

# Actions for **SDG 13 & SDG 15** implementation on the Region of Madrid.

Region of Madrid - Canal de Isabel II

July 2021

David Peral

Sustainability Analyst

Canal  
de Isabel II



DEPARTMENT OF  
**ECONOMIC AND  
SOCIAL AFFAIRS**



SUSTAINABLE  
**WATER &  
ENERGY**  
SOLUTIONS  
NETWORK

# Group Canal



**ESPAÑA**  
 Canal de Isabel II  
[www.canaldeisabelsegunda.es](http://www.canaldeisabelsegunda.es)  
 Delegación de Canal en Cáceres  
[www.canaldeisabelsegunda.es](http://www.canaldeisabelsegunda.es)  
 Aguas de Alcalá UTE  
[www.aguasdealcala.es](http://www.aguasdealcala.es)  
 Canal Gestión Lanzarote  
[www.canalgestion Lanzarote.es](http://www.canalgestion Lanzarote.es)  
 Hispanagua  
[www.hispanagua.es](http://www.hispanagua.es)  
 Canal de Comunicaciones Unidas  
[www.canalcom.com](http://www.canalcom.com)  
 Hidráulica Santillana  
[www.hidraulicasantillana.com](http://www.hidraulicasantillana.com)

**COLOMBIA**  
 Gestus  
[www.gestus.co](http://www.gestus.co)  
 ASAA Richacha  
[www.asaa.com.co](http://www.asaa.com.co)  
 INASSA  
[www.grupoinassa.com](http://www.grupoinassa.com)  
 Amerka TI  
[www.amerkaTI.com](http://www.amerkaTI.com)  
**PANAMÁ**  
 Inassa Panamá  
[www.grupoinassa.com](http://www.grupoinassa.com)

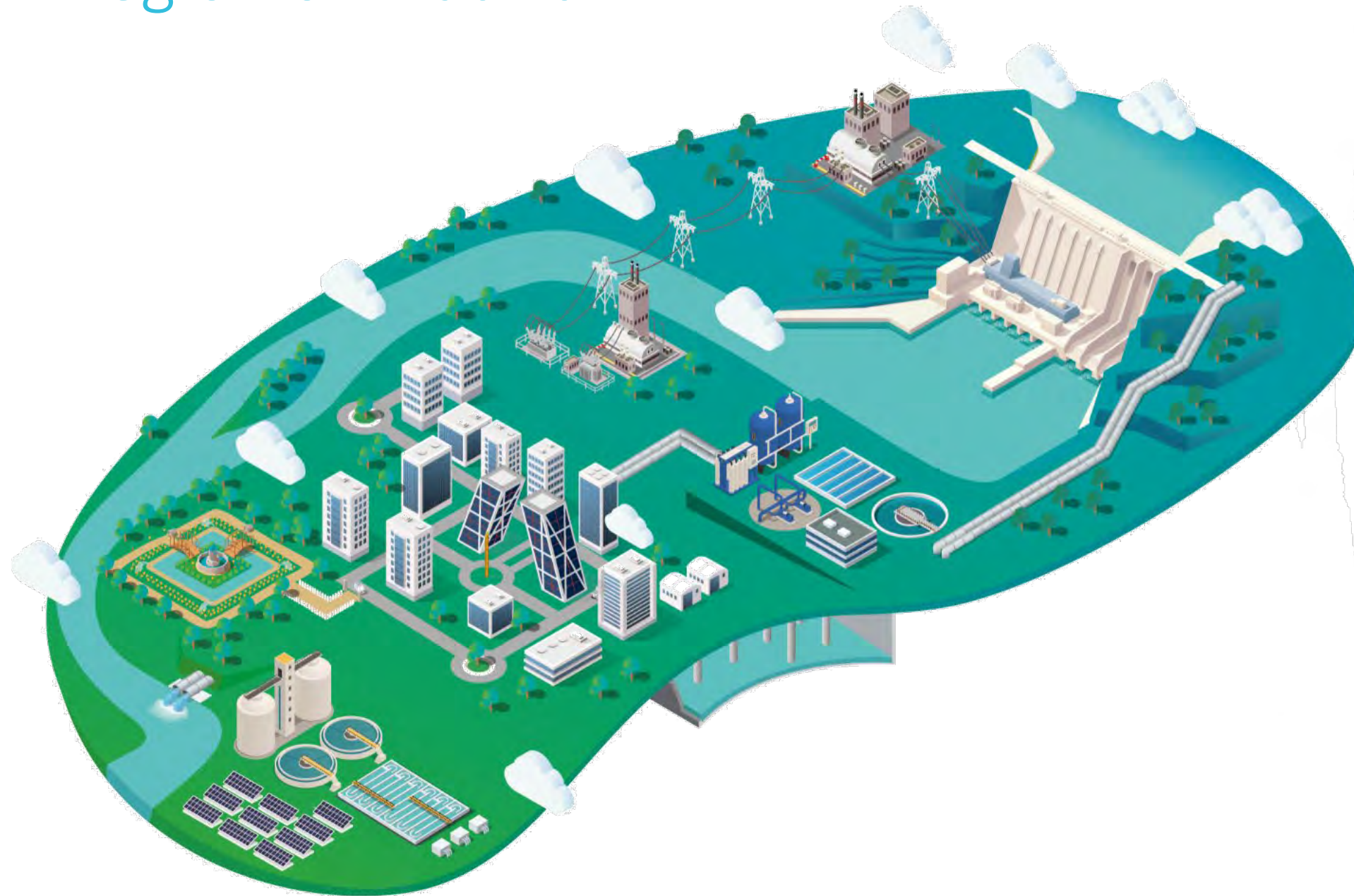
**REPÚBLICA DOMINICANA**  
 AAA DOMINICANA  
[www.aaa.com.do](http://www.aaa.com.do)  
**ECUADOR**  
 AMAGUA  
[www.amagua.com](http://www.amagua.com)  
**BRASIL**  
 Fontes da Serra  
[www.fontesdaserra.com.br](http://www.fontesdaserra.com.br)  
 Emissão  
[www.emissao.com.br](http://www.emissao.com.br)

