

# Water Adaptation in the Horn of Africa

Water adaptation - exchange

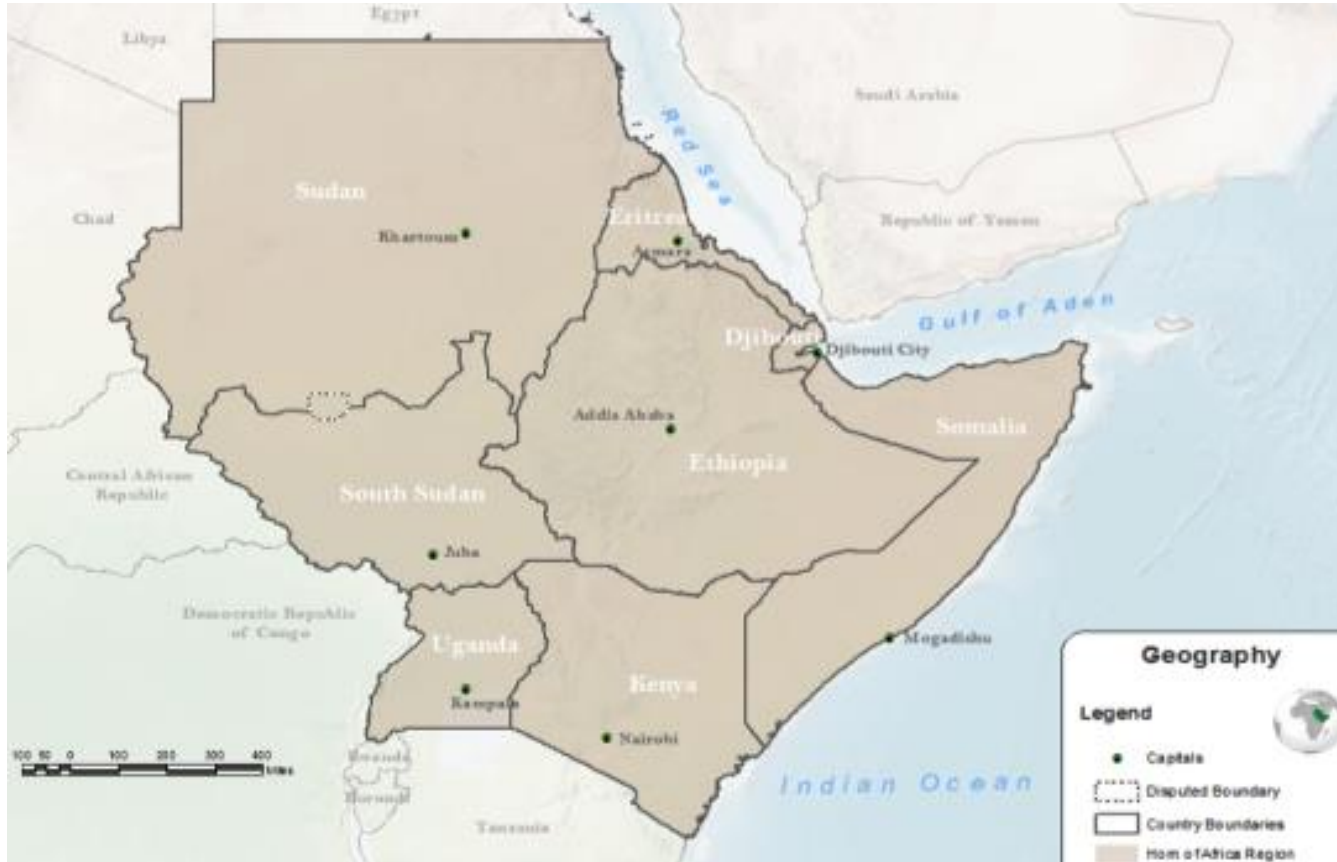
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# Horn of Africa – floods and droughts challenge



# Horn of Africa Context

- The Horn of Africa covers area of about 5.2 million square kilometers – countries include:
  - Djibouti,
  - Eritrea,
  - Ethiopia,
  - Kenya,
  - Somalia,
  - South Sudan,
  - Sudan and
  - Uganda,







# Water towers of the Horn Region



The Horn of Africa's water towers  
(Source: *UNEP, 2013*)

