



# WATER REUSE

within Malta's National Water Management Framework  
*Session 3: Adaptation to climate change: integrating reuse to cope with droughts and water scarcity*

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Valencia, Espana

# Background

## **Context:**

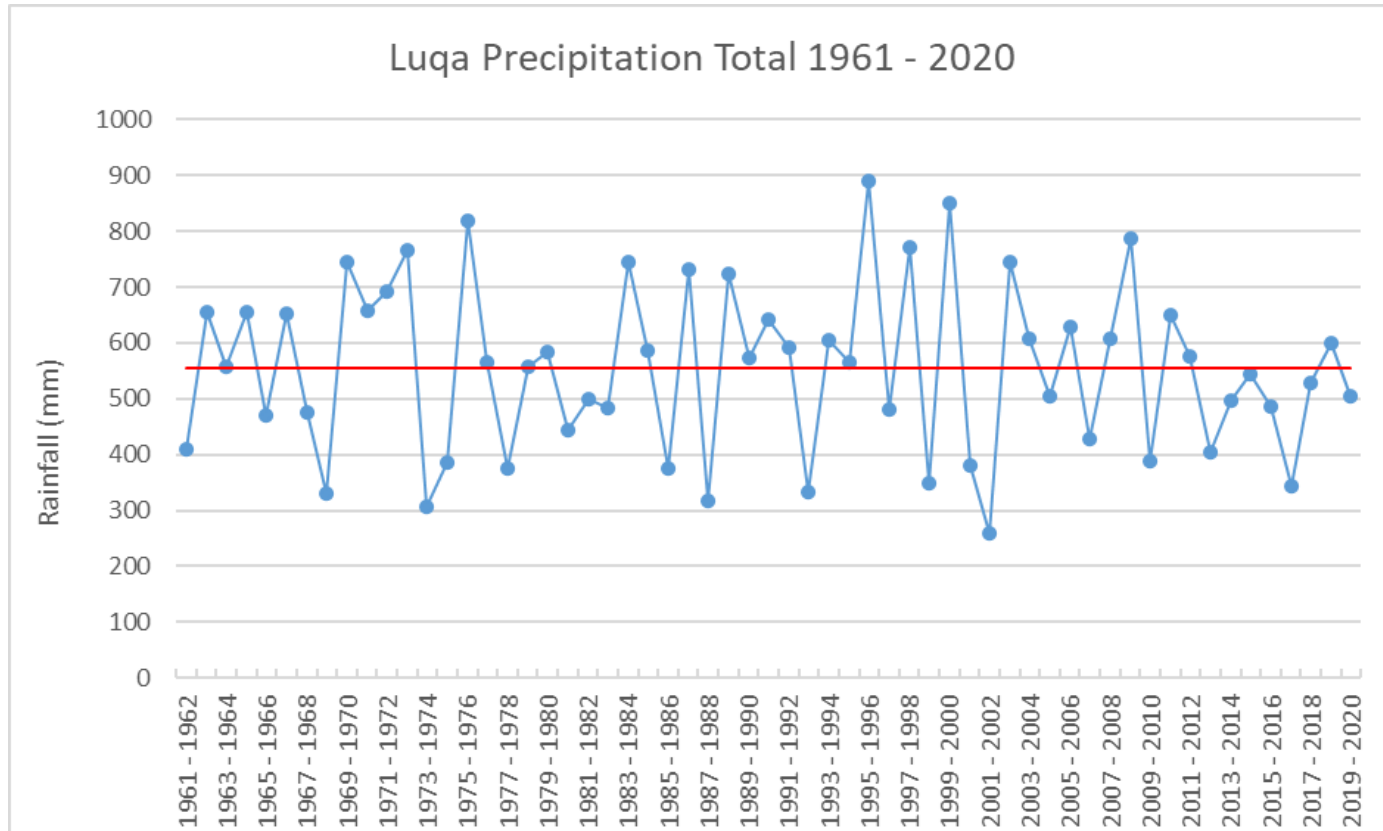
Starting Point: Unavailability of sufficient water resources

## **Objective:**

Ensuring an adequate supply of water to the population and their economic activities whilst respecting the needs of the environment

