

DIFFICULTIES IN IMPLEMENTING DECENTRALISED SANITATION SYSTEMS IN EGYPT EXEMPLIFIED THROUGH THE “GTZ MODEL”

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Egypt – Background Information

- Population 2008: 78 million → Population growth expected 2025: 90 million
- Agricultural expansion in “New Lands”
- Growth of industrial and agricultural activities



- Increasing water demand and wastewater production
- Deterioration of quality of water resources
- Available water resources are fully utilised

Problem Statement (1) - Generally

- Water supply in Egypt improved
 - Central wastewater systems have been implemented in cities and towns
 - But: **NOT** in small communities/villages
- Lack of sanitation services, especially in **rural** Egypt
- Threatening human and environment

Related issues:

- Institutional set-up of Egypt's water sector
- Water and wastewater tariffs in Egypt
- Traditions, culture, and norms

Problem Statement (1) - Generally

Access to improved water source and sanitation for the year 2006

	Egypt, urban	Egypt, rural	Egypt, total
Water supply, total	98.8%	92.9%	96.6%
Sanitation, total (connection to sewer network)	82.5%	24.3%	50.5%

(Adapted from MED EUWI 2, 2009)



Before implementation: hygienic conditions of very low standard



After implementation of the sewage system

Problem Statement (2) – GTZ model

- Successful implementations → but: slow replication
- Question of finance
- Question of “support”



Objectives of the study (1)

1. Investigating and describing driving forces, constraints and challenges,
2. Analysing reasons for and causes of faced difficulties, which hinder performance

Focus:

The study did not focus on technical aspects, but rather, on the **socio-economic and institutional background**

Methodology (1)

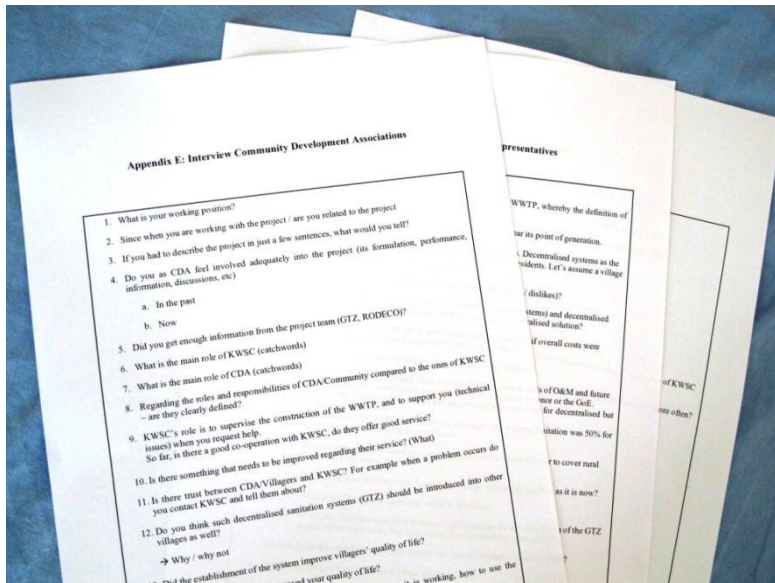


1. Desk study

- Review of literature referring to the theoretical background of IWRM as a concept and the problem of its implementation (focus: “**governance**”)
- Literature concerning problems of introducing decentralised sanitation systems in Arab countries
- Overall documentation of some exemplary establishments of such sanitation systems (based on project’s documentary), including technical, financial, O&M issues as well as effects and impact.
- Review of the respective Egyptian Law

Methodology (2)

2. Field research (semi-structured interviews and consultations) (17)
 - a) Experts (international and national) (3).
 - b) Village community and CDAs (7).
 - c) Representatives of different governmental institutions (7).



IWRM in Egypt

- More than 10 ministries involved into Egypt's water sector → un-coordinated, disconnected planning

to address shortcomings



- Commitment to IWRM, Institutional Reform, principle of subsidiarity, increase involvement of private sector and consumers
- New national policies

BUT: necessary reform processes and institutional changes in respect of IWRM are still in their initial stages

