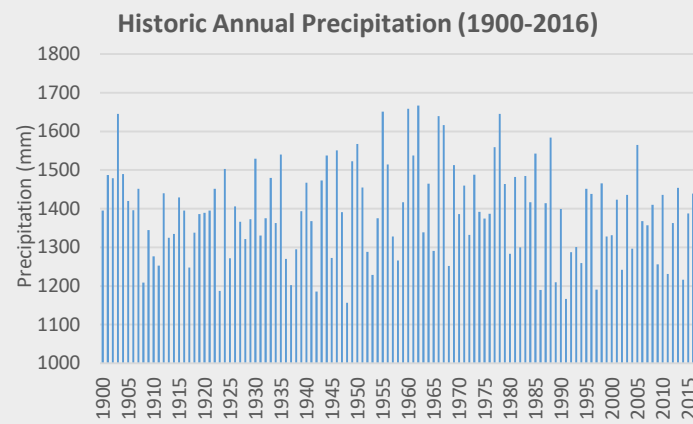
Land Hypsometry



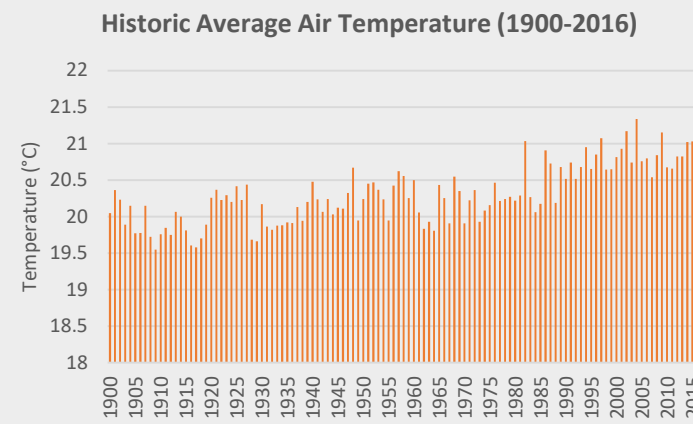
Area of Subbasins (%)



Lake Nyasa Basin Water Resources Key Figures



Averaged for Lake Nyasa 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	1,385 mm
Rainfall Average 1985-2016	1,357 mm
Difference in Long-term Average	- 27 mm

Difference in Rainfall*: - 2.0%

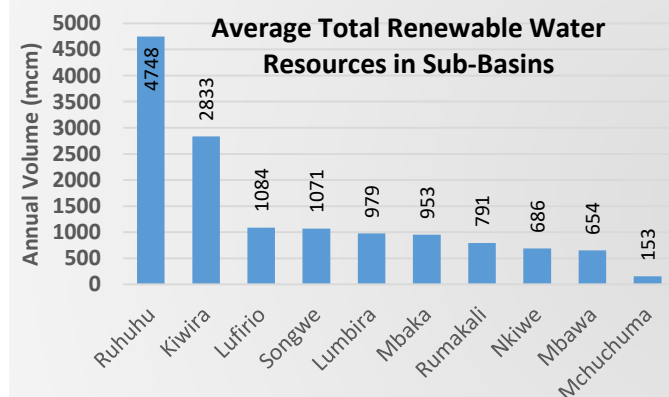
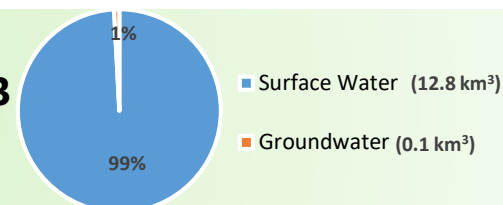
Long Term Temperature Variation

Temperature Average 1900-1930	19.99 °C
Temperature Average 1985-2016	20.78 °C
Difference in Long-term Average	+ 0.79 °C

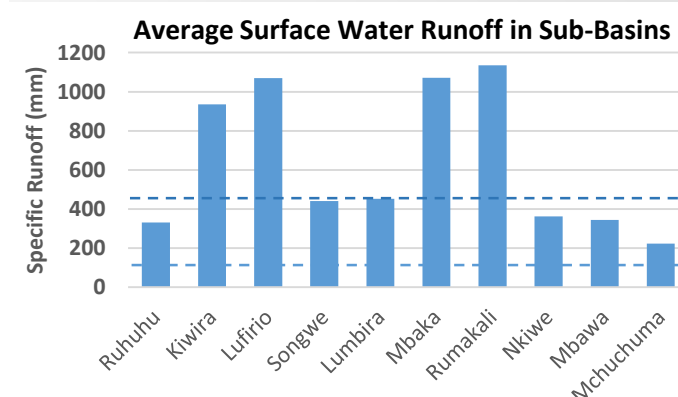
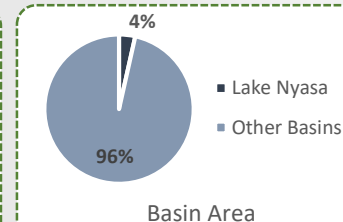
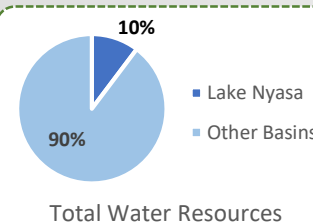
Difference in Temperature*: + 3.6%

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

Annual Renewable Water Resources: 12.9 km³
(inside Tanzania borders)



Share of Lake Nyasa Basin in Tanzania Renewable Water Resources



Average Lake Nyasa Basin's Specific Runoff: 458 mm

Average Country-wide Specific Runoff: 111 mm

There is a large variation of runoff production within different sub-basins in Lake Nyasa Basin:

- Rumakali Sub-Basin as high as 248% of average
- Mchuchuma Sub-Basin as low as 49% of average

Lake Nyasa Basin receives in average an annual precipitation of 46 km³ out of which as much as 33 km³ returns back to the atmosphere and about 12.9 km³ (28%) turns into surface and ground water as renewable freshwater resources.

