Key Water Challenges & Opportunities in Zambia

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Zambia at a Glance

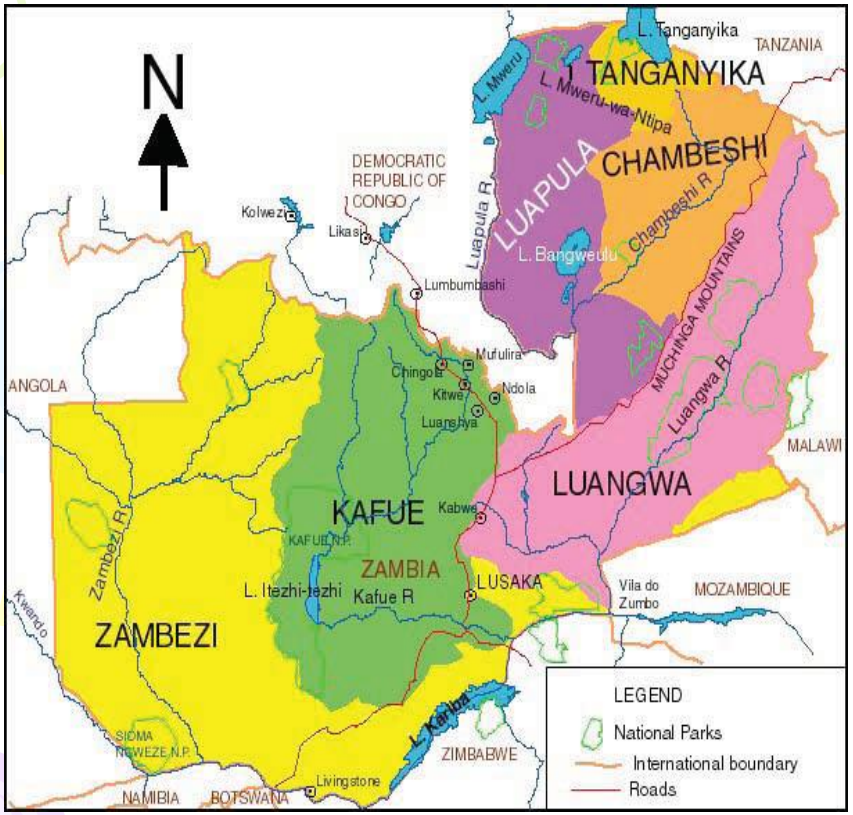
Population 13 million
61% rural & 39% urban
Pop growth rate: 2.8%
Surface area: 752,614km2

Name derived from Zambezi river

Strong Economic Growth…
GNI per capita: US$1,280/year
GDP Growth: 6.4%

But Growth is Uneven…
Poverty level in rural areas: 77%
(59% at national level)

