

# Regulatory challenges in the water sector

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Foundation course in utility regulation in Africa

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with acknowledgements to Jan Janssens, World Bank

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# Outline

- Types of regulation
- Economic regulation – overview
- Contract regulation – overview
- Regulatory challenges in the water sector



# Types of regulation

- Economic regulation
  - Contract regulation
  - Technical regulation (standards)

TODAY

- Environmental regulation
- Social regulation (access)

THURSDAY

# Economic regulation - overview

## Objectives

- Efficient operations
- Efficient investments
- Consumer gets good value for money
- Service is sustainable

## ■ Scope

- Tariffs or revenues
- Investments (possibly)
- Integrally linked to setting & regulation of standards

## ■ Basic approaches

- Rate of return
- Price or revenue caps (incentive-based regulation)
- (or by contract – see contract regulation)



# Contract regulation - overview

This is a subset of economic regulation; used in the context of PPPs

- Types of contracts
  - Concessions
  - Leases
  - Management contracts
  - Service contracts
- Purpose of contracts
  - Replaces/reduces role/discretion of regulator
- Scope of contract regulation
  - Ensure compliance with national policies & standards
  - Promote best practices (model contracts)
  - Conflict management (avoid costly courts)

# Regulatory challenges



# (1) Water is an economic service

The most important challenge in the water sector is recognising that water is primarily an economic (commercial service) and should primarily be treated as such first, and then take account of the social aspects of the service.

Governments around the world are very reluctant to do this, even though the value (in economic terms) of the social aspect of the service is only a small fraction of the total value of the service. This arises from a misconception concerning how the social aspect of the service should be addressed and is the key threat to sector sustainability.

Fortunately, this perception is changing as evident in the international debates (for example, statements such as “water is both a economic and social good”) and in practice in some countries (for example, Australia, Chile)

# Implications

Australian experience

- Full cost accounting of the service
  - Ring-fencing a prerequisite
  - Full economic depreciation
    - Preferred approach is **asset renewal annuities** which are the present value of the future stream of cash flows needed to keep assets in service
- Full recovery of all costs
- Real return on assets
  - Paid as dividend to the (public) shareholder

This means that assets and the business are truly sustainable.

The dividend can be used to fund the social aspect of the service (the topic of Thursday's presentation)