- Water cycle management
- Support services for water cycle management
- Telecommunication and IT
- Electric power production



# Canal de Isabel II *key figures*

Region of Madrid



**6.56/6.77 million** inhabitants served (supply / sanitation)

**488.27 hm<sup>3</sup>** treated in WWTP

**125.93 hm<sup>3</sup>** of regenerated water

**12.01 hm<sup>3</sup>** of water reused

**2,924** employees.

**131.6** mill. € invested.

**107.64 MW** installed for electricity generation.

**378.80** millions KWh produced (**68%** of consume)

**127.89 litres** per capita per day of domestic consumption

Canal  
de Isabel II



**13** CLIMATE  
ACTION



**15** LIFE  
ON LAND



SUSTAINABLE  
**WATER &  
ENERGY**  
SOLUTIONS  
NETWORK

# Towards the Decarbonization of the EU Economy



SUSTAINABLE  
**WATER &  
ENERGY**  
SOLUTIONS  
NETWORK

# Canal water-energy full urban cycle

Water collection

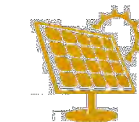
Installed capacity 2020\*  
**107,5 MW**

Drinking water

Waste water



Hydroelectric



Solar



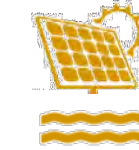
Biogas generators



Biogas micro turbine



Dry sludge



Floating solar



Micro turbine



Gas station



Methane reinjection



Solar panels

Drinking Water treatment

Water Distribution

Wastewater treatment



SUSTAINABLE  
**WATER &  
 ENERGY**  
 SOLUTIONS  
 NETWORK

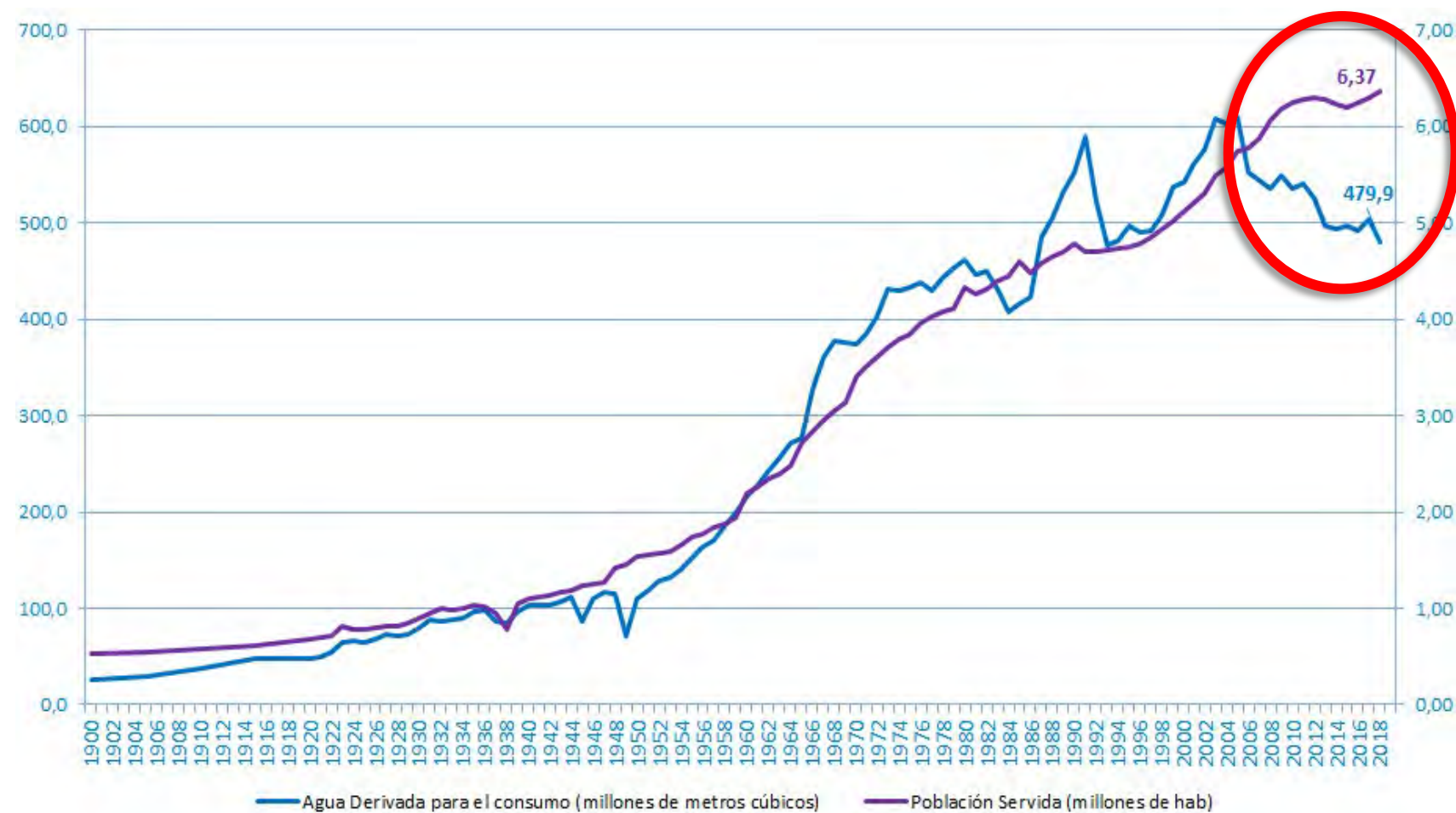
\*largest installed capacity company on the Region of Madrid

# The best way to **save energy** is to **save water**

Traditionally, population growth has led to an increase in water consumption.

In Madrid this has been the case until **2005**.

Consumption and population (1900-2018)