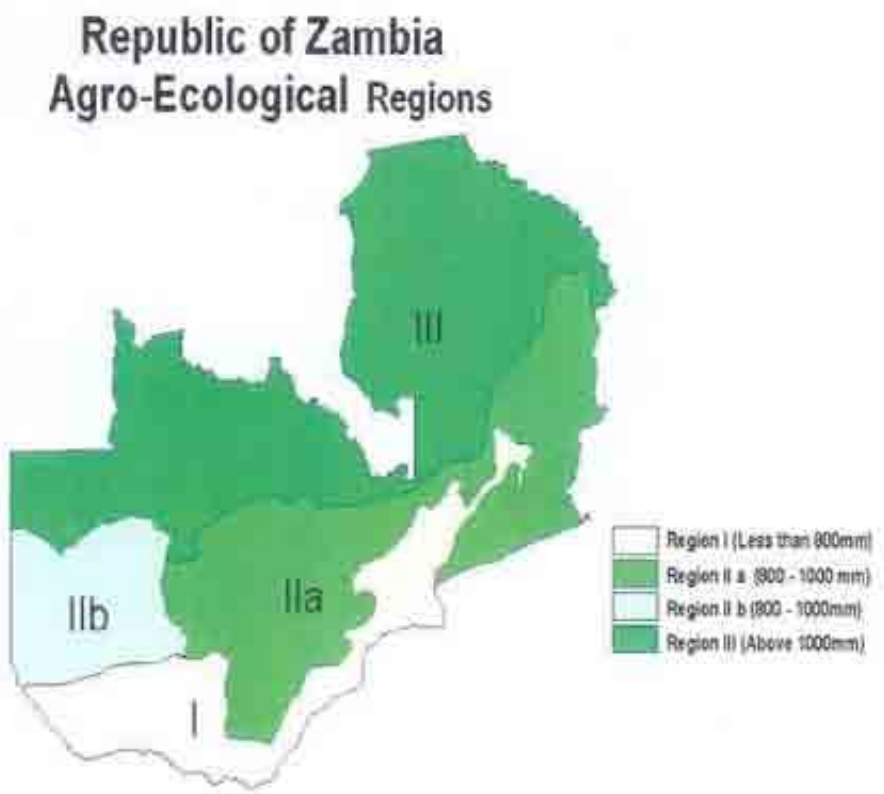
Water Availability



- Two main river basins: Zambezi & Congo
- Two basins comprise 6 catchments
- Of 752,614km2, water covers 11,890km2(1.58%)
- Generates 100km3 surface water & 49.6km3 G/water per annum

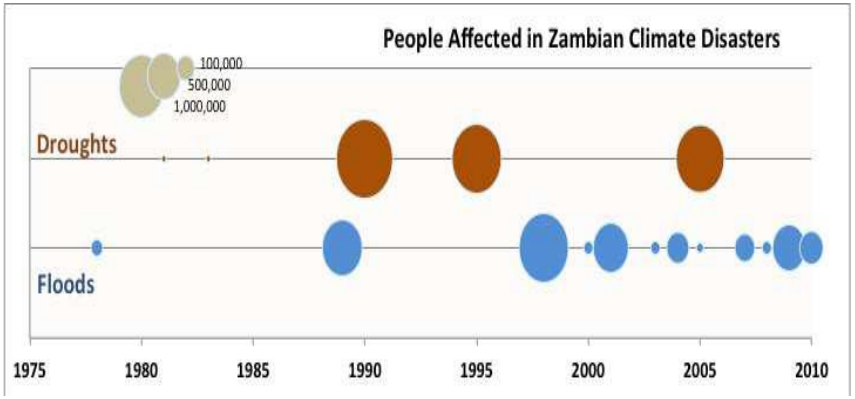
Water Availability

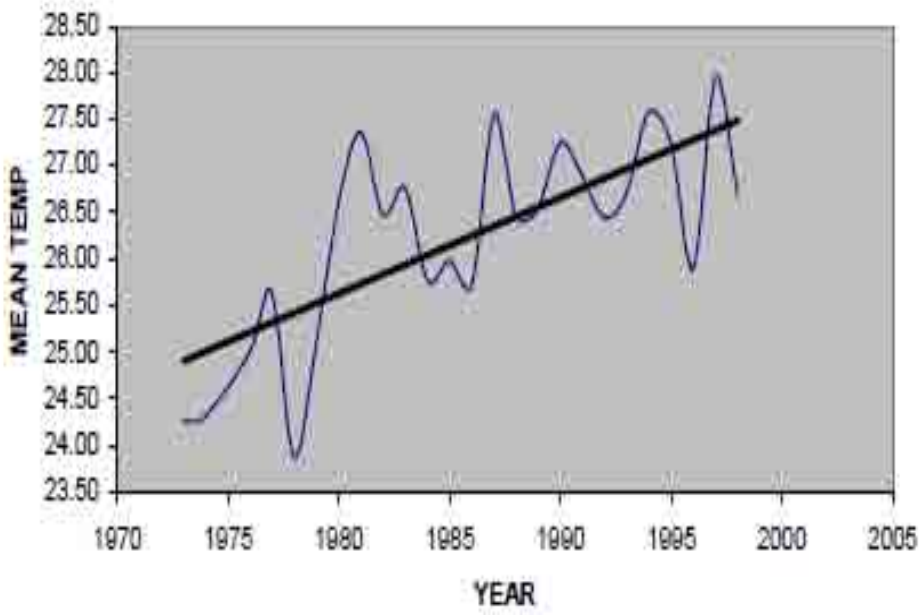
- Rainfall main source of renewable water
- River flows experience seasonal variation and follows rainfall trend
- Although resource is abundant, it is poorly distributed in time along the yr & unevenly distributed across the country
- Southern part being quite arid