## Africa's water towers

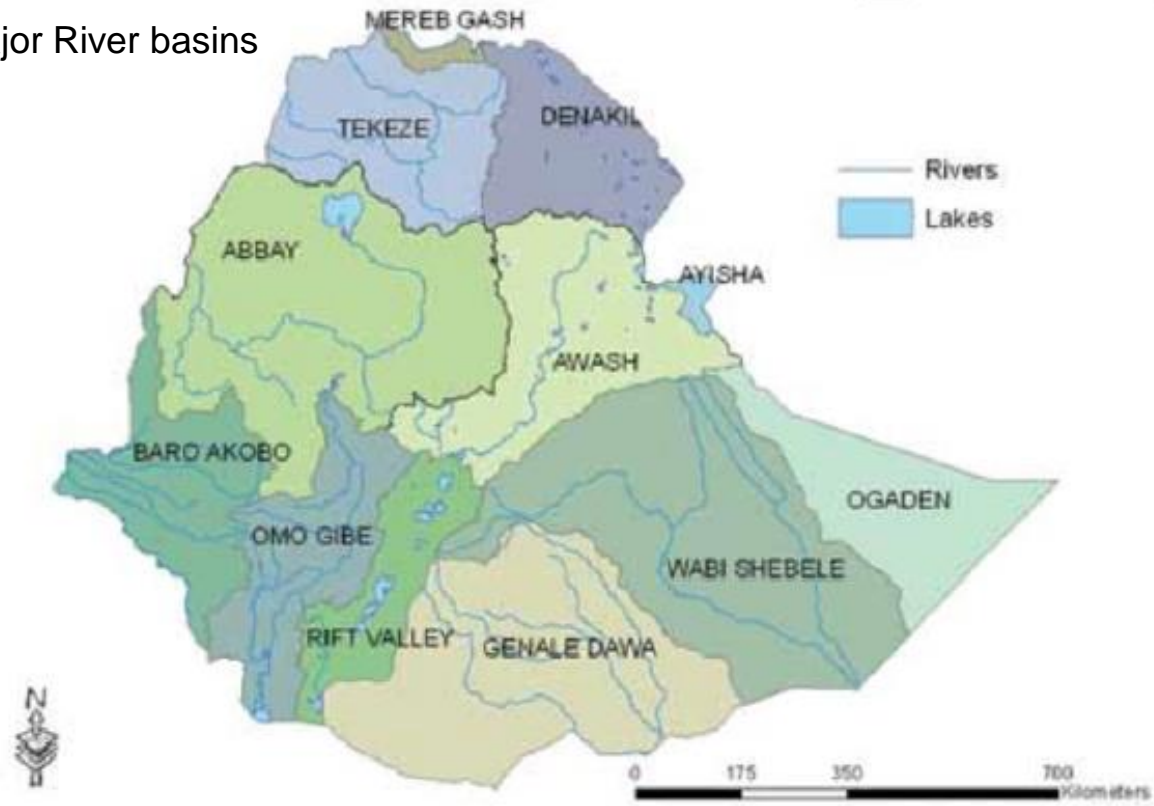
-  Water Towers
-  Hydrological Basin
-  Rivers
-  Lakes and Reservoirs

# Water Towers of the Horn Region

- The central highlands of Ethiopia
- Kenya,
- Albertine Rift in Uganda are considered to be among the most important water catchments in the Horn of Africa.
- With an altitude of over 1,500 meters, they form the water towers of the region.

