

 Food and Agriculture Organization of the United Nations
 Solutions Using Water-Energy-Food Nexus Approach | Session 6 | June 23, 2022
 Governing the Water-Energy-Food Nexus: A policy-science dialogue!
Questions from the Audience
Answers from Dr. Ines Dombrowsky
and Haneen Sa'deh
 Hosted by
 The Nexus Regional Dialogues Programme
www.water-energy-food.org

1. In GW wells in the Azraq region: what is the average depth of the GW table presently, and what was it say 10 years ago?
 - Answer (Dr. Ines Dombrowsky): *The groundwater level drop by about 1 meter per year since the 1980s. If I remember correctly, the groundwater level used to be about 10 meters below the surface (on average) and has dropped accordingly since then.*

2. What are some of the key barriers you have identified which result in the current low level of cross-sectoral coordination? (Would you say it has more to do with the lack of realization of the level of interconnectedness of the resource challenges, or is it more due to the absence of institutional mechanisms that allow for such coordination to happen?)
 - Answer (Dr. Ines Dombrowsky): *Partly, it is a problem of lack of institutionalization, such in the case of the water and agriculture ministries. But I would also say that even if there was a respective committee, there is no guarantee that this committee would actually deliver given the political economy involved. At the level of farmers, it is also a problem of a lack of awareness on interconnectedness. And even the Ministry of Water and Irrigation does not have reliable data on safe yield.*
 - Answer (Haneen Sa'deh): *Based on the second presentation: The inter-ministerial Water-Energy working group-Jordan, in which the scope is limited to the water energy nexus, the cross sectoral coordination between water and energy sectors has been improved over the past few years through the established high level and technical inter-ministerial working groups. However, the current established coordination mechanism is not ultimately leading to the integrated management and policy coherence because of the missing formal and agreed up on nexus governance settings required for effective integrated planning and some other barriers which have been highlighted in the presentation. The lack of realization of the level of interconnectedness of the resource challenges is also considered as key barrier to the effective WEN Governance.*

3. Is a report available on the study? Have you had a particular coding system and method to extract data from the semi-structured interviews to feed into the AS model or this was based on an overall summary of the findings from the interviews? And how you were able to draw the linkages in the model your presented– any method or an overall interpretation from data collected?
 - Answer (Dr. Ines Dombrowsky): *The findings of the Azraq study have been published here: <https://link.springer.com/article/10.1007/s11625-022-01135-w>. Furthermore, a comprehensive study will be published in the next couple of days as IDOS study, pls. check our*

website. Yes, we had a coding system based on the IAD which was complemented by inductive coding. The lines in the diagram were drawn based on our interpretation of the interview findings.

4. Illicit use of groundwater resources is mainly generated by commercial farms and not small farmers, how by subsidizing renewable energy limiting the abstraction?
 - Answer (Dr. Ines Dombrowsky): *Illegal groundwater use can be found in all user groups. I am not sure that subsidizing renewable energy limits the abstraction.*
5. Is a report available on the study? Have you had a particular coding system and method to extract data from the semi-structured interviews to feed into the AS model or this was based on an overall summary of the findings from the interviews? And how you were able to draw the linkages in the model your presented– any method or an overall interpretation from data collected?
 - Answer (Dr. Ines Dombrowsky): *In general, it more the absence of institutional mechanisms but maybe more importantly of political will. But at the level of farmers, it is partly also a lack awareness of resource scarcity and interconnectedness.*
6. Do irrigators and water supply companies have official permits /licenses to abstract / use water? What is the percentage of users without a formal use permit? Are permits linked to water accounting e.g., models on safe groundwater abstractions?
 - Answer (Dr. Ines Dombrowsky): *My understanding is that in Azraq more than 50% of the wells are illegal. Legal wells have a license, but it does not specify the amount that can be abstracted, so the answer is no. Depending on the well type, different prices are charged.*
7. The social component seems to be the main constraint in the MENA region. Then the disconnection between stakeholders affects the best use of resources.
 - Answer (Dr. Ines Dombrowsky): *Yes, disconnection among stakeholders, but also strongly diverging interests among them. I don't think that there is a sense of a collective action problem that needs to be solved jointly.*
8. How to convince the poor and small farmers or users to aligned with this approach?
 - Answer (Dr. Ines Dombrowsky): *This is really a good and important question. Obviously, the main water users are the large commercial farmers. For the smallholder farmers it is a very tough situation. In general, the trust of all farmers in government is very low. It would be important to improve communication and build trust. The option of buyouts has already been discussed in the past. Maybe this could be taken up again.*
9. In Jordan, which ministry is responsible for developing human settlements (urban & rural) and for territorial development?
 - Answer (Haneen Sa'deh): *The Higher zoning council under the Ministry of Local Administration.*