

Water Security Workshop Report

Discussing regional cooperation
in arid and semi-arid areas



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King's College London

Background

Water security is becoming a major issue in the international sphere for development, economic growth and political interventions. There are growing numbers of initiatives globally and regionally focused on providing practical solutions to the water issues. Water is not only a stand-alone element but also fits in a diverse numbers of networks and interactions (e.g. food or energy supply chains, and the newly introduced Water-Food-Energy Nexus models).

Envisioning water security in trade-offs or supply chain models especially in arid and semi-arid regions is of a great importance; otherwise, the results of imbalance in WEF nexus can be severe. Some of the unrest in West Asia and North Africa (WANA) region are good examples of how water scarcity can trigger a series of regional socio-political conflicts that can lead to global dilemmas. From the other perspective, in the regions that water is commonly scarce, this shared concern can or should be addressed as a venue of cooperation and strengthening ties among regional states to overcome the problem.

Objectives

1. Explore some insights into the regional Water Security and Water-Food-Energy trade-offs or supply chains in the context of arid and semi-arid regions.
2. Providing a networking opportunity for the future water leaders and specialists.

Proceedings

I) Opening remarks

The seminar was opened by a welcome note from Saber Masoomi; a member of organizer team. He briefly mentioned about the story behind this event. While coordinating a WWF Water-Energy-Food Nexus project in Cambodia he started to think if a Nexus model can be a ground for improving cooperation in dry regions such as WANA. This seminar is a result of a series of consultations and peer discussions with development and water experts during last three years and the main intent is to start thinking about future of development and cooperation dry regions by incorporating connectivity models through life elements such a food, water and energy.

Then, Dr. Mark Zeitoun, a professor of water security at University of East Anglia provided a keynote speech. His presentation was about "How to do a better analyses for the transformation of transboundary water conflicts?". His two main messages were about understanding that **a)** Water conflicts are the outcomes of social and biophysical processes

and **b)** more equitable transboundary water arrangements can about to better analyses and better compliance with international water law and international humanitarian law.

He elaborated his presentation under four topics:

1. Understanding main challenge reconciling borders.
 - Permanent rivers vs changing states.
 - Emphasis on hydrological cycle: catchment setting – the need to consider effect of population (food, water, energy nexus).
 - Importance of economy and agricultural schemes.
 - Bordering and allocations issues of hydrological cycle.
2. Water and transboundary conflict.
 - Water can be a source, or a tool or a victim of conflict.
3. Poorly informed diplomacy.
 - Diplomacy can be shifted to cooperation -> 'Constructive conflicts'. However, we also need to acknowledge that there is 'destructive cooperation' -> Issue of power.
 - Sharing water itself or sharing the benefits?
 - The tool proposed can be used to see the evolution of conflicts over time: a scalar perspective, understand patterns and root causes
4. Doing "better".
 - Treaties seen as positive and conflicts and negative, but it has changed now.
 - Cooperation and conflict coexist.

II) Presentations

1. Water scarcity and transboundary water governance: the case of Jordan.

Dr. Hussam Hussein. University of East Anglia.

In his presentation Dr. Hussein reflected proceedings and results of his PhD project on understanding the water discourses in Jordan River. There are two main narratives regarding water scarcity in Jordan as one of the most water scarce countries in the world including Water insufficiency narratives which is mainly supported by government and mainstream newspaper. This narrative focuses on climate change, population growth, immigration and refugees and takes the responsibility off government's shoulders. The second narrative is water mismanagement narratives developed by NGO's and some academics indicating that water resources of Jordan are limited but can meet country's demands if well managed. He concluded how water discourse of water scarcity are powerful in driving the solutions.

2. The future of solar powered irrigation.

Saeed Mohammed Wazed. University of Sheffield.

Solar powered irrigation technologies have developed significantly in the past decade assisted by the development of higher efficiency, low cost solar Photovoltaic (PV) panels. PV technologies are still not being used extensively due to their high initial investment costs and compared to other renewable energy technologies the carbon footprint is still comparatively large. On the other hand, solar thermal technologies are seen to be much cheaper, and have a much smaller carbon footprint, but are marred by low efficiencies. In his presentation Wazed introduced solar powered irrigation technologies (PV and solar thermal technologies) that can be utilized by independent farmers in a small scale remote rural farms in Sub-Saharan Africa. The focus is to be able to identify an affordable solar powered irrigation system that will make use of local resources effectively for drip irrigation.

3. Tidal River Management in Bangladesh

Jahin Shams Sakkhar. University of East Anglia.

His presentation focused on managing human induced problems of water logging and utilizing ecosystem-based adaptation techniques for flood control in Bangladesh. Initially, to provide protection from flooding the government disconnected water bodies from the rivers and used flash gates to control water from land to the river. Although for 15 years it was a positive solution but the river disconnected from land plane caused sedimentation issue which resulted in the delta formation system to be halted. The proposed solution is Tidal River Management, improved governance and increasing public participation.

4. Water Weaponization in the Syrian context.

Alaa Khattab. University of Birmingham.

During Syrian crises water was used as a weapon or tool while in the same time it was a victim. Based on his experience working with International humanitarian organizations in Syria, by using examples from Damascus and Raqqa cities he described how different parties of war used water in different manipulations to enforce their power:

- Strategic: (Mostly by ISIS) for controlling the cities, targeting large population centers, industrial production.
- Unintentional: Due to the war water resources are cut off as a collateral damage.
- Tactical: During very short period, during negotiation.
- Physiological: Rebels threaten government to cut off water supply.

III) Group discussions

During the discussions in two working groups participants discussed their insights and possible practical solutions for transitioning water scarcity risks and conflicts in WANA region to cooperative opportunities.

