



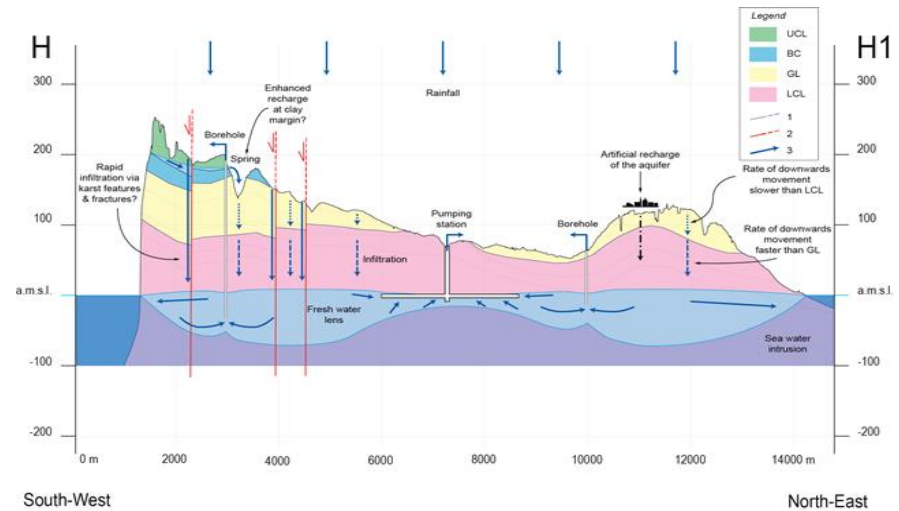
19TH INTERNATIONAL CONFERENCE FOR THE IMPLEMENTATION OF THE EUROPEAN WATER DIRECTIVES

Session 3: Sustainable quantitative management of water resources for climate change adaptation and biodiversity preservation

**8-10 December 2021
Malta**

Understanding Our Natural Environment

- What are the available natural water resources?

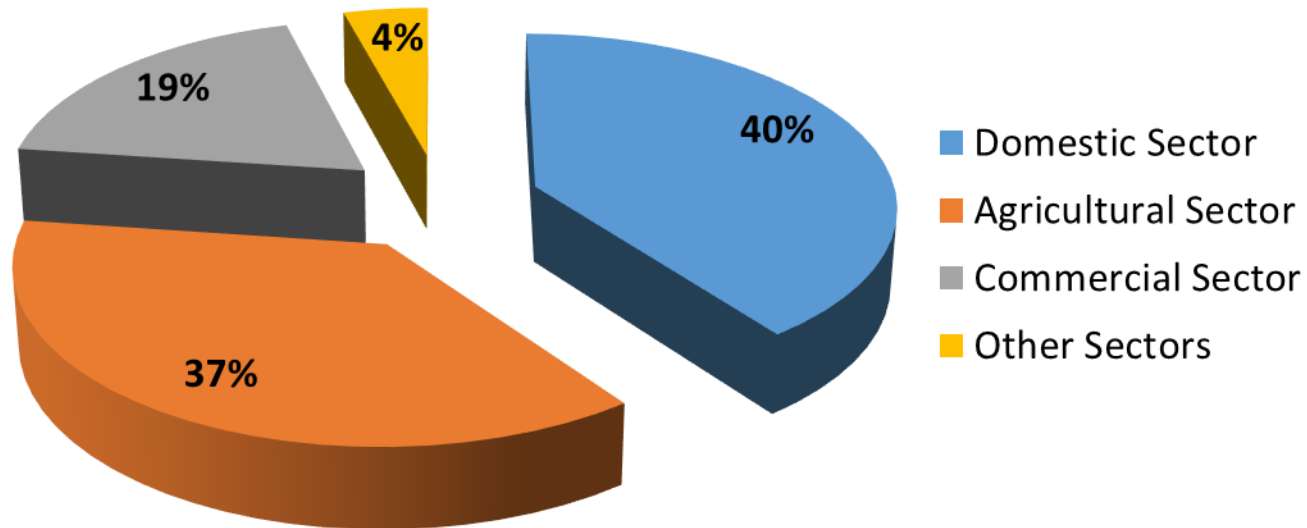


- What is our existing understanding of the available natural water resources?



Understanding Water Demand

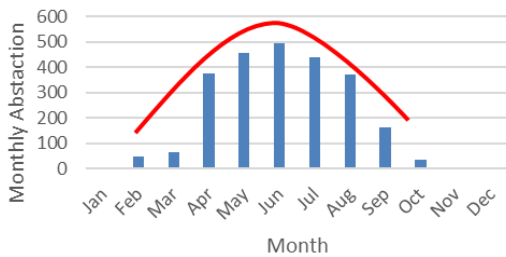
- What is the demand necessary to sustain the various water users?



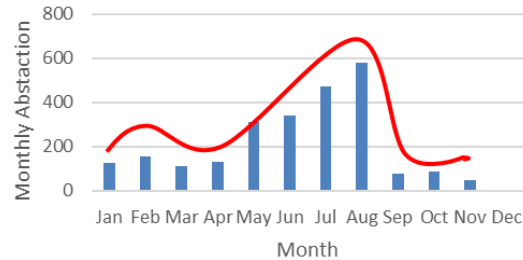
Understanding Water Demand

- What is the demand necessary to sustain the various water users?

