



The Water-Energy-Food Nexus in the Arab Region

Nexus Governance and the Role of Institutions

Summary

Water, energy and food security are central to the sustainable future of the Arab world. Arab countries' devised policies to tackle this security nexus challenge will set the tone for the sustainable development of the region for the years to come. While more integrated planning and management of resources may require new technologies, it can only be delivered through the appropriate and relevant institutions. This brief presents an overview of the existing national and regional institutions that govern the element of water, energy, and food (WEF) at the national and regional levels in the Arab region. The institutional framework governing the elements of the WEF nexus in the region needs strengthening mechanisms for effective resource management. Some countries succeeded in presenting different models of "integrated institutions," but their comprehensive and inclusive management of these interlinked priorities still need support, especially that the various institutions governing these sectors are themselves fragmented because of the existence of multiple and overlapping jurisdictions. Coordination and collaboration mechanisms among and between institutions, therefore, is a vital factor to adopt an "integrated nexus approach" to resource management in a new era of diminishing resource base and escalating risks and threats that associate with climate change risks. This situation could be the driver for institutional reform and policy integration of the nexus in the region. Enabling existing institutions could be more important and appropriate than establishing new institutions to achieve the targets for both the Sustainable Development Goals (SDGs 2016-2030) and the mandates of the Paris COP21 climate change Summit in 2015.

Recommendations

Governance and institutional structures in the Arab region can be enhanced and strengthened for more effective and integrated resources management through:

- Analyze current national institutional arrangement for better understanding of the weaknesses and gaps that hinder implementing the WEF nexus approach in each Arab country.
- Empower and strengthen existing institutions already active in developing and implementing strategies/policies-related to WEF sectors to develop a comprehensive WEF nexus national strategy; a key element of which is data homogenization and sharing.
- Enhance coordinating and collaborating mechanisms amongst institutions as a key for mainstreaming the WEF nexus approach at local, national and Arab regional levels, and not necessarily establishing new institutions for the WEF nexus.

Introduction

Political and administration needs, particularly good organization, management and operation are among the drivers for developing Government institutions in all regions of the world; the Arab region is no exception. Institutions responsible for sectors, such as water, energy, agriculture are developed independently due, in part, to the focus of self-determining needs and the necessity to limit managerial Complexity of large administrations. However, today the increasing scale and nature of global and strongly interlinked challenges, such as climate change,

population and economic growth, exceed global boundaries and national resource limitations. As external and internal drivers and pressures increase, the inter-dependencies and impacts among many of these sectors are being heightened. Under such conditions, meeting growing demand for water, energy and food generate immense challenges to Arab countries.

The actual challenge for institutions, then, is to adopt coping strategies that address these new needs: adapt to the new requirements of interconnected



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desires and to satisfy the requirements of one sector without sacrificing that of the other sectors. The WEF nexus approach is an ideal instrument to meet these new needs. The new requirements are particularly relevant for the analysis of the challenges and the development of coping strategies, while keeping implementation within the experienced and professional institutions. At this juncture, therefore, the main question is "what form of institutions do we need and what characteristics should they have?"

Government Institutions in the Arab Region

The institutional framework governing the elements of the WEF nexus in Arab countries is mostly fragmented, which has in the past and continues today to delay the comprehensive and inclusive management of these interlinked three priorities. This fragmented institutional framework has also led to a sectoral approach to policy planning, and consequently fragmented policies. In some Arab countries, there are at least six ministries that are both directly and indirectly linked, one way or another, to the WEF management. This fragmentation is also found within the sector itself. For example, in some countries more than one authority govern the water sector, where one ministry controls water allocation for domestic and industrial use while another controls irrigation water use; yet a third ministry sets standards for potable water quality with a fourth setting quality standards for surface and groundwater.

Nevertheless, Arab countries present various models of "integrated institutions;" in the sense one body is responsible for the policy, planning and/or management of two or more sectors/resources. For example, in Lebanon, the Ministry of Energy and Water is the main public stakeholder responsible for the policy planning and management of both the water and energy sectors. The Ministry of Environment and Water of the United Arab Emirates is responsible for the elaborating and implementing plans, strategies, and policies in the areas of the environment and water resources as well as agriculture, livestock, fisheries, and managing desertification and biodiversity conservation. Morocco combines energy, water and environment under the Ministry of Energy, Mining, Water and the Environment, meanwhile the Ministry of Agriculture and Fisheries governs the processes of planning water resources and irrigation. The Ministry of Water and Irrigation in Jordan represent another model of integration within institutions on the national level, as they cross over in their water sector planning and management into agriculture through irrigation.

In view of the recent global commitments of the SDGs 2030 and the new mandate to have a lower carbon economy of the Paris Climate Summit in December 2015, the current institutional framework in many countries will probably need to be reviewed.

