

The Water–Employment–Migration nexus: Buzzword or useful framework?

Hussam Hussein^{1,2}  | Fatine Ezbakhe³ 

¹Department of Politics and International Relations (DPIR), University of Oxford, UK

²Royal Scientific Society (RSS), Amman, Jordan

³Institute for Environmental Sciences (ISE), University of Geneva, Switzerland

Correspondence

Fatine Ezbakhe, Institute for Environmental Sciences (ISE), University of Geneva, Boulevard Carl-Vogt 66, 1205, Geneva, Switzerland.
Email: fatine.ezbakhe@unige.ch

Summary

Motivation: Critical development studies have overlooked water-related nexuses and frameworks proposed by development agencies that recognize that water and sanitation are linked to other development challenges and identify the synergies and trade-offs between sectors. In particular, critical development studies have ignored these nexus approaches urged upon the governments of the Middle East and North Africa (MENA) region, the world's most water-scarce region.

Purpose: The article presents a case study of the Water–Employment–Migration (WEM) nexus framework, which has been recently proposed in policy circles. The analysis reflects on the extent to which this new nexus may be either a buzzword or instead a useful framework to improve national policies in the MENA region.

Methods and approach: We undertook a comprehensive review of the relevant literature on the WEM nexus. We complemented this secondary data with interviews with key informants from the institutions involved in the WEM nexus, as well as from youth organizations active in the Mediterranean region and working in the development sector.

Findings: What emerged is that there are no concrete examples of how to operationalize the WEM nexus at the policy level. Many respondents in the MENA region highlighted the need to “mainstream WEM in policies and plans”

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2022 The Authors. *Development Policy Review* published by John Wiley & Sons Ltd on behalf of ODI.

but were vague when asked how. There is a need for more critical evidence to elevate the WEM nexus from a discussion topic among regional organizations, to a concept that can be useful and practical.

Policy implications: Rather than a new nexus, which would capture only a few sectors relating to water, what is needed is a systems thinking approach, able to encompass the complexity and multifaceted issues relating to water resources.

KEYWORDS

development discourses, Mediterranean, Middle East and North Africa (MENA) region, Water–Employment–Migration (WEM) nexus

1 | INTRODUCTION: CRITIQUES OF INTERNATIONAL DEVELOPMENT APPROACHES

The international development arena is full of, sometimes implicit, ideas and approaches that inform or inspire practice and policies. These ideas and approaches are never neutral: they represent particular frames of reference, which produce different ways to interpret problems and solutions and views of what is true or right. Research on buzzwords started in the mid-2000s with the work of Cornwall, Eade, and others (Cornwall, 2007; Cornwall & Brock, 2005; Cornwall & Eade, 2010). Scholars in development studies have more recently analysed the role of buzzwords in the development sector, identifying their power in shaping policies and perceptions of development-related issues (EIAIly et al., 2020; Schnable et al., 2021). Buzzwords are “terms that represent hot topics in the field. Buzzwords characterize a development issue and imply elements of possible solutions” (Schnable et al., 2021, p. 26). Molle (2008, p. 132) called these terms *nirvana concepts*, or “concepts that embody an ideal image of what the world should tend to.”

There have been many critiques of international development approaches. In their “the empty rhetoric of poverty reduction” piece, Arora and Romijn (2012, p. 481) argue that development through Base-of-the-Pyramid (BoP) businesses are merely means for the “privatisation of poverty reductions,” as they obscure “unequal power relations between project managers and the so-called beneficiaries.” Similarly, in her analysis of community forestry policy in Nepal, Khadka (2010) pointed out that such a community-based approach, while being heralded as an instrument for poverty reduction and inclusion, ignores the dynamics of power and/or knowledge hindering the inclusion of the most disadvantaged groups of society. Frey (2008) analysed the “good governance” approach and concluded that, in the context of unequal societies, such an apolitical view of governance only strengthened existing power relations.