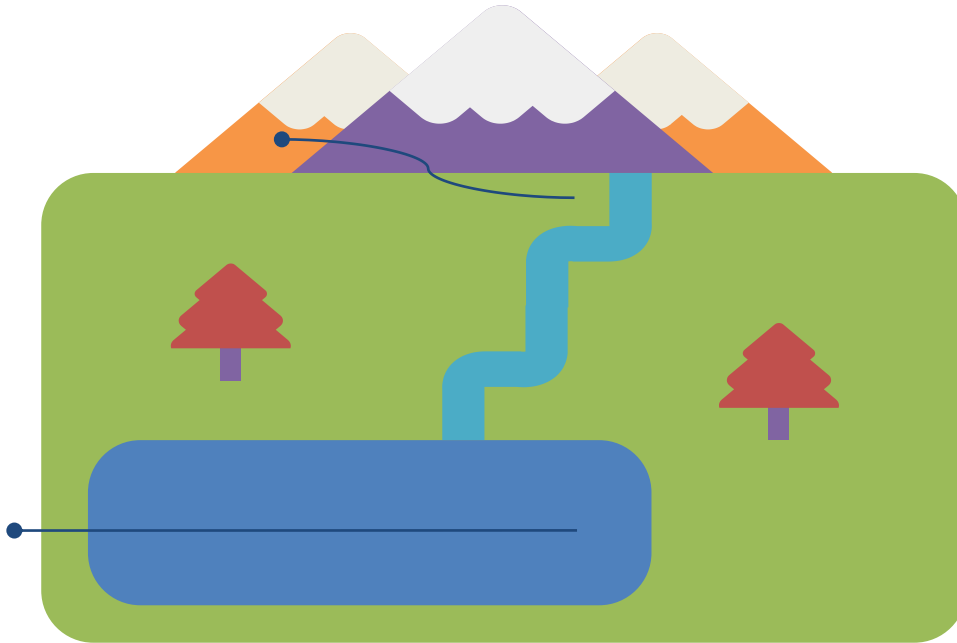
# Major river basins of Ethiopia

12 Major River basins



# Water challenges in the Horn of Africa

## Floods



**Rising water levels in Lake Turkana are increasing flooding, @Jacque Macharia, February 2022 Kenya**







# **SOUTH SUDAN FLOODS**

## **THE COST OF INACTION**

as of November 2021

# Sudan, October 2021. Photo: WFP

South Sudan