Water Availability & Climate Change

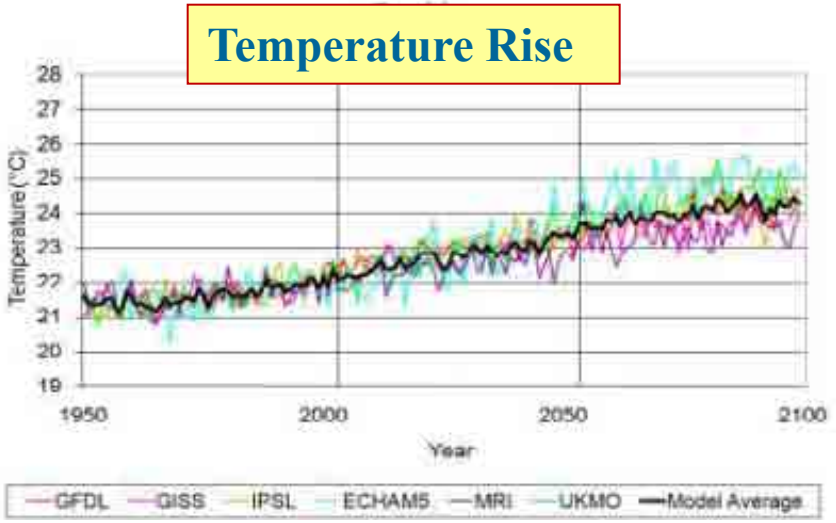
- From 1960s to now, trend towards droughts & floods
- Mean temp has so far increased by 1.3^0C since 1960s

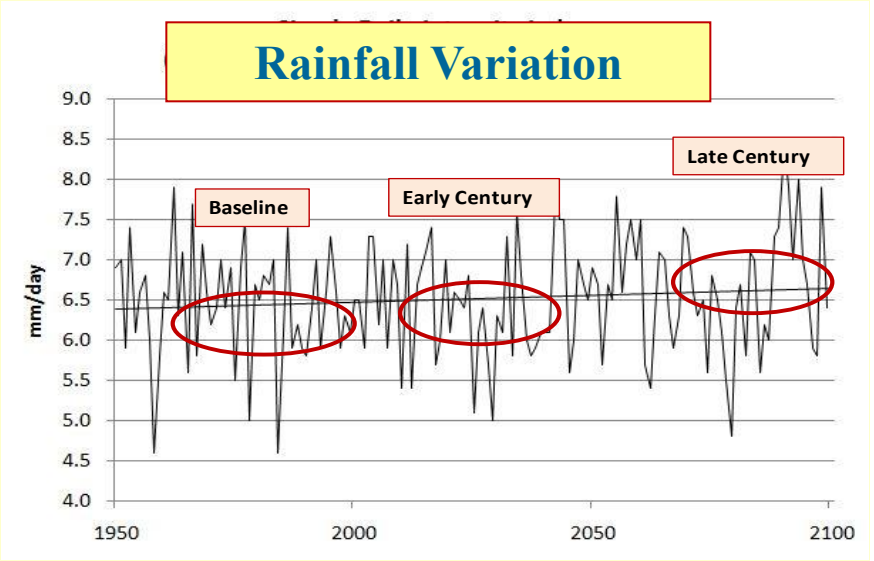




Water Availability & Climate Change/..cont'd

- Temp. projected to 3-5^{0}C by 2100
- Avge precipitation not projected to change significantly
- However, variability expected to increase
- Climate extremes to be more prevalent

