

# Case Study NWASCO (Water utility regulator Zambia)

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## Objective

- To study the development of water and wastewater services provided by public utilities in Zambia
- To understand the role and instruments of NWASCO, the regulator
- To analyse the use of the benchmarking instrument by the regulator
- To conclude if performance improvement, if any can be attributed to the regulator

## Water sector reform in Zambia

- Historically, municipal authorities were responsible for delivery of watsan services; the infrastructure was owned, expanded and maintained by central government, except in the copper mining areas
- Drinking water was free or heavily subsidized
- The collapse of the copper price in the world market (1980s) caused a major economic crisis following which the service level in the water sector declined
- Reforms started at the end of the 1980s and continued in the 1990s; the 1994 reforms created autonomous, publicly owned utilities (CUs) and retained private operators

## Water operators prior to & after the reform

	Prior	After
Central Govt	46	0
Local Govt	29	0
Commercial utilities	2	11
Private schemes	7	7

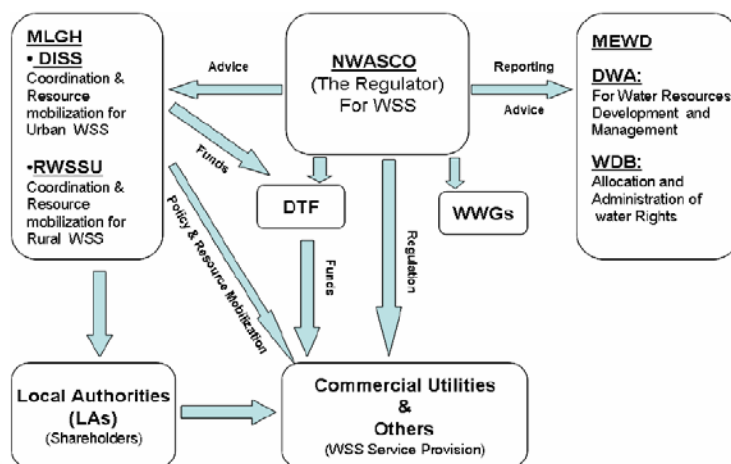
11 commercial utilities cover 76 towns

7 private schemes serve mining towns in the Copper Belt

## Structure of the CUs

- 11 commercial drinking water and sanitation companies are operating systems in the major urban centers in Zambia and supply the majority of the urban population
- The companies have a local monopoly
- The municipalities are the only shareholders and nominate the non-executive board of directors
- The board members select management and oversee the activities of the water company
- No company has sold its shares to private partners

## Key Stakeholders in the Zambian water sector



## Zambian water sector challenges

- Zambia is characterized by a high growth of the urban population where the utilities have to also serve the peri-urban informal settlements
- The regulatory issue is not so much about price increases to fund investments (not feasible), but rather to improve revenues for the proper functioning of the system
- Government and donors are providing funding for investments in the form of grants and soft loans

## Mandate of NWASCO (WSS Act 1997)

- License utilities and service providers
- Develop sector guidelines for performance and regulate the tariff mechanisms
- Establish and enforce standards through an annual benchmarking
- Disseminate required information to the consumers

## NWASCO regulatory tools

- Benchmarking
- Information system
- Innovations
- Monitoring and licensing
- Pro-poor regulation
- Service level guarantees and agreements
- Water supply and sanitation guidelines
- WSS sector report

## NWASCO compares the performance of the Cus

- NWASCO uses benchmarking to induce quasi-competition between water utilities
- The assumption is that the quasi-competition leads to increased efficiency and enhanced performance
- The main results of this competition are published in the annual sector report
- The reports are available online:  
[www.nwasco.org.zm](http://www.nwasco.org.zm)

## Financing NWASCO

- NWASCO is largely financed by the service providers themselves, who contribute 2 percent of their financial turnover as a license fee to NWASCO
- License fees made up 72 percent of NWASCO's budget and the remaining 18 percent was financed by donors and the Zambian government (NWASCO, 2004)
- More recently 99% of regular expenses is financed from the licenses; special programs are often sourced from external funding e.g. by the German Government

