



September 24, 2021

2:00PM-4:00PM Beirut Time

Minutes of the 1st Meeting on WP2 DATA

Organized by Hadi Jaafar and Nina Graveline

This document is a record on the proceedings of the 1st meeting conducted on WP2 DATA on September 24, 2021 among all water lab partners. The document keeps track of the meeting objectives, attendants, summary points, preliminary WaPOR takeaways, resources, an overview on meeting flow, and presentations of case studies of water labs.

01 Meeting Objectives

- Touch-base with water labs on data collection progress for the data needed for the water accounting runs.
- Provide water labs with an overview on WaPOR, input and output data, possible quality checks, as well as guidance on data access.
- Discuss the data management plan (DMP) challenges in data collection and basin locations and identification, and ensure that all water labs are on track in-line with deliverable deadlines and project timeline.

02 Meeting Attendants

Abdrabbo Shehata, Carlos Dionisio Perez Blanco, Francesca Renzi, Francesco Sapino, Hadi Jaafar, Hector Gonzalez Lopez, Issam Nouiri, Laura Gil, Mohamed Fethi Ben Hamouda, Nina Graveline, Paolo Mazzoli, Stefano Bagli, Rim Hazimeh, and Roya Mourad.

03 Meeting Summary Points

- Most water labs showed interest in attending a guidance workshop on the process of water accounting runs.
- A demo workshop will be conducted by the Lebanese water lab to guide all water labs on performing water accounting runs using WaPOR (date of workshop to be determined, most probably in January 2022).
- Most water labs are interested in running water accounting for their basins/catchments.

- Another meeting will be organized to discuss the data needed to be collected for the D2.1 deliverable (deadline: December 2021 - Nina Graveline) on hydro, micro-, macro-economic, agronomic and climatic database.
- The Lebanese lab will be running water accounting for the Lebanese basin, and will provide support and guidance on the process to other water labs, and will not, however, perform the runs for each water lab.
- The Lebanese lab suggested that all water lab PIs can join efforts to draft a paper together, which might be the first serious validation of WaPOR and water accounting performed over the Mediterranean Region, and might produce interesting scientific evidence for this region.
- Each water lab shall assign a specialized staff to be in charge of performing the water accounting runs.
- The metadata sheet includes a comprehensive list of items that directly feed into the water accounting runs, and others that will serve the bigger umbrella modeling process
- DMP has to be public (at least the outputs) placed in a repository. The DMP will be linked to the TALANOA project website. Suggestions may include creating a single repository for each water laboratory. Input data that should stay private can be restricted by the licenses applied on this data.
- **Approaching deadlines:**
D5.2 DMP Report: Nov 30, 2021
D2.1 Hydro, micro-, macro-economic, agronomic and climatic Database: Dec 31, 2021
D2.2 WA Database: May 31, 2022 (by this date, all water accounting runs are completed for all interested water labs).

04 Preliminary WaPOR Takeaways

- Data processing is not automated over time, and the project does not generate a tool.
- Data needs to be uploaded by either using data suggested by the Lebanese lab or by acquiring your own refined data.
- It is recommended that data undergo validation before importing into the runs for quality check. If water labs think that remotely sensed data might not be very accurate, it would be good to have ground-truth data to benchmark it with the water accounting runs. In addition, some remotely sensed data might have pixels larger than the size of the basin, and this might require the use of each lab's own data.
- The data for the water accounting runs might require format transfer first (ex. Time step aggregation; quality checks, etc.); the usual QAQC on the data before performing the runs.
- Water labs need to account for illegal diversions, for instance, in the WA runs, since for a water balance, the sums should close at the end and the researcher should be aware about this.

- Water storage and runoff data can be gathered from national sources, with format modification.
- **More insights on WaPOR and how to run the data will be provided during the upcoming hands-on workshop.**

05 Meeting Resources

- Lebanese Lab - Dataset: **Land Cover database CCI** (Climate Change Initiative) by ESA
- Lebanese Lab - Dataset: [Soil Moisture CCI ACTIVE Dataset](#) by ESA
- Italian Lab - Tool: [IRRICLIME: Climate Smart Irrigation Tool](#) by GECOsistema:
An open-source web mapping application to spatially and temporally predict, on a monthly, decadal or daily basis, core water budget variables and other agri-variables (hydro-climatic balance BIC, Soil Water Content SWC, Evapotranspiration ET etc.).