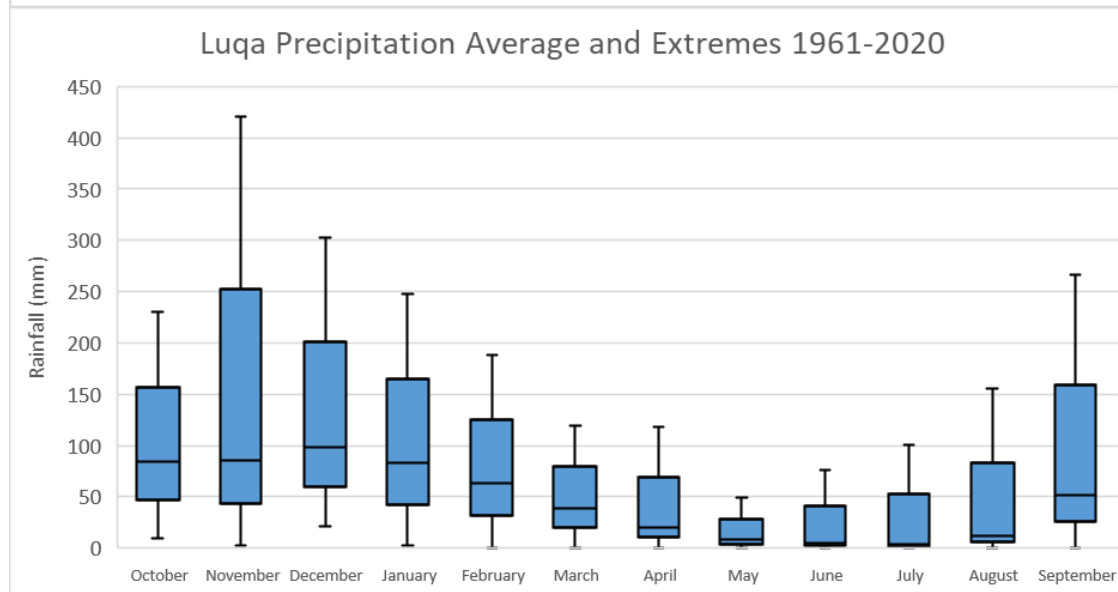
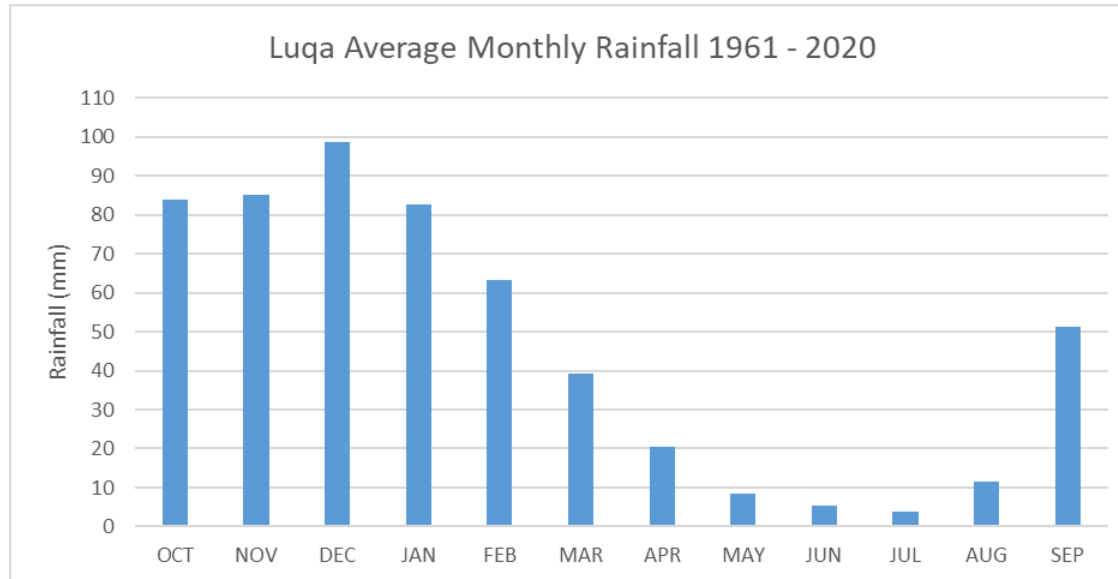
- security of supply
- supply and demand
- environmental protection

# Natural Conditions



Count	Precipitation (1961 – 2020)
Average	554.11mm
Standard Deviation	151.59
Minimum	259.6mm
Maximum	889.5mm
Range	629.9mm