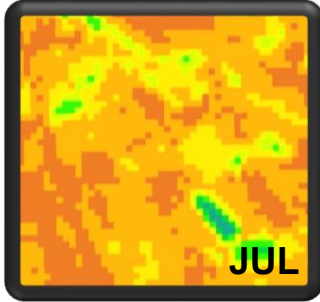
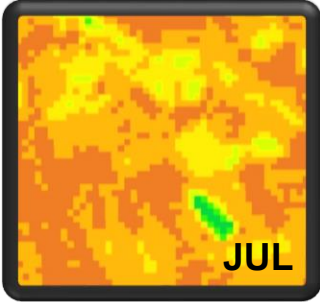
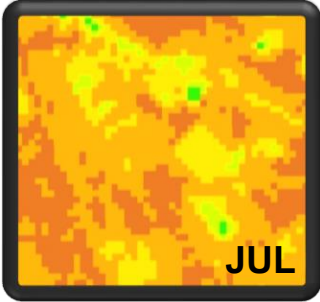
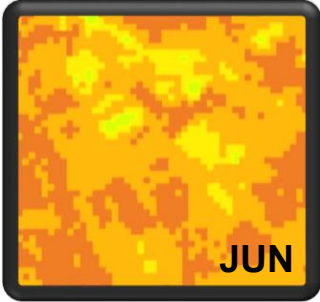
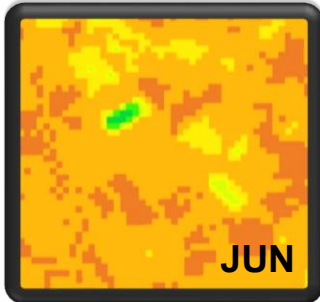
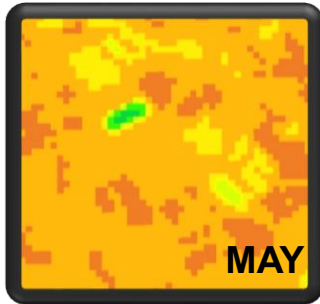
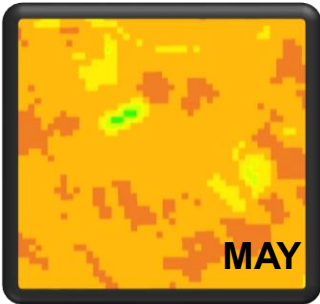
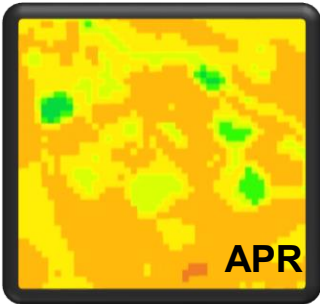
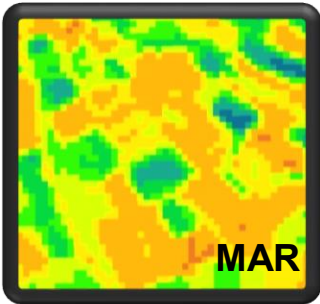
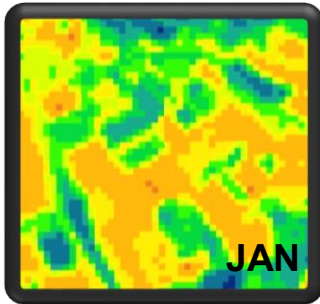
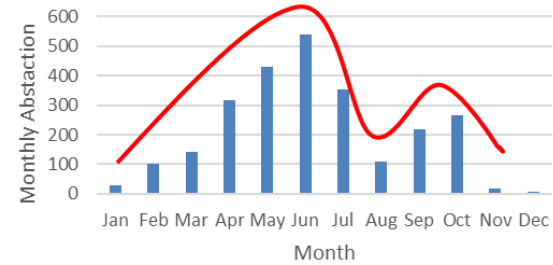
Groundwater Abstraction - Monthly Distribution



Groundwater Abstraction - Monthly Distribution



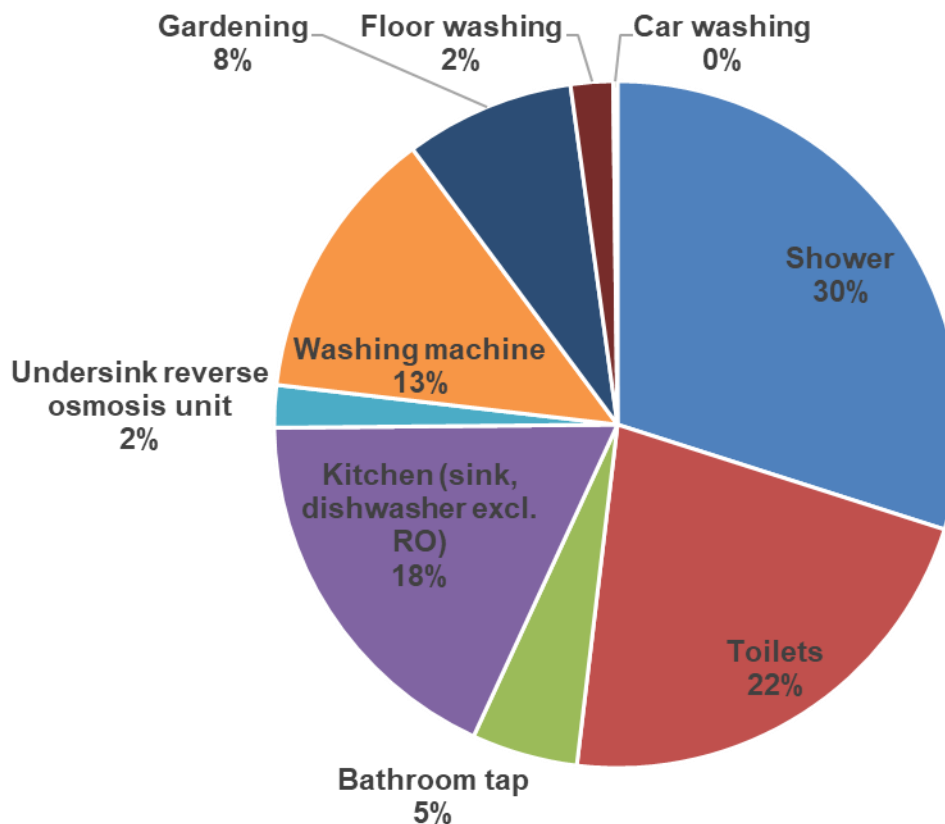
Groundwater Abstraction - Monthly Distribution