Institutions and their Development

As mentioned earlier, there is a wide diversity of sectors involved in handling the interlinked and

game-changing challenges. It is a shared domain between agriculture, water, climate, energy, finance, municipalities and other units at both local and national levels. Moreover, nowadays the private sector and civil society are institutions and have an important role to play. There is an inherent need to develop and implement systematic approaches where all stakeholders have a sense of ownership and willingness to cooperate.

The Arab Ministerial Council for Electricity



In many Arab countries, the mandates of the main governmental institutions involved in managing the WEF nexus sectors clearly entrust these relevant ministries with elaborating relevant strategies and plans for the sector. It is not easy to sustain resources using sectoral strategies. It is increasingly evident that development strategies and national policies can no longer be formulated for individual sectors alone. To assure proper adoption of WEF nexus, policies and plans must be developed using a multi-stakeholder approach that cuts across the different sectors to address the arising challenges and adequately identify synergies and manage trade-offs. Some Arab countries, such as Jordan, have a higher water commission. The Royal Water Commission for Water, headed by HRH Prince Faisal Bin Al Hussein, invites representatives of the public and private sector to participate in decision-making processes to ensure a coordinated and holistic approach for water management.

Technical and Scientific Advisory Committee of the Arab Ministerial Water Council



Under the current institutional framework, then, to be more effective there is need for a clear determination of national priorities in light of the WEF nexus that identifies and sets the roles of each ministry while abiding with its mandate (this might be the role of Ministry of Planning in some countries). These national priorities could be related through a national strategy for water, energy and food security. However, in some cases, countries are likely to be donor-driven, and sectoral projects are implemented to address pressing issues related to the nexus.

While it is clear that uniting key WEF sectors under one ministerial umbrella in Arab countries is no guarantee for their integrated management and governance; it could be a step in the right direction to avoid duplication of efforts, and diffuse any ill-defined mandates. However, managing the nexus at the local and national level does not require major institutional restructuring, but rather appropriate changes to protocols, procedures and processes that improve interactions among the relevant ruling entities. Another approach to ensure proper coordination is through periodic consultative planning meetings of the undersecretary generals of the key ministries, but short termism characterizes the general mode of operation.

Data and Information Sharing

An important element that is often singled out is the availability and quality of sectoral data. It is imperative that data homogenization within sectors and across them be carried out and that these data are shared. Management of any resource starts from a baseline established or based on accurate and clear data.

Coordination and Collaboration

The coordination and collaboration mechanisms amongst national institutions are vital elements in applying an integrated approach to resource management. Strong institutions that are better interlinked are means to a nexus approach, and may be more important than additional or new institutions. An in-depth evaluation of institutions and governance system in each Arab country is a requirement for better understanding of the weaknesses and gaps that hinder applying a nexus approach despite existing institutions that should, in theory, be enabling for such an approach. Furthermore, institutional analysis of regional entities (like water river commissions) for the nexus is critical to understand the processes for collective action, consensus building, mediation, policy formulation, and decision making.

Governance Models for Nexus Mainstreaming

There are several options for mainstreaming the WEF nexus approach. One option is, however, more favorable than others as it does not aim to develop new entities with the specific mandate of managing the WEF nexus. Instead, one body already active in elaborating and implementing strategies that are related to the

WEF sectors can be the focal point for preparing a comprehensive WEF nexus strategy for the country. This is possible through policy dialogues and evaluation of policies for the WEF nexus in a periodic manner. Also, the nexus approach may be mainstreamed as part of sustainability reporting mechanism such as that applied in UAE by the Abu Dhabi Environment Authority.

High level validation meeting with representatives from the water, energy, and food sectors in the Arab countries and regional organizations, League of Arab States, March, 2016



Other models that are possible to mainstream the nexus include:

- Shared governance. All the units involved have representatives to a body that will be empowered and entrusted to govern the nexus.
- High level governance unit. Establishing an independent body with representation of all stakeholders involved in the nexus that will have resources and authority to implement.
- Private-Public Partnership (PPP). The implementation of the nexus approach is expected to conserve resources which may be reflected in the form of financial savings. However, for such a partnership to start up, there is the need for an initial financing (seed funding). This is also of great importance in countries where the Government privatized some sectors, such as drinking water companies.

Meeting of Highland Water Forum to discuss solutions to water scarcity in Jordan



Whatever the mechanism adopted, more and improved coordination between ministries related to WEF sectors needs to take place to meet future challenges. Countries need to assess key public entities that are already involved and influential in all of the WEF sectors as the principal administrators of the development and mainstreaming of policies and strategies that tackle the WEF sectors in an integrated and comprehensive way.

Regional institutions and initiatives such as those under the League of Arab States could play an important role in assisting Arab countries in mainstreaming WEF nexus approach. This could be achieved through supporting Arab states in conducting in-depth assessment of existing institutions and then determining entry points. Such initiatives could also focus on providing capacity building to empower existing institutions thereby harmonizing WEF efforts in all Arab states while respecting national priorities.

