

WATER SCARCITY & DROUGHTS POLICY IN THE EU - GAP ANALYSIS

PRELIMINARY FINDINGS AND ELEMENTS FOR RECOMMENDATIONS



Meeting of the EC Expert Group on Water Scarcity and Drought

VENICE, October 13-14 2011



Project commissioned by the

EUROPEAN COMMISSION

DIRECTORATE-GENERAL

ENVIRONMENT

Directorate D - Water, Chemicals & Biotechnology

Objectives

→ An **overview** of magnitude of the WS&D problem in Europe for today up to 2030

→ **Identification and assessment** of the adequacy of existing measures to prevent, manage or mitigate WS&D situations in MS

→ **Identification of gaps** and **suggest new measures** or mix of measures to tackle WS&D issues in the EU

→ Assessment of the environmental, economic and social impacts and the **feasibility of the proposed measures (next steps)**

General approach

Task 1: Analysis of the present situation in the EU & predictions for the future

- Development of a baseline scenario
- Categorise and assess the effectiveness of WS&D measures
- Identify gaps related to this baseline
- In-depth assessment of the objectives for a revised WS&D policy

Task 2: Collect data and assess the social, economic and environmental impacts and the feasibility of the identified measures

- Complete in-depth assessments of measures tackling WS&D
- Compile information in a common assessment framework

Tasks 3 & 4: Support the Commission in the stakeholder consultation process and provide supporting documents to policy makers

- Support the Commission in related consultation processes
- Final report and policy makers' summary