Understanding Water Demand

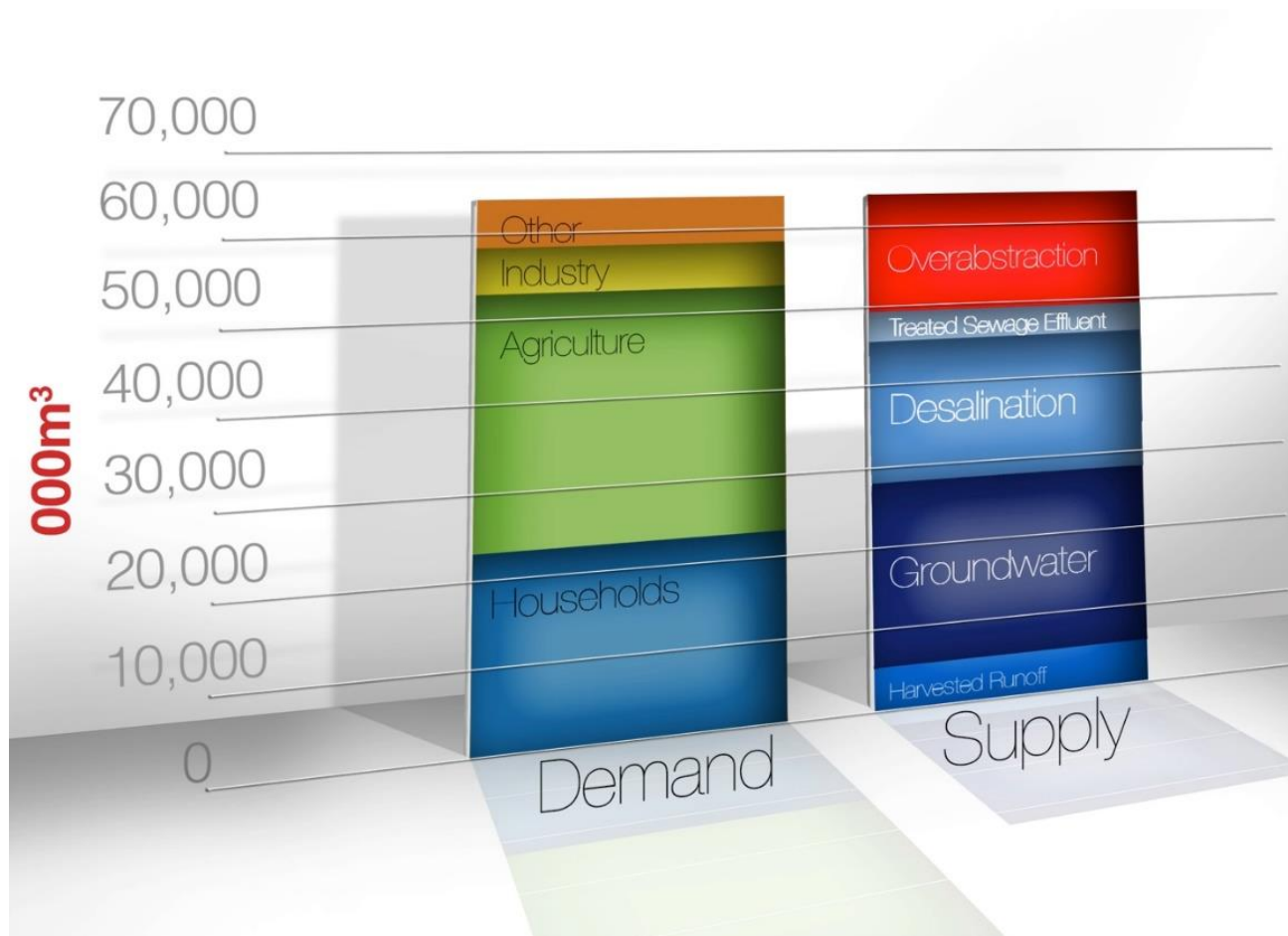
- What is the demand necessary to sustain the various water users?

Domestic Water Applications	Avg % water use for households surveyed	L/capita/day
Shower	30%	36
Toilets	22%	26
Bathroom tap	5%	6
Kitchen (sink, dishwasher excl. RO)	18%	22
Under sink reverse osmosis unit	2%	2
Washing machine	13%	16
Gardening	8%	10
Floor washing	2%	2
Car washing	0.2%	0
		120



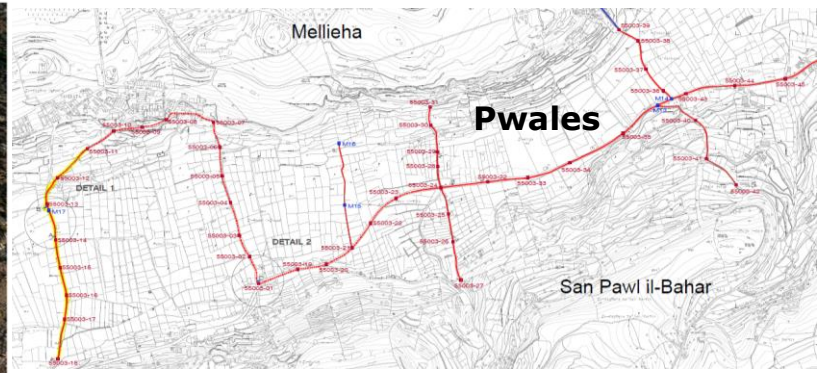
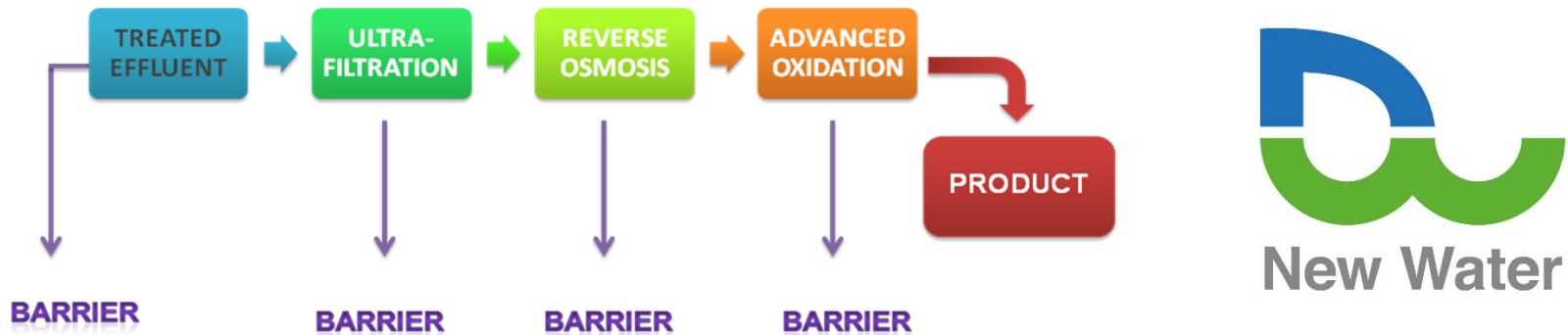
Available water resources to address water demand

