



Newsletter April 2022

What is happening in the network?

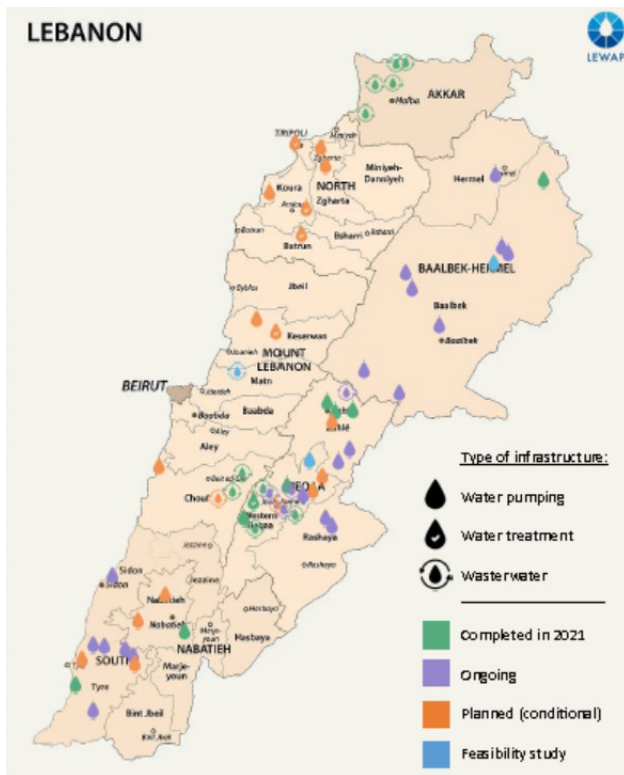
WATER-ENERGY NEXUS WORKSHOP: OVERCOMING CHALLENGES FOR POWER SUPPLY OF WATER AND WASTEWATER SERVICES (AUB-IFI, OXFAM LEBANON, LEWAP)

On March 2nd and 3rd, LEWAP, the Issam Fares Institute for Public Policy and International Affairs (IFI) at AUB, and Oxfam Lebanon, held a 2-sessions workshop on the Water-Energy nexus, sharing and discussing recommendations to increase power supply of water and wastewater infrastructures in response to the electricity crisis in Lebanon. The workshop was coordinated and facilitated by LEWAP to capitalize on previous experience and build actor's capacities to intervene in this context.

During the first session, 46 participants from different organizations received information on solutions to increase energy supply for water and wastewater services in Lebanon. The session started with the presentation of a field experience, the solarization of two pumping stations in the Bekaa, implemented by Oxfam Lebanon in 2021. It was presented by M. Jihad Abdul Ghani, WASH Advisor at Oxfam Lebanon. Then, Dr Nadim Farajalla, director of the Climate Change and Environment program at AUB-IFI gave a general overview of the 2021 [water-energy nexus](#) study addressing the different aspects of water-energy

interlinkages and existing solutions. Recommendations were formulated from both sides, for solar project implementation and at the policy level; each presentation was followed by a Q&A session.

The second session aimed at initiating discussions on the sector's needs and priorities to be considered regarding to the water-energy nexus – both to increase energy supply to water and wastewater services in the short term, and to develop an integrating approach to water and energy as pointed out during the first session. 25 participants from different organizations attended and were divided in four groups based on the four regional water establishments geographic coverage to zoom in on their needs and priorities in order to formulate recommendations in this context, available in the workshop report. To conclude the workshop, participants looked at the national level and discussed two main topics: the need to consider energy and energy efficiency in the design of water and wastewater systems, including solar pumping; and the need for a national plan regarding energy for the water sector.



A list of solar projects for water and wastewater was collected for this workshop, and a cartography was realized to visualize the existing initiatives for 2021-2022. The national and regional maps are available through [this link](#). Partners whose projects are not displayed are invited to [contact us](#) to provide their information.

Details on the presentations, as well as the lists of recommendations formulated by speakers, and outcomes of the group discussions on needs and potential solutions, are available on the [workshop report](#).