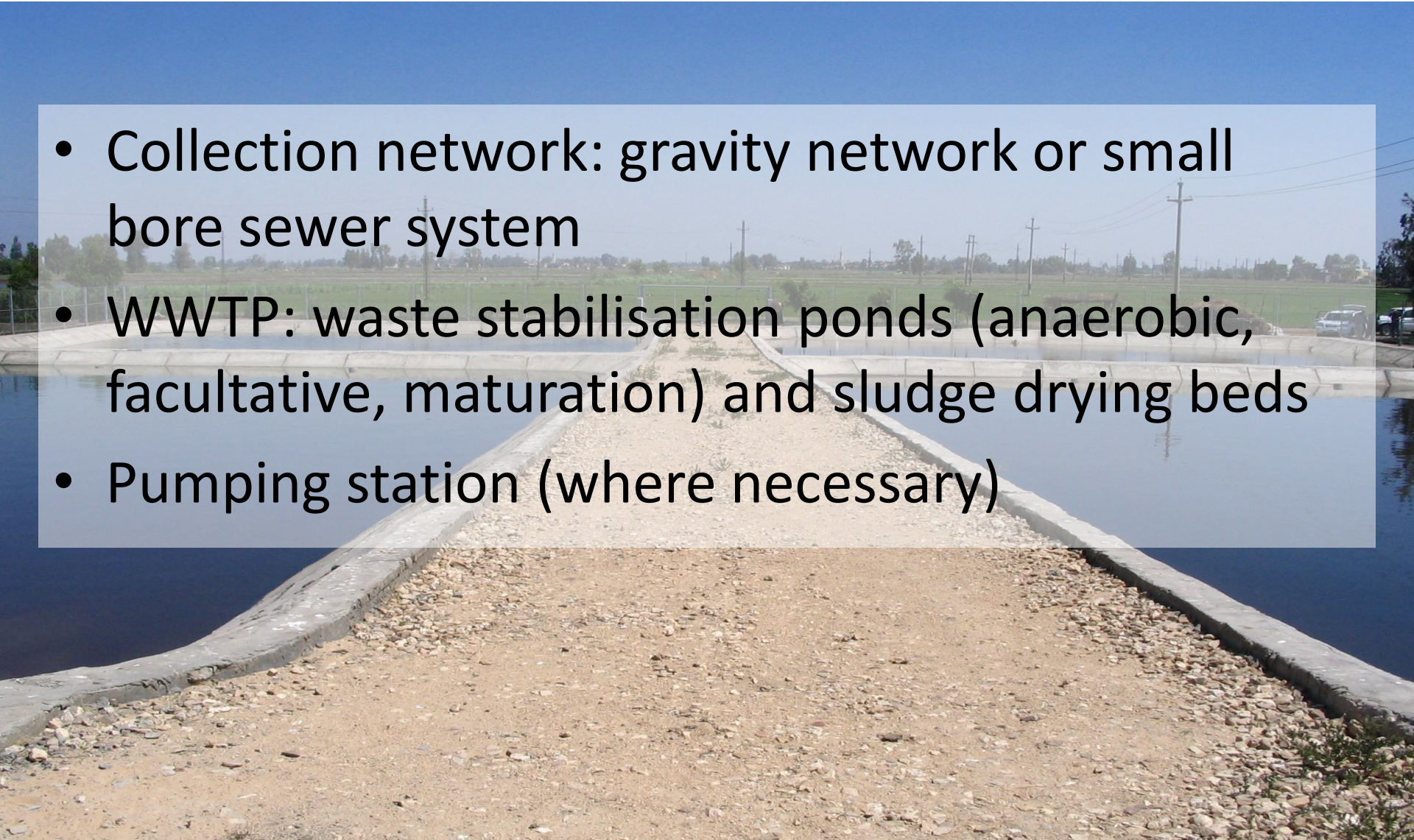
The “GTZ model” (1)

- Serving villages up to 5,000 inhabitants
- Decentralised sanitation system
- Community based approach
- Community manages system, carries costs of O&M, and provides land