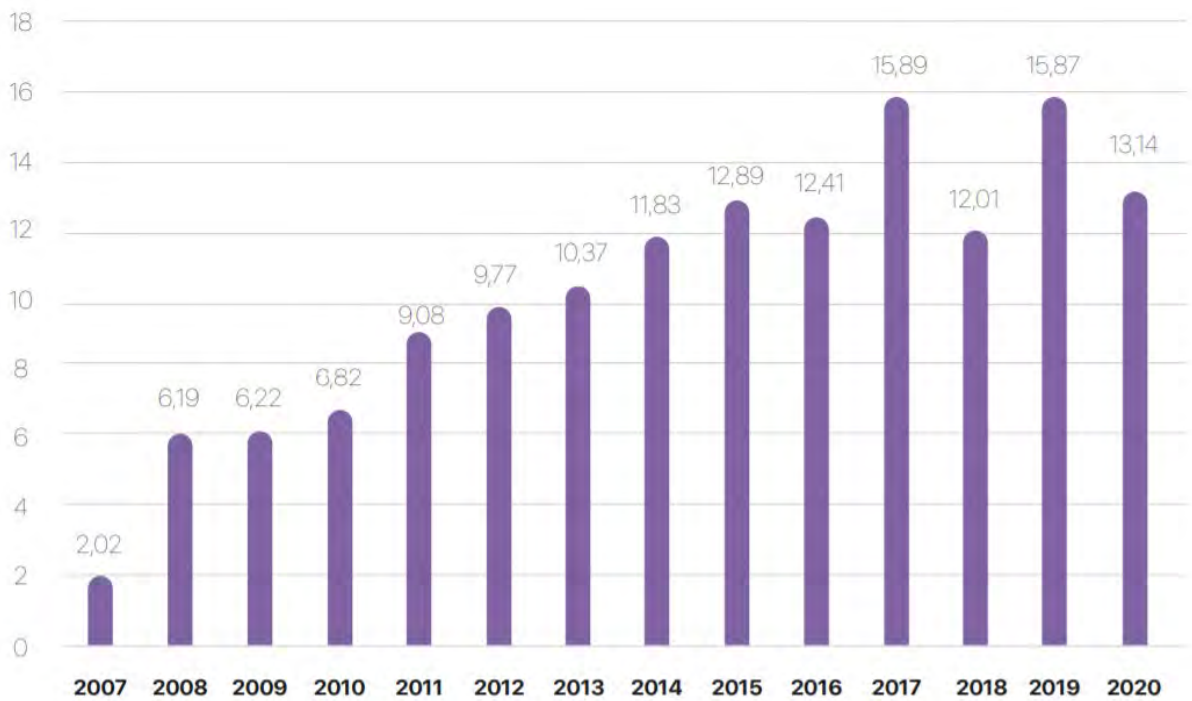


*¿How did we change the curve?*

# Regenerated water production



ANNUAL PRODUCTION OF REGENERATED WATER FOR REUSE  
(MILLIONS OF CUBIC METRES)



**134 hm<sup>3</sup>**

water recycled by Canal Group





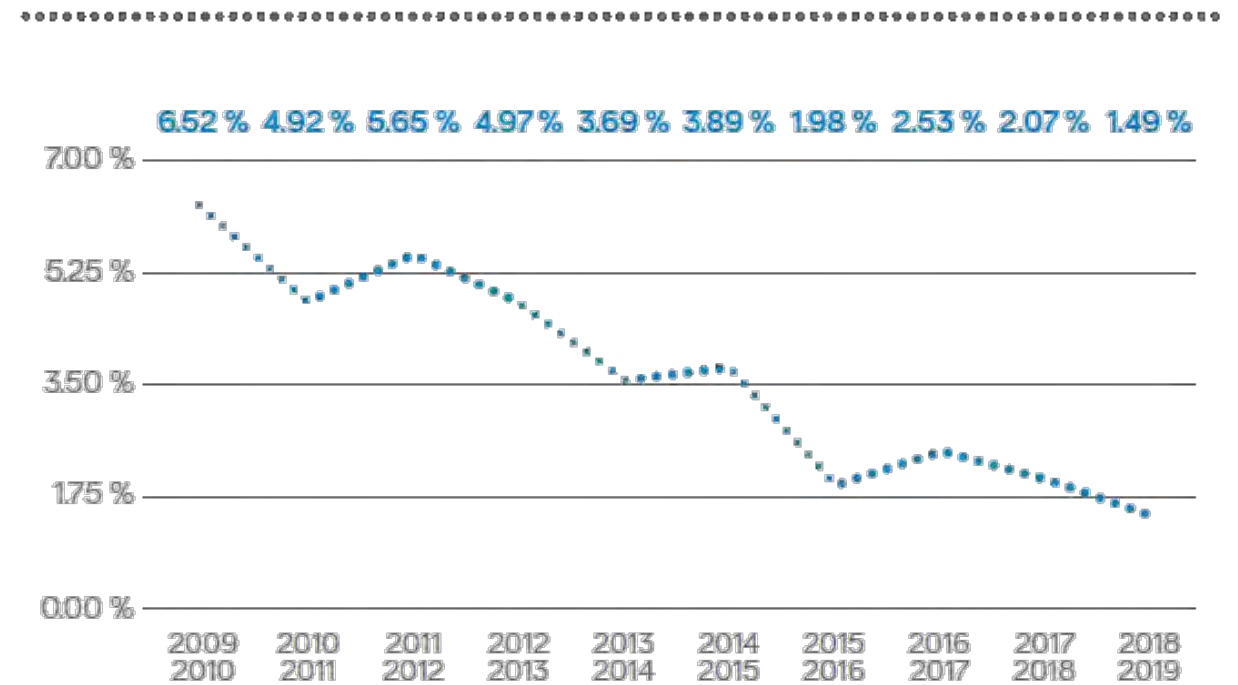
# Efficient use of water (*best practices*)