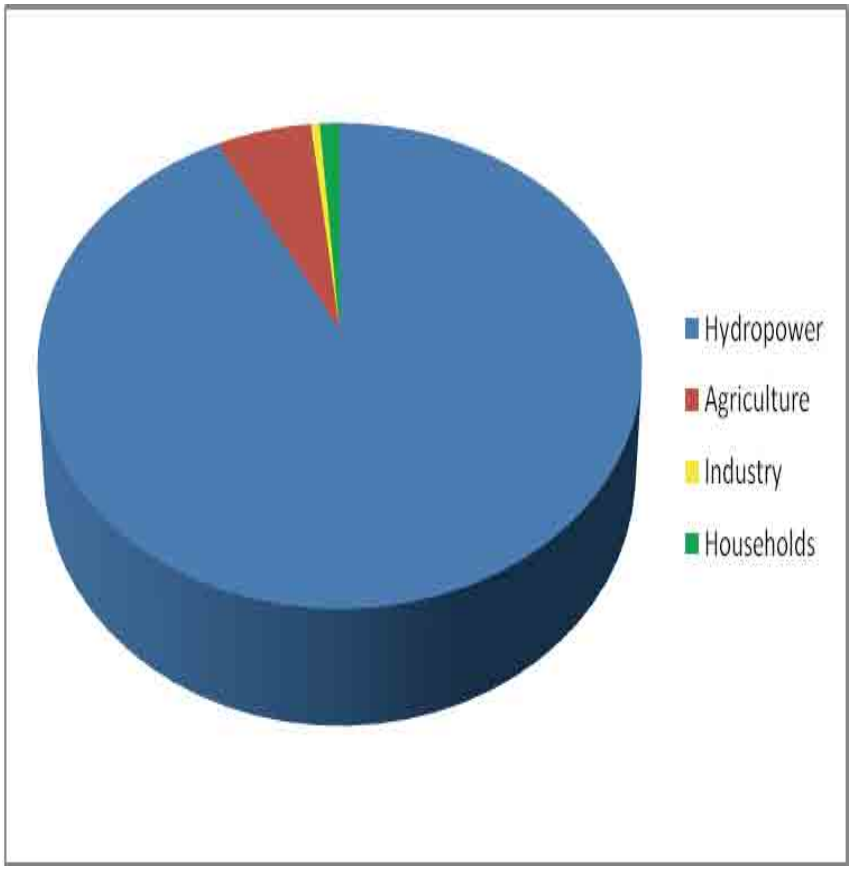




Water Demand

Total water demand is 40km3/yr:

- Energy (36km3)
- Agriculture (2.31km3)
- Industry, mainly mining (0.21km3)
- HHolds(0.48km3)



Water demand-domestic use

- Proportion of HHolds with access to water is 59%
- Urban areas is 89% and rural is 43%
- LSK highest (96%) while Northern Province lowest with 16%
- Std domestic water supply set at 500m by Govt
- Each point is supposed to serve 200
- Unplanned settlements in peri-urban areas affects provision of service

Water demand-domestic use/..cont'd

- Growth in pop continues to be a burden on existing water infrast.
- Infrastructure has remained the same while population has continued to grow

Water demand- MDGs Targets

- With less 4yrs remaining, hard to determine whether access to safe drinking water will be met
- Currently, 59% have access to water supplies against 2015 target of 75%
- Target by 2015 for low-income category is 2million people but only 770,000 have been serviced with safe piped water

Water Pollution

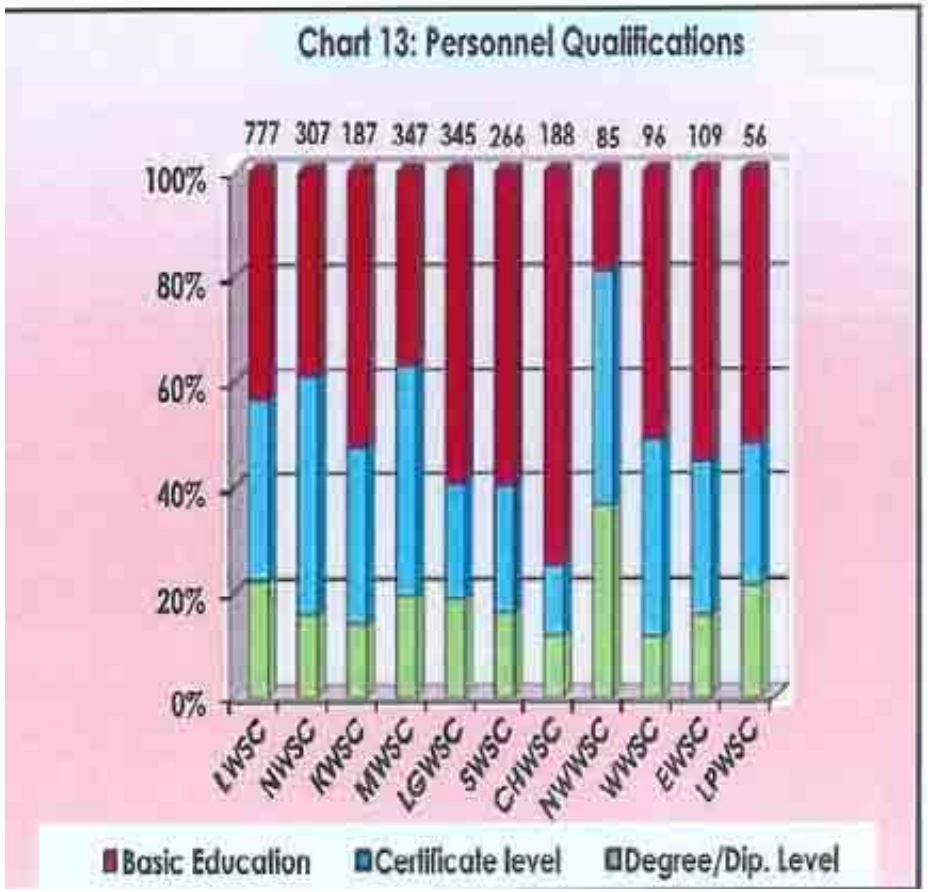
- Industrial sector, esp mining contributes to water pollution
- Large quantities of water with pollutants are released into rivers
- Rivers end up disappearing due to silt accumulation