- Do the existing water resources satisfy the existing water demand?



Available water resources to address water demand

- What are the additional/alternative water resources which can be made available?



Demand Management

- How can the existing demand be managed sustainably?



- Menu
- Customer Reports
- Water Consumption
 - Show my water consumption chart
 - Frequently asked questions
- E-Forms Applications
- Control Room
- Map
- Abnormal Consumption
- My Account
 - Personal Settings

Hi Julian

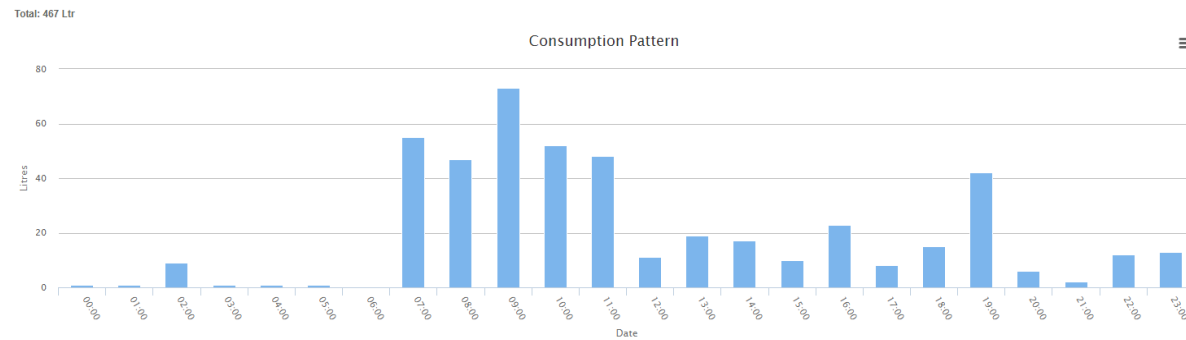
Alerts ▾

Logout

Show my water consumption chart

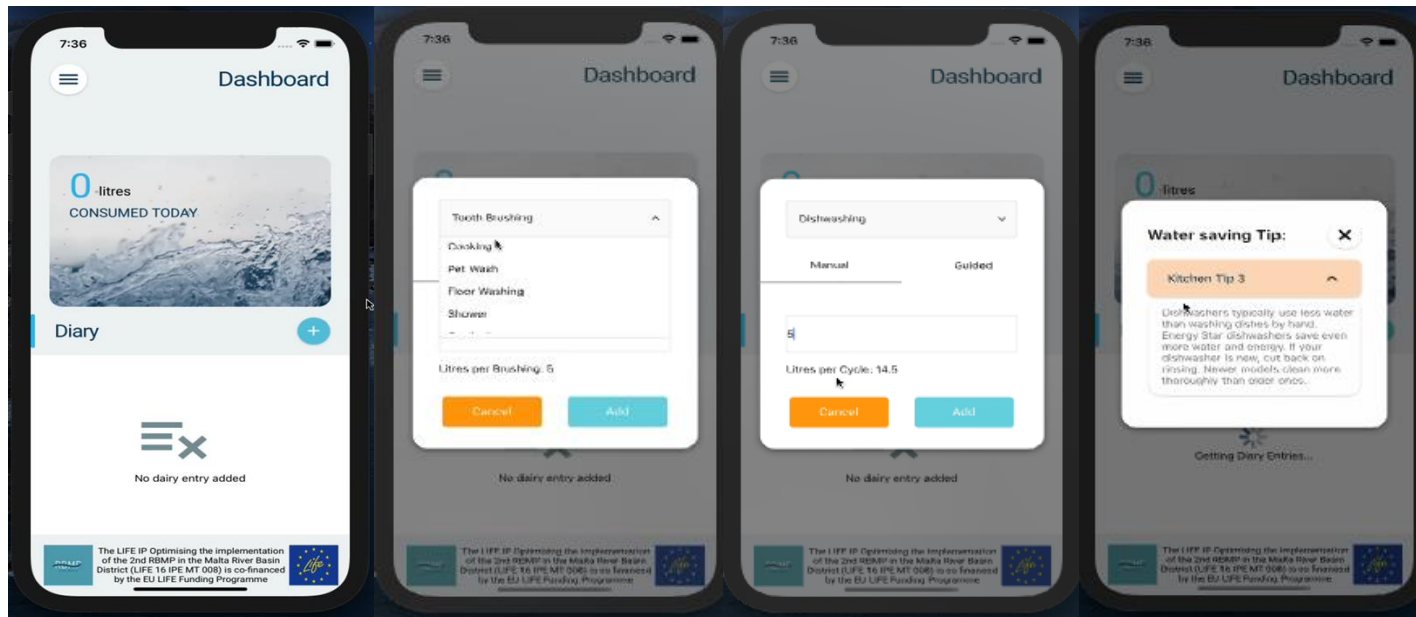
Please note that although this data is good enough to monitor consumption, it is not accurate enough to be used to calculate bills.