## COMMUNICATION CAMPAIGNS

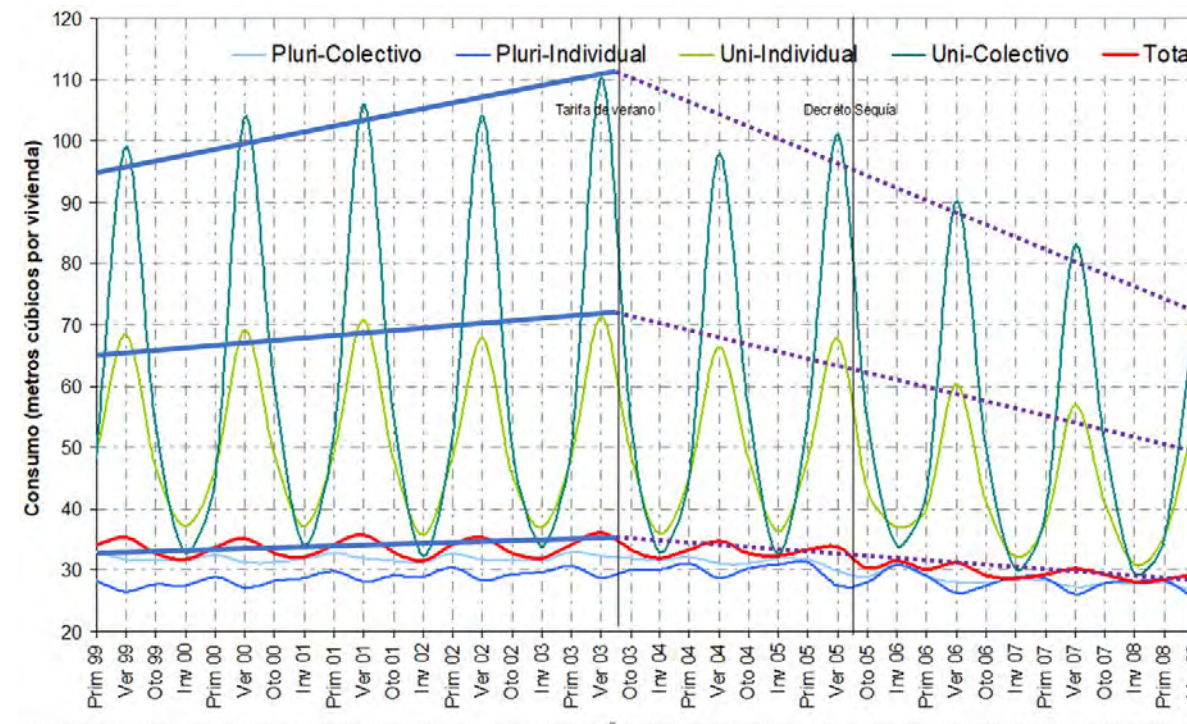


## NETWORK LOSS REDUCTION

**HIDDEN LOSSES IN THE DISTRIBUTION NETWORK**  
 (% OF WATER DERIVED FOR CONSUMPTION PER HYDROLOGICAL YEAR)



## WATER TARIFFS



- Progressive
- Seasonal
- Binomic structure
- Committed with the Environment





## Caring for **environment** caring for **water**



- ✓ Promote environmental investigation
- ✓ Ecosystem conservation



- ✓ Impact reduction.
- ✓ Pest control.
- ✓ Monitoring and modeling.



- ✓ Monitor climate change.
- ✓ Forests to capture CO<sub>2</sub>.



- ✓ Environmental public information.
- ✓ Bonuses for sustainable agriculture and livestock.
- ✓ Promote sustainable tourism.



