

# Can integration of local water users bring us closer to achieving the SDGs 6.1, 6.2 and 6.3?

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## Introduction

### Old Question (1):

How to provide people with safe drinking water?

### MDG answer:

To build pipelines and provide centralized water system

### SDG (target 6.1) answer:

To provide safely managed drinking water system: both are accepted – centralized and decentralized

### Old Question(2):

How to provide people with safe sanitation?

### MDG answer:

To build/install flushed toilets

### SDG (target 6.2) answer:

To provide safely managed sanitation facility (not shared) where excreta is disposed in-situ/off-site (stored temporarily and then emptied and transported to treatment off-site; transported through a sewer with wastewater and then treated off-site)

### No one thought question (3):

What to do with single household waste water?

### MDG answer:

Not considered directly

### SDG (target 6.3) answer:

To treat or reuse waste water in situ or off-site (Target 6.3)

### New Question:

How to implement safely managed drinking water and sanitation systems according to SDGs?

### Proposed multidisciplinary solution:

To collaborate the sustainable development model into the process of water and sanitation provision where especially social factors are considered.

**Aim of the poster:** to assess the perceived level of responsibility for managing rural centralized and decentralized water and sanitation systems; and investigates the access to drinking water (SDG 6.1), sanitation services (SDG 6.2) and wastewater treatment (SDG 6.3) among rural citizens in one of the donor regions in Kazakhstan – Atyrau region.

**An existing literature:** the current literature shows a shift from engineering solutions towards multidisciplinary approach. Public acceptance and shared responsibility and their capacity building is the key to achieve full coverage with SDGs 6.1, 6.2, 6.3.

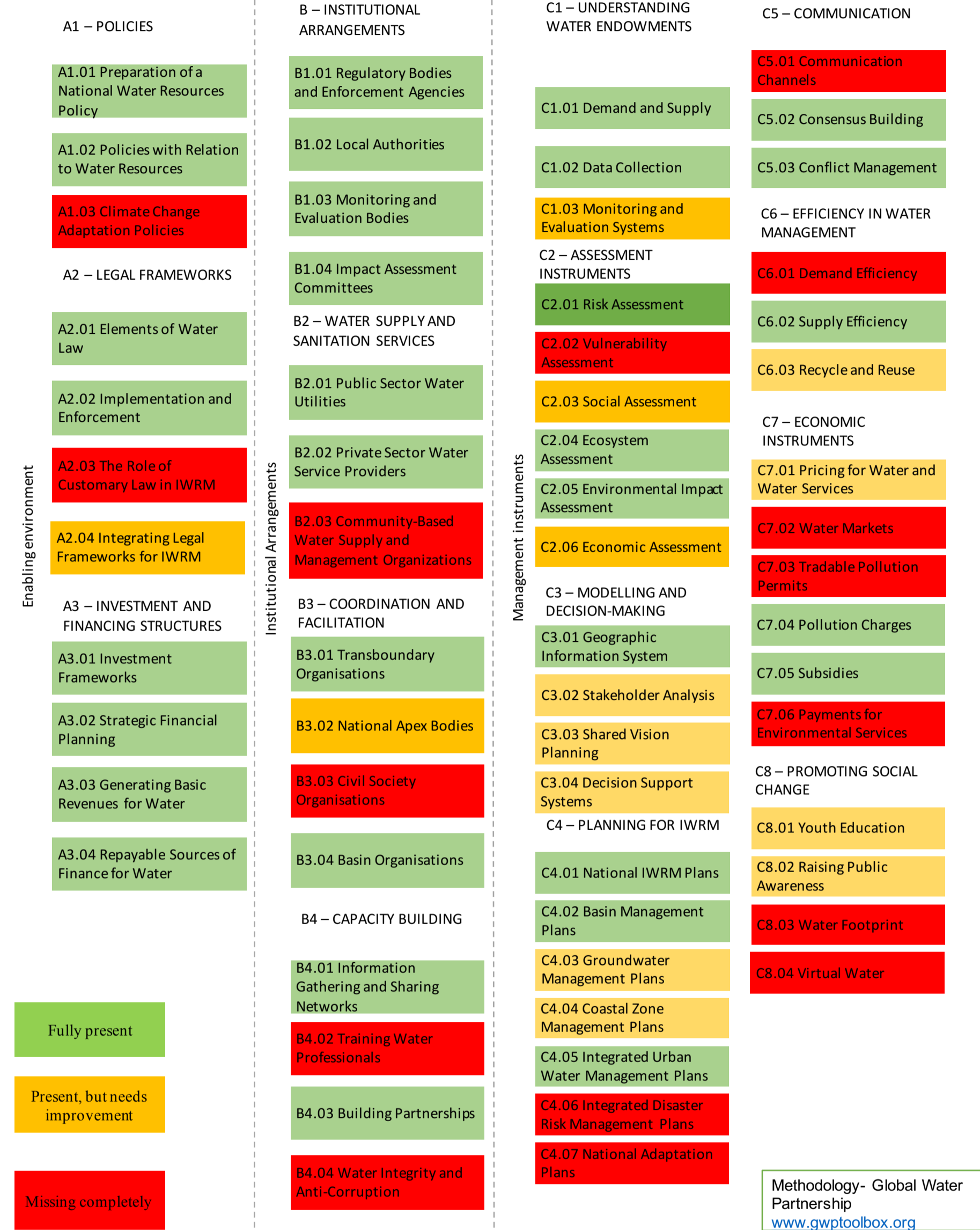
**Hypothesis:** The presence of water and sanitation facilities does not guarantee the safeness of the systems. The water user involvement, public attendance, environmental aspects and economical affordability should be considered in water provision. Stakeholder perceived responsibility for decentralized water supply and sanitation systems is important to safely manage those systems and to build the capacity.