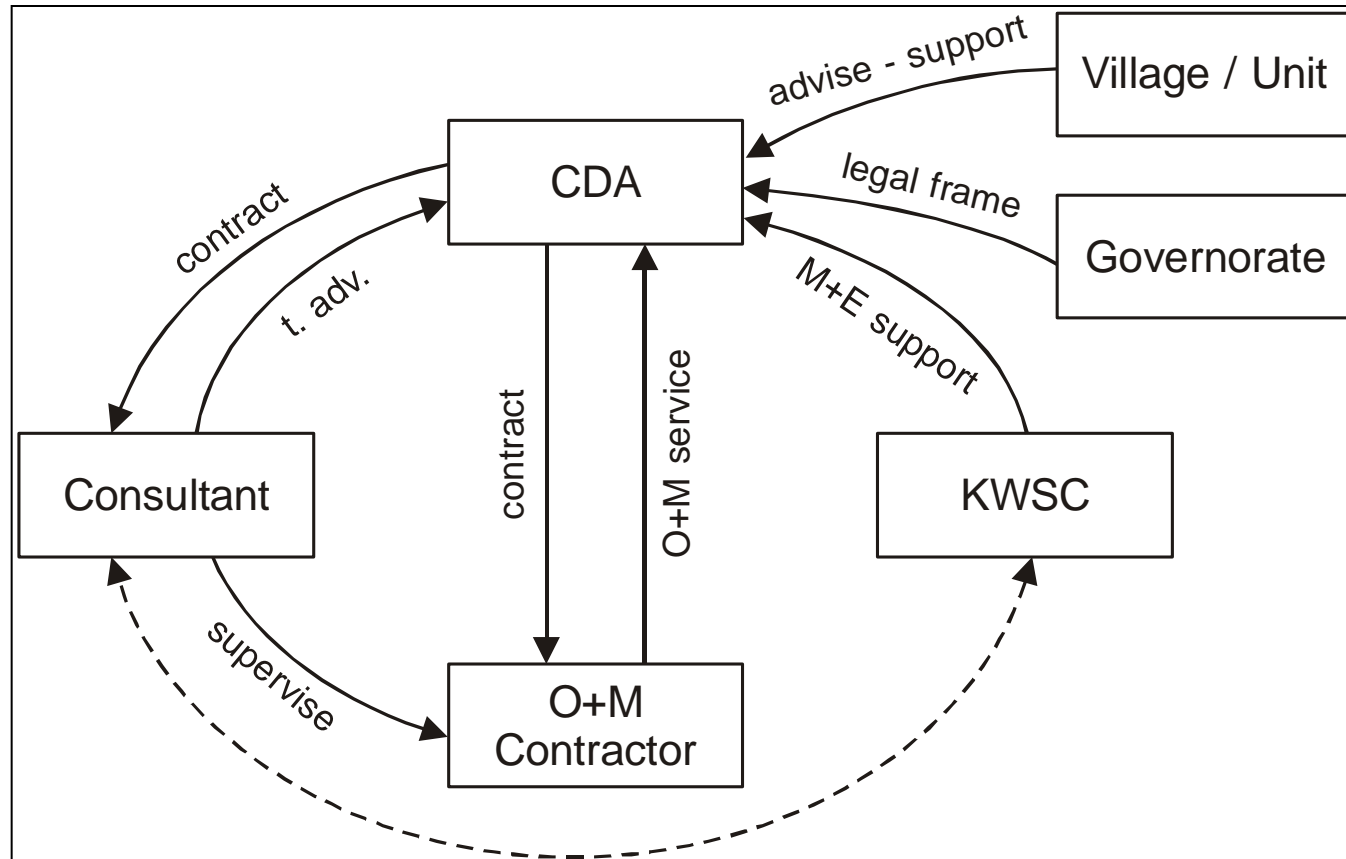


The “GTZ model” (2) – Technical system

- Collection network: gravity network or small bore sewer system
- WWTP: waste stabilisation ponds (anaerobic, facultative, maturation) and sludge drying beds
- Pumping station (where necessary)



The “GTZ model” (3) – Management and operation



(Wehrle, et al., (2007, p. 27))

The “GTZ model” (4) – Financing

- Monthly service charge on flat rate basis per household
→ covers costs of O&M and future reinvestment costs
- Collected by CDA



→ Approach new to Egypt

- Water and wastewater services highly subsidised
- No utility covers costs of O&M via user charges

Results of investigations (1) – Review and consultations

- Decentralised sanitation systems – a new approach for Egypt (both sides)
- Financing
- Commitment of the Kafr El Sheikh Water and Sewerage Company (KWSC)
- Commitment of village community
- Land requirement
- Legal framework

Results of investigations (2) – Outcomes of the interviews (not experts)

- Perception of decentralised sanitation systems by governmental representatives
- Perception of the GTZ model
- Improvements related to the establishment of decentralised sanitation systems
- Participation
- Ownership
- Additional information
- Governance
- Financing
- Replication of the GTZ model

Conclusion (1)