Ecosystem care

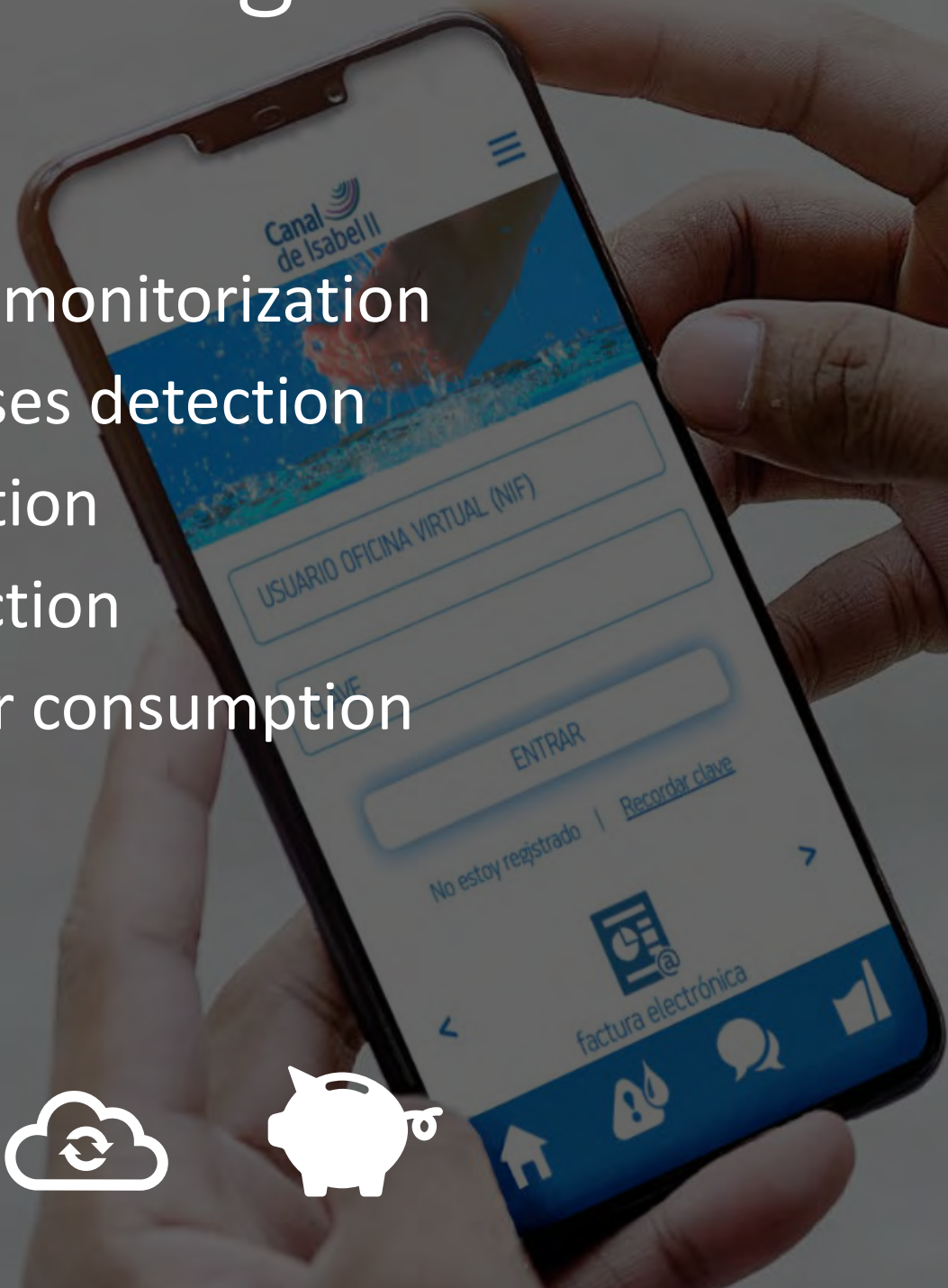
# A new use for *La Alberca* dam

- Bats and amphibians protection
- Maintain of gallery dam
- Reuse of construction materials
- Vegetal recover according to species needs



# Smart-metering

- Consumption monitorization
- Leaks and losses detection
- Daily information
- Digital connection
- Efficient water consumption