Water Pollution/..cont'd

Water Pollution/..cont'd

Inadequate Human Resources & Financing

- Water sector lacks adequate qualified human resource
- Many specialized positions in govt. are vacant due to various reasons ranging from poor conditions to long recruitmt procedures
- Technical and business competencies lacking in most CUs
- FNDP only committed 2.4% to water sector and actual expenditure was 1.5% of total national budget



Inadequate Water Data (Information)

- Inadequate and unreliable data is a key challenge
- Current data being used for surface & g/water based on assessment done 16yrs
- Additionally, data and information is scattered in different institutions
- Data collection has been affected by diminishing hydrological network e.g from 250 in 1986 to less than 100 by 2003

Some Measures being put to address challenges

Legal Framework

- 1994 Water Policy separated water resources management from WSS
- Responsibilities were split between two Ministries:

➢ MEWD became lead for Water Resources Management (WRM);and

➢ MLGH got the WSS and implemented two main prgms namely NUWSSP and NRWSSP

National Urban Water Supply and Sanitation Program (NUWSSP)

- Objectives include provision of sustainable service and cost recovery for operations
- Local authorities established CUs to provide water to residents
- Currently, 11CUs & provide clean water to 86% of urban pop

Commercial Utility	Abbreviation	Start of operations	No. of connections	No. of towns serviced	No. of Staff	Level of economic activity	State of Infrastructure	External Support*
Lusaka WSC	LWSC	1989	73,240	4	777	High	B	World Bank
Nkana WSC	NWSC	2000	43,805	3	347	High	B	ADB
Katubu WSC	KWSC	2000	48,365	3	356	High	B	Denmark
Mulonga WSC	MWSC	2000	41,600	3	307	Medium	B	-
Lukanga WSC	LGWSC	2006	14,360	6	187	Medium	A	ADB
Southern WSC	SWSC	2000	29,529	17	266	Medium	A	-
Chambeshi WSC	CHWSC	2003	12,344	12	182	Low	C	Irish aid
North Western WSC	NWWSC	2000	6,882	7	91	Medium	A	-
Eastern WSC	EWSC	2009	9,903	8	109	Medium	B	Germany
Western WSC	WWSC	2000	9,775	6	97	Low	C	Denmark
Luapula WSC	LPWSC	2009	3,993	7	56	Low	C	-

Peri-urban Water Supply and Sanitation (PUWSS)

- Majority of urban pop lives in Peri-urban and investment in WSS required
- DTF was established under WSS as basket financing to assist CUs provide water in Peri-urban
- Unplanned nature of areas raises investment costs
- DTF uses a kiosk approach which serve up to 1,800 people

National Rural Water Supply and Sanitation Policy (NRWSS)

- Progam aims at increasing access to safe & reliable quantities of supply
- Focuses on adding more drinking water boreholes in rural areas
- By 2010, 500 boreholes had been drilled
- 2015 target is 18,000 boreholes

New Water Resources Management Act, 2011

- New act provides for the regulation of g/water and international waters
- Provides for establishment of catchment councils
- Act presents an opportunity to manage water resources on a catchment basis, which is natural hydrological unit as opposed to managing water based on administrative boundaries

Thank You for Your Attention