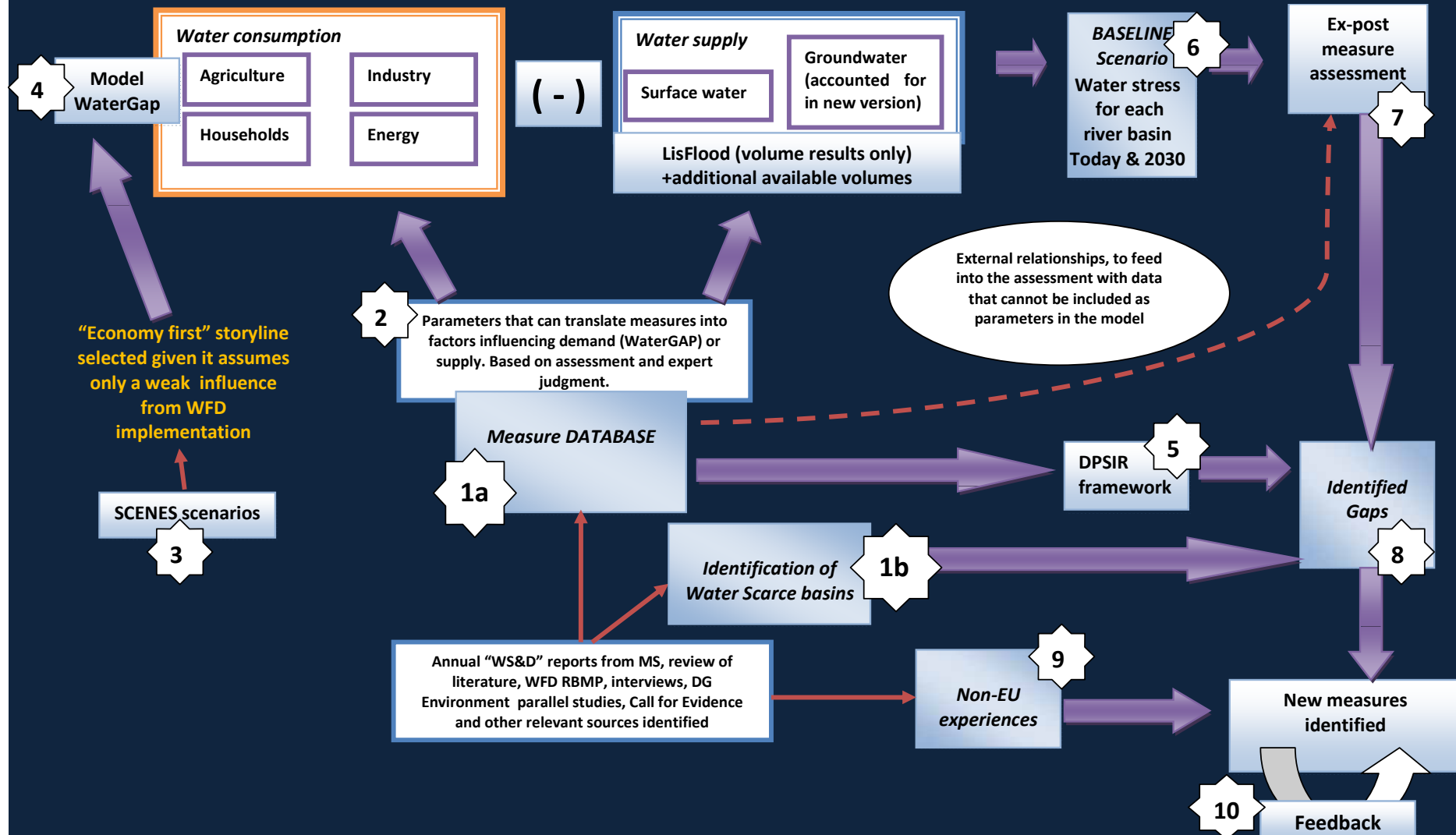
Development

Overview of magnitude of the WS&D problem: Besides a literature review on the causes and consequences, the prevalence of the phenomena was analysed by collecting various sources from reported cases to modelled.

Identification and assessment of actions: This was undertaken