The field of water is not immune to such development approaches. Over the years, practitioners, activists, and scholars have presented a series of approaches, concepts, principles, and models to address the complex challenges facing water management. This is what Bréthaut and Schweizer (2018, p. 1) call “international water management trends.” One of the ubiquitous trends is Integrated Water Resources Management (IWRM), which has been under scrutiny as to whether it has degenerated into a buzzword used in water policies (Allouche, 2016; Mukhtarov & Cherp, 2014). Other trends include adaptive governance, water security, water diplomacy, transboundary water governance, and, more recently, the water–energy–food nexus (Magsig, 2020; Simpson & Jewitt, 2019).

The Middle East and North Africa (MENA) region is the world’s most water-scarce, and Jordan is the second most water-scarce country worldwide. In the region, a new nexus approach has emerged, brought into the policy arena mainly by the Global Water Partnership Mediterranean (GWP-Med). This is the Water–Employment–Migration (WEM) nexus, which GWP-Med presents as an instrument for addressing the interlinkages between water security,

employability, and emigration prevention “water insecurity into security; unemployment and under-employment into employability and job creation; and displacements into emigration prevention in countries of origin and integration of migrants in transit and destination countries” (Toli, 2017, p. 68). First introduced in 2016, the WEM nexus is part of regional policy frameworks such as the Union for the Mediterranean (UfM) 2020–2030 water policy framework (Abadi, 2019).

The emergence of this new nexus poses an important question: is the WEM nexus just another buzzword, or does it represent a new way to address concrete Mediterranean challenges? In this article, we reflect on whether the new WEM nexus is a useful framework or simply a policy buzzword. We will focus on its operationalization in the Mediterranean region, particularly the instruments used (or intended to be used) to bridge the gap between policy discussions and implementation. By focusing on the instruments for operationalizing the WEM nexus, we hope to add some empirical evidence to this new water-management approach. The article is structured as follows. First, we review the previous water-related nexus(es) (Section 2). We then present the methodology for our study (Section 3). In Section 4, we provide a critical reflection of the WEM nexus, based on the evidence collected. Finally, we discuss our main findings, providing some directions for future research on implementing the WEM nexus (Section 5).

2 | REVIEW OF WATER-RELATED NEXUS(ES)

In view of the manifold interactions between water resources and other vital resources such as energy, food, and ecosystems, their inherent interconnection and interdependence should come as no surprise. Water-related nexus approaches are precisely designed to provide a systems-based perspective that explicitly recognizes such complex interlinkages, aiming to better identify and manage synergies and trade-offs between sectors. Over the years, a series of nexuses has been developed and used to address the multiple and increasingly complex links between water and other sectors.

One of the first nexuses explored was the *Water-Energy (WE) nexus*. The concept was introduced more than 25 years ago, when Gleick (1994) conducted a life-cycle analysis of water and energy resources to quantify the energy requirements for the water sector, and vice versa, demonstrating the intrinsic relationship between both sectors. Since then, the body of research on the WE nexus has swelled considerably in both scale and breadth, as revealed by Ding et al. (2020)'s recent literature review. At around the same time, the concept of the *Water-Food (WF) nexus* started to be investigated. Grounded in Allan (1998)'s work on “virtual water,” trade economists such as McCalla (1997) delved into the connections between water scarcity and food security. Both the WE and WF nexuses have been somewhat incorporated into wider policies, such as the US Department of Energy's (2014) integrated strategy for technology research and development or the European Innovation Partnership on Water 2015 strategic implementation plan (European Policy Center, 2015).

The next step in the nexus shift considered all three resources—*Water-Energy-Food (WEF)*—and the intricate relationships among their production, distribution, and use (Mabrey & Vittoria, 2018). Unlike the previous nexuses, which gained currency mostly among academics, the WEF nexus emerged from policy circles, and became particularly important after the 2011 Bonn Conference when it was placed at the centre of the transition to sustainability (Hoff, 2011). It then started to be incorporated into policy frameworks, and addressed in regional initiatives and programmes, such as in the EU Renewable Energy Directive, the EU Infrastructure Communication, the EU Partnership for Research and Innovation (PRIMA), the FAO Nexus Assessment, and the GIZ Nexus Dialogue Programme (Aboelnga et al., 2018; Markantonis et al., 2019). The WEF nexus has also received considerable academic attention (Leck et al., 2015; Newell et al., 2019; Sarkodie & Owusu, 2020).