06 Meeting Flow 2:00PM-4:00PM Beirut Time

2:00-2:05

Project updates presented by Carlos Dionisio Perez Blanco

2:05-2:25

Presentation by Hadi Jaafar – Lebanese Lab

2:25 - 2:45

Q&A Session

2:45 - 2:55

Presentation by Nina Graveline – French Lab

2:55-3:15

Presentation by Abdrabbo Shehata – Egyptian Lab

3:15 - 3:25

Presentation by Carlos Dionisio Perez Blanco – Spanish Lab

3:25 - 3:35

Presentation by Issam Nouiri – Tunisian Lab

3:35 - 3:55

Presentation by Stefano Bagli – Italian Lab

3:55-4:00

Final Discussion

07 Water Labs Case Studies

French Water Lab – INRAE

- Precise basin delineation is still unclear.
- Discussions with stakeholders are ongoing - on whether or not to include some Mediterranean areas.

- One complex issue is the existence of a water conveyance infrastructure that is suprabasin.
- There is an interest in experimenting with WaPOR and comparing it with AirGIWRM.
- Currently, the lab has a generic approach to data and is in the progress of collecting the metadata.

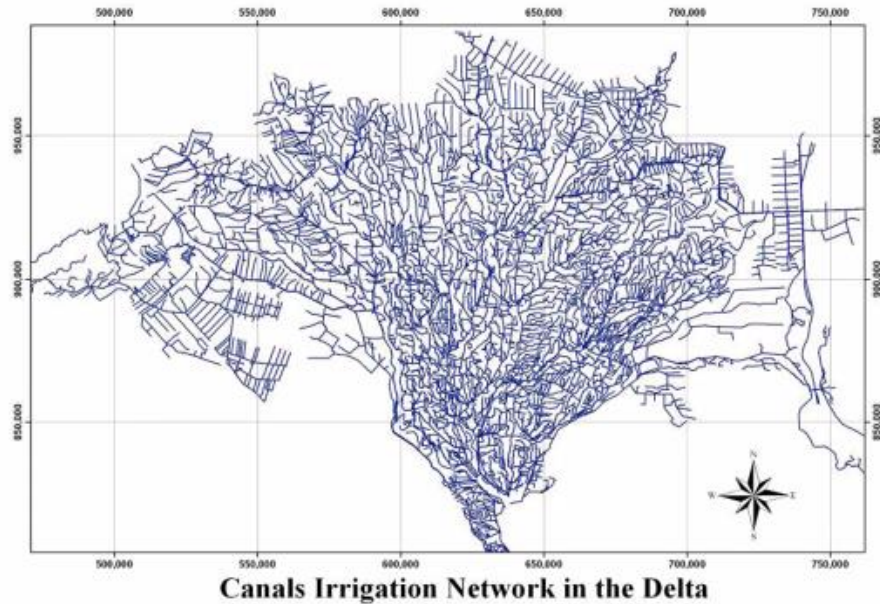



Overview of the approach

- The detailed basin is still unclear but included in Hérault or Aude dep
- We are running bilateral meetings to discuss with the Water Agency, the local government & the State to identify the best basin
- One complex issue is the existence of a water conveyance infrastructure that is suprabasin + local basins stakes
- We would like to experiment WAPOR & compare with AirGIWRM
[airGR Integrated Water Resource Management • airGRiwrn \(g-eau.fr\)](#)
- => we have a generic approach to data until now
- [..\..\Documents\TALANOA Prima\WP 2 - DATA & Accounting\DMP Data France.xlsx](#)