Accounts: 411C... Filter: Select date range Date from: 17/03/2021 Date to: 17/03/2021 Refresh



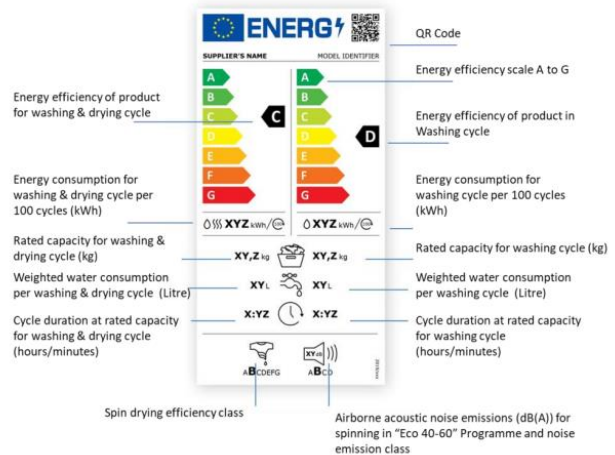
Demand Management

- How can the existing demand be managed sustainably?



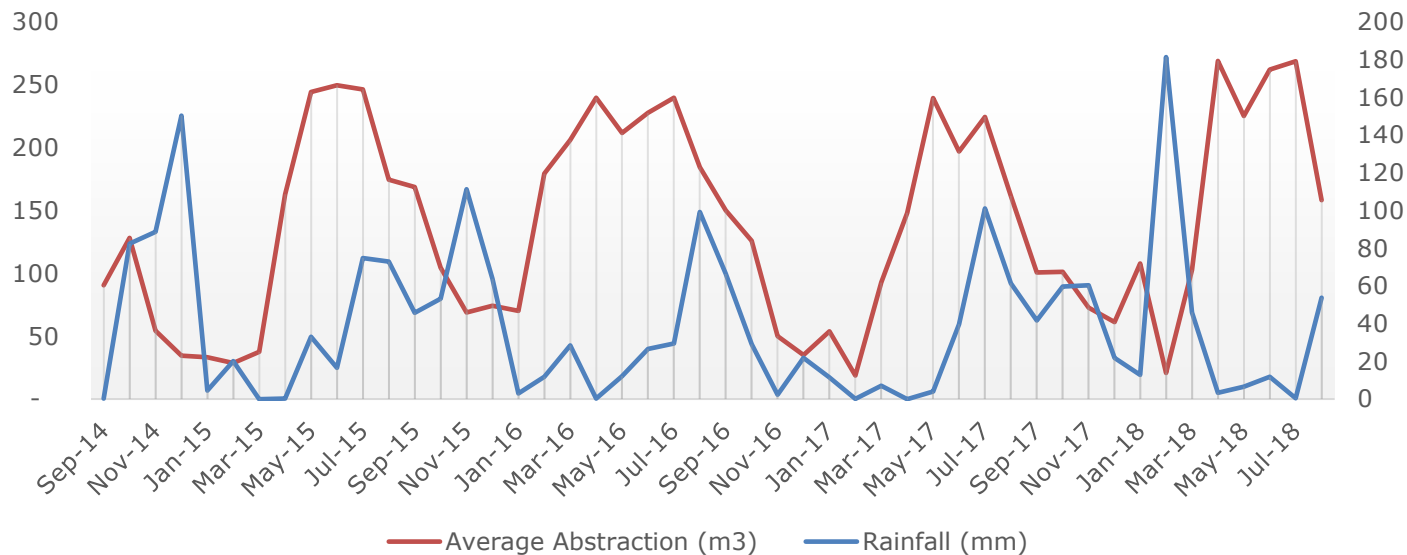
Demand Management

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Demand Management

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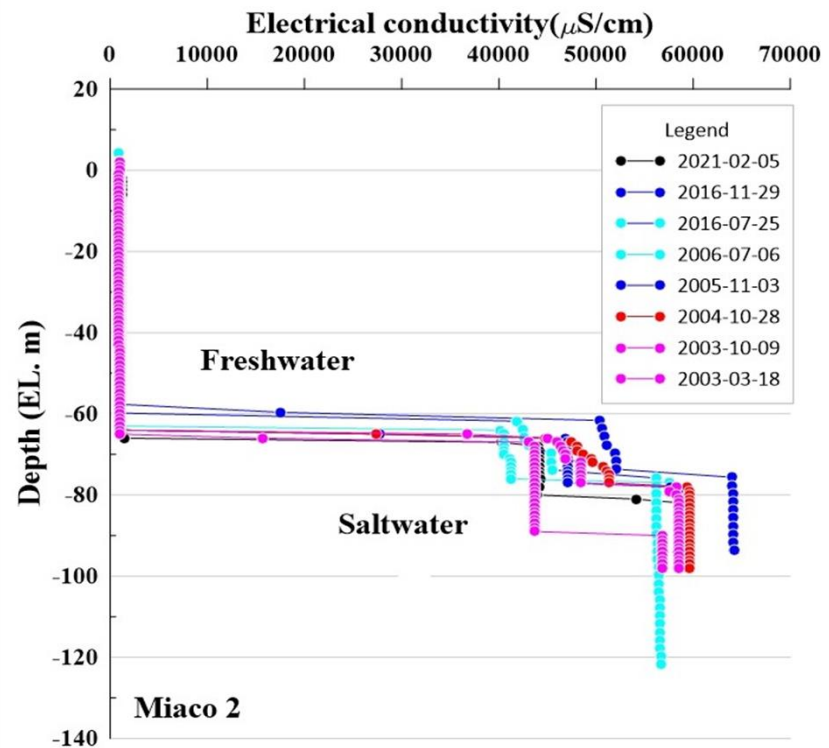
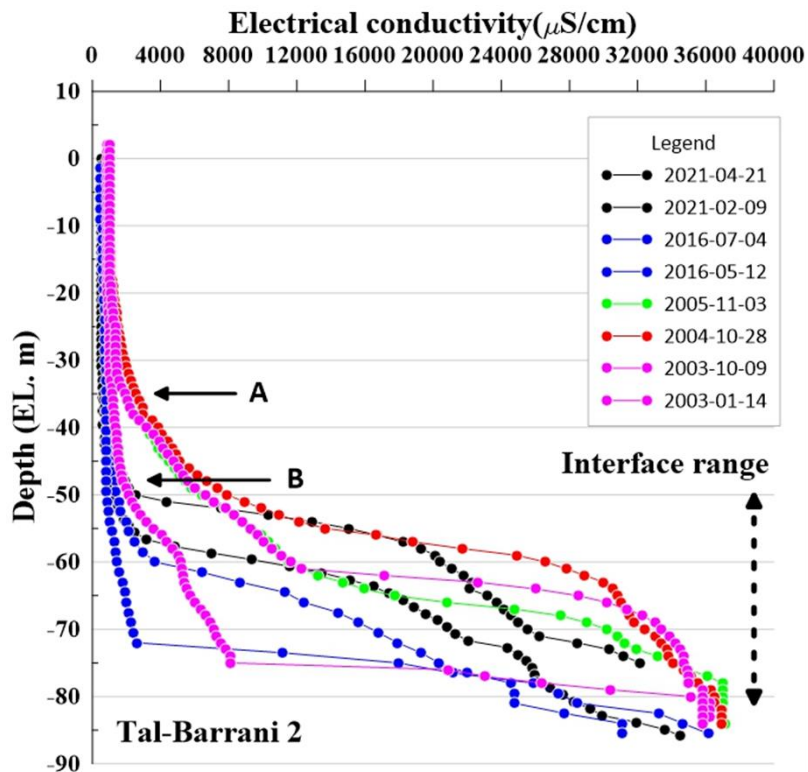
Demand Management

