

## THE DESSIN PROJECT

The **DESSIN** Project not only promotes the use of innovative solutions to face the challenges related to water quality and scarcity but also has developed a methodology to evaluate the impacts of those solutions on the ecosystem services, short ESS, called the **DESSIN ESS EVALUATION FRAMEWORK**.

This innovative approach allows a standardized evaluation of the impacts and benefits of solutions in multiple sectors. One of its main competitive advantages is its capacity to integrate economic, environmental and social dimensions in the evaluation.

## FIVE KEY LOCATIONS

The research of the **DESSIN** project focuses on five demonstration sites located all over Europe (Norway, Greece, Germany, Holland and Spain) that were carefully selected as representatives of the biggest challenges in Europe's water sector.

## WHAT ARE ECOSYSTEM SERVICES?

Ecosystem services are the benefits people obtain from ecosystems. These include provisioning services (e.g. food and water), regulating and supporting services (e.g. climate regulation and pollination) and cultural services (e.g. aesthetic values and recreation).



## PARTNERS



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DEMONSTRATE ECOSYSTEM SERVICES ENABLING INNOVATION IN THE WATER SECTOR



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## DESSIN EVALUATION FRAMEWORK

# ECOSYSTEM SERVICES EVALUATION

## FOR DECISION MAKING



DEMONSTRATE ECOSYSTEM SERVICES ENABLING INNOVATION IN THE WATER SECTOR

# DESSIN ESS EVALUATION FRAMEWORK

The **DESSIN ESS EVALUATION FRAMEWORK** is a methodology that assesses and analyses ecosystem services changes once a measure/solution\* is implemented and provides the necessary data for the decision-makers (administrations, companies...) **to choose the best option** when investing in projects. One of the core aims of the methodology is to make decisions more transparent.



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[www.dessin-project.eu](http://www.dessin-project.eu)

## MAKING THE RIGHT DECISION

The **DESSIN ESS EVALUATION FRAMEWORK** will support evaluation planning, design and development of new solutions before being implemented in water management. The methodology incorporates elements of main types of ecosystem services typologies (CICES and FECS-CS) and integrates existing schemes (DPSIR) to improve the DESSIN method.

## AT WHOM IS IT AIMED?

The methodology can be used by different users with different objectives: by small and medium-sized enterprises (SMEs), to demonstrate the positive impact on the proposed technology; by drinking water operators to test alternative solutions or by policy-makers to meeting environmental objectives.



SME's



Drinking water operators



Policy makers

### \* INCORPORATED SCHEMES AND TYPOLOGIES

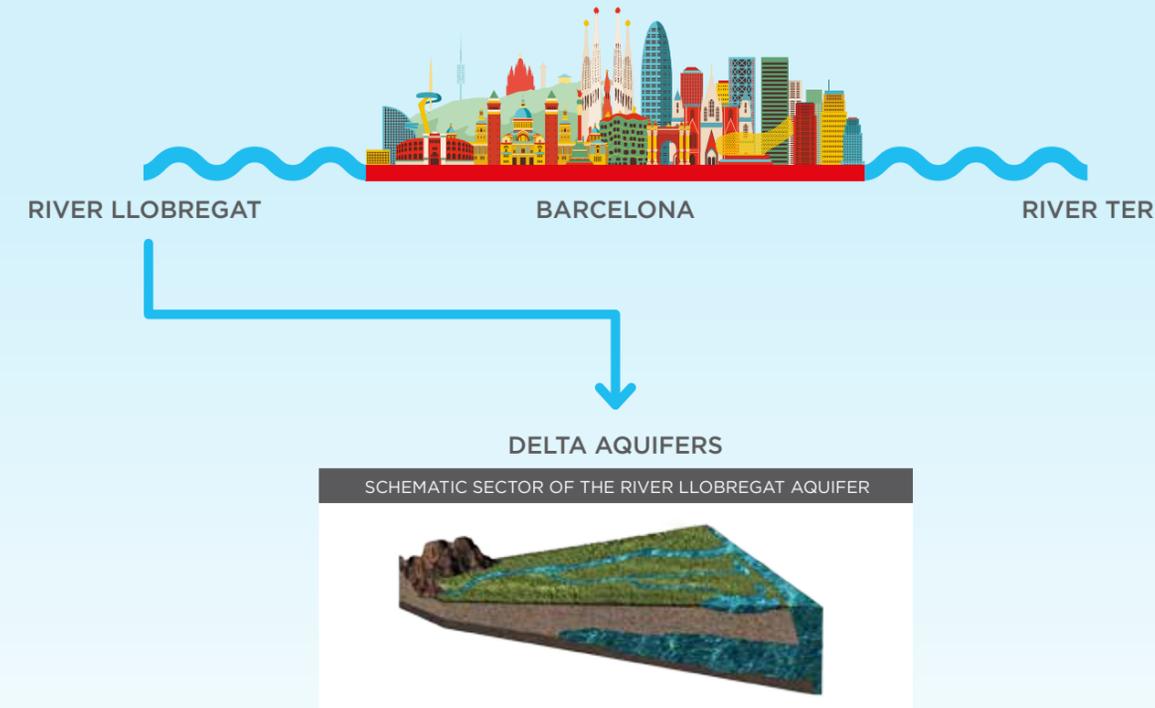
**DPSIR:** Drivers Pressures State Impacts Responses

**CICES:** Common International Classification of Ecosystem Services

**FECS-CS:** Final Ecosystem Goods and Services Classification System

# THE CASE OF BARCELONA

Barcelona was taken as one of the case studies to develop the **DESSIN ESS Evaluation Framework**. The city is in need of an alternative to the main sources of water: the rivers Llobregat and Ter. For this reason, the aquifers of the Llobregat deltas were selected.



However, the aquifers of the Llobregat deltas are a limited source. **Two options** were considered in order to improve the capacity of the aquifers to store the water temporarily:

## BARCELONA CASE

### TWO POSSIBLE SOLUTIONS

ANALYZED AND COMPARED BY DESSIN ESS EVALUATION FRAMEWORK

### OPTION 1

Creating infiltration ponds (Recharge in area)



### OPTION 2

Injection wells (Recharge in depth)



### ANNUAL BENEFIT OF EACH ECOSYSTEM SERVICE

220.000€	484.000€	220.000€	150.000€
216.000€	21.000€	216.000€	

### BENEFICIARIES

Drinking water operators, industries, researchers, citizens.

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Drinking water operators, industries, researchers.

### DECISION

- Water for domestic use
- Water for industrial use
- Uses for research
- Recreational use