



REsilienT water gOvernance Under climate CHange within the WEF E NEXUS: The Júcar riverbasin case study



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THE RETOUCH NEXUS PROJECT



CASE STUDY OVERVIEW

THE CASE STUDY IN A NUTSHELL

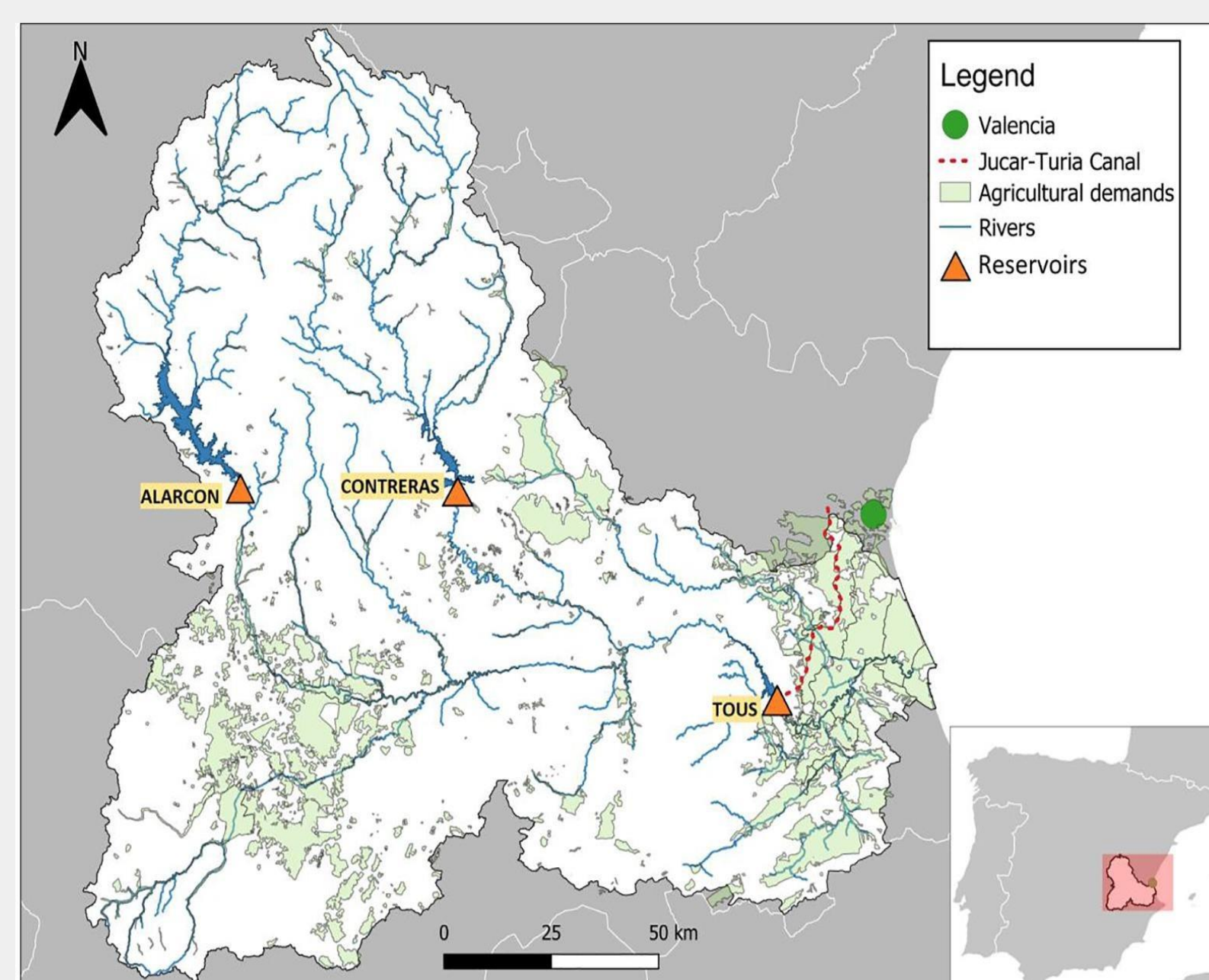
The Júcar river basin is located in the Mediterranean basin of eastern Spain, the water resources system operates in a tight balance between water demand and availability. The Júcar River is the main source of urban water supply for the city of Valencia and its metropolitan area (the third largest municipality in Spain). Water scarcity, irregular hydrology and over-exploitation of groundwater cause frequent and severe droughts with significant economic, social and environmental consequences. This situation is expected to be aggravated by the impact of (global) climatic and socio-economic changes and by increasing institutional obstacles resulting from political disputes between the two main riparian regions, Castilla-La Mancha (upper and middle basin) and Mancha (upper and middle basin) and Valencia (lower basin).