The adoption of the 2030 Agenda for Sustainable Development brought another dimension to the nexus: ecosystems. While recognizing the inseparable linkage of the previous three sectors, the *Water-Energy-Food-Ecosystems*¹

¹It is sometimes referred to as the Water-Energy-Food-Environment nexus.

(WEFE) nexus also considers their impact (and dependence) on ecosystems and their services. The United Nations Economic Commission for Europe (UNECE) promoted the WEFE nexus to identify intersectoral synergies and trade-offs in transboundary basins (UNECE, 2013). Other inter-governmental organizations, such as the Global Water Partnership Mediterranean (GWP-Med) and the Union for the Mediterranean (UfM), have also pushed the WEFE nexus (GWP-Med, 2016; UfM, 2020a). Furthermore, the research community has also studied the WEFE nexus, focusing on its feasibility (Patrick et al., 2016; Rakhmatullaev et al., 2017) and developing methodologies for its assessment (De Strasser et al., 2016; Karabulut et al., 2016).

There have also been other water-related nexuses, such as *Water-Soil-Waste* (Avellán et al., 2017; Kurian & Ardakanian, 2015), *Water-Energy-Food-Land* (Ringler et al., 2013; Sharmina et al., 2016), *Water-Energy-Food-Climate* (Beck & Walker, 2013; WEF, 2011), *Water-Forest* (White et al., 2019), and *Water-Climate-Migration* (Burrows & Kinney, 2016; Metulini et al., 2016; Weinthal et al., 2015). All nexus approaches share the same underlying rationale: moving beyond traditional “silo” thinking to a multi- and cross-sectoral management of resources. Such nexus thinking makes it possible to assess interlinkages among the relevant sectors, reconcile potentially conflicting interests, and capture existing (or emerging) opportunities for improved use of resources.

However, taking this nexus perspective from theory to practice is no easy task. Lack of institutional co-ordination, restricted funding mechanisms, and the different but overlapping spatial and temporal operational scales are some of the several barriers to nexus-based cross-sectoral integration (Allouche et al., 2014; Bizikova et al., 2013; Shannak et al., 2018). Analysing the application of the WEF nexus to the UK, Cairns and Krzywoszyńska (2016) explain that the key elements of such buzzwords are the lack of a sharp definition; as Gilbert Rist put it, buzzwords are characterized by “an absence of real definition, and a strong belief in what the notion is supposed to bring about” (Rist, 2007, p. 486). For them, there is strong support for the WEF nexus precisely because it is a vague concept with a normative resonance. In light of this, it is legitimate to wonder whether yet another nexus approach is required or desirable.

The *Water-Employment-Migration* (WEM) nexus was first introduced in 2016 by the Global Water Partnership Mediterranean (GWP-Med) to “turn water insecurity into security, unemployment and under-employment into employability and job creation, and displacements into emigration prevention in countries of origin and integration of migrants in transit and destination countries” (Toli, 2017, p. 65; Kamal, 2017). In collaboration with the GWP-Med, the UfM has set the WEM nexus as one of the four thematic areas in its water policy framework for actions 2030 (Abadi, 2019), establishing a UfM Task Force on the WEM nexus. The objective of the WEM line of action, according to this framework, is to “mainstream water-employment-migration approaches and actions to increase water-related employability and entrepreneurship in countries of migration origin, transit and hosting, while promoting sustainable water management and gender equality and youth objectives.” The collaboration between the UfM and GWP-Med has led to a series of “WEM labs”—the first in Barcelona in October 2018 and the second in Istanbul in November 2019—bringing together key institutions, governments, and stakeholders, including the private sector, civil society, and academic institutions, to identify challenges, possible solutions, and synergies for implementing the WEM nexus in the region. Since 2020, however, the UfM has focused on “synergetic actions” on the WEFE and WEM nexuses, acknowledging the need to “focus on delivering feasible and tangible results tailored to available fundraising options” (UfM, 2020b, p. 6). Therefore, a critical reflection on the usefulness of the WEM nexus comes at the right time.

