



## Concept Note.

UNESCO-IHP. Contract 4500511514

### MedProgramme Child Project 2.1 “Mediterranean Coastal Zones, Water Security, Climate Resilience and Habitat Protection”

Management of Coastal Aquifers and Related Ecosystems – Component 2

### **Training Course on “Conjunctive Management Solutions of Surface and Groundwater: Governance and policies”. 17-18 July 2024**

**13 June 2024**

#### **Rationale**

The definition of conjunctive use of two different, but in most instances inter-connected, water resources, namely surface water bodies (e.g., rivers, dam reservoirs, lakes) and underground water reservoirs (aquifers), varies depending on the place, the political and the geographical characteristics. In a very basic definition, one would see the conjunctive use of surface water and groundwater as being a mechanism through which the use of available water resources is optimized, and the benefits of doing so are greater than if both sources were managed in an uncoordinated manner.

The rationale behind adopting an approach of conjunctive use of water resources lies in the existing hydrological inter-linkage between groundwater and surface water. A combined use of both resources may help solve, or at least attenuate, water quality and water quantity problems. At times, conjunctive use can prove to be a cheaper solution than sole dependence, either on surface water or on groundwater.

Among the advantages of the conjunctive use of available water resources are the economic, operational and strategic benefits or improvements a society may obtain when optimizing both resources. Although not very obvious at the start of a project, the economic advantages become clear when new investments for water supply sources (construction of large dams) decrease, and the operational costs of integrated systems are lowered. The operational advantages include the increase of available water resources for water supply without necessarily increasing the storage in the basins. Furthermore, some problems due to the over-exploitation of either one of the surface or groundwater resources, may be reduced or completely solved, such as the drainage and salinization of soils in irrigated lands in arid and semi-arid regions, land subsidence due to excessive pumping, etc.



There is a great potential for conjunctive use in the Mediterranean region. The main reasons are that groundwater resources are extensively exploited, particularly coastal aquifers where most of the population is settled; generally, surface water irrigation increases recharge; drainage and salinity problems often arise, and sometimes millions of hectares are affected and abandoned. Alternative use (providing higher yield and reliability) is already a common practice, as well as river flow augmentation.

Although the topic of conjunctive use of surface water and groundwater is very broad, the course is intended to serve as an introduction to it, but also aims to provide practical information, tools and methodologies to address the analysis and design of planned conjunctive use of surface water, groundwater and non-conventional water in a basin or region. This analysis and design is essential to ensure a planned and efficient conjunctive use.

UNESCO-IHP is the executing partner of Component 2 on “Management of Coastal Aquifers and Related Ecosystems” of the UNEP/GEF MedProgramme Child Project 2.1 “Mediterranean Coastal Zones: Water Security, Climate Resilience and Habitat Protection” (MedProgramme). Component 2 of the project aims to support the implementation of actions of the Sub-Regional Action Plans developed under the MedPartnership on the sustainable management of coastal aquifers and groundwater-related ecosystems. The activities foreseen aim, in particular, at the implementation of the sustainable management policies and practices in five coastal aquifers considered of priority importance by the countries (other project countries are Albania, Montenegro, Morocco, Tunisia, Lebanon and Libya).

As part of activity 2.2.2, MENBO organized a first regional training course on “Conjunctive Surface and Groundwater Management in Coastal Areas” which took place on 17-19 May 2023 in Valencia, Spain. The training course focused on key elements of conjunctive management such as: (i) Basic Groundwater Governance Principles and management tools; (ii) Hydrogeological and socio-economic implications of surface water and groundwater interactions; (iii) Available tools for the conjunctive management of groundwater and surface water; and (iv) Innovative tools (e.g. numerical modelling, isotope techniques) for improving groundwater management.

Following up on the interest expressed by the participating countries, it was decided to organize a second regional training course focusing on the governance and policies related to conjunctive management and addressing governance related topics such as: (i) institutional settings for conjunctive management, (ii) policy frameworks and legislation, (iii) stakeholders’ engagement (iv) financial mechanisms and (v) communication.

The second course will take place on 17 and 18 July 2024 at the premises of the Júcar River Basin Authority.

### **Participant countries**

The participants in the course will come from the following MedProgramme beneficiary countries: Albania, Algeria, Bosnia and Herzegovina, Lebanon, Libya, Montenegro, Morocco and Tunisia.

The group of participants is composed of officially designated country representatives, the UNESCO national consultants that have contributed to the organization of the national dialogues



on conjunctive management, and the international experts and resource people who will be invited to contribute to the training course with lectures and case studies.

The national consultants in charge of the organization of the national dialogues will be invited to present the results of the national dialogues held in their respective countries. The national dialogues took place in Lebanon in February 2023 and in Albania, Montenegro, Morocco and Tunisia in April 2024. The participation, accommodation and travel costs of the official 7 country representatives will be covered by MENBO in the framework of the Child Project 2.1 of the UNESCO Med-Programme.

### **Structure of the course**

In accordance with the above-mentioned objectives, a course of a total duration of **two days** has been planned. On the second day a technical visit to a relevant site will be organized.

The work in the classroom will be structured around 5 main themes:

- Theme 1: Institutional settings for conjunctive management
- Theme 2: Policy frameworks and legislation for water resources management
- Theme 3: Stakeholders' engagement in conjunctive management
- Theme 4: Financial mechanisms for sustainable conjunctive management
- Theme 5: Communication and information sharing.