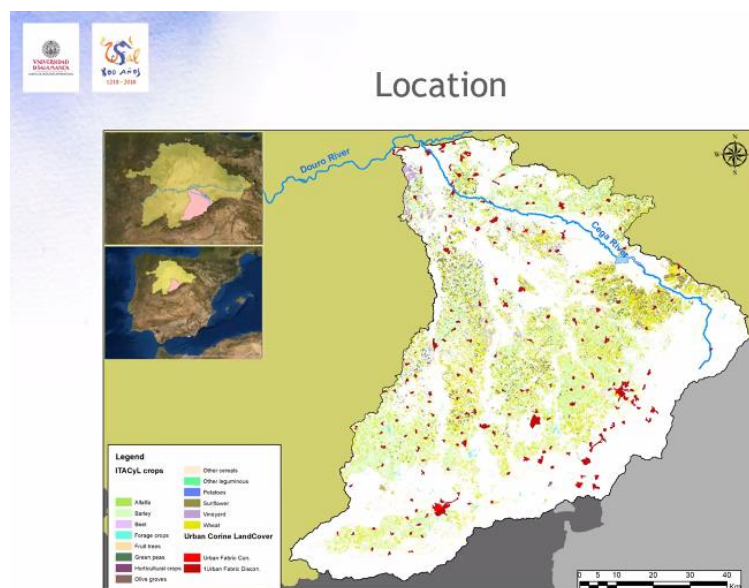
Egyptian Water Lab – GPAI – Nile Delta

- Research question the lab is raising: The area faces many problems in irrigation water shortage and farmers are intensively using agricultural drainage water in irrigation, as well as wastewater as supplementary water resource. This area cultivates rice, and it is very important to control water management to know what is the future of this area and the dilemma of the Ethiopian high dam.
- Shapefile of the boundaries of the area is required.
- Nile delta irrigation canals - It is complicated to run WA because it requires measuring every single drop of water from upstream to downstream.
- Lab has decided to work on the canal from Cairo towards the Mediterranean Sea.
- Area 94,000 hectares
- Covering the Nile area—Lab needs to know how much water is carried by the sum of each canal at the entrance.
- The lab installed equipment to measure water level and discharge from the canal.
- The lab ran the WaPOR analysis for the area and developed an inception report.



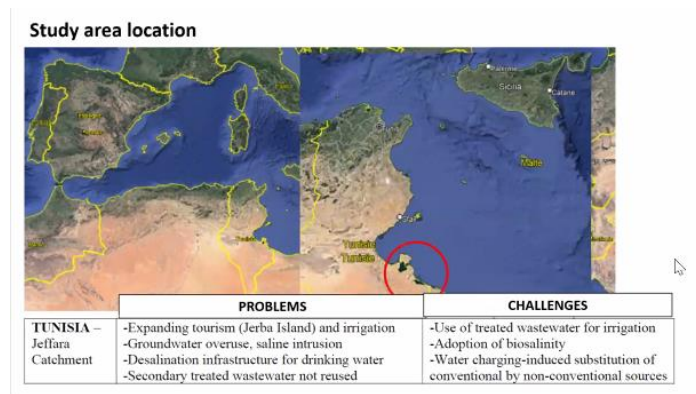
Spanish Water Lab – USAL – The Cega River

- The case study includes the Northeastern part of the basin.
- The main problem in this area is the lack of precision in information on public water wells needed for data collection, as well as the required data on private (illegal) water wells location and their yields.
- There is neither a dam nor a reservoir on this river; it is a natural water feature, where thoughts on building a dam are active; one of the reasons why the lab chose this river as a case study.
- The lab presented their gathered data including data on climate, hydrology, hydrogeology, geography, and missing data.
- Some data must be uploaded such as land use maps and Copernicus' precipitation.



Tunisian Water Lab – INAT – Jeffara Catchment

- A lot of urbanization between four cities, with extensive industrial land use and huge commercial and touristic activities.
- Rain-fed agriculture is present.
- Area= 10,000 km²
- Groundwater overuse and saline intrusion in a mostly desert-like land cover.
- The lab developed MODFLOW and WEAP models for the aquifers/simulation of groundwater fluxes for integrated management of water in the area. However, there is a big difficulty in identifying the number of farmers near illegal wells areas.
- Datasheet: mostly all data is available; the lab already collected precipitation from meteorological stations and rainfall gauge, as well as evapotranspiration.
- The lab will dedicate one post-doc who will be in charge of these runs.



Italian Water Lab – GECOsystema

- Lab is waiting for a meeting with CMCC to define a case study (define temporal and spatial resolutions, etc.)
- All meteorological data is collected.
- Land use high resolution is available.
- Soil database is available.
- Lab just needs to decide on the area with CMCC and is not worried about data collection.
- Lab presented the [IRRICLIME: Climate Smart Irrigation Tool](#). The tool only requires an internet browser (ex. Chrome) to be accessed. This model allows the forecasting of different scenarios and different parameters such as evapotranspiration. The model can be replicated anywhere in the world and can be tested on any case study.