3 | METHODOLOGY

For our critical reflection on the WEM nexus, we based our data collection on both secondary and primary sources. First, we undertook a comprehensive review of the relevant literature on the WEM nexus. This included searching the relevant peer-reviewed and grey literature, to understand the evolution of the WEM nexus concept and its implementation in the region. Sources of the literature included, but were not limited to, publications and media articles produced by regional organizations working on this nexus, such as the GWP-Med, the UfM, the Center for

Mediterranean Integration (CMI), the Mediterranean Agronomic Institute of Bari (CIHEAM-Bari), CEWAS Middle East, and the West Asia-North Africa (WANA) Institute.

We complemented this secondary data with interviews with key informants from these institutions involved in the WEM nexus, as well as from youth organizations active in the Mediterranean region and working in the development sector. The interviews took place between March and June 2020. We decided to use this data-collection method as it allows for a holistic understanding of the benefits and challenges of using the WEM nexus on the ground. We prepared an interview guide (Annex 1) to ensure consistency of insight, which served to steer the discussions. Specifically, these discussions focused on three issues: (1) the rationale behind the WEM nexus; (2) the initiatives undertaken to implement the WEM nexus; and (3) the role of youth in the conceptualization and operationalization of the WEM nexus. Our decision to include a discussion on youth came from the growing interest and involvement of the institutions developing and supporting the WEM nexus in youth involvement; hence, we considered youth organizations to be key stakeholders in operationalizing the nexus. We conducted 20 interviews with representatives of regional organizations (policy- and research-focused) and with young water activists from the Mediterranean region. As in other participatory-action research approaches (Lam et al., 2020), the engagement with young water activists enabled us to collect their perspectives on the nexus and their ideas on the way forward for its operationalization. The selected sample combined practitioners and activists from the development sector familiar with the WEM nexus. We undertook all interviews through email exchanges, using internet communication to overcome the logistical barriers presented by the fact that the interviewees were dispersed.

In terms of data collection, it is important to highlight two important limitations. First, one of the key organizations behind the WEM concept—GWP-Med—did not participate in the interviews. Second, we did not have access to the WEM labs' notes and agendas, but only to reports and newspaper articles mentioning them. Nevertheless, we overcame these limitations by interviewing other regional organizations involved in regional discussions on the WEM nexus and participants engaged in the WEM labs, and by reviewing GWP-Med reports.

We analysed both primary and secondary data using narrative analysis (Wetherell et al., 2001). The study triangulated the different answers to explore the WEM nexus in the Mediterranean, focusing primarily on identifying key themes for operationalizing it.

4 | A CRITICAL REFLECTION ON THE WEM NEXUS AND ITS OPERATIONALIZATION

The evidence collected emphasized both the need for a water-related nexus able to capture the existing challenges facing the region, especially unemployment and migration, as well as the need for a clear and common definition of the WEM nexus—avoiding the vagueness of terms characteristic of buzzwords—and the need to involve youth. In particular, the key themes that emerged and that will drive our reflections are: (1) the existence of a shared vision of the region's structural problems, but a lack of a shared understanding of the WEM nexus; (2) convergence on the role of youth, but divergence on approaches for operationalizing the WEM nexus.

Reflection 1: A shared vision of the region's structural problems without a shared understanding of how to address their interlinkages.

It is clear that there is a shared understanding of the regional structural problems, with an emphasis on changing how things are being done, including from a donor and international aid perspective. There is a need, it emerges, to consider how water scarcity is linked to migration, especially from rural to urban areas, and to rethink job creation. Indeed, when enumerating the structural problems in the region, almost all interviewees referred to recurrent environmental and social notions such as “water stress,” “climate change,” “skills,” “opportunities,” and “unemployment.”