MARDI LEWAP: WHICH STANDARDS FOR WATER REUSE IN LEBANON? (IWMI, LARI, LEWAP)

On March 15th, LEWAP, in coordination with International Water Management Institute (IWMI) and Lebanese Agricultural Research Institute, organized a “Mardi LEWAP” on the topic of water reuse in Lebanon. “Mardi LEWAP” are seminars aiming at building bridges between academic and operational actors by presenting the latest research works in the field of water and sanitation.

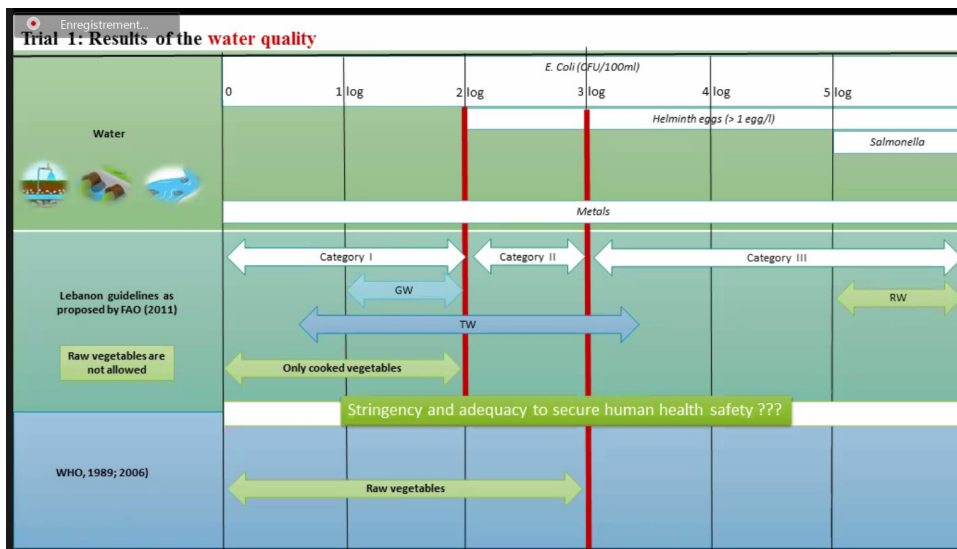
This seminar, titled “Which standards for Water reuse in Lebanon? Informing the debate based on international experience and local field experiment” featured results from research conducted as part of the ReWater MENA project, a 4-years regional project funded by SIDA and implemented by IWMI. In Lebanon, the project supports LIBNOR committee in formulating official standards for water reuse for

irrigation through several activities which included the research presented here.

Dr. Marie-Hélène Nassif, Consultant, Researcher and Project Coordinator at IWMI for ReWater MENA in Lebanon, presented results from a policy analysis which looked at the guidelines currently applied in Lebanon and compared them to other regional and international guidelines. Then, Dr. Marie-Thérèse Abi-Saab, Researcher and Head of the Climate and Water Unit at LARI, detailed a field experimentation of water reuse for the culture of vegetables eaten raw, in the Bekaa region. The experiment compared health and environmental risks, as well as nutritional quality, of crops irrigated with groundwater, river water and reclaimed water from Ablah WWTP. It also compared the impact of different irrigation techniques.

Both presentations concluded that the standards could be less stringent than what is currently applied, while in the same time management and monitoring should be increased to ensure safe irrigation. LIBNOR is coordinating with different ministries and institutions, with the support of IWMI, to draft official standards that would take into consideration these different aspects and enable safe practices of water reuse in Lebanon.

The topic of water reuse is particularly important in the context of growing water scarcity and of water resource pollution (especially surface water). 50 participants attended and were able to ask their questions to the speakers. The seminar report is available through [this link](#), and the full event can be watched [online](#). Partners and members of the network who are interested to know more about the topic are invited to contact us.



UOB-LEWAP STUDENT CHAPTER'S WORLD WATER DAY (LEWAP, UNIVERSITY OF BALAMAND)

On March 29th 2022, LEWAP and the University of Balamand organized an event under the UoB-LEWAP student chapter to mark world water day.