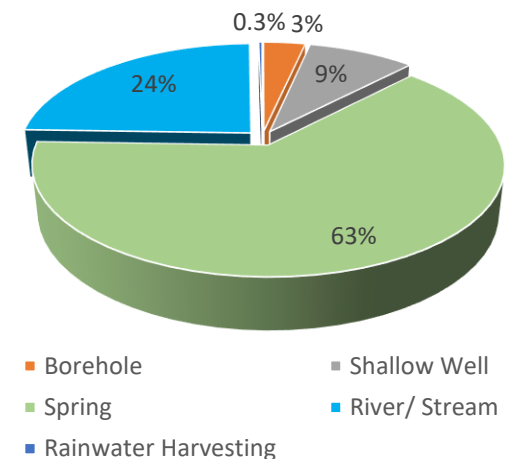
Lake Nyasa Basin Water Infrastructure Key Figures



Water Infrastructure Profile

Water Points	
No. of Water Points	7,666
No. of Taps	9,725
No. of Monitoring Stations:	
Weather	7
Rainfall	55
Hydrological	31
No. of Dams and Reservoirs	5
Reservoirs Capacity	1.1 mcm
Irrigation Schemes	
No.	88
Area	5,580 ha
Irrigation Efficiency	25%
Main Crops (irrigated)	Maize, Cotton, Rice, Sorghum

Water Points by Sources of Water



Average Gross Area per Water Point: 4 km²

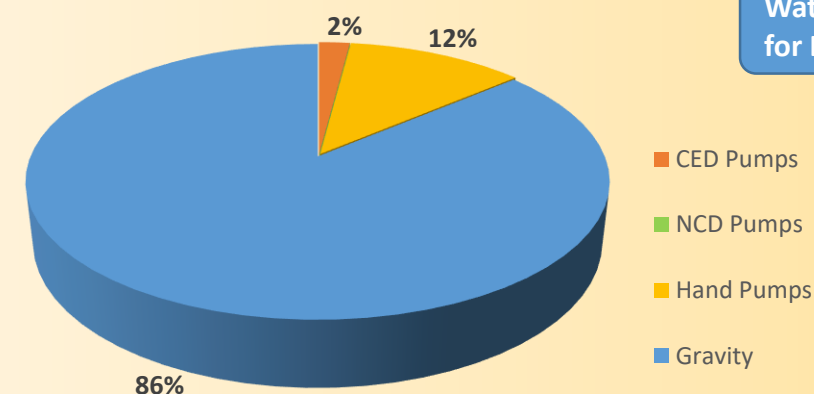
Functioning Water Taps: 6288

65%

Water Points Supplied by Groundwater and Springs

75%

Extraction Technologies at Water Points



Water Points that Need Energy for Extraction of Water

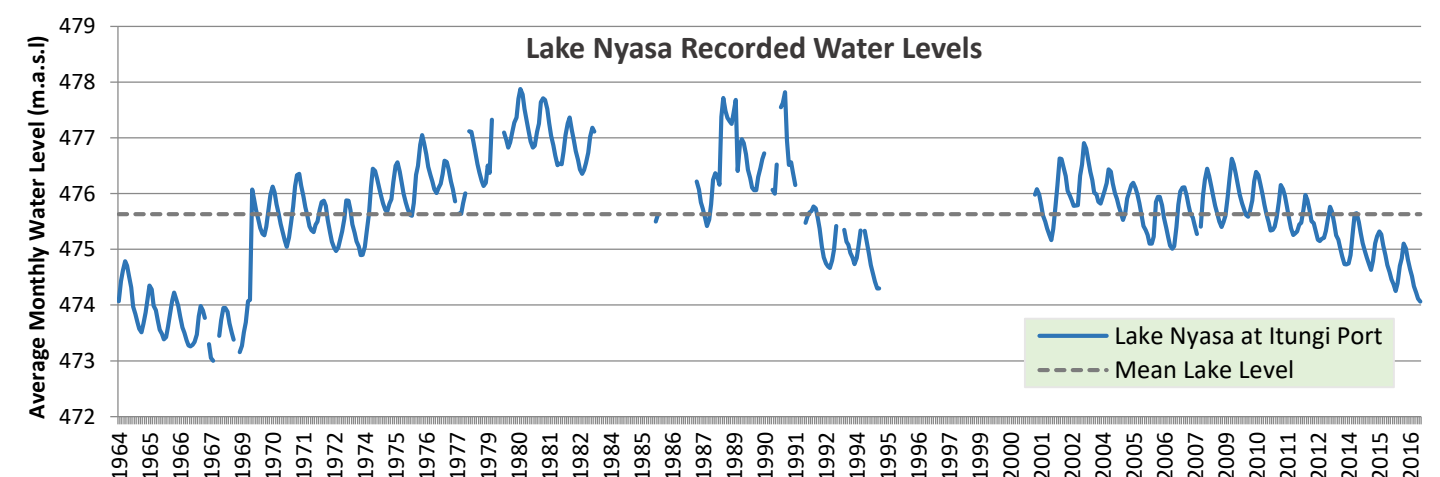
14%

- CED Pumps
- NCD Pumps
- Hand Pumps
- Gravity

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)



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.