# Natural Conditions

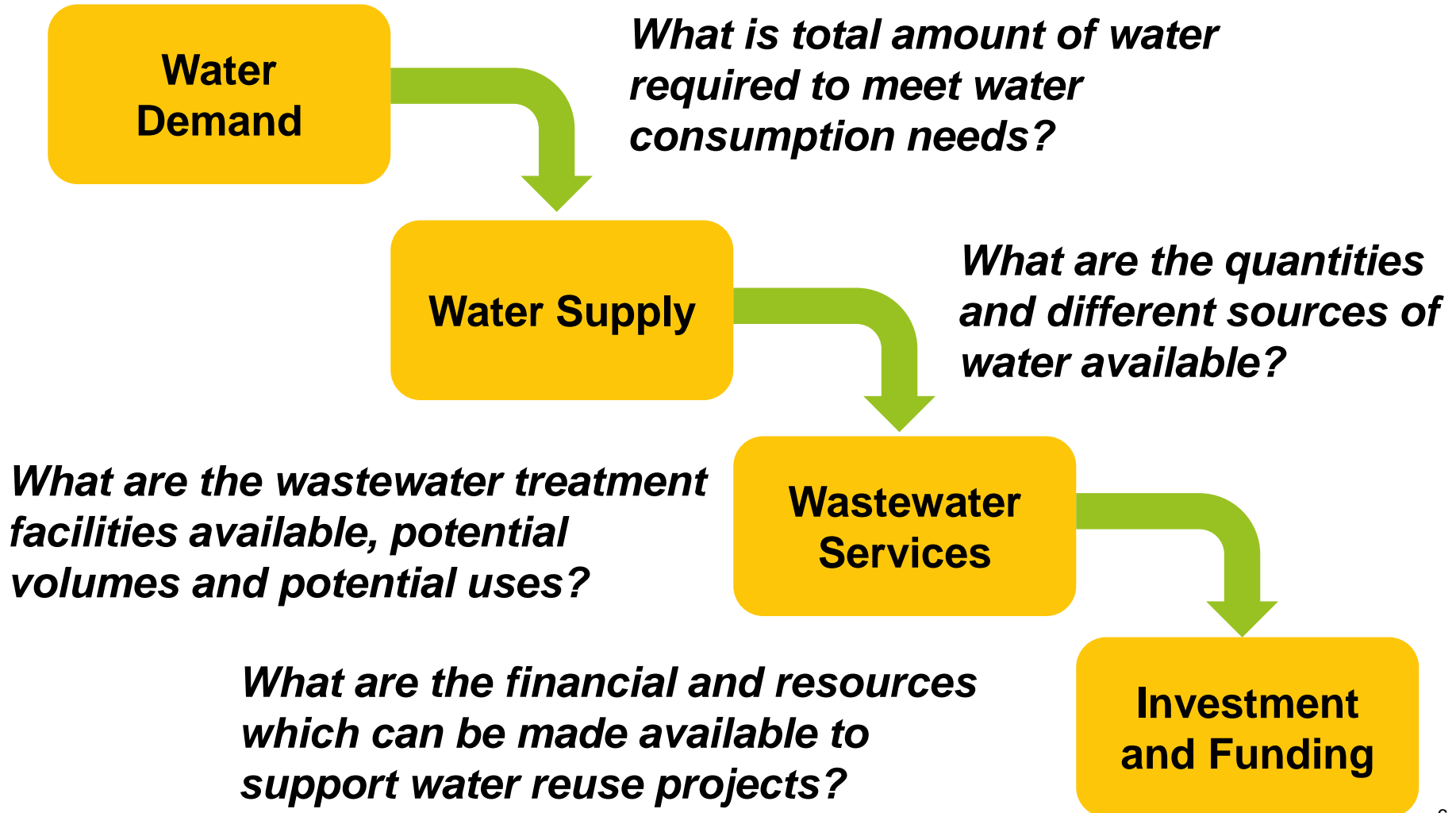


# Policy Approach

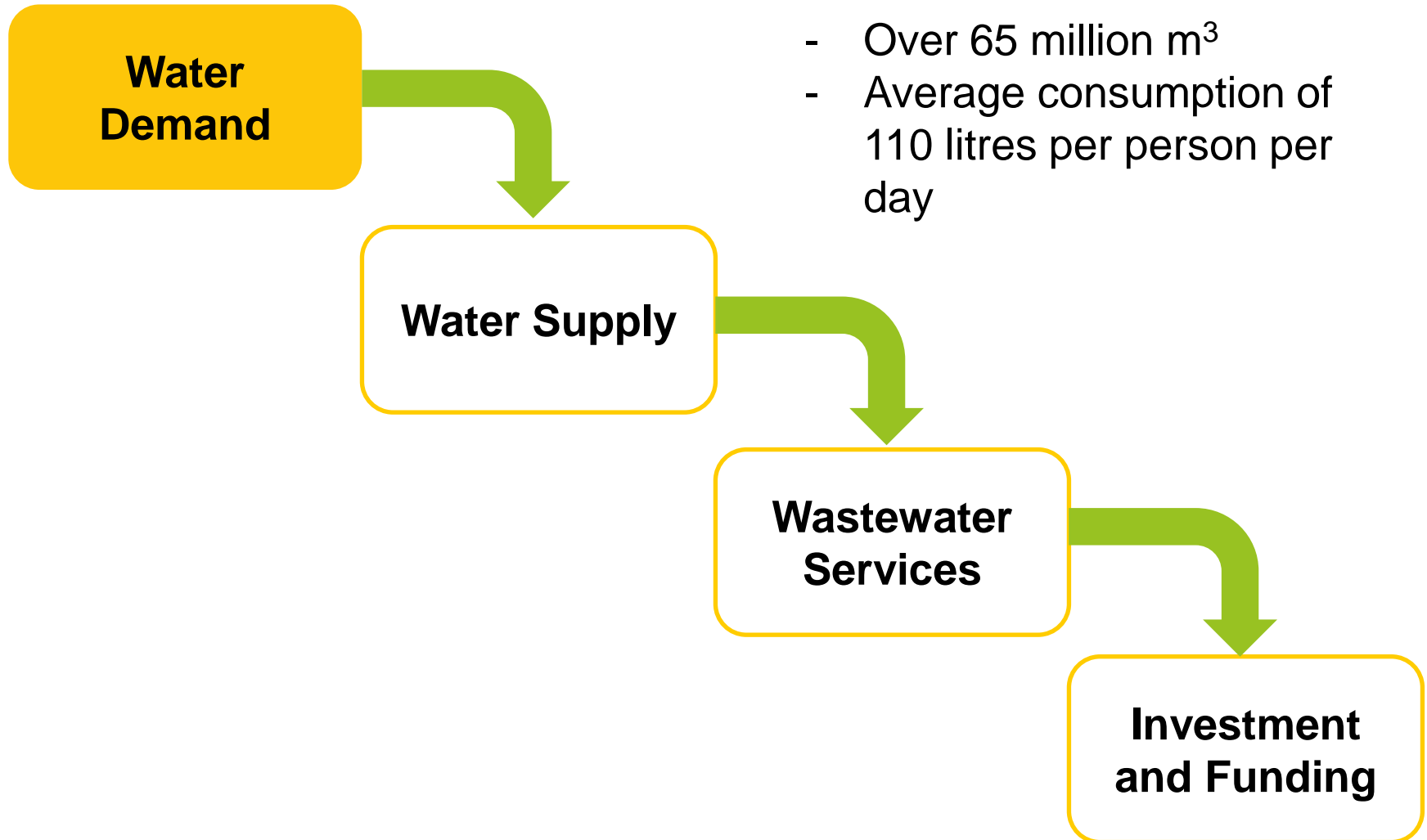
## Three main policy approaches:

- **Supply Augmentation** (Widening the Resource-base)
- **Demand Management** (Increasing efficiency in use)
- **Stakeholder Awareness** (Empowerment)