The event took place on UoB's campus covering the theme of "Sustainable Water and Sanitation Services» and was open to all UoB students. It started by a welcoming note from the dean of faculty of engineering Dr. Rami Abboud followed by a presentation from Dr. Yasmine Jabaly who presented the importance of water resources in Lebanon. LEWAP continued by introducing the UoB-LEWAP student chapter, its vision and mission and

its benefits for students on the short and long term. Afterwards, Mruna presented their BiomWeb technology implemented in LARI in Tal Aamara and the decentralized wastewater treatment systems installed.

This is one of the series of events that the UoB-LEWAP student chapter will be hosting to improve the knowledge of students in the water and sanitation sector in Lebanon, to involve them in the sector and to be influencers to other universities to create their own chapter and have this common student chapter in all Lebanese universities.

News from Hawkamaa-EU project (MADAD 3)

PARTNERS' ACTIVITIES FROM JANUARY TO MARCH 2022

The Hawkamaa-EU project aims to provide WASH assistance to support water governance and public water and wastewater services in Lebanon for host and refugee communities. A consortium formed of different organizations is at work; the implementing partners of the project are ACTED, ACF, WW-GVC, LebRelief and Solidarités International with the support of IMPACT, LCPS, Nahnoo and LEWAP.

In the past quarter, partners continued to work on the 6 selected water infrastructure projects to be supported in Akkar, Bekaa, Beirut and Mount Lebanon and South Lebanon. Notably, works in the Southern suburb of Beirut and Ain Bourday area will commence in April/May. In regards to wastewater interventions, 6 systems were done in Informal Tented Settlements (ITS), thereby improving sanitary conditions in the sites as well as reducing risks of

environmental pollution.

In addition, LEWAP launched the Hawkamaa-EU Research Grants program, under which Bachelor and Master students will receive 10 research grants, as well as the opportunity to being mentored by Hawkamaa-EU water experts (more details below).

In April, a whole week of training targeting LCSW (Lebanese Civil Society for Water) members was launched, with the aim to capacity build Lebanese water actors on grants management, advocacy and fundraising.

In the next period, partners will also launch the modeling of Al Assi and Al Ghadir river basins, to add to the already completed modeling of Al Ostuan river basin. In turn, this will inform Catchment management plans that will promote a holistic approach to resource management around these 3 basins.

LEBANESE CIVIL SOCIETY FOR WATER

As part of the Hawkamaa-EU project, LEWAP and LebRelief have launched the Lebanese Civil Society for Water (LCSW), a sub-network of LEWAP aiming at increasing the involvement of civil society actors in the water and sanitation sector through capacity-building, information dissemination, and exchanges with sector's stakeholders.

Between January and March, 3 meetings were organized by LEWAP and LebRelief to share updates and information about

the water sector, and have discussions on strategic topics. LEWAP acted as a neutral facilitator for discussions between members of the LCSW and sector's stakeholders. During the first meeting on January 26th, information was shared on the sectorial reforms and it was decided with participants to organize a meeting with the Ministry of Energy and Water and with the Technical Assistance (TA-AFD) team, to go more in depth about these reforms and the overall Ministry's strategy. Suzy Hoayek, advisor to the Minister, and

Alain Maroun from BTD representing the TA, attended the second meeting, on February 17th. The National Water Strategy, and the challenges faced by institutions in the current context, were presented to the LCSW attendees, who had the opportunity to raise and discuss several points including the question of water efficiency and water monitoring from source to household; feasibility and implementation on the ground of the strategy in the current context; institutional coordination; tariffs reform and water metering. The LCSW met a third time on March 10th to debrief and identify several topics to be explored further in future meetings with stakeholders from the sector.

During these meetings, LCSW members were informed of capacity building workshops provided by ACTED to enable them to develop their activities, improve their organizational structure and intervene in the water and sanitation sector. The 5-modules training addressed ways to mobilize technical and financial tools, and took place in early April. Other capacity building or thematic workshops, organized through the Hawkamaa-EU project, will be provided to members of the LCSW.