## Typical regulatory challenges

1. Quality of water
2. Prices of the products provided
3. Price recovery mechanisms
4. Tariff adjustment and risk allocation
5. Regular and reliable supply
6. The investments, the capital expenditure, or the RoR on investments
7. Pressure in the system
8. Non-ambiguous performance indicators
9. Dealing with the poor (price & incentives to provide services)
10. Checking that private parties respect the legal arrangements defining their activities

## Typical indicators used by regulators

Financial indicators	Non-financial indicators
<ul style="list-style-type: none"> <li>• Operational expenditures as percentage of total cost</li> <li>• Investments made</li> <li>• Rate of return on capital</li> <li>• Solvency rate</li> <li>• Yields to assets</li> <li>• Number of non paying clients</li> <li>• Tariff paid by poor people</li> </ul>	<ul style="list-style-type: none"> <li>• Indicators of product quality</li> <li>• Continuity of supply (24/7)</li> <li>• Water pressure</li> <li>• Connections per employee</li> <li>• Non revenue water</li> <li>• Population coverage</li> <li>• Number of poor people connected</li> </ul>

## Assignments

- Assignments 1 to 5
  - #1: analysis of KPIs
  - #2: analysis of regulator's comments
  - #3: analysis of investments
  - #4: analysis of regulator's activities
  - #5: analysis of finance and efficiency
- Concluding discussion (using the reader)
- Sources of information:
  - Assignments: information given with each assignment
  - Concluding discussion: reader

## Assignment 1

### Information from 3 Sector Reports:

- Overview of utilities
- Overview of KPIs

### Instruction:

- Three participant groups
- Each group studies one cluster of utilities:
  - Utility overviews (table 2)
  - KPI overviews (table 3)

## Assignment 1

### Assignment:

- Present your observations on the information presented in the 3 overviews (e.g. on the number of connections, external support agencies, etc)
- Present your observations on the KPIs, on the values for the different KPIs, on the concept of the benchmarks (what are the values used?) and on the trends presented in the 3 overviews
- Present your conclusions and recommendations on the performance of the various companies in your group of companies, over time and against the benchmarks



## Assignment 2

### Information from 3 Sector Reports:

- Comments for each CU

### Instruction:

- Three participant groups
- Each group studies one cluster of utilities:
  - Study the comments by the regulators
  - Compare the comments by the regulator with your own conclusions from assignment 1

## Assignment 2

### Assignment:

- Present your conclusions on the comments by the regulator on your clustr of utilities (agree/disagree; soft/hard, etc..)

## Assignment 3

### Information from 1 Sector Report:

- Chapter on investments for each CU

### Instruction:

- Three groups
- Each group to study the whole investment chapter (US\$ 1 = ZMK 5,100)
- Calculate investments per connection for the various utilities
- Study comments by the regulator on the state of the investments

## Assignment 3

### Assignment:

- What is your opinion on the adequacy of the investments when considering the KPIs
- Do you agree with the regulator's opinion

## Assignment 4

### Information from 1 Sector Report:

- Chapter on activities by the Regulator

### Instruction:

- Study the chapter to understand what activities the regulator undertakes to promote the improvement of service delivery

## Assignment 4

### Assignment:

- What are the different areas of activity by the regulator
- Which activities are aimed at capacitating the regulator
- Which activities relate to the regulation and monitoring of the CUs
- Which tools does the regulator use
- Does the regulator use all tools
- How do you value the regulator's use of the tools
- Are there important regulatory tools missing

## Assignment 5

### Information from 1 Sector Report:

- Chapter on comparative performance by the CUs

### Instruction:

- Study the chapter to know how the regulator regulates and monitors finance and efficiency
- Three participant groups
  - Group 1: paragraph 7.2.3(financial)
  - Group 2: paragraph 7.2.4 (staff)
  - Group 3: paragraph 7.2.2.3 (customers) and 7.3 (governance and management)

## Assignment 5

### Assignment:

- Which indicators and processes are monitored by the regulator
- Does the information provided here provide a better understanding of company management and operations
- If so, what insights have you gained