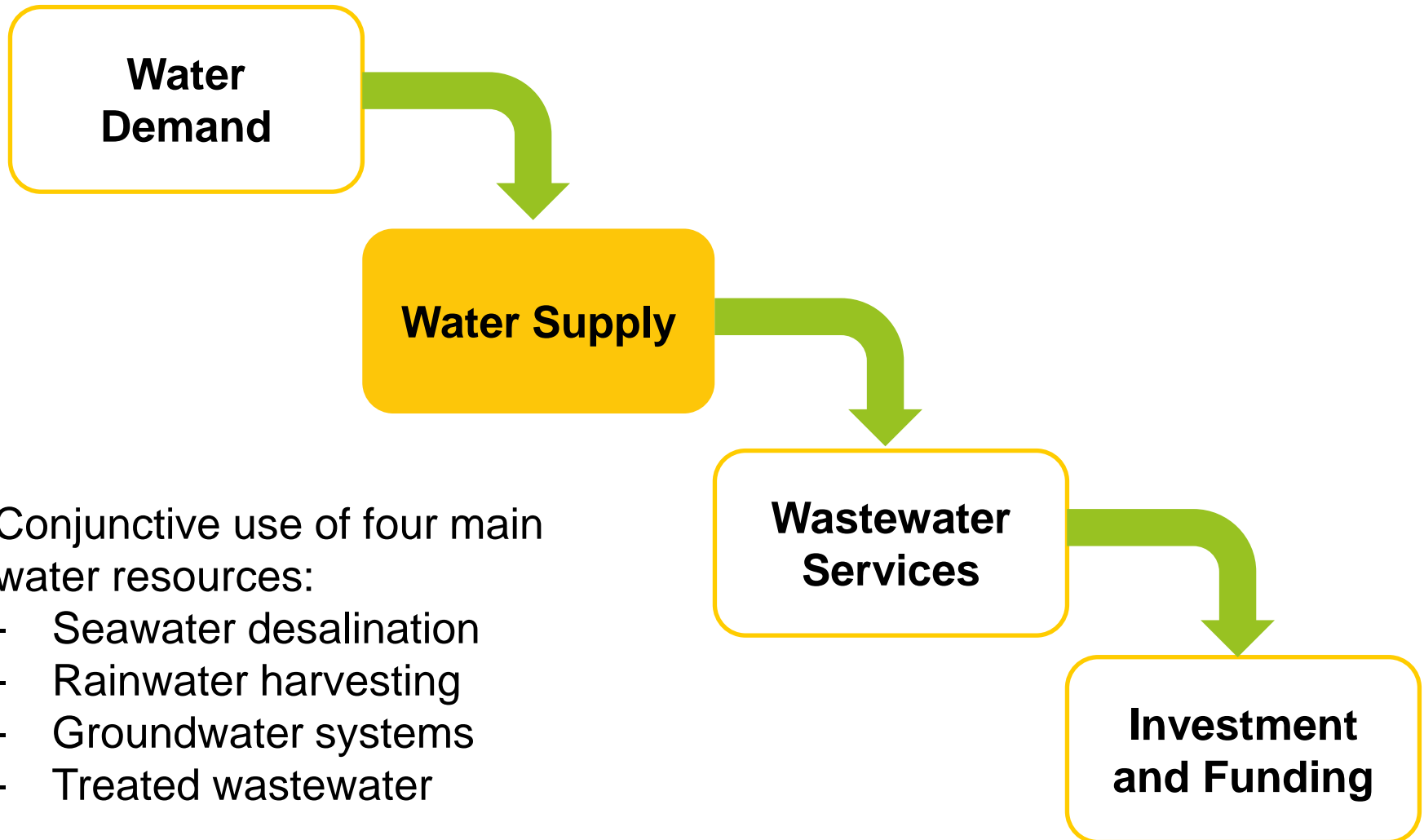
# Identifying the local/regional needs for water reuse