As mentioned above, on the second day, the course will also include a **field visit** to the **Valencia Water Tribunal** (*Tribunal de las Aguas de Valencia*).

The Water Tribunal is an institution of justice responsible for settling disputes between farmers, arising from the use and exploitation of irrigation water in the Irrigation Communities established around the city of Valencia (*Quart, Benàger i Faitanar, Tormos, Mislata, Mestalla, Favara, Rascanya, Rovella and Chirivella*).

The participation of farmers and the speed with which problems are solved have projected the Water Tribunal internationally as an exemplary Institution. On 30<sup>th</sup> September 2009, the Tribunal was designated Intangible Cultural Heritage of Humanity by UNESCO.

The origin of the Tribunal is totally unknown, although it is most likely an evolution based on earlier Andalusian traditions while some historians place its origins in Roman times. The Water Tribunal is the only remaining legislative structure of those established by the monarch James I. The Arabs already practiced this irrigation system, which the monarch formally established for the distribution of water from the Turia River.

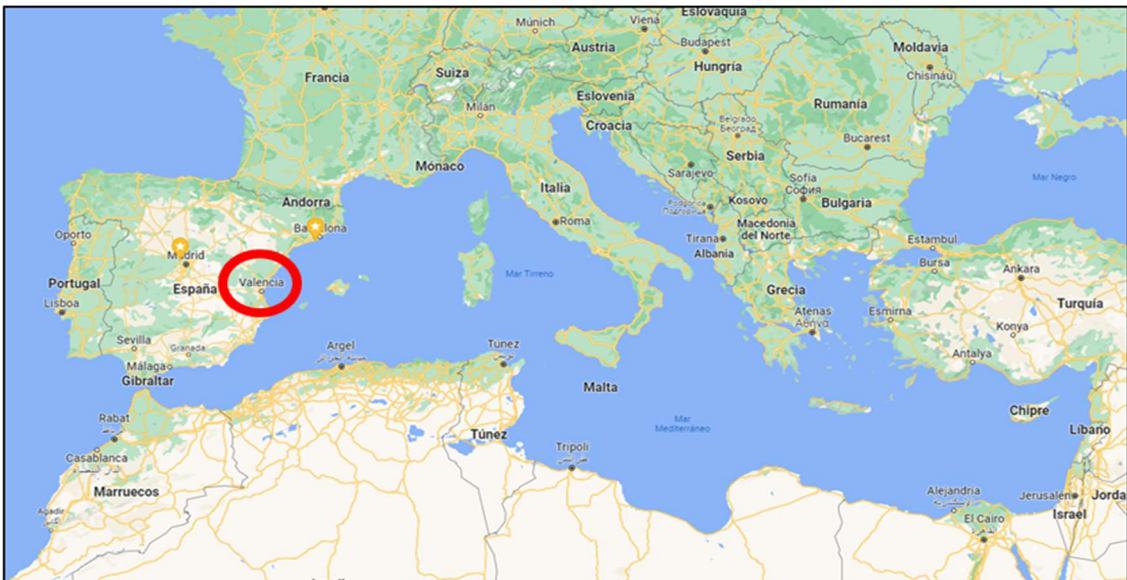
The Tribunal is made up of eight farmers who are democratically elected every two years by the irrigators of the Valencia *Huerta* (Orchard). It meets formally every Thursday of the week at midday in public session outside of the Apostles' Gate of the Cathedral of Valencia.

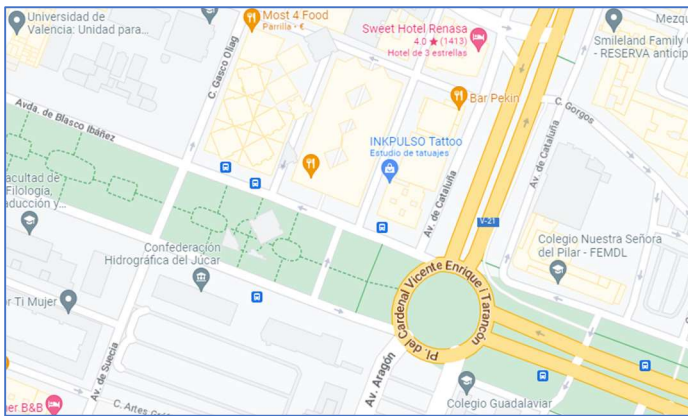


## Venue



The course will be held at the premises of the *Confederación Hidrográfica del Júcar* (CHJ), in Valencia, Spain. The CHJ is a River Basin Organization created in 1934, within the scheme adopted in Spain in 1926, for the management of water resources at river basin level. This organization is responsible for planning, management and policing of water resources and the public hydraulic domain within its field of competence.





The CHJ building is located on *Blasco Ibáñez* Avenue, well connected to the subway and train stations, and to the Valencia-Manises Airport.

CHJ hosts and houses the Permanent Technical Secretariat of the Mediterranean Network of Basin Organizations (MENBO), which will operate the development of this course on

behalf of UNESCO.

The premises of the Jucar River Basin Authority counts with several spaces and rooms suitable for the development of the course.



The organization will ensure the reservation of a suitable hotel for the accommodation of all the participants, from which the transfer to the different work, visit and meal areas, will be guaranteed. The selected hotel will be located nearby the premises of the Jucar River Basin Authority where the course will be delivered.