by doing a policy instrument database gathering and classifying measures and support actions.

Identification of gaps and recommendations: As a result of the first two exercises, several types of gaps have been identified.

Development (to date)

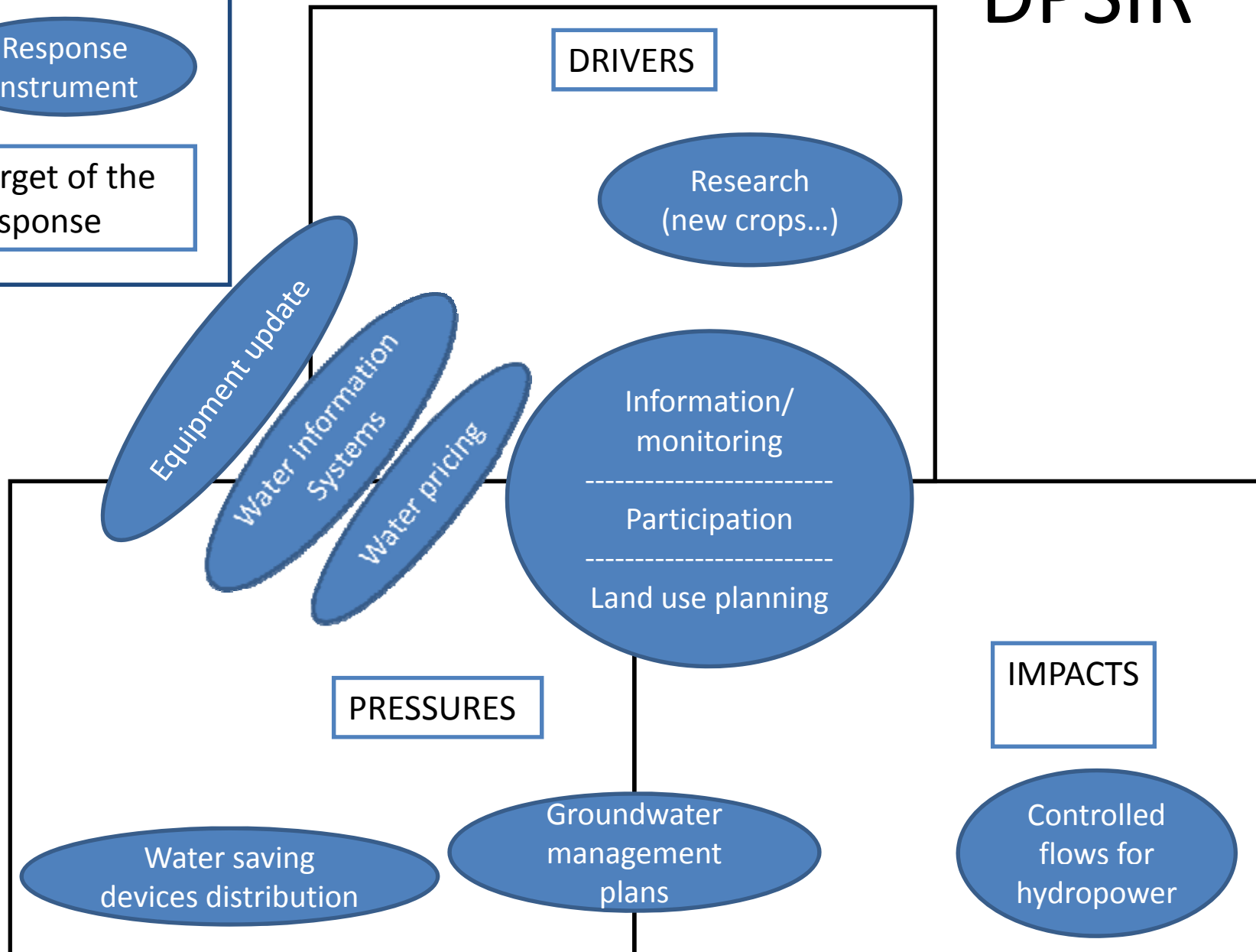
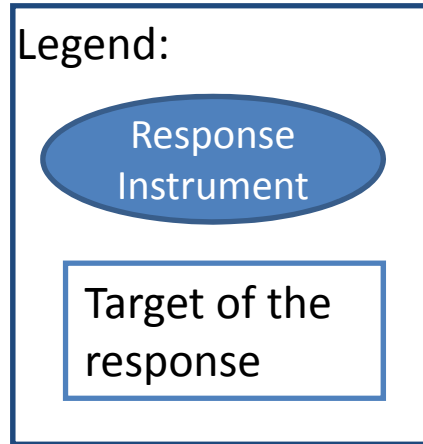