# Sustainable Drainage Urban System



FOREST RESTORATION



FILTER DRAINS



GREEN COTTAGE FOR TRANSPORTION



VERTICAL GARDENS



GREEN ROOFTOP

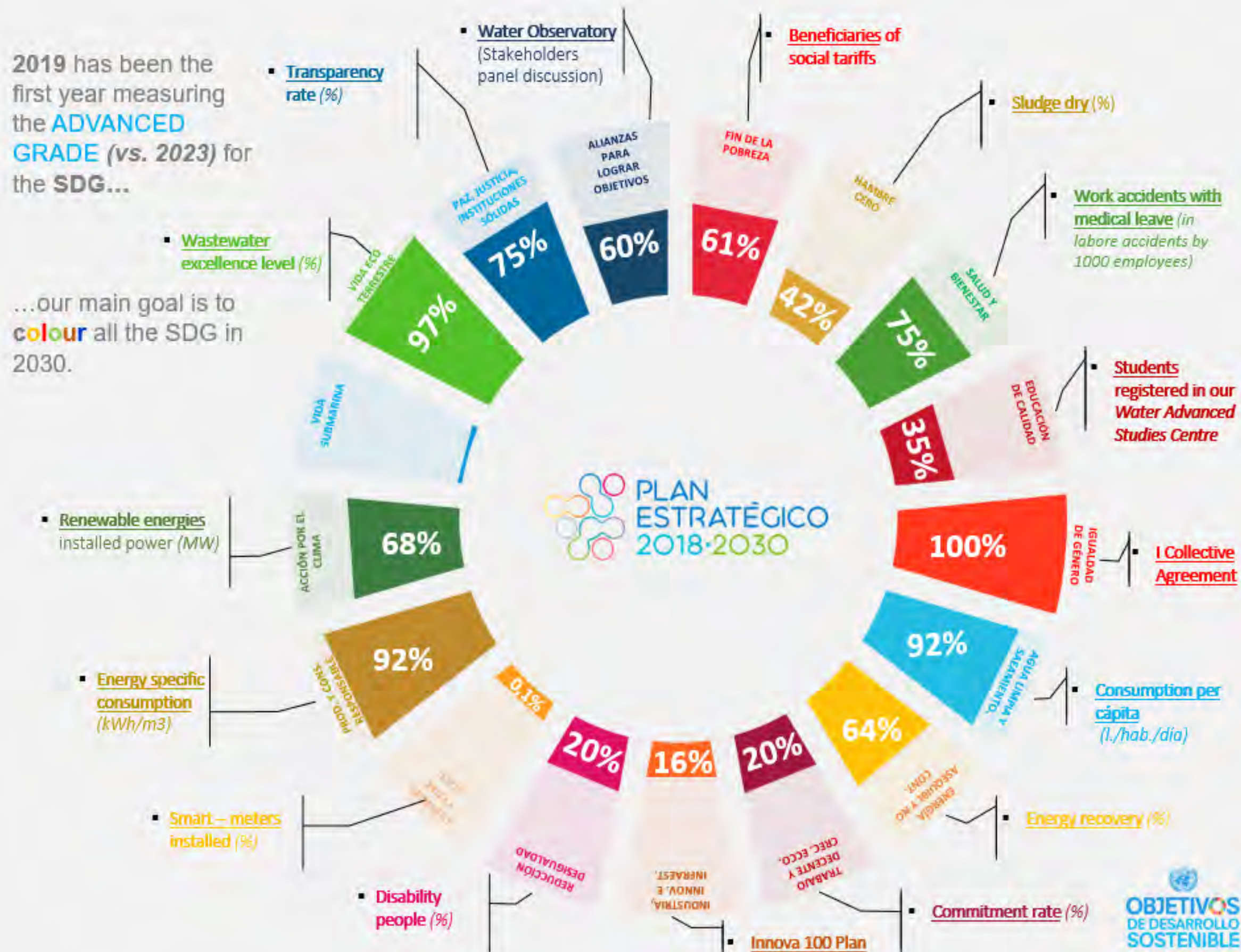


NATURAL RETENTION BASIN



# Measuring the progress: 2030 strategy

- Full integration of SDGs in our strategy plan
- 99 actions working on targets
- Measuring the progress with an ad-hoc tool
- Quarterly communication on website
- International benchmarking groups
- Workshops with employees for prioritization
- Sustainability report based on SDGs





# Conclusions

- **Saving water** is the best tool to save energy
- There are **many alternatives** to contribute for climate action. Canal is close to generate 100% of our consumption but also there are some projects and initiatives to do.
- **Comprehensive management** of the water cycle in large territories allows the development of robust and resilient companies.
- **“Go far”** from **daily activity** and firm commitments are the key to accelerate the action.

*We firmly believe that **it is time to act** and seek a more sustainable future for the next generations.*



Canal  
de Isabel II



Comunidad  
de Madrid



SUSTAINABLE  
**WATER &  
ENERGY**  
SOLUTIONS  
NETWORK