The regional organizations emphasized the environmental aspects and structural problems when discussing the relevance of the WEM nexus. For UFM, intensified climate variability and change and the underlying challenges in water governance are increasingly crucial factors and a threat multiplier, hindering sustainable development and the achievement of the Sustainable Development Goals (SDGs). Limitations in water availability and inadequate water

services can be linked to food insecurity, lack of employment, social instability, and possibly violent conflict. Particularly on the southern shores of the Mediterranean, countries are facing water scarcity and unemployment. Thus, according to this rationale, water security can be an enabler of jobs, and, in turn, jobs are an enabler for people to stay in their homelands. For CEWAS Middle East, the main challenges in the region follow the same lines and include: increased water scarcity due to climate change and resource mismanagement; the negative impact on food supply and security, leading to growing famine and loss of employment opportunity; and the need to find opportunities elsewhere. For UNESCO, climate change poses an additional burden to the existing challenges, as it further exacerbates the occurrence of extended periods of drought, and hence water scarcity. For the WANA Institute, the Mediterranean region faces several challenges—political, social, economic, and environmental. In general, the main environmental challenges are the limited natural resources, the lack of adequate tools and policies to govern, protect, and manage the resources, food insecurity and nutrition, the lack of inclusive green development, the low resilience and carrying capacity, and the lack of co-operation and collaboration in managing shared resources.

Furthermore, youth respondents emphasized the region's structural socioeconomic problems, triggered by water scarcity and the environment. A young Moroccan policy-maker stressed that the Mediterranean region has one of the highest youth unemployment rates, in addition to being a migration hotspot from the southern to the northern shores. A young Tunisian entrepreneur underlined that "unemployment as one of the principal causes for migration, where youth is most affected, and therefore the WEM nexus is crucial in working toward a sustainable future." For a young academic from Morocco, the nexus framework is "particularly important to the Mediterranean region given the stresses, constraints, and strong interdependencies between sectors" and thus "the understanding of the dynamics of the different sectors is essential for developing effective strategies for the sustainable use of these resources while ensuring employment for the youth." Another young researcher from Palestine stated that "simply put, all three—migration, water, and employment—are key challenges in the Mediterranean; therefore, it is important to develop a nexus between the three."

In other words, there is a need for a WEM nexus, which could serve as a useful framework to analyse the situation and bring about the necessary change, especially for structural problems. However, while there seems to be a need for a WEM nexus, the interviewees pointed to the current challenge: the WEM nexus has no standard definition, it is still vaguely defined, and therefore seems to be more like a buzzword. In fact, respondents were familiar with the WEM interlinkages, but none provided a concrete definition of the nexus. Concepts such as "hotspot," "people-centred nexus," or "cross-countries nexus" were given, but even the regional organizations gave no concise definition of the WEM nexus. This vague conceptualization is not unique to the WEM nexus, as previous nexuses such as the WEF and WEFE faced the same problem. In the WEM nexus and its precursors, practitioners identify and call for the need for a concept of a nexus, recognizing the critical interlinkages between different sectors (in the case of the WEF nexus) and issues (in the case of the WEM nexus). However, depending on the person's disciplinary lens, the nexus assumes different shapes and understandings.

Nonetheless, most respondents acknowledged the necessity to take a "holistic," "out of the box/silos," and "system approach" when examining the three issues of water scarcity, unemployment, and migration, to understand how they were linked and how they influence each other, hoping to "bridge the policy–practice gap." Still, more work is needed to better define the interlinkages behind the WEM nexus.

Reflection 2: A convergence on the role of youth but a divergence on the approaches for operationalizing the WEM nexus.

Operationalizing the WEM nexus means "putting youth at the heart of the nexus," that is, developing a participatory model for the nexus through, for instance, research, entrepreneurship, and awareness-raising. This call for including youth in the WEM nexus is in line with the calls for achieving environmental justice through equity (i.e. distributing the environmental risk), recognition (i.e. recognizing the diversity of participants and experiences), and participation (i.e. participating in the political process which create and manage environmental policies) (Schlosberg, 2007, 2013).