**Contribution:** involvement of people and assessing the perceived responsibility level for different water and sanitation services may help better shape the safely managed systems and thus, build the capacity to assure long-term sustainable access.

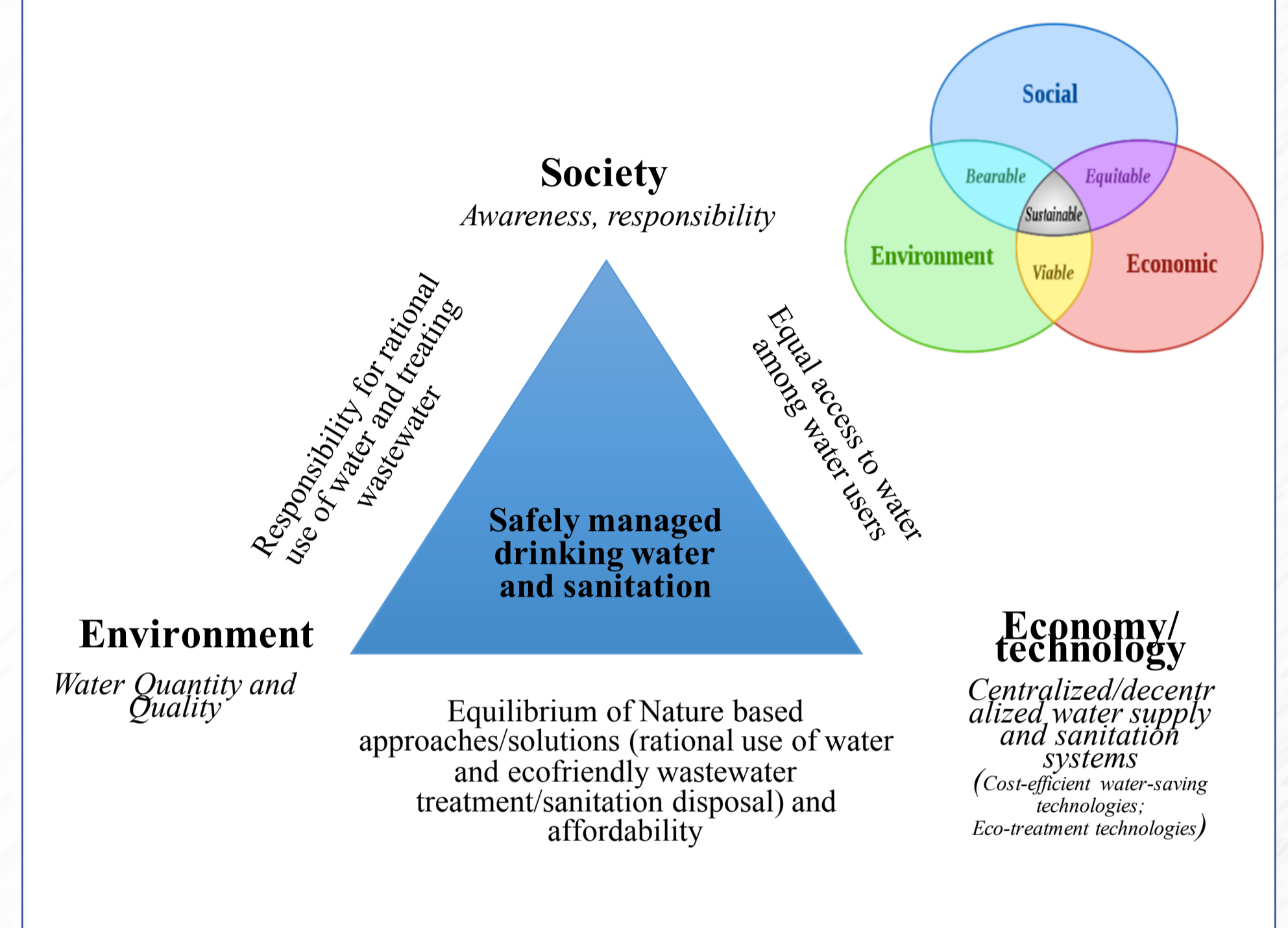
### Methodology:

1360 questionnaires were collected based on online survey conducted in 153 villages in Atyrau region – naturally dry and arid area with poor water resources – during September 2022.

## Integrated Water Resources Management



## Conceptual model



## Summary and Conclusion

### Findings:

#### Access to water (SDG 6.1)

Both centralized and decentralized water sources are used; Centralized piped water system perceived to be responsibility of local municipality (19%) and private organization (63%); Decentralized water supply systems are perceived to be household responsibility (62%) shared with private organizations (25%)

#### Access to sanitation (toilet) and Disposal of faeces (SDG 6.2)

Mainly pit latrine is used (80%), sewer system is used every 10<sup>th</sup> household; Backfilling is the main faeces disposal method, septic tank cleaning and no cleaning are the next options; Faeces disposal is perceived as full responsibility of household (92%)

#### Treatment of waste water (SDG 6.3)

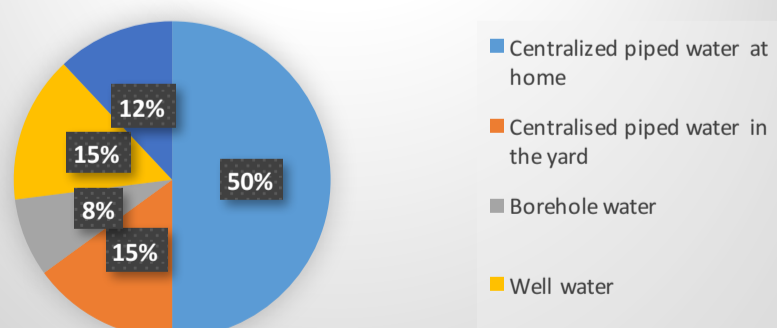
Majority use septic tank (65%) or no specific collection point and no treatment for wastewater (17%); Perceived responsibility for wastewater treatment is on household (82%) and private organizations (10%) Lack of community-based water supply and sanitation services function at local and governmental level