Definitions

Measures: Technical, hydro-technical and land-use based measures that bring about actual water savings and reduce droughts

Support Actions: Administrative controls, financial instruments, policy actions, management plans, voluntary initiatives, and educational activities (research and awareness-raising) that support the implementation of “measures”.

DPSIR



Tools informing the analysis

Water scarce basins [matrix](#) and [maps](#)

According various sources (RBMPS review, ClimWatAdapt model, 2nd Interim report, WEI, Other national sources)

Policy instrument database (per country and consolidated by type). This includes both measures and support actions.

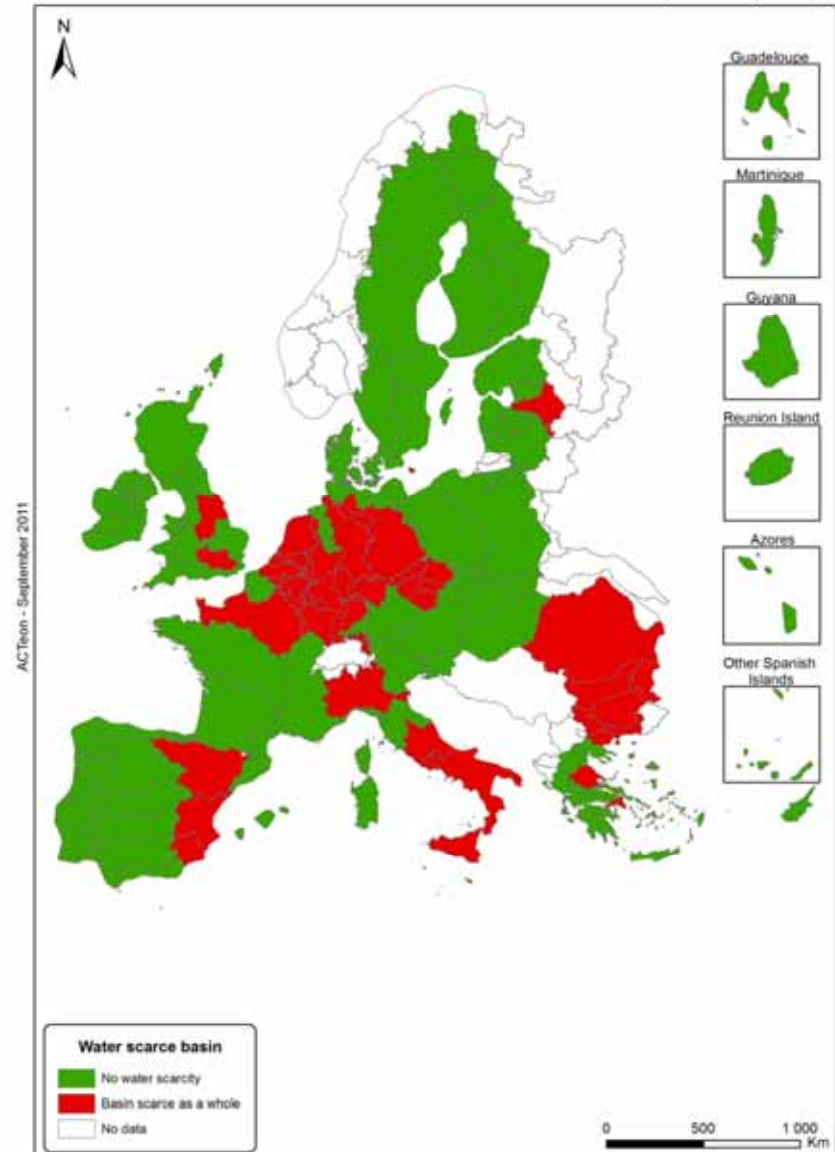
Baseline scenario to 2025/30 of the expected impact of WS&D measures from RBMPs in 6 countries under the assumptions of an Economy First Scenario (SCENES).

Modelling WS magnitude to 2030

Localisation of the water scarce basins in 2030 (summer)



Localisation of the water scarce basins in 2030 (whole year)



Types of gaps 1

Conceptual gaps:

Limitation in the understanding of the causal relationships between Drivers, Pressures, State, Impacts, Responses and their interplay

Gap of knowledge and lack of coherent methodologies when it comes to defining and assessing Europe's vulnerability to WS&D (exposure-sensitivity-adaptive capacity)

Types of gaps 2

Information and assessment gaps:

These gaps prevent the accurate identification of the magnitude/recurrence of WS&D and of a coherent interpretation of the conceptual frameworks.

Unclear and non-transparent datasets

Data on impacts are not widely available, nor was a common typology been developed

Concrete evidence on the effectiveness and efficiency of measures and support actions is also missing (largely qualitative info)

These relate to Monitoring and Reporting issues

Types of gaps 3

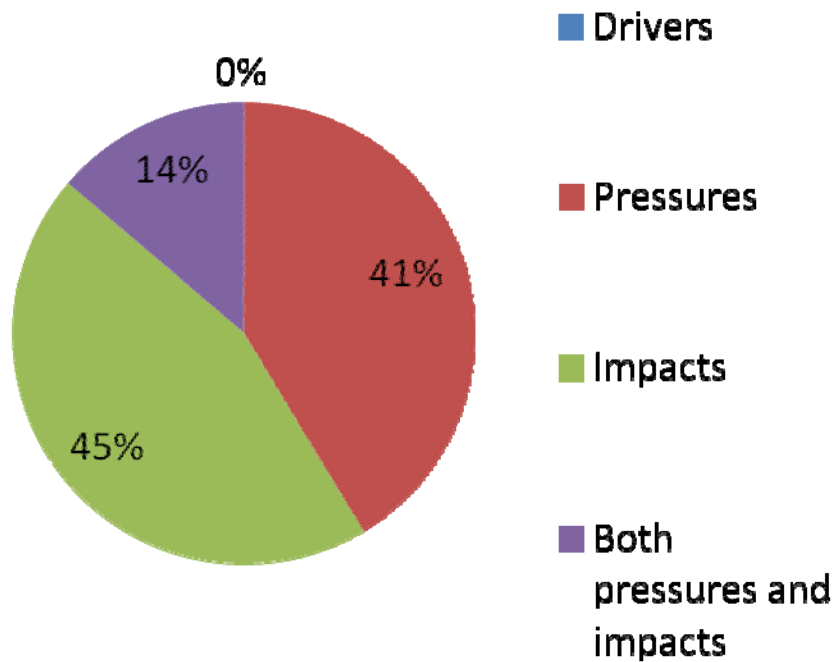
Governance and policy gaps (main focus):

Policy instruments and responses can be introduced to change specific drivers, pressures or impacts, or become a driver for change themselves.