Contact us to join the LCSW or receive further information.

RESEARCH GRANTS PROGRAM

As part of the Hawkamaa-EU project, and in line with LEWAP's activities of bridging the gap between academics and other actors in the sector, LEWAP is working on providing research grants to future water professionals being university students in Lebanon.

The aim of this program is to promote Research in Action in the water and environment sectors in Lebanon and to foster rethinking of water systems for maximum efficiency. Students will be given the opportunity to see their research put into use by Hawkamaa-EU implementing partners and will receive the support from partners during their research development. The program

was launched in December 2021 with the deadline for applications being 14 March 2022.

18 different applications were received from the following universities: USEK, LU, BAU, UoB, USJ, LAU and AUB. They are currently being reviewed and graded. 10 will be selected based on the quality of the proposed methodology and the adequacy of topics for the needs of the project. The selected students will receive a part of the grant to enable them to conduct their research methodology; and the other part as a reward will be given at the end of the program's period (end of 2022).

LAUNCHING OF THE WATER SANITATION AND CONSERVATION (WSC) PROJECT (DAI/USAID)

The USAID-funded Water Sanitation and Conservation project (WSC), implemented by DAI for 2021-2026, had its official launching ceremony on March 23rd, together with the closing of Lebanon Water Project (2015-2021). The WSC has three objectives: expanding the capacity of wastewater and sanitation management; increasing the efficiency of public water utilities to manage water resources; and enhancing citizens' water stewardship. To do so, WSC will engage a large range of stakeholders, including private sector and civil society organization.

One of its activities, which has already started, is a national grants program, through which grants targeting different type of actors will be launched throughout the project duration, to

cover the following activities:

- Awareness programs in schools
- Internship programs for university students
- Youth and women empowerment in water management
- Civil society organization capacity development on water protection and conservation
- Improved irrigation efficiency
- Reduction of pollution from wastewater through communal sanitation management
- Private sector/industrial discharge compliance

Several requests for application have already been published on [Daleel Madani](#) and shared through the WSC [Facebook page](#) – you can check these resources for more information and to follow up on the upcoming calls.

“THE SPONGE CITY” EVENT (OEA, UPLoAD, APIEU, LEWAP)

The cooperation project between the municipality of Zahle and APIEU Montpellier, supported by Montpellier Méditerranée Métropole and the Agence de l'Eau Rhone Méditerranée Corse, and implemented in partnership with UPLoAD, addresses the question of groundwater recharge in urban context through the concept of the Sponge City. An urban master plan is being designed in Zahle, to propose urban development that takes into consideration ground permeability and water resource protection.

To capitalize on this activity and promote the concept of sponge city in Lebanon, an event was organized on

April 12th by the Architects Consultant Branch of the Order of Engineers and Architects in Beirut (OEA), in collaboration with UPLoAD, APIEU and LEWAP. In addition to Zahle project, several other projects applying the concept of Sponge City in Lebanon by targeting groundwater recharge and water resource management in urban context were presented. More than 60 participants attended, including several municipalities. The video of the event is available on OEA [Facebook page](#).

You can consult the booklet developed by UPLoAD and APIEU, available in [French](#) and [Arabic](#).

DEVELOPMENT OF THE MOBILE DEWATERING SYSTEM DECANTRA (CUBEX)

CubeX is currently developing Decantra, a mobile dewatering system that addresses the frequent need of desludging from septic systems in rural areas and refugee camps. Through this technology, solids are separated from water on-site to be recovered by further integration into a composting operation and reused as a solid fertiliser in agricultural activities.

After a field sampling and testing campaign conducted in the West Bekaa to establish a data foundation of wastewater characterization and dewaterability of faecal sludge, and following the development of a lab-scale prototype to validate the technology, CubeX is manufacturing a Minimum Viable Product (MVP) that will be put to operation in the second quarter of 2022 to service rural households and refugee camps in West Bekaa in collaboration with several municipalities. A team member from the MEWS (Management of Excreta, Wastewater, and Sludge) research group at Sandec, Eawag, visited the

site in February to better understand the challenges and strengthen collaboration between both entities (more information [here](#)).