### Conclusion:

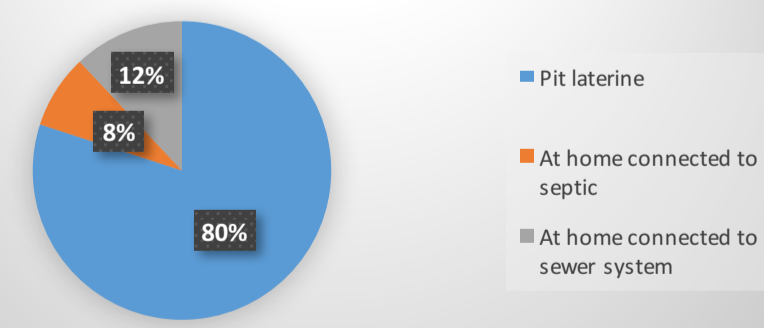
Community is ready for shared responsibility; Capacity building for local villagers is required via introducing community-based decentralized water supply and sanitation related government and local municipality functions

## Results

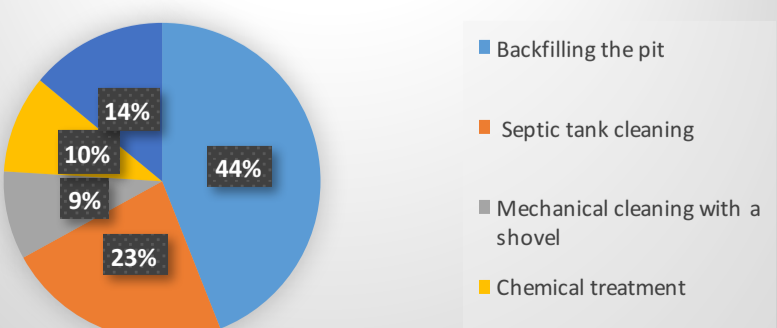
### Access to water (SDG 6.1)



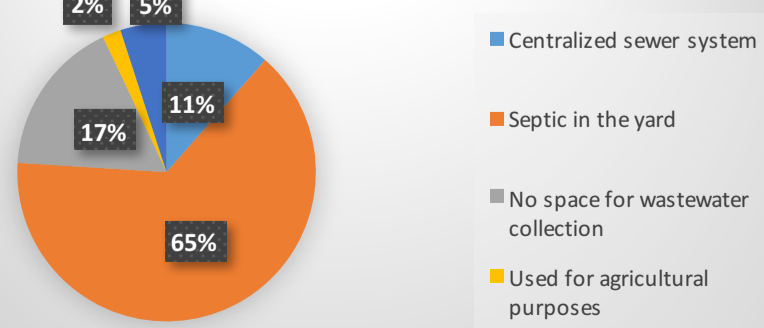
### Access to sanitation (toilet) (SDG 6.2)



### Disposal of faeces (SDG 6.2)

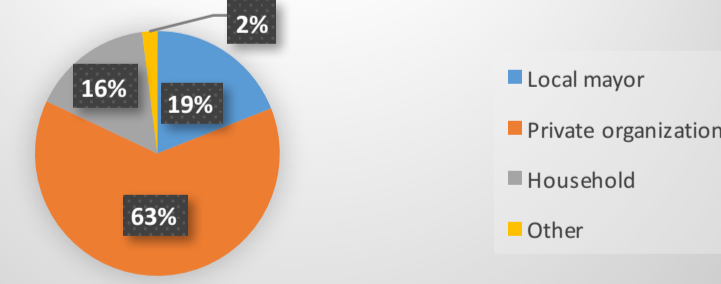


### Treatment of waste water (SDG 6.3)

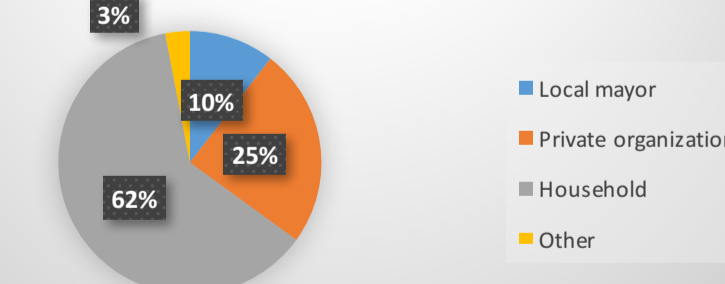


## Results

### Who should be responsible for centralized water supply system



### Who should be responsible for decentralized water supply system



### Who takes responsibility for disposal of faeces



### Who should take responsibility for wastewater treatment