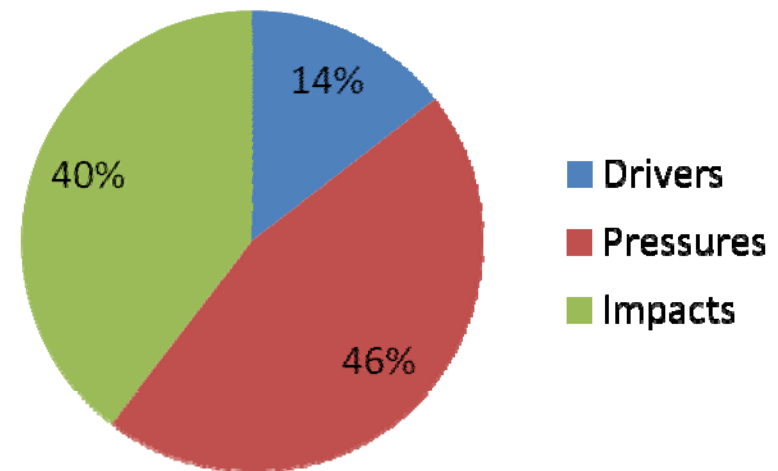
1. When WS&D are identified to be an issue in a RBD, is action taken?
(Yes, but the basin needs to be identified...)
2. What are our policy instruments (i.e. support actions and measures) targeting?
(only a few are targeting drivers, therefore probably falling short of what is required to successfully and durably tackle the issue)
3. When responding, do the actions have a 2025-30 horizon?
4. Are we reactive rather proactive?
(comparison of comparison to water supply investments vs. water saving instruments)
5. IS THE LEVEL OF AMBITION OF THESE INSTRUMENTS ENOUGH?