## Reminder: problems emerging

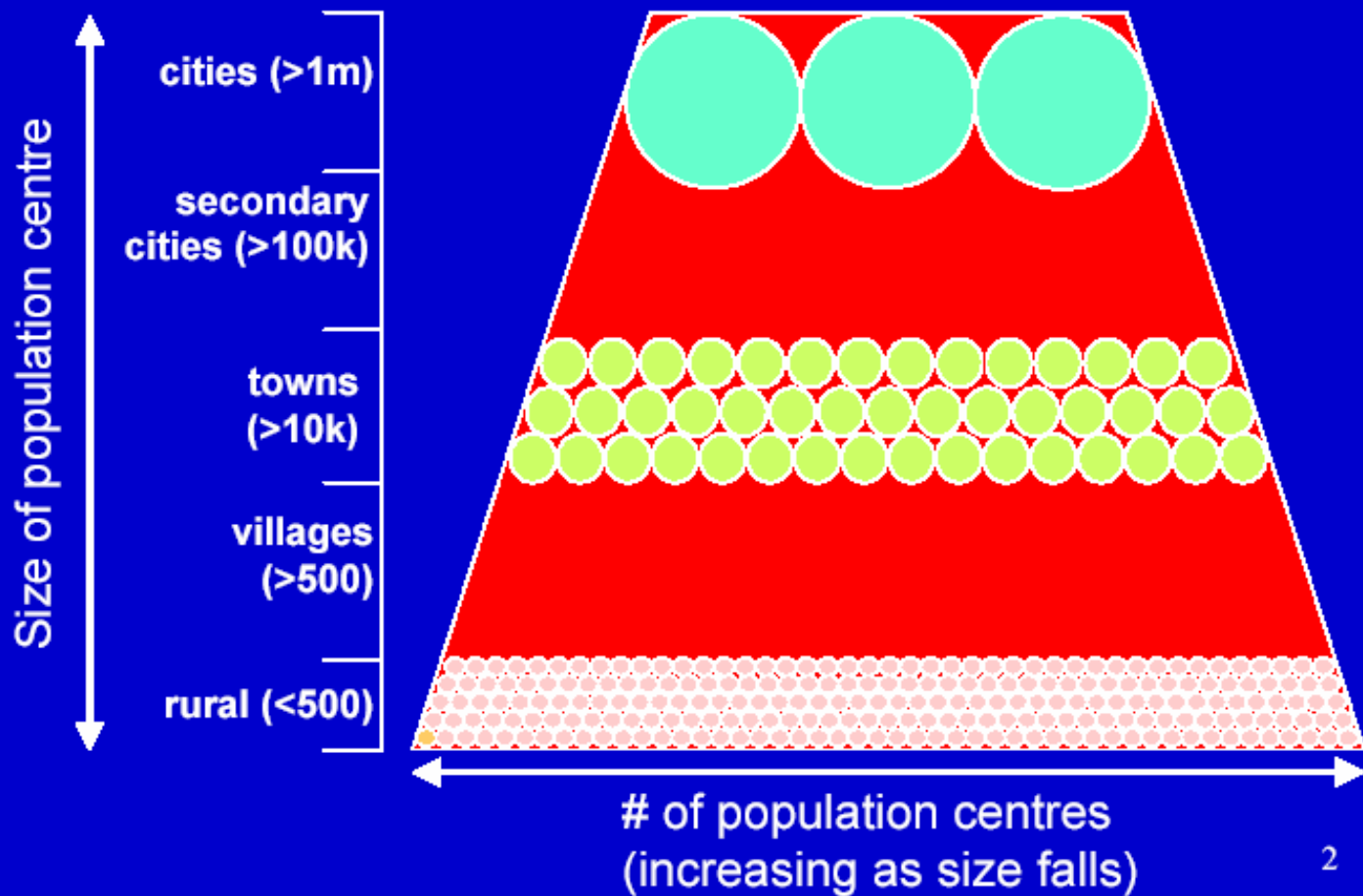
*“Government opportunism is the main problem for poor performance of utilities, even publicly owned utilities. Governments cannot credibly commit to financial sustainability in the water sector.”*

*Body of knowledge for regulators, 2003 (draft)*

## (2) Water services are diverse



# *The Sector is Segmented With Different Consumer Needs And Challenges*

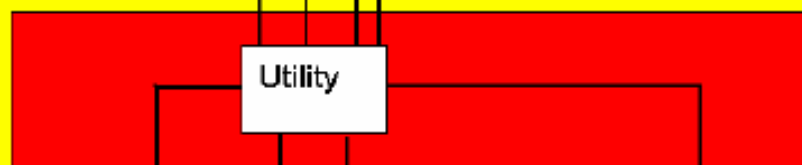


R1



resources regulation  
(env/iwrm)  
- water rights/licensing  
- groundwater extraction  
- surface water protection

R2



SSIP  
CBO / NGO

economic regulation  
- water tariff  
- quality of service  
- contract compliance

piped water

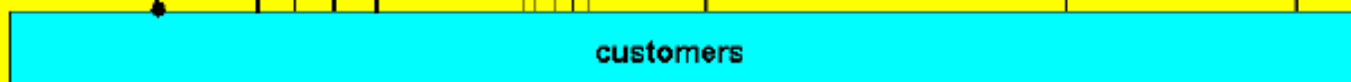
shared connection

CBO  
NGO

SSIP

self provision

R3



env / public health  
- water quality  
(customer education)

♦ metered point of supply, end of liability of utility for water quality supplied

CBO: community based organization; NGO: non-governmental organization  
SSIP: small-scale independent provider