CONTEXT OF THE CASE STUDY

The traditional way to tackle water scarcity issues in Spain, increasing available resources, is almost exhausted in the Júcar River basin and may refer to the use of non-conventional water resources, whose costs are beyond affordability for most users, in particular in the recent context of rising energy prices. Improved water governance schemes and economic instruments appear as promising alternatives to achieve sustainable water use and reconcile it with energy production and consumption, food production from agriculture and advancing towards the achievement of the WFD.

Main Characteristics:

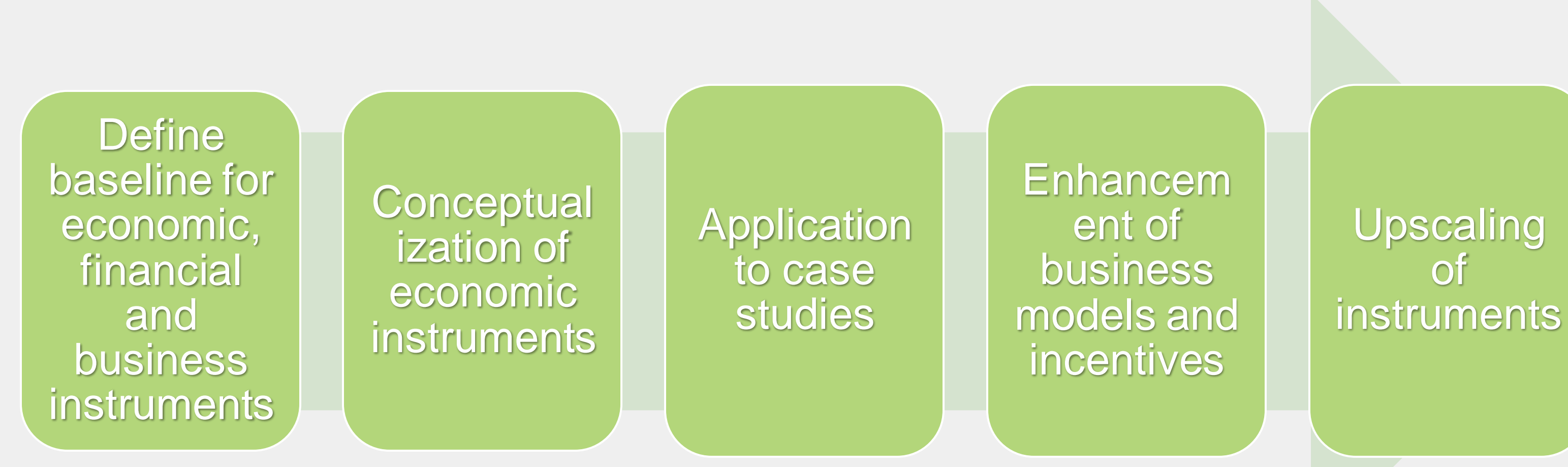
- Av surf resources: 1,605 Mm³/year
- Urban demands: 190 Mm³/year
- Agric Demands: 1,403 Mm³/year
- Industrial demands: 32 Mm³/year
- Hydropower capacity: 2,373 MW + 1,092 nuclear
- Environ flows: 104 of 143 water bodies
- Reservoir capacity: 2,627 Mm³



CONTRIBUTION

Design economically and financially sustainable cross-sectoral, multi-level Nexus-based water systems.

METHODOLOGY & EXPECTED RESULTS



Expected results

- Innovative solutions for an efficient and sustainable coordinated governance of the WEF E Nexus
- Climate-adjusted economic instruments and business models for water governance in the EU
- Climate change scenarios, water economy models and adaptation measures for sustainable water governance

LOCAL WATER GOVERNANCE SYSTEMS ANALYSIS

- Water planning is centralised by the CHJ with users having the possibility to make suggestions.
- Water management is more collaborative performed by a commission (Comisión de Desembalse) that gathers representatives from CHJ, users and governments.

LOCAL INDICATORS USED FOR MONITORING WATER GOVERNANCE

- Existence and level of implementation of a water law.
- Existence of a central agency with water related responsibilities for policy making.
- Existence of mechanisms to review responsibilities
- Existence of integrated water resource management strategies and policies
- Existing of institutions for the management at the hydrographic scale.

STAKEHOLDER ENGAGEMENT & PUBLIC PARTICIPATION ANALYSIS

Main Stakeholders

- Júcar Water Users Union (USUJ)
- Júcar River Basin Authority (CHJ)
- Hydropower (Iberdrola)
- Groundwater users (Mancha Oriental, Utiel-Requena)
- Municipalities (Valencia, Albacete)
- Regional governments (Comunitat Valenciana, Castilla – La Mancha)

Synergies with RETOUCH



References:

- OECD Water Governance Indicator Framework (2018)
- CHJ. Plan hidrológico de cuenca, 2022-2027.



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