

Dryland resilience-building under a difficult and changing climate - the Bekaa Valley, Lebanon

Reflection Workshop – 26 October, 2016

Time: 9:00 AM - 17:00 PM, AREC

Summary Report

In Lebanon's Bekaa Valley, environmental concerns have grown since 2013 amongst local host populations, displaced families, and humanitarian actors. This is stimulating debate concerning strategies through which resilience may be nurtured by populations, government and international humanitarian and development communities in difficult and unstable climates. In collaboration with Dr Hadi Jaafar from the American University of Beirut (AUB) Department of Agriculture, the International Institute of Environment and Development (IIED), held a workshop to reflect on these debates. The aims of the workshop were to share the findings of a preparatory analysis of changing water demand and use patterns in the Bekaa valley since 2010 and over the longer term, to bring together perspectives from local and national government, humanitarian actors and the IIED Drylands and Human Settlements Programmes, and to explore needs, opportunities and level of stakeholder interest for international collaborative research for action to build dryland resilience (secure, steward and sustain access to water) under anticipated climatic changes.

Dr Hadi Jaafar (AUB) and Dr Caroline King-Okumu (IIED) welcomed all participants to the workshop. Opening remarks concerning the problems of water scarcity in the Bekaa were made by Dr Mohamed Haidar of AREC. An overview of IIED's policy and action research agenda was presented by Dr Diane Archer of IIED. Dr Hadi shared preliminary findings from his research on Water Resources in the Upper Litani and Orontes Basins. This included consideration of water needs for domestic uses by the displaced and resident populations, as well as other sectoral needs, including water for agriculture and industry. A further reflection on the availability, accessibility and distribution of safely managed domestic water for the population in the Bekaa Valley, including institutional dimensions was presented by Ms Diane Machayekhi, Consultant. Michele Pierpaoli (GVC), provided additional discussion of estimated volumes of water demand for the displaced and resident communities, and the interest of ongoing efforts to introduce water metering. Dr Jihad Farah of the Lebanese University raised a key question regarding the role of the private sector following the crisis in Lebanon.

Discussion points focused on the intersection of 3 planning agendas for crisis response, sustainable development and climate change action in the Bekaa, as targeted by the IIED policy and action research agenda. Dr Caroline highlighted observations emerging from research presented so far. These included confirmation of a long term environmental challenge, but also opportunities to meet the water and sanitation of the population without increasing water stress by strengthening participation and planning at the local level, even in the more difficult dryland environments. A case study presentation, focusing on the area of El Qaa was presented by Dr Ihab Jomaa of the Lebanese Agricultural Research Institute (LARI). Groundwater pollution associated with different land uses, including expanding irrigated agricultural production and urbanization was assessed, based on currently available data. PDG Maroun Msallem of the Bekaa Water Establishment (BWE) provided remarks on the El Qaa case study and reflected on the many challenges faced by the BWE to enhance access to water for both domestic needs and economic uses, including agriculture and others.

The discussions reflected on the experiences of the BWE and international partners, including GVC and UN-Habitat, in working with municipalities. Eng. Elie Mansour (UN-Habitat) reflected on challenges relating to the financial and human resources capacities, including cases where municipalities do not have any paid employees. In light of this, UN-habitat has found working at the level of unions of municipalities more efficient. On the other hand, for the larger cities like Zahle and Baalbek, UN-Habitat is working on the development of city profiles which can provide a platform for transparent analysis of

issues relating to water, land-use and urban issues. This can then enable the municipalities and humanitarian agencies to discuss and evaluate potential solutions.

Dr Hassan Machlab of the International Centre for Agricultural Research in the Dry Areas (ICARDA) and all other participants contributed additional suggestions for technologies and approaches to reduce water stress. These included some that could start from the household level by harvesting rainwater and reusing greywater (as explored by LARI and ICARDA in the Bekaa), introducing metering (as explored by BWE and international partners), minimizing water pollution, reducing emissions through use of clean energies, enhancing agricultural water management practices, enhancing groundwater recharge and raising public awareness. PDG Maroun suggested that a workshop should be organized with the municipalities to include further discussion of these ideas.

Emerging recommendations presented by Caroline included 3 entry points to tackle both short- and long-term challenges:

1. investing in local adaptation and mitigation at the water-energy environment nexus;
2. increasing local participation (through strengthened institutional, human and financial capacities);
3. sharing & using credible information to enhance planning (particularly around water stress in densely populated areas, industry & agriculture).

Options relevant to these entry points that have been tried & tested by IIED in other dryland & urban contexts were highlighted:

- support to local government proposals to the Green Climate Fund (GCF) and/or piloting of local climate adaptation funds or other local finance models;
- establishment of local climate adaptation planning committees, resilience assessments & strategic planning across scales & sectors;
- response to water stress enhanced through publication & review of databases, and mapping of settlement & user types, densities, energy & water systems.

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