# Identifying the needs for water reuse – Malta's Context

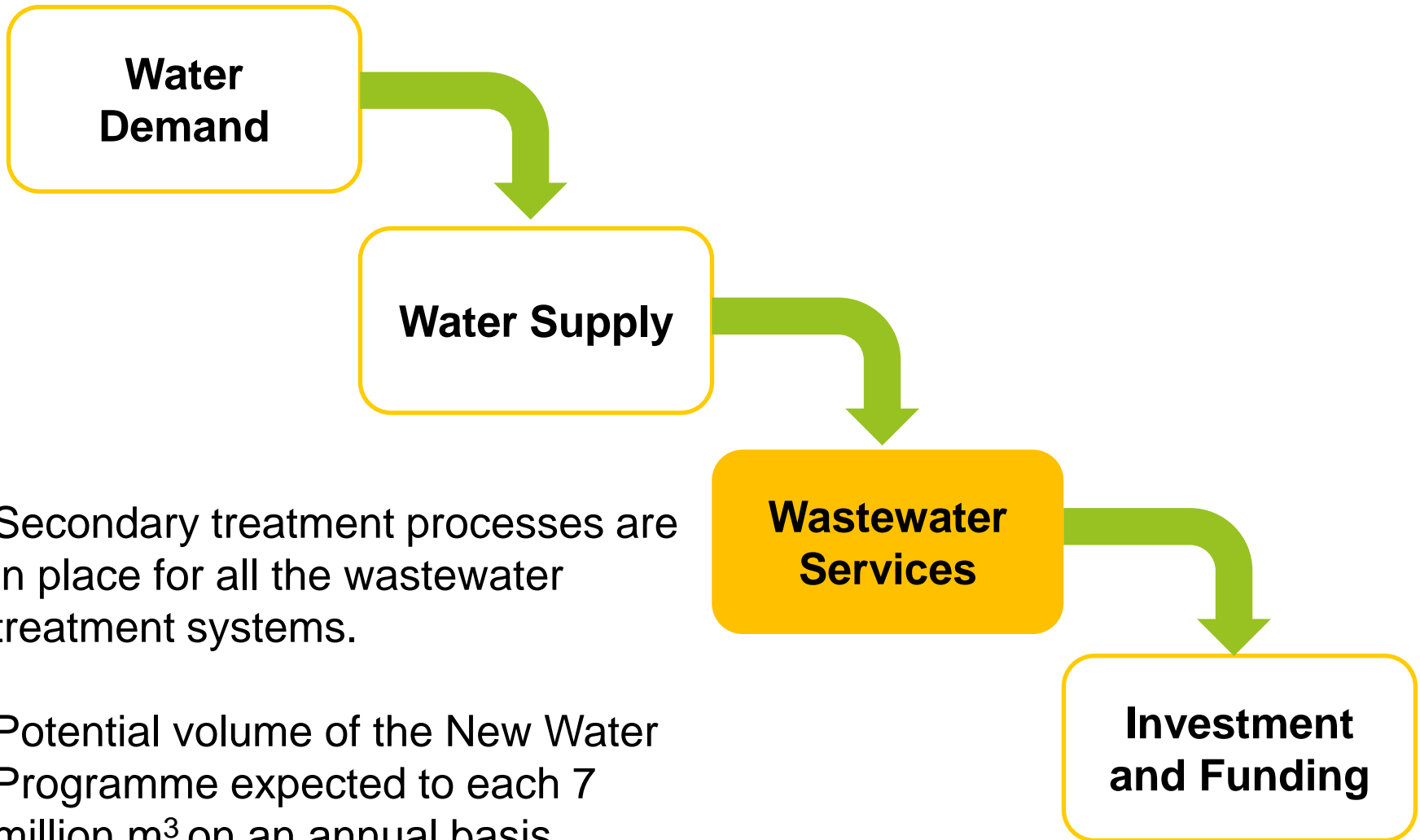


# Identifying the needs for water reuse – Malta's Context

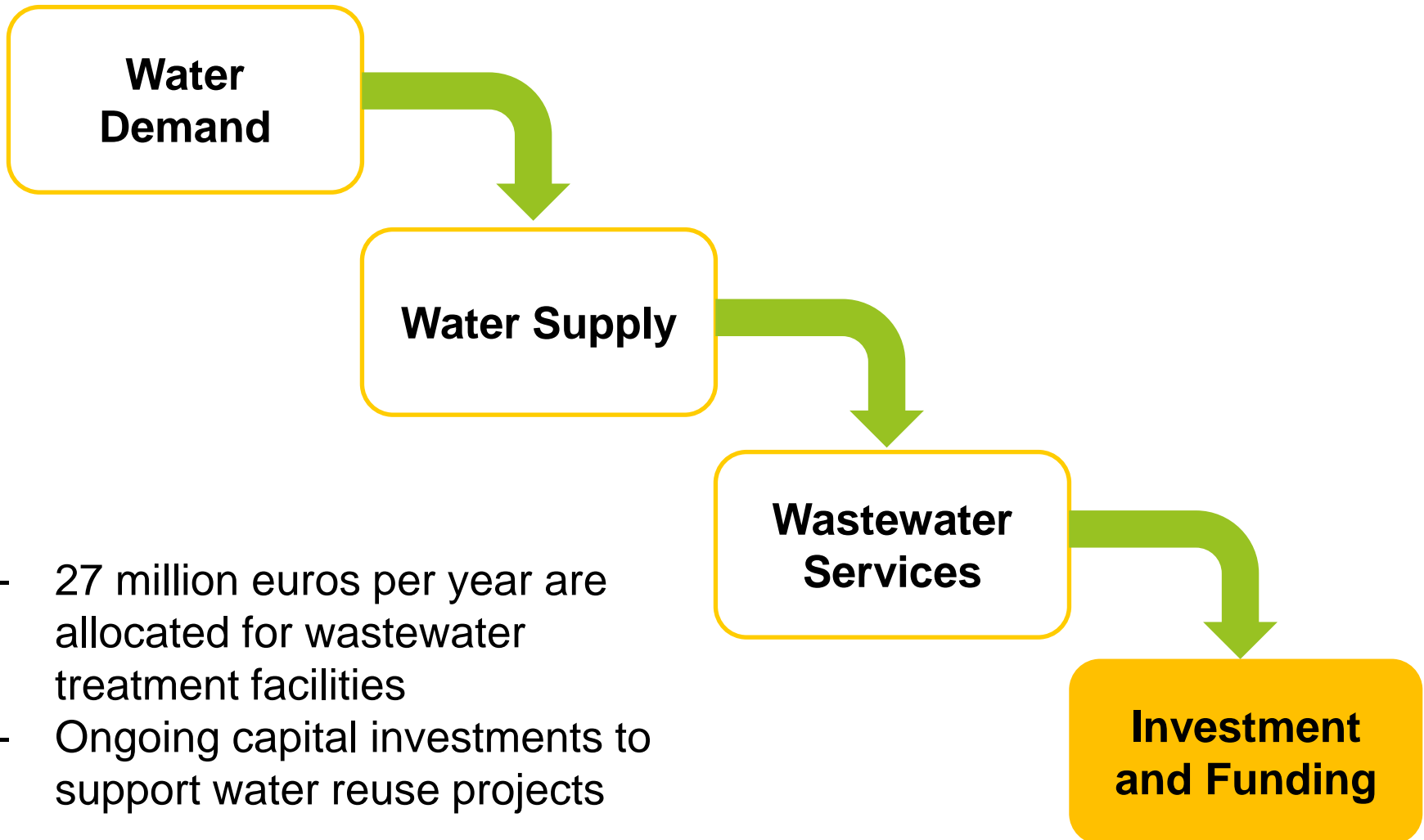