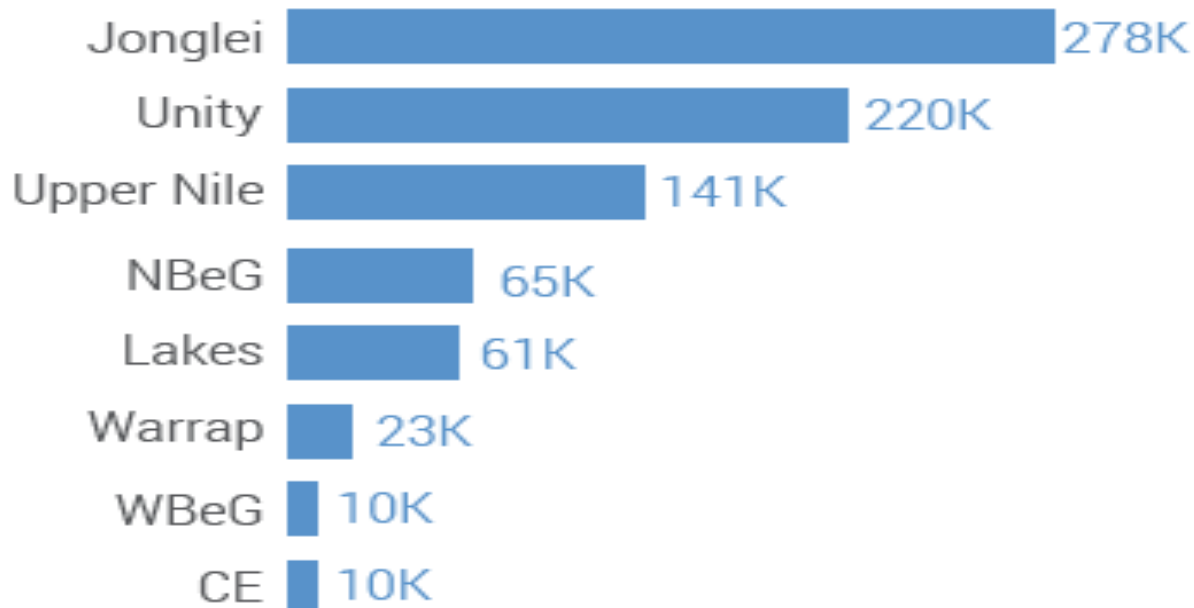






## PEOPLE AFFECTED BY STATE

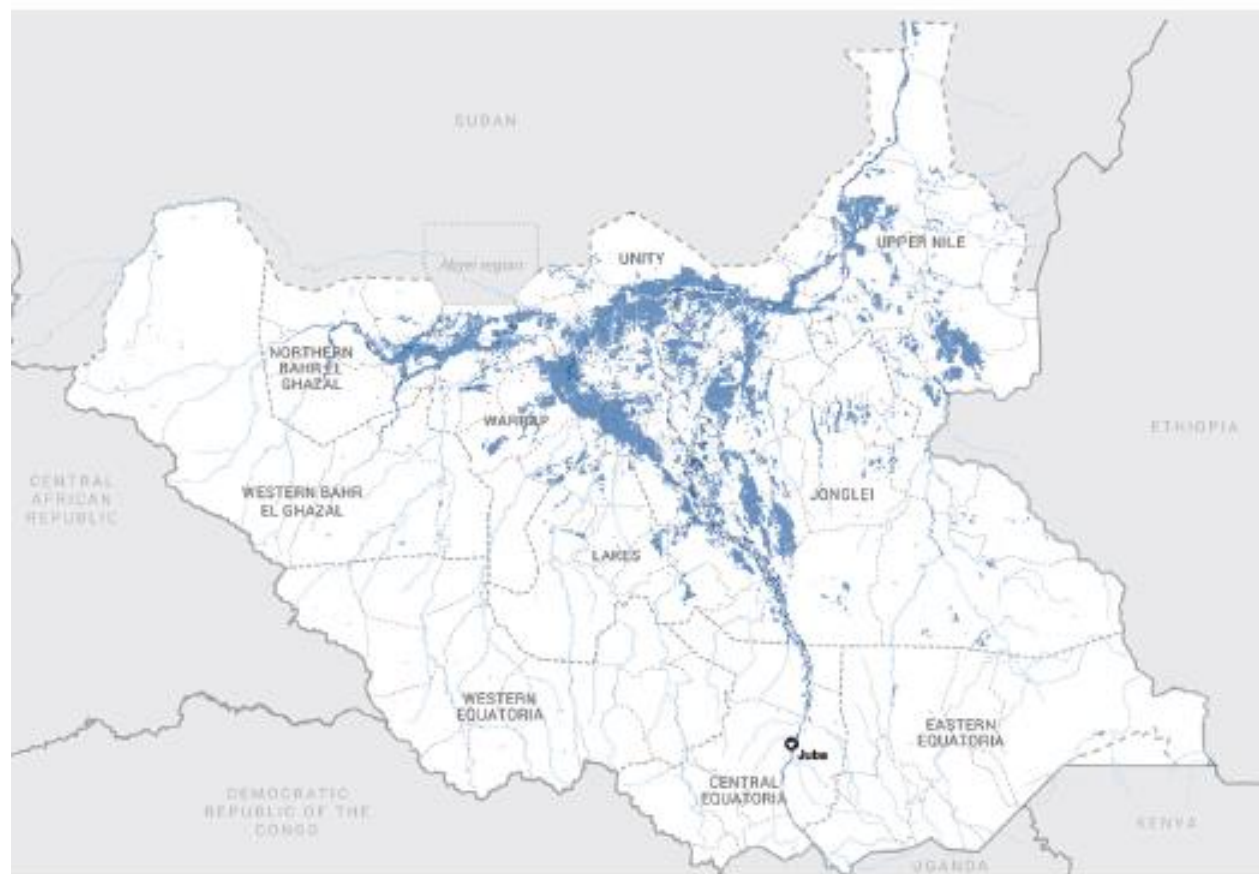
Over 75% of people affected are in Jonglei, Unity and Upper Nile.



NBeG: Northern Bahr el Ghazal, WBeG: Western Bahr el Ghazal,  
CE: Central Equatoria

# FLOOD-AFFECTED AREAS

Of 78 counties in South Sudan, 33 are affected by the floods.