Prototype testing in the West Bekaa during MEWS visit, February 2022

On March 29th, a closed discussion session was organized in collaboration with cewas Middle East and LEWAP, gathering international experts to explore options for tertiary water treatment on a mobile unit, thus supporting the development of Decantra.

UPDATES FROM THE MINISTRY OF ENERGY AND WATER

The last three months haven't enabled to improve the energy supply of water and sanitation services, as the World Bank loan on energy (which aims at increasing electricity provision by EDL through gas import from Egypt, and developing renewable energy for the water sector) has been delayed until reforms requirement are met, while fuel provision by the logistic sector to essential services has ended in February. At the moment, energy provision depends on EDL supply from Iraq which isn't sufficient and will end in September. The MoEW calls for support to provide fuel for generators to maintain water and sanitation services.

In response to this situation, the MoEW is working on a contingency plan with UNICEF, while the Water sector recovery plan for the next five years, developed with the AFD Technical Assistance, is being finalized. It was presented to donors during a coordination meeting

on April 14th. Among the recovery plan's objectives and activities, are: the increase of subscription and collection rate for WEs; the reduction of non-revenue water through district metering; a yearly tariff increase until reaching break-even tariff in 2026; solarization as well as use of water resources through gravity rather than pumping; legal and institutional clarification with the work on the water code and decrees.

In parallel, solarization of facilities is growing through partners' project, but the development of a national plan on solar for water is delayed as it initially relied upon WB loan. Evolutions of the law on electricity could affect solar projects; a project law on the distribution of renewable energy, which would allow to sell surplus on energy to the national grid, has been signed by the council of Ministries and has to pass in front of the Parliament.

VULNERABILITY MAPPING

The WASH cluster has realized a vulnerability mapping based on data provided by UNICEF in August 2021 and completed by interviews with municipalities to validate data. The following information were collected and can be consulted as separate maps:

- Geolocalisation of 453 pumping stations
- EDL (Electricité du Liban) service line
- Operators of the pumping stations (Regional Water Establishments,

municipalities, or private)

- Percentage of population served by the pumping stations
- EDL service hours in November 2021
- Water per capita

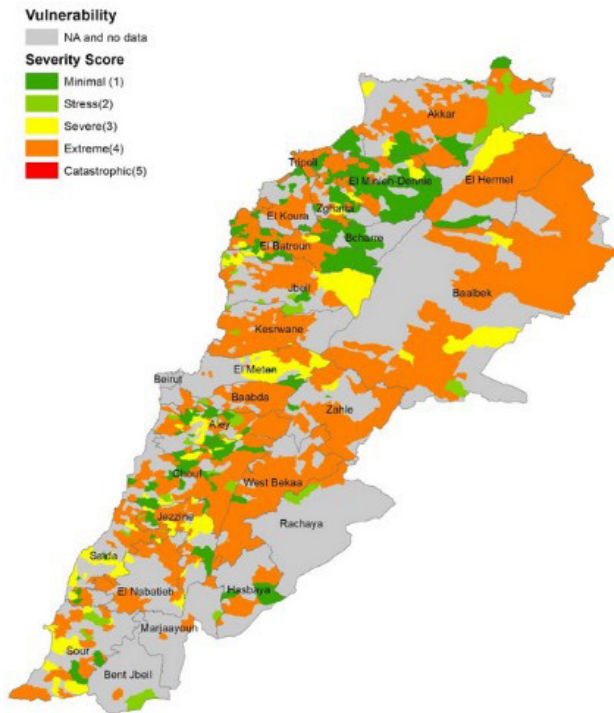
An overall vulnerability map (see below), displaying the degree of stress in each cadaster based on all these elements, was also developed. It should be continuously updated and validated by RWEs, municipalities, and other service providers. A presentation of the maps can be consulted on [this link](#).