Main difficulties / limitations: **Governance and financing**

Governance

- Difficulties related to parties' attitudes and commitment.
 - Unaccustomed to sharing responsibilities.
 - Unclear distribution of roles and responsibilities.
 - Limited trust.
- Concerned institutions did not support establishment of DSS
- Both sides did not and do not satisfactory perform their role
- **Establishment of a new governmental body brought a new structure into the water and wastewater sector of Egypt**
- **Importance of structured organisation with well-defined coordination and related to this a clear distribution of roles and responsibilities**

Conclusion (2)

Finance

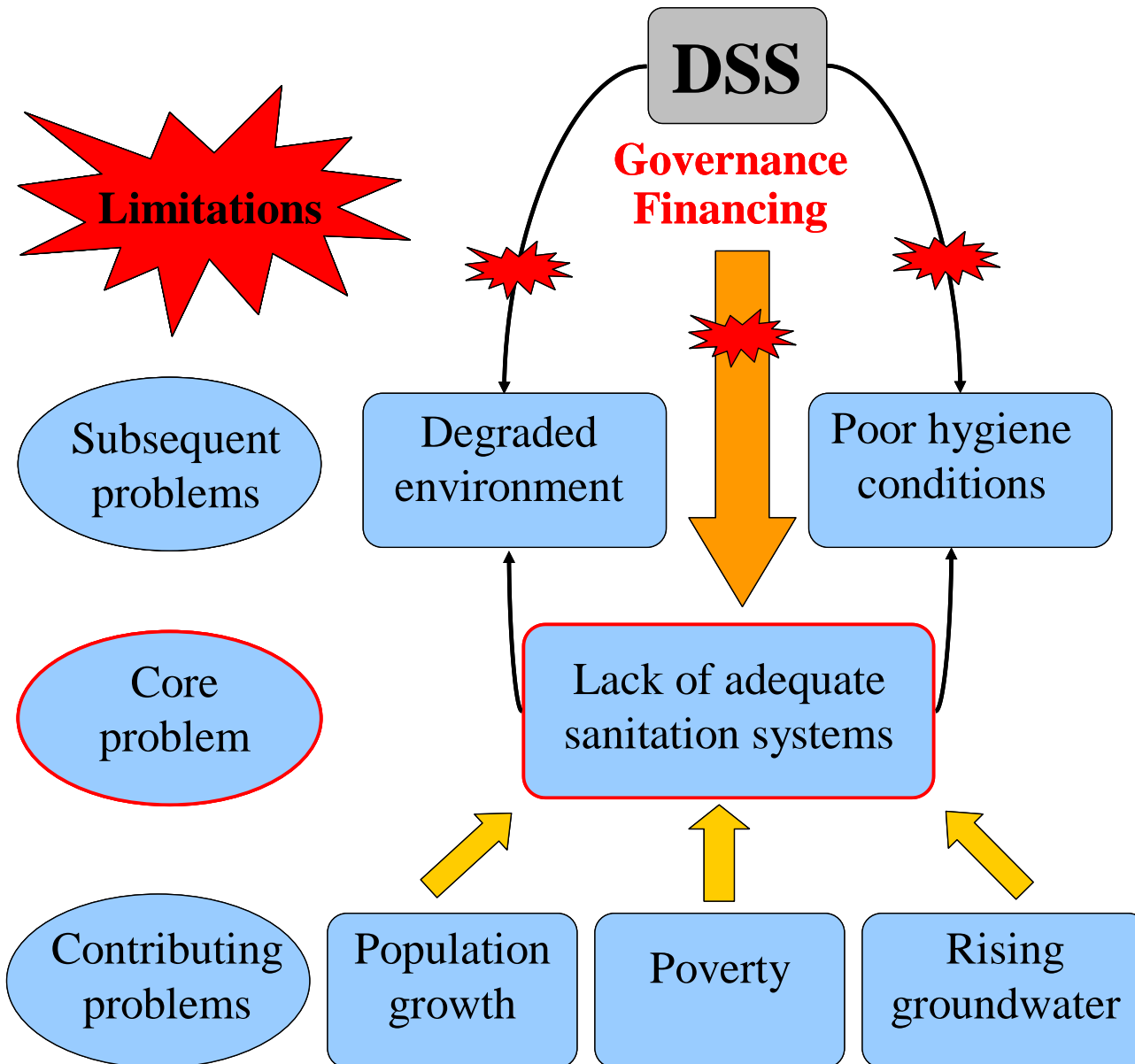
Main reason for currently slow replication of the model: Question of finance