- How can the existing demand be managed sustainably?



Quality is dependent on Quantity

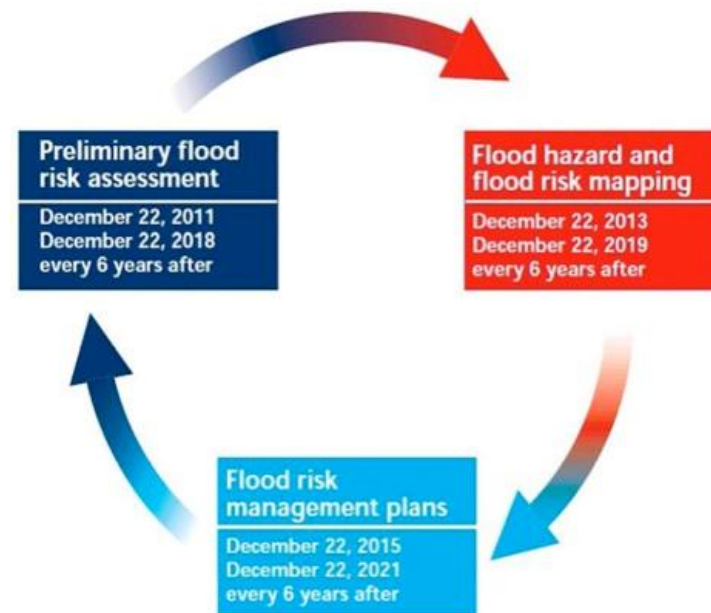
- What are the sustainable use limits which should be imposed to ensure the adequate water quality?



Iterative Process

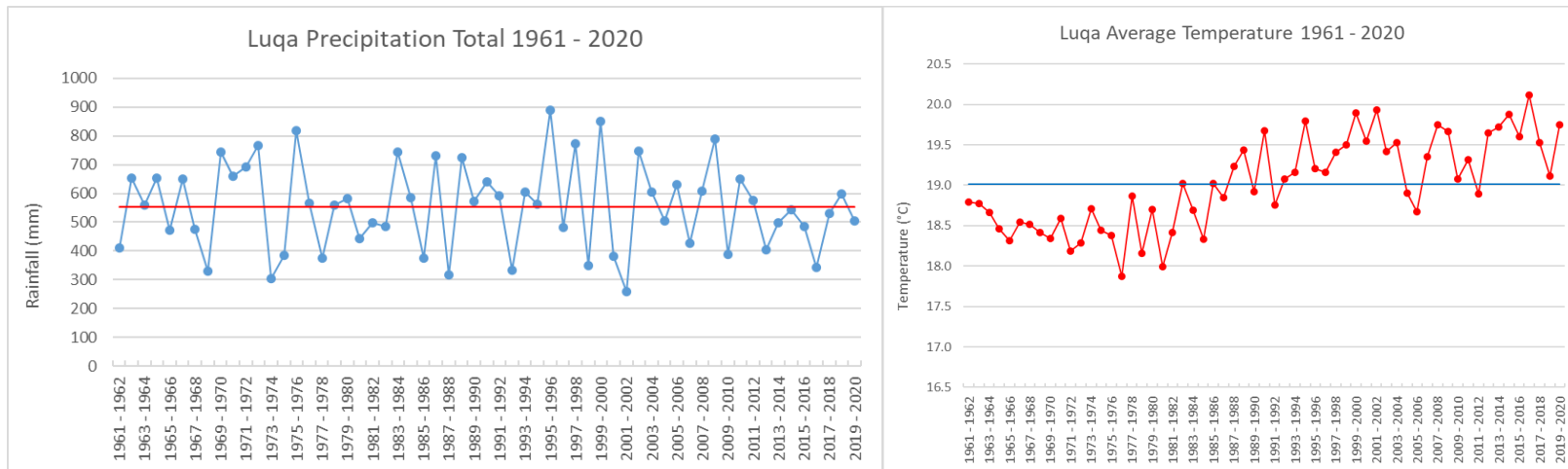
- What aspects of the quantitative management of our resources should be revisited?