# Identifying the needs for water reuse – Malta's Context



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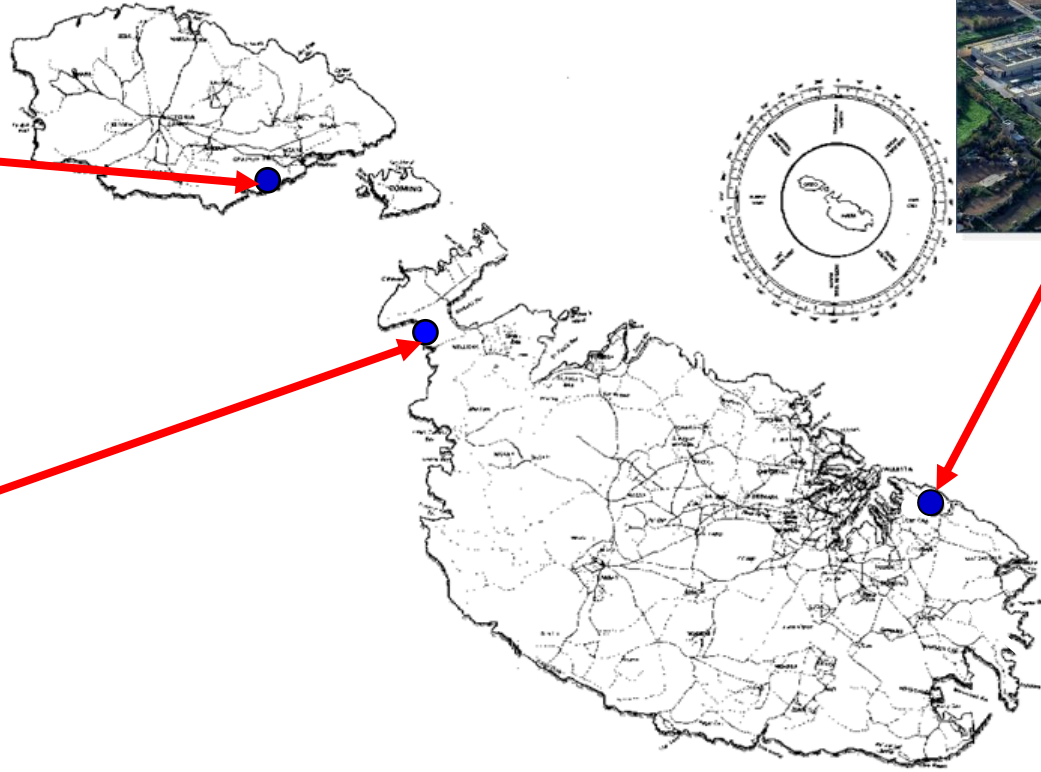
# SEWAGE TREATMENT PLANT GEO-DISTRIBUTION