NEWS FROM THE STABILIZATION THEMATIC GROUP

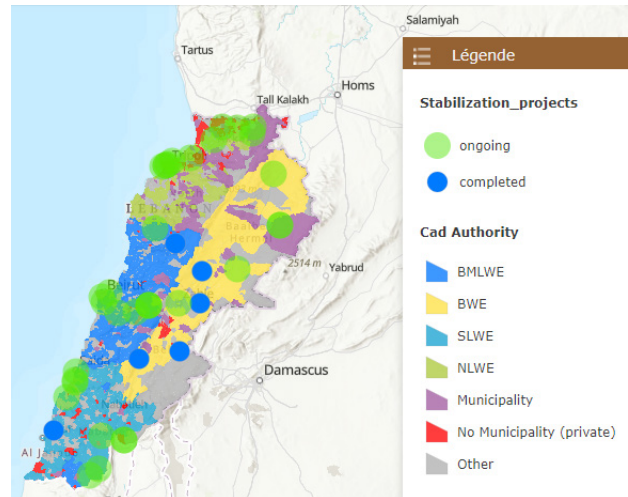
The stabilization thematic group, coordinated by LEWAP, has been meeting at the end of every month to collect updates from partners on their projects and discuss challenges faced. The group defined their aim and objectives and to focus on strengthening the coordination in the water sector on infrastructure and stabilization projects.

The group will be working on mapping their projects on an online map

accessible to partners and donors in order to improve project allocation. It will be filled with information shared by members of the stabilization thematic group as first; a further step will be to include projects from other development actors. This map will be added as a layer to the vulnerability map in order to identify the areas in need of intervention based on their degree of vulnerability and intervention gaps.



Vulnerability map 2021-2022



Result of the first mapping exercise conducted by the stabilization TG

Latest publications

More publications on LEWAP and pS-Eau [database](#). To share a publication, send it via email to contact@lewap.org.

LEBANON CRISIS RESPONSE PLAN 2022-2023 (UNHCR, 2022)

The 2022 Lebanon Crisis Response Plan (LCRP) has been finalized and published in February 2022. It brings together 126 partner organizations to assist more than 3.2 million crisis-affected people living in Lebanon. Two outcomes are expected for the water sector, targeting 2,067,041 people in needs:

- Strengthen national, regional and local public institutions' capacities to deliver improved public policies, goods and services (including water and sanitation);
- More vulnerable people in Lebanon are using safely managed drinking water and sanitation services whilst reducing health and environmental risks and improving water quality by increasing the proportion of wastewater that is safely treated.



The full report is available through [this link](#).

Upcoming events in Lebanon - date and further information will be send via email

AL-OSTUAN RIVER BASIN PRIORITY WORKSHOP (ACTED & LEBRELIEF) – MAY

The Ministry of Energy and Water and the North Lebanon Water Establishment, in collaboration with the University of Balamand, NAHNOO, ACTED and LebRelief, are organizing the “Al-Ostuan River Basin Priority” workshop. The workshop aims at discussing practical steps forward to treat waterwater in the Al-Osturan River Basins with all involved stakeholders. The Al-Ostuan River Basin study for integrated water management will also be presented.

RIVER BASIN MANAGEMENT WORKSHOP (ACTED) – JUNE

The second workshop organized under Hawkamaa-EU projects should be held in June, in partnership between LEWAP and ACTED. It will present the River Basin management approach, a tool for Integrated Water Resource Management. The audience will be benefitting from pS-Eau’s expertise and from ACTED’s field experience to gain knowledge and capacities to implement this approach.

PUBLIC PUBLIC PARTNERSHIP WORKSHOP (WW-GVC AND NAHNOO) – JUNE

The first workshop organized under Hawkamaa-EU projects should be held in June, in partnership between LEWAP, WW-GVC and Nahnoo. It will present the opportunities from signing agreements between municipalities and water establishments to improve water and wastewater services. The audience will learn more about the benefits of this approach and discuss the pros and cons of adopting it.

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Contribute to LEWAP newsletter!

This newsletter has been published in order to keep you informed about the updates in the water sector. The newsletter can be enriched by your contributions...

Do not hesitate to communicate to us any information which are likely to be interest to other members in the network!

contact@lewap.org