Milestone	Deadline	Work step
Final deadline for implementation of the Water Framework Directive objectives	Dec. 2027	
Beginning of third river basin management plan period	Dec. 2021	
Environmental objectives achieved.	Dec. 2015	Period during which Water Framework Directive objectives are to be met
Beginning of second river basin management plan period	Dec. 2012	
Implementation of the relevant measures	Dec. 2012	Implementation of programmes of measures
Establishment of river basin management plans and programmes of measures.	Dec. 2009	Establishment of river basin management plans and programmes of measures
Beginning of first river basin management plan period	Dec. 2009	
Monitoring programmes ready for implementation	Dec. 2006	Establishment monitoring programmes
Characterization results	Dec. 2004	
Legal transposition	Dec. 2003	Characterization
Effective date of the Water Framework Directive	Dec. 2000	



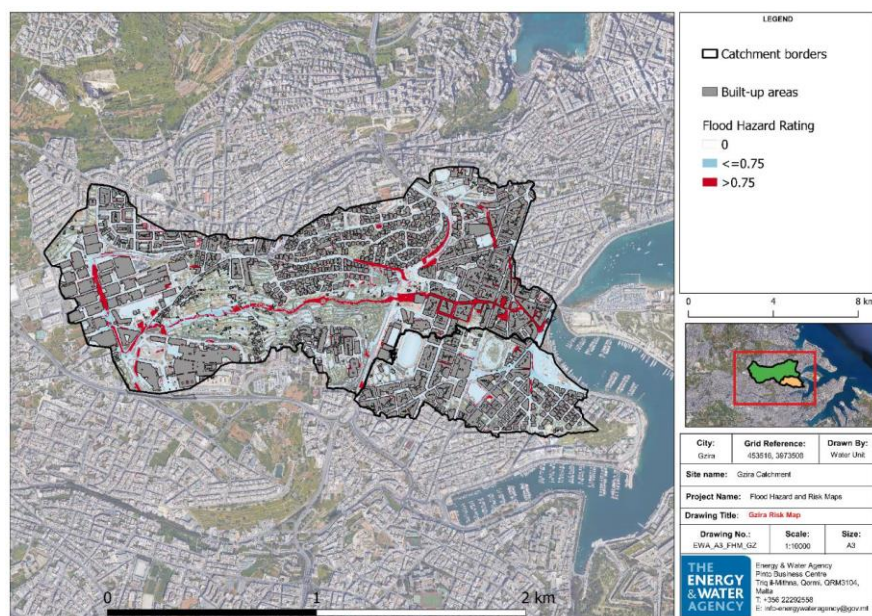
Forward Looking

- How can we make our available water resources and water management approach resilient to changing conditions?



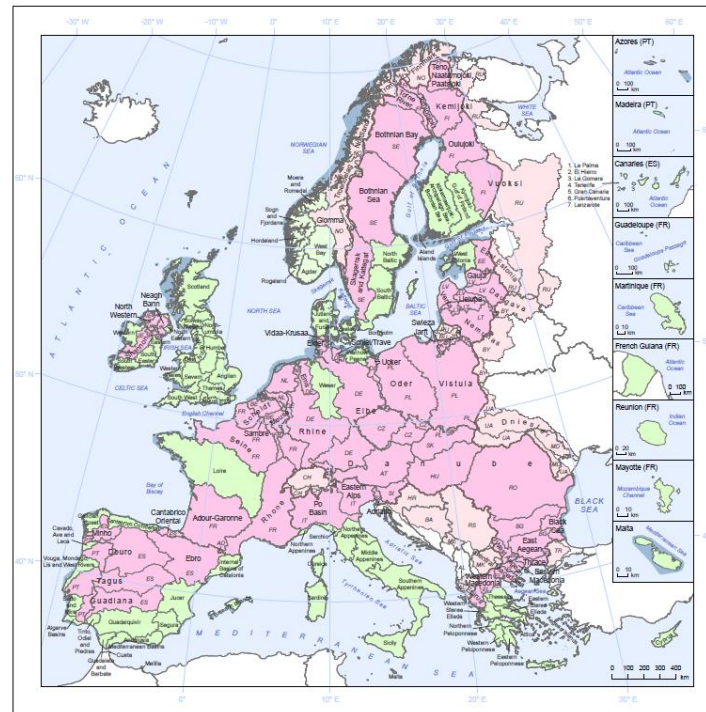
Forward Looking

- How can we make our available water resources and water management approach resilient to changing conditions?



Importance of collaboration


- What collaborative structures should be utilised to ensure the sustainable use of our water resources?




National and International River Basin Districts

 International River Basin Districts

Compiled from data reported to WISE by EU Member States

 Approximate extent of International River Basin Districts outside of the EU

Compiled from data reported to WISE by AD, CH, LI MC and NO, supplemented with CCM2 Seaoutlets and ICPDR data