Governance / Policy gaps

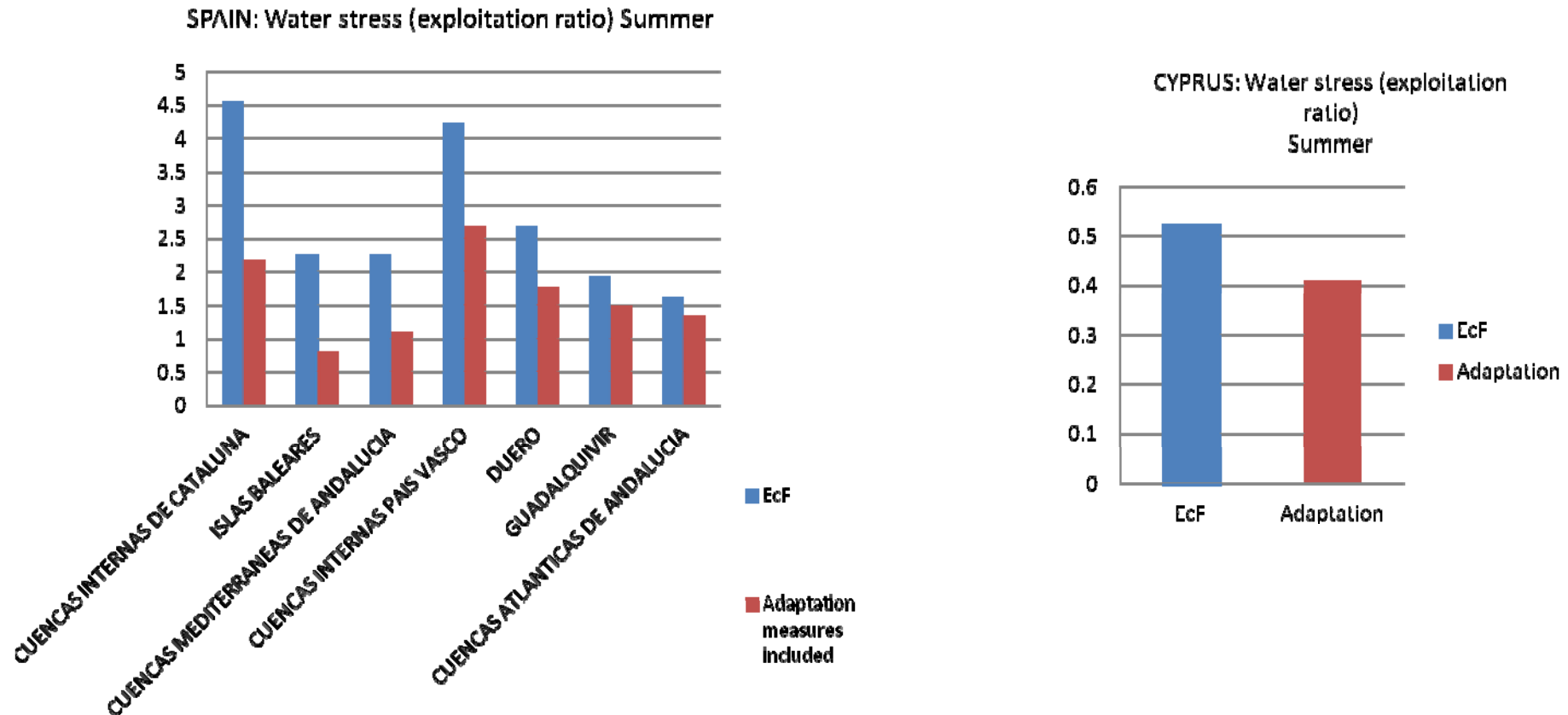
Number of measures targeting drivers, pressures or impacts



Number of support actions targeting drivers, pressures or impacts



Governance / Policy gaps



Summer months' Water Exploitation Index, with and without current policy instruments in 2025-30.

(Source: Modelling based on WaterGap including the translation of measures from each RBMP into coefficients for structural change, technological change, irrigation efficiency, change in irrigated areas and new sources of water)

Types of gaps 4

Implementation gaps:

Following the launch of adequate measures directly answering identified policy gaps, these may fall short of expected outcomes because of weaknesses associated with their Implementation

- “Actual field Performance”, theory vs. reality (this relates also to clearly defined targets of an adequate horizon)
- The implementation of the measures will be a shared responsibility of the authorities at different levels and the stakeholders. However, details on this issue are rather limited and so it remains often vague and challenging who finally will be responsible
- The interaction of the different launched measures is also challenging and poorly addressed (risk of conflicting vs. supplementary)
- Financing of measures, support mechanisms needed, round and solid planning. Have we considered all these?

Limitations of the study

- Information quality/coherence
- The process of translating potential effects of the policy instruments into the WaterGap model (parametrisation).
 - Need to mobilise expert judgement
 - Constructed on several assumptions and value transfers
 - Bias arising from the lack of balance between data on new supply / data on savings

Key points of the inception report

- Current incoherent picture of water scarcity in Europe (matrix / maps) as a result of lack of data and incoherent and unclear datasets
- The review of the measures and supporting actions show a bias towards answering to pressures and impacts (immediate causes and symptoms) and not tackling the drivers
Also, are more focused to enhancing water supply than reducing water demand → we are not proactive enough
- Although limited in performance, the model used to project the effect of the recent and to be introduced measures do not show a great shift in total water use.
- Without looking to undermine current water saving efforts, these conclusions invite to revise the approach followed up to now.

Policy options to:

- Allow a more informed policy development and evaluation
- Enhance relevant data/information flow
- Promote more ambitious measures targeting drivers
- Enhance coordination between measures & support actions
- Channel new incentives through:
 - Conditional financing,
 - Market-based instruments (i.e. Cap and trade)
- Wider engagement with sector policies
- Ensuring EU wide water allocation rules
- Revisit effective water use control approaches, although potentially more costly at face value (i.e. land use planning, regulatory technical measures)