Ras il-Hobz STP (2007)  
**NEW Water Plant (2018)**  
3200 m3/day



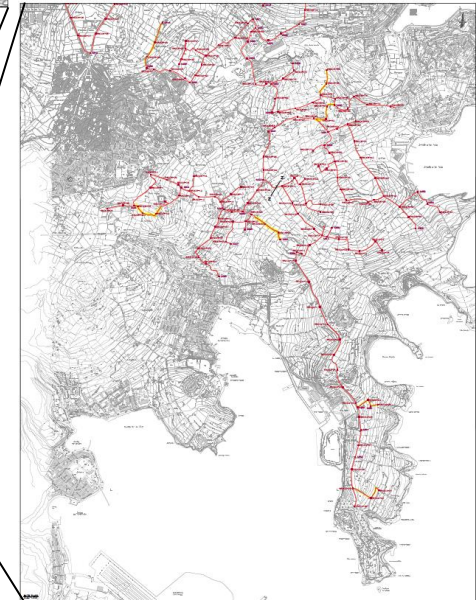
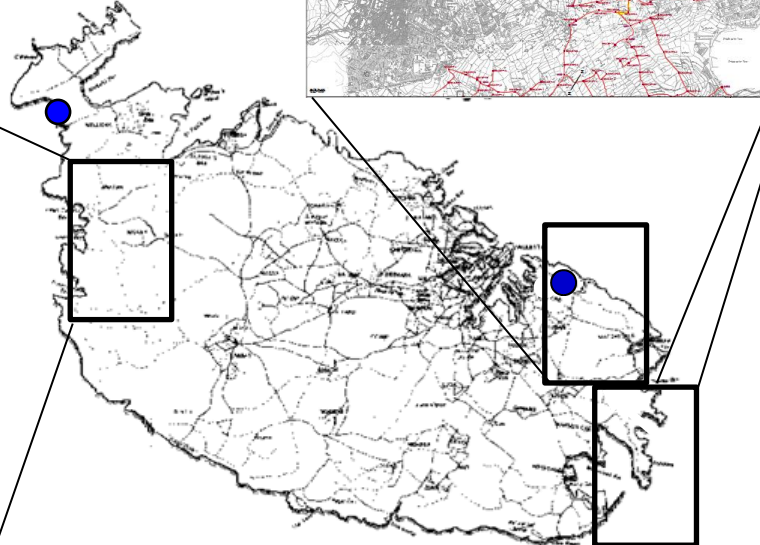
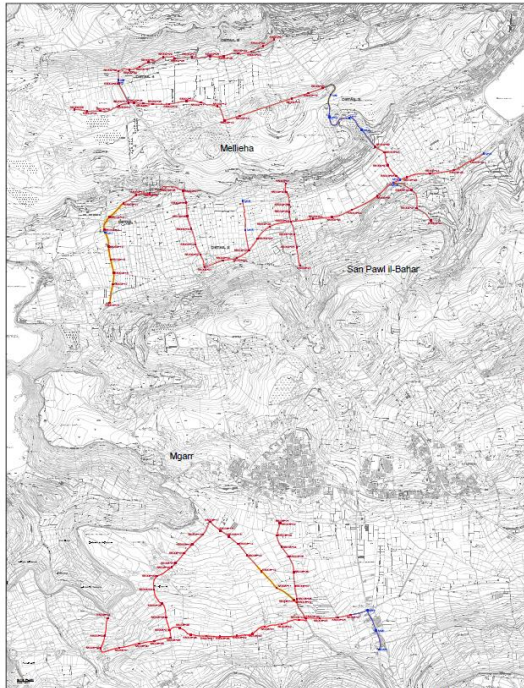
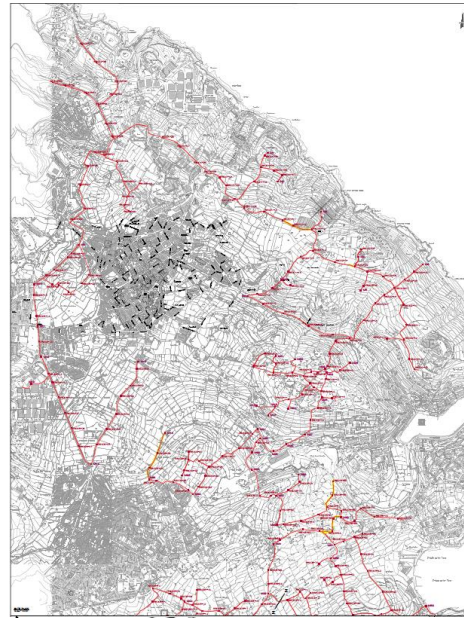
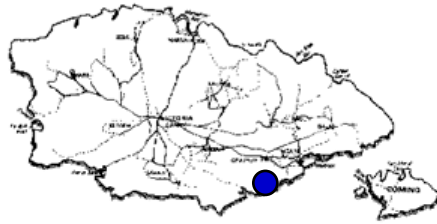
Ic-Cumnija (2008)  
**NEW Water Plant (2017)**  
6400 m3/day



Ta'Barkat (2011)  
**NEW Water Plant (2018)**  
55,000 m3/day

● Wastewater Treatment and NEW Water Plants Locations

# National Strategy



# Socioeconomic Barriers to Overcome

1. Limited attractiveness compared to freshwater supply
2. Trade barriers for food products irrigated with reclaimed water
3. Public opinion the risks associated with reuse and reclaimed water

# Conclusion

## **Strategic approach:**

Ensuring the availability of water supply in a changing natural environment and demand scenario (security of supply)

## **WHILST**

Maintaining current cost-levels to water users (ensuring affordability and competitiveness)

## **AND**

Attaining higher levels of environmental protection.



# Conclusions

- Water reuse initiatives should not be considered and implemented in isolation but integrated within the local, regional or national water management plans.
- Water reuse needs and assessment potential should increasingly consider the important effects of water shortages and scarcity.
- In Malta the highest water reuse potential is in the agricultural sector as it is also the sector which is most vulnerable to occurrence of drought events.

Thank you!

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