 EU27 extent


 National River Basin Districts

Compiled from data reported to WISE by EU Member States

 National River Basin Districts outside of the EU

Compiled from data reported to WISE by NO

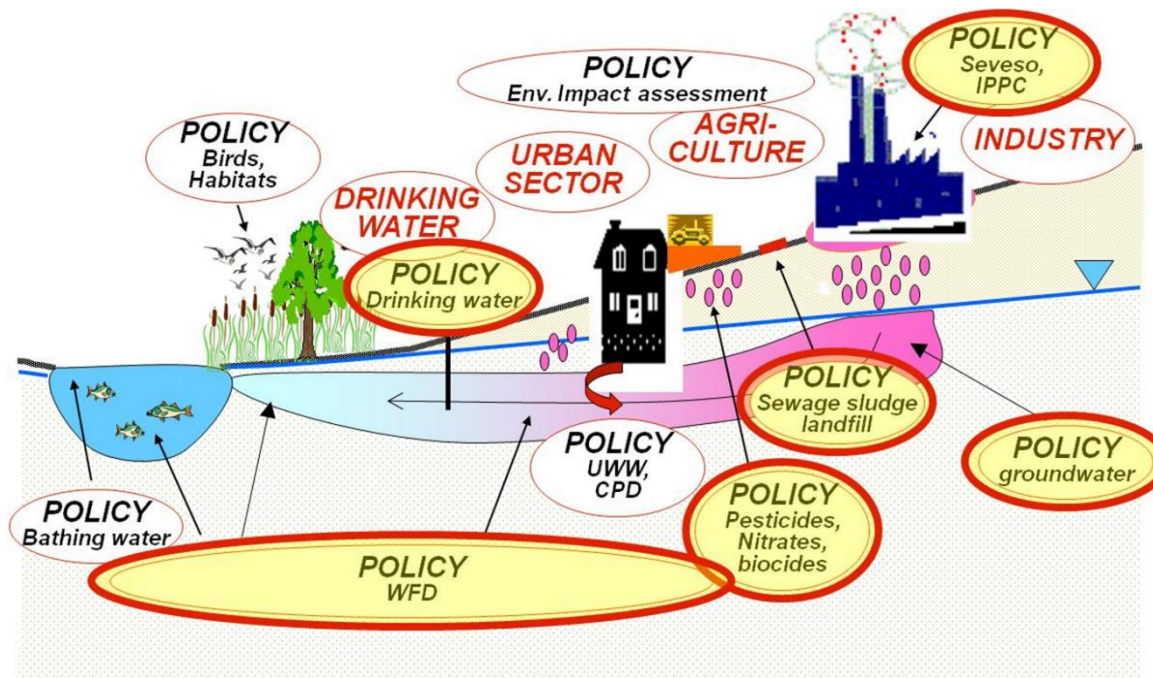
 Coastal waters

 Country borders

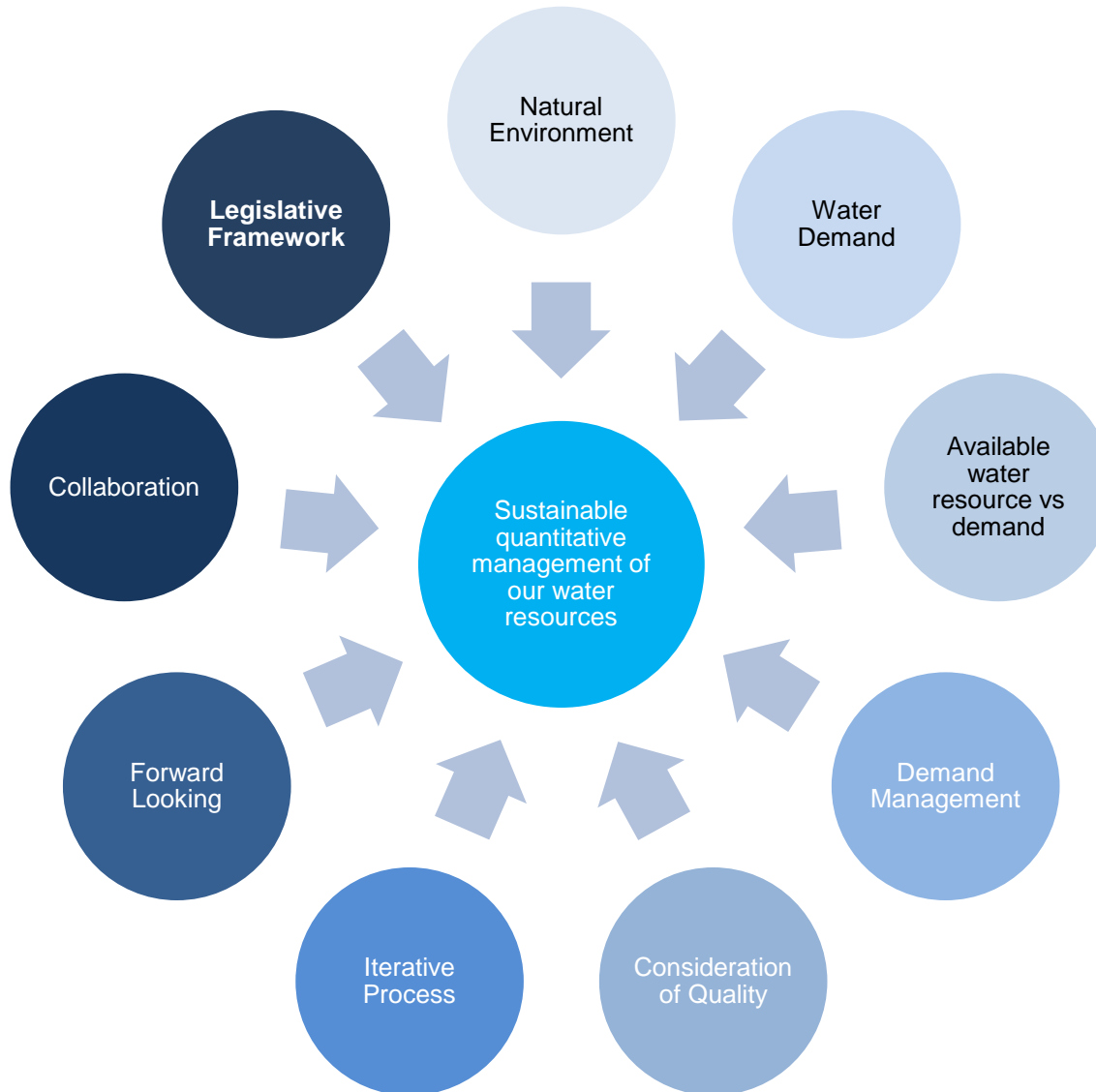
Map produced by WRc plc on behalf of the European Commission[®], DG Environment, 2012

Legislative Framework

- How can the legislative framework ensure the sustainable use and management of our available water resources?



To conclude ...



Thank you for your attention

michael.schembri@gov.mt