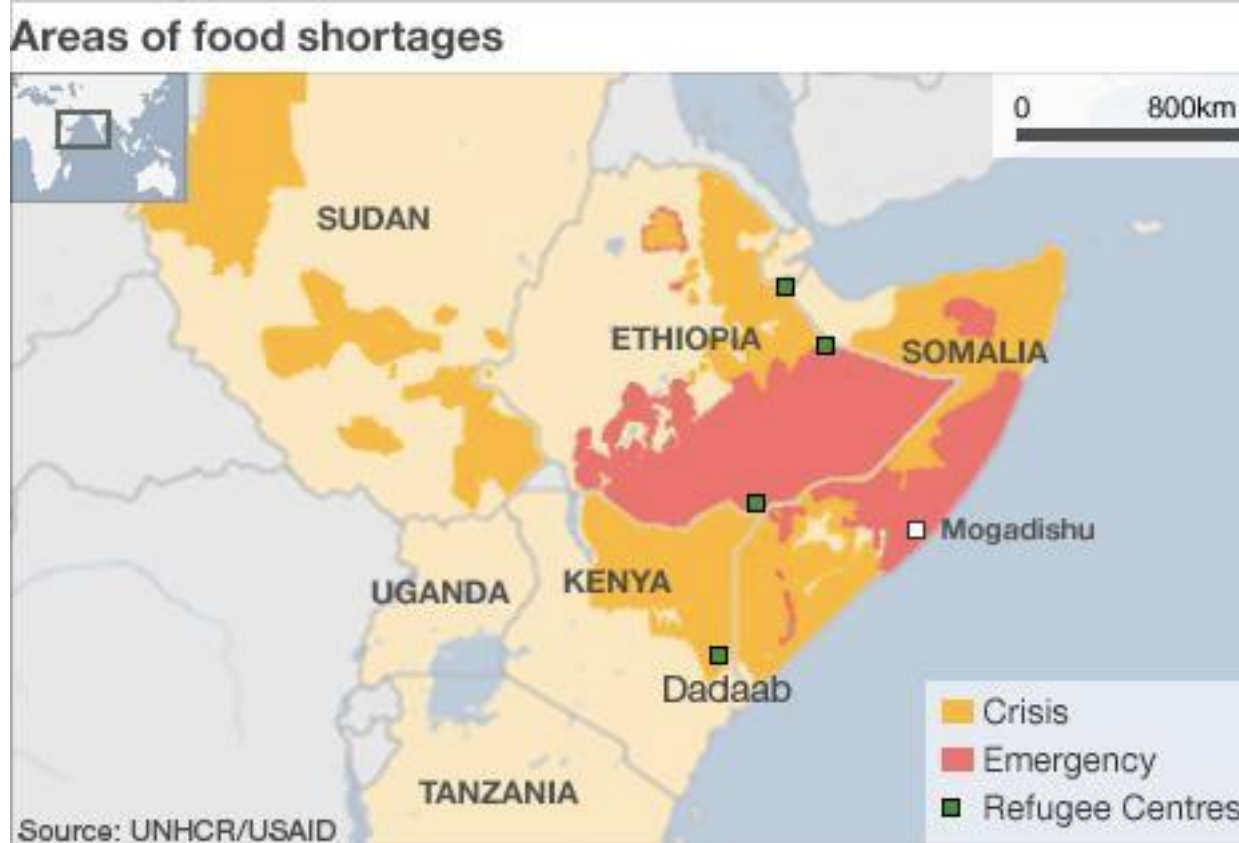


# Flood in Gambella Region - Ethiopia





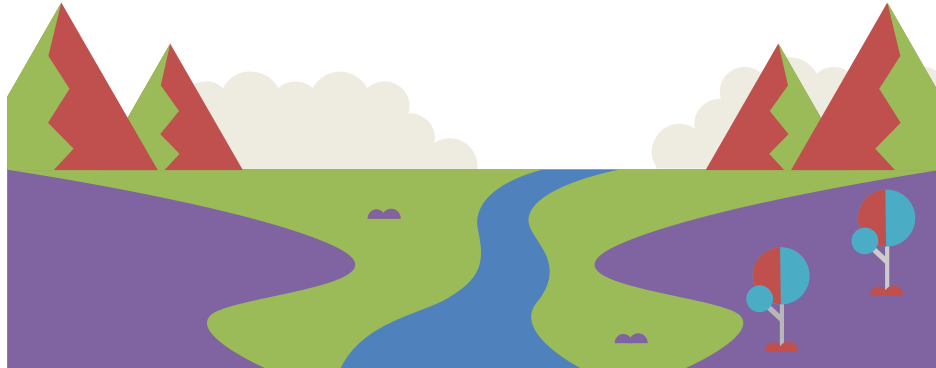
# Horn of Africa Droughts



Horn of Africa sees 'worst drought in 60 years' BBC, 28 June 2011



# Water adaptation planning in the Horn of Africa – the needs



# Water themes across the Horn of Africa countries – NAPA documents

- Integrated watershed development
- Improve access to potable water to strengthen community climate resilience
- Expand the construction of medium and large-scale irrigation systems to enhance food security
- Water conservation and management – institutional arrangements enhanced
- Establish and maintain strategic water reserves mega-dams, shallow wells to capture runoffs

# Water Themes

- Conduct climate and risk assessments on water, sanitation and irrigation infrastructure
- Build resilience infrastructure for the protection of dams and dykes and river lines
- Promote water harvesting and storage at county and household levels
- Mainstream climate change into water catchment management plans

# Water Themes

- Disaster preparedness and management
- Early warning systems and disaster risk management policies to improve resilience to extreme weather events
- Meteorological networks to enhance early warning systems
- Increase resilience of communities, infrastructures and ecosystems to droughts and floods
- Assessments to identify areas prone to shortages under climate change and inform integrated water resources management.
- Water harvesting structures, including dykes, water reservoirs and canals, to increase water availability

# Data needs

- Ground water potential – critical for ASALs
- Surface water and dynamics (up stream and down stream) interaction – flood trends
- Assessment of water availability and demands for water in times of droughts and floods
- Assessing basin-wide environmental challenges to inform planning
- Floods and droughts hotspots - management and controls
- Assessment of ecosystem degradation across basins (land use land cover change)
- Water towers environmental conditions