Group 1: Facilitated by Dr. Mark Zeitoun

Institutional perspectives on opportunities, gaps and dimensions of regional cooperation on water-energy-food tradeoffs and nexus in WANA.

- In light of the recent geo-political changes in WANA, how we can assess cooperation?
- What are the levels and types of possible cooperation?
- A SWOT projection of cooperation on water security in WANA.
- Necessity of a regional initiative? Where we can start?

Highlights of group 1:

- It is useful and necessary to think about a regional platform for WANA region.
- Role and importance of data sharing and transparency in such a platform.
- Paying attention to the intent of such platform: conflict reduction or development?
- Looking for good practices and providing connections.

Group 2: Facilitated by Dr. Tony Allan

Agriculture and water security; a common challenge. Where and what are the solutions in state and regional levels?

- What are the food security and irrigation (water availability) paradoxes in WANA in the light of political economy?
- How can farmers' experiences, position and voice be reflected in a regional cooperation context? Possibilities and obstacles

Highlights of group 2:

- Food prices do not reflect the actual price of food- economies of scale but also water pricing for irrigation is not a marginal price (high subsidies, and other pricing mechanisms- area-based methods, block tariffs etc.).
- In WANA no matter how much water is available as there is always more need.
- The question of recognizing farmers' position and voices in overall food and water security is the big issue in WANA.

IV) Closing Remarks

Prof. Tony Allan from King's College London in his closing keynote speech provided some insights regarding his work experience in MENA since 1950 and the challenges this region was facing towards food security and adaptation and economic diversification from political economy point of view.

- Trends and demands for food?

In his speech he answered below questions.

- How water resources deficit were addressed?
- What are the versions of water and food security that the economies of the region will enjoy in future?
- Is food security too difficult to understand?
- Why will truisms prevail and the critical known continue to be constructed as an unknown?

He explained that there are two contradictory narratives including: Socially and politically stabilizing narrative which is promoted by MENA legislators, MENA water consumers and unacceptable destabilizing narrative which is based on sustainable hydrological function and economic fundamentals and political processes. He emphasized on the importance of food produced by using water in the soil profile and how farmers play an incredible role in managing both of these water sources. There is a need to understand limited capacity of the MENA region and the rest of the world to meet food-water needs of a doubled population, and developing coping mechanisms with respect to population growth is a necessity. In this regard concerning its rapid population growth, Africa is a main concern.

V) Book launch and a tribute to Dr. David Philips

The last segment of the seminar was devoted to Dr. David J.H. Phillips (1952 – 2014) and launching the book "Promoting Equity, Cooperation and Innovation in the Fields of Transboundary Waters and Natural Resources Management". His family, colleagues and students provided very remarkable thoughts and comments about his active scientific contribution in global water and environmental issues will be provided. Most of the speeches emphasized on his interdisciplinary capacities (political sciences, social sciences, and biology), strength and motivation to have an impact.

VI) Results and follow ups

- There is a demand to establish an international platform supported by academics for West Asia and North Africa.
- This platform should involve all of the countries in the region.
- There is a need for such a platform to be involved in raising awareness and technical capacity of the region.
- Food security and irrigation is always a paradox in WANA.
- Smallholding farming in the region lowers farmers' voices. But they should be brought into the water dialogue.

VII) List of participants

	Name	Position and institution	Country
1.	Adeel Khan	MSc Student, King's College, London	Pakistan
2.	Alaa Khattab	MSc Student, University of Birmingham	Syria
3.	Alice Brandt	SOAS Postgraduate Student	Italy
4.	Alice King	International Development student, University of East Anglia	UK
5.	Ameerah Anathallee	MSc Student, Oxford university	Mauritius
6.	Ana Maria Narvaez	MSc Student, City University of London	Colombia
7.	Bethany Coleman	MSc Student, King's College London	UK
8.	Fatima Aja	PhD Researcher, University of Sheffield	UK
9.	Frances Dixon	Independent	UK
10.	Hussam Hussein	Researcher, University of East Anglia	Italy
11.	Indira Kyilybayeva	MSc Student, University College London	Kazakhstan
12.	Jahin Shams Sakkhar	MSc Student, University of East Anglia	Bangladesh
13.	Julian Cardona	Private Sector	Colombia
14.	Kelly Bridges	MSc Student, Oxford university	USA
15.	Kieran Lutton	MSc Student, King's College London	UK
16.	Mark Zeitoun	Professor, University of East Anglia	Canada
17.	Matt Kirkegaard	MSc Student, University of East Anglia	USA
18.	Michaela Dolk	MSc Student, Oxford university	Australia
19.	Muna Dajani	PhD Candidate, London School of Economics	Palestine
20.	Nargilya Gasanova	MSc Student, King's College London	Turkmenistan
21.	Peili Tian	MSc Student, King's College London	China
22.	Saber Masoomi	MSc Student, University of East Anglia	Iran
23.	Saeed Mohammed Wazed	PhD Research Candidate, University of Sheffield	Bangladesh
24.	Sonali Mitra	Senior Fellow, Chatham House	India
25.	Thomas Fudge	PhD researcher, Brunel University	UK
26.	Tony Allan	Professor, King's College London	UK
27.	Xiawei Liao	PhD student, Oxford university	China

VIII) Organizing team

- Ameerah Anathallee, Oxford University.
- Kieran Lutton, King's College London.
- Saber Masoomi, University of East Anglia.

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- Matthew Kirkegaard, University of East Anglia.
- Nancy Smith, University of East Anglia.
- Dr. Naho Mirumachi, King's College London.
- Dr. Mostafa Panahi, Azad University Iran.
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