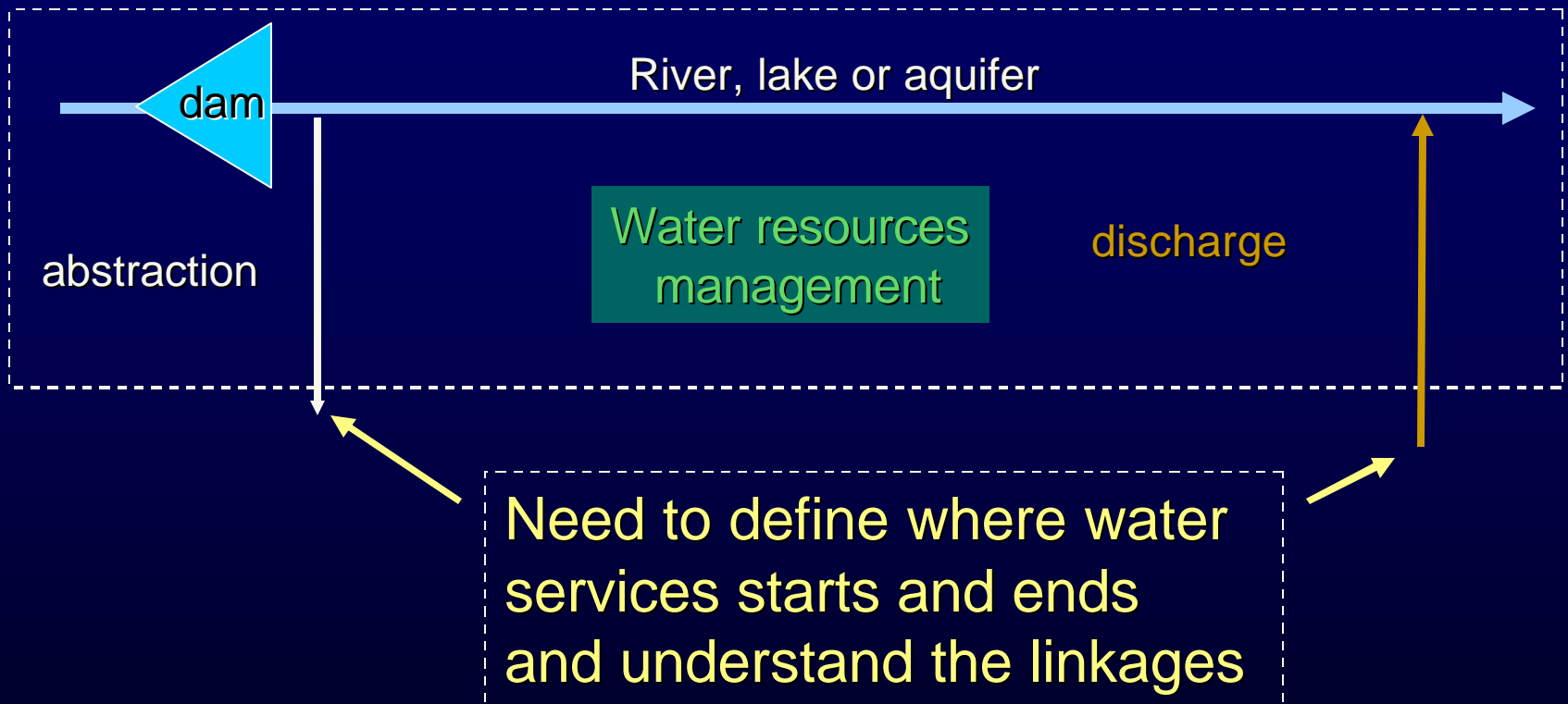


# Implications

World Bank experience

- Cannot adopt a one size fits all approach
- Separate out economic regulation of **utilities**
  - Recognise that it is not possible to undertake effective economic regulation local government provision
- However, note that protection of the customer/ consumer goes beyond the regulation of utilities.
- **NO EFFECTIVE REGULATION WITHOUT REFORM!**
  - particularly for the regulation of public sector provision

### (3) Interface with water resources regulation



At point of abstraction, rights, availability, WR infrastructure and WRM activities impose costs onto water services;

At point of discharge (from WWTW), ambient river quality standards and effluent standards impose costs on water services.