Comparison of tariffs (per household) considering different scenarios

Village	Current Tariff (LE)	Tariff (LE) total cost	Tariff (LE) full cost and interest rate (2%)	Tariff (LE) total operational cost and interest rate (2%)
El Moufty El Kobra	7	20 ⁵³	--	--
Om Sen	10	28	34	12
Koleaah	10	57	70	26
Om Shour	10	69	84	24
Handakokha	10	53	65	20
Kafr El Gedid	10	63	79	21
Kouzman	10	55	67	19

Source: Own calculations based on numbers given by RODECO, Implementation Schedule, status September 2010; and Report on Financing Systems, April 2007

→ Need to change current tariff system



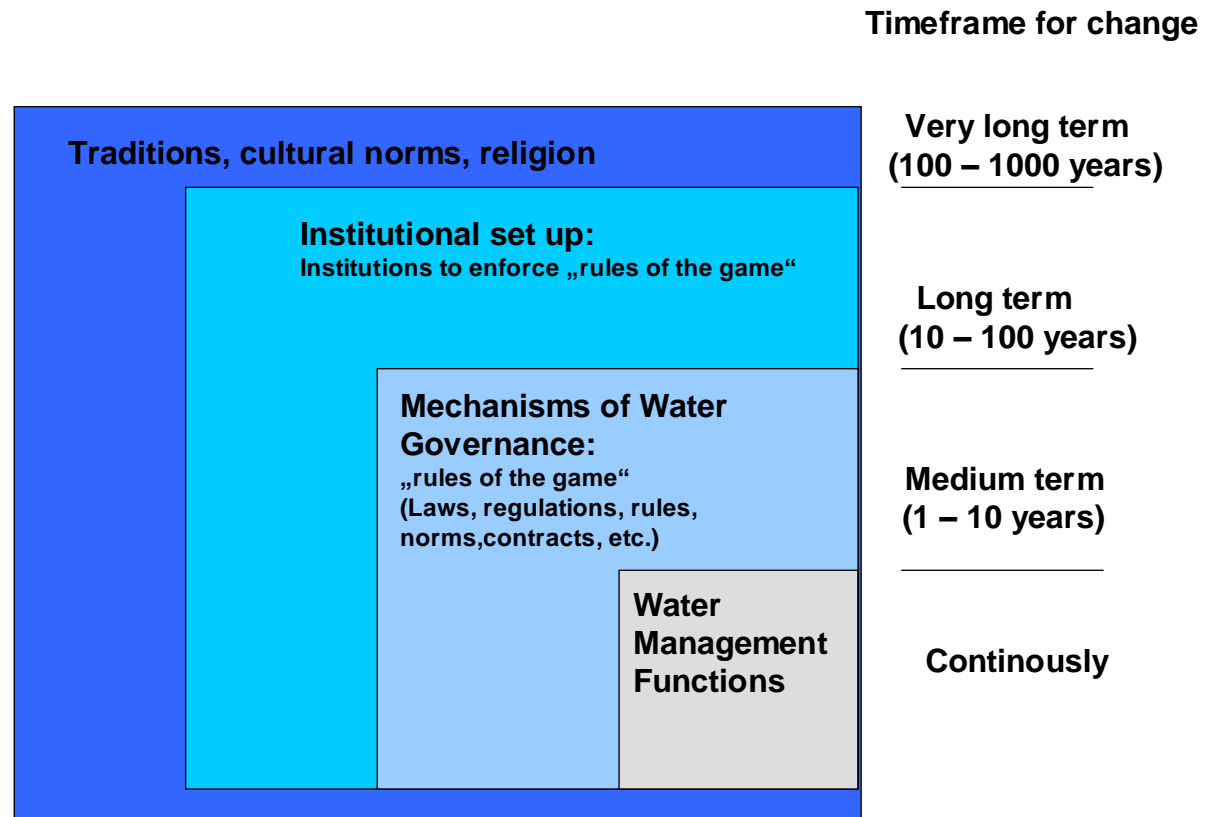
Conclusion

- Decentralised sanitation services → great opportunity for Egypt
- Several constraints and limitations → related to governance and financing → can be overcome

(Main) Recommendations (1)

Regarding Governance

- Give more time



(Main) Recommendations (2)

Regarding finance

Further examine existing tariff systems,

- Social and technical studies
- Investigate rising costs of construction

THANK YOU FOR YOUR ATTENTION