Financial Resources and Incentives for Implementation

As the implementation of the nexus does require, in most cases, investment in structural changes, policy development and execution and capacity building, among others, several shareholders must be identified, including the public and private sector as well as foreign aid. Moreover, the climate fund which is part of the Paris Climate Summit in COP21 can provide a potential resource for funding the nexus and to achieve the SDGs (2016-2030).

There is also a need to give investors and shareholders tools that will give a clear assessment of risk management and viability of business conditions. Budgeting and establishing financial responsibilities for stakeholders can be in some cases the most critical and challenging aspect of negotiations in implementing WEF nexus solutions. The models and tools available are a valuable resource that can help the parties involved assess the risks and impacts of different scenarios and therefore facilitate the establishment of financial and managerial responsibilities of resources.

There are tremendous opportunities for innovation and entrepreneurship, particularly at the local level in the rural context. There is a role for public-private partnerships and emerging public-private-civil society partnerships or people-centered development models like the water-users' associations model in Egypt and Jordan. However, for these partnerships to be successful, national governments must establish appropriate mechanisms and take responsibility for regulation and oversight. Moreover, these partnerships should be developed in the absence of public funding.

Dialogue and cooperation within sectors and among different scales can be promoted if there are incentives to take action; for example:

- a. Gained efficiency and/or reduction of cost.
- b. Good citizenship and working towards the betterment of society.
- c. Financial gains that will directly benefit the operations of sector.
- d. Incentives for compliance to policies and laws play an enormous role in the sustainability of the nexus resources.

These incentives must be applicable to multiple implementing agencies or sectors of the nexus solutions, from high level ministries to the private sector and end users of resources. This is a collective action problem which can be

attained through government, market or voluntary process to achieve criteria of equity, efficiency or quality of service.

The private sector is an essential partner in the WEF nexus, but lack of incentives or inadequate regulations prevent their engagement in a more proactive way. Taking the water-energy linkages as an example, water services are subsidized in most Arab countries, and therefore very few individuals or municipalities pay the real cost of water and wastewater services. The energy sector on the other hand is a productive sector and is worth several orders of magnitude greater than the water sector in terms of capital per year. As a result, the energy sector has more leverage for investment and innovation. Making the right quantitative linkages between these two sectors can promote ways to incentivize private investment for nexus solutions. Hence, institutional analysis of the nexus is needed to better understand the process of decision making, knowledge management and policy implementation and evaluation processes.

Conclusion

Even though existing institutions of the Arab world face many challenges to a nexus approach, however many opportunities exist that should be tapped into, such as the existing models of "integrated institutions", the increased awareness on the importance of the nexus approach in Arab countries among policy makers, and the existing research projects and small scale pilot projects which could inform policy options. Moreover, this does not mean creating new institutions, or new hard structures. For example, the newly established climate change institutions and different forms of multi-stakeholder bodies such as national climate change committees, already formulated in many Arab countries, could serve as a catalyst to mainstream the nexus approach at all levels of policy development. The ultimate aim is to have institutions that are able to mainstream and reflect the WEF nexus approach in policies in the Arab countries in light of the mandate and targets of both the SDGs and the Paris 2015 Climate Summit. This is important in order to ensure that the Arab countries will not, in the near future, be sidetracked by crippling resource insecurities on their sustainable development path.

References

- Abdel Gelil et al. Sustainable Energy in the Arab World: Prospects, Challenges and Opportunities. www.afedonline.org/report2013/english.html.
- International Renewable Energy Agency (IRENA), League of Arab States and Regional Center for Renewable Energy and Energy Efficiency (RCREEE). 2014. Pan Arab Renewable Strategy 2030: roadmaps of actions for implementation. IRENA. www.irena.org/DocumentDownloads/Publications/IRENA_Pan-Arab_Strategy_June%202014.pdf
- Khouri, N., UN-ESCWA (United Nations Economic and Social Commission for Western Asia). 2012. Setting priorities for food security in the Arab world: Early results of an international collaboration. Paper presented at the joint IFPRI-ESCWA Conference Food Secure, Arab World, A roadmap for policy and research, Beirut, February 2012. www.escwa.un.org/about/editors/Download.asp?table_name=about_oespresentations&field_name=id&FileID=14.
- UN-ESCWA (United Nations Economic and Social Commission for Western Asia). 2009. Water Development Report 3, Role of desalination in addressing water scarcity. United Nations: New York, 2009. www.escwa.un.org/information/publications/edit/upload/sdpd-09-4.pdf
- UNDP. 2013. Water Governance in the Arab Region: Managing Scarcity and Securing the Future. www.undp.org/content/dam/rbas/doc/Energy%20and%20Environment/Arab_Water_Gov_Report/Arab_Water_Gov_Report_Full_Final_Nov_27.pdf