## (4) National versus local regulation

Australia, Brazil, Mexico experience

- Local regulation
  - Advantages: responsive to local consumer needs; can be tailored to local circumstances
  - Disadvantages: cost, skills, credibility
- Balance depends largely on local capacity
  - For example, Joburg CMU has adequate scale
- Mostly not a choice
  - Constitution dictates in many instances
  - But this does not rule out national regulation!

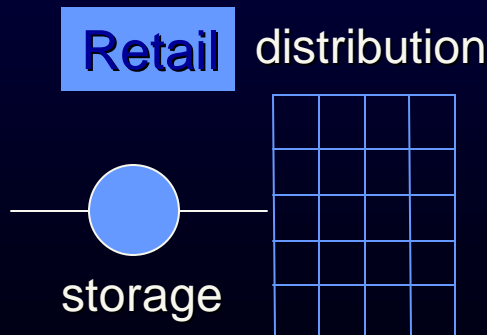
## (5) Contract regulation

World Bank experience, see paper on Senegal

IT IS (almost) ALL IN THE CONTRACT!

- Can be a substitute for a weak regulator
  - Reduces discretion of the regulator
- Buy the best advice available
  - A handful of international transaction advisers
- Embed key provisions in contract (for example, tariff adjustment mechanism, penalties)
- Entrust regulator to administer these tasks
- Enforceability an issue in public-public contracts

## (6) Challenges of regulating water utilities



- Forecasting demand
  - Good to be conservative, but by how much?
- Lumpy investments
  - What is appropriate price? LRMC? AHC?
- Determining efficient costs
  - Costs are system dependent
- Quality of supply
  - What standards are appropriate? (cost trade-offs)
  - Penalties for non-compliance
  - Self-policing of standards not okay unless external random audits
- Non-core business
  - Definition; enforcing ring-fencing
- Managing risk
  - treasuries; shifting risk onto consumer

## (7) Challenges of regulating wastewater utilities

- As for water utilities
- BUT tariff and subsidy design more complex ...
  - What share of revenue from private consumers and in what form (eg. local taxes, consumption-based tariffs)
  - Negative externalities more pervasive (eg. Brazil, flush toilets with outlets into the street.)
  - Equity between served and unserved
- AND direct relationship between standards and cost
  - For example, DWAF 2010 standards



## (8) Financing investments

### REGULATORY REGIME WILL INFLUENCE SECTOR FINANCING ... some key pointers ...

- Avoiding grant seeking behaviour
- Good to rely of domestic capital formation
  - Historically, water industry has helped in the development of local capital accumulation
  - Avoid exposure to foreign currency risk
- Use combination of
  - Retained revenues (“equity”)
  - Bank loans
  - Bonds
- **Private equity** is expensive, especially in development countries, but sometimes may be necessary or desirable.

# (9) Designing subsidies

(discussed on Thursday)



## (10) Regulatory independence

- Governments reluctant to allow regulatory independence in the water sector
  - “government needs to protect public interest”

BUT this is a misunderstanding of regulatory independence

- Government sets policies
- Independent regulator allows for
  - Greater accountability
  - Greater transparency
  - Ability to attract and retain professional skills

# (11) Form of economic regulation

- ROR or incentive-based regulation?
- In practice, both approaches are “hauntingly similar” (World Bank)
- When starting out, recommend starting with an annual cycle of ROR, then converting to incentive-based (price or revenue cap) regulation.
  - Chilean model of interest (ideal company; incentives to disclose; dispute breaking mechanisms)

## (12) Information

- Surfacing performance and information
  - Positive incentives to report
  - League tables (public domain)
    - Benchmarking
  - Avoid confidentiality clauses in contracts
  - Use the need to get agreement as a strong incentive to disclose information

# (13) Capacity

- Water often the poor cousin
- Creation of independent regulation can help
- Even better to move towards a multi-sector regulator to share scarce, high level core competencies (legal, finance, economics across sectors)
- As an alternative ?
  - Outsource regulation (this is not desirable but may be the next best alternative to independent regulation)



# (14) Network of water regulators

- Learning from each other
- Taking capacity constraints into account
- Not importing first world models without careful consideration
  - Zambia (NWASCO)
  - Mozambique
  - Others ...





Thank you

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