According to the regional organizations interviewed, youth is essential for the WEM nexus. For the UfM and CEWAS, youth is one of the categories most affected by unemployment and pressure to migrate: as the

highest-potential breadwinners, they often opt to migrate to sustain their dependants back home. In turn, the migrant-sending economy loses out on its brainpower and workforce. Therefore, youth needs to be actively considered both as the core recipient of many of the interventions envisaged under the WEM nexus approach, and to be involved from the outset to shape consultations, provide crucial insights, and ground the work of the different stakeholders. For CIHEAM, youth will be the promoters and the core of a brainstorming platform underpinned by international and regional organizations to play an effective role. For UNESCO's World Water Assessment Programme (WWAP), youth and women together constitute the more significant parts of society, and must therefore not be left behind when it comes to designing and implementing WEM interventions (Miletto et al., 2017). Therefore, only through an inclusive approach that ensures representation and participation on the part of all social strata will it be possible to tackle these deeply rooted challenges. According to WWAP, the knowledge and creativity brought by young people will help improve the current approach to the use of water resources. This will not only create new job opportunities, but also, potentially, new environmental standards as well as more human rights-based solutions. For the WANA Institute, youth, women, and people with disabilities are the most vulnerable sectors of the population and should not be marginalized when addressing WEM-related challenges. Youth can provide innovative solutions, as they are keener to use advanced technology. Involving youth will thus promote and ensure their being fully integrated into the socioeconomic and political agenda, and this will create positive social changes.

While regional organizations confirmed the intention to put youth at the core of the nexus, youth interviewees highlighted the need to go beyond "tokenism" and have youth as active stakeholders in its implementation. For a young water activist from Morocco, this meant that "an essential aspect that should be considered when implementing this nexus is to develop youth-led entrepreneurship programmes that will help create more jobs and limit the migration of talented and highly educated youth." A young academic from Spain highlighted the need to "change the participatory model and introduce young networks from strategic sectors," and for these networks to act as active members of "committees which influence the different decision-makers." A young Palestinian researcher also underlined that youth must "contribute to the solutions of issues related to WEM as either employees and workers, knowledge developers, entrepreneurs, and innovators." In other words, youth must play an active role in designing and implementing WEM-related interventions at the local level, especially in their countries of origin. This is because they have greater chances of connecting with their peers to disseminate and raise awareness of the impacts of this nexus and identify ways to curb its adverse effects. Moreover, youth suggested that youth networks could play a pivotal role in linking youth and regional/national organizations and play an active role in issue identification and policy development. For a young water activist from Morocco, youth organizations could use their established communities and networks to communicate directly with youth and raise awareness on WEM, participate and represent the voices of youth in policy discussions, and consult, disseminate and build the capacities of young people. Among the roles that youth could play, youth interviewees mentioned that they should be involved in decision-making to (1) foster dialogue with different stakeholders within the WEM nexus; (2) identify key problems and challenges at the local level and develop entrepreneurial initiatives and projects to tackle them; and (3) create platforms for knowledge and the sharing of opportunities on WEM issues.

However, the convergence on the role of youth quickly revealed the divergence on how to operationalize the WEM nexus and transform it into a useful framework. To operationalize the WEM nexus, the respondents indicated (or recommended) the adoption of a range of different strategies. According to the UfM, such operationalization should be done with an "action-oriented approach," where concrete pilot interventions are implemented at the local level to demonstrate the intended benefits to countries and their populations. These pilot actions should include mentoring and support for start-ups and should focus on both addressing the root causes of migration and on tackling the impacts of migration in the transit and destination countries, always as related to water. In this regard, the UfM has established a Task Force bringing together governments and regional institutions to provide further orientations for the next steps and ultimately advance the WEM nexus agenda. Outcomes from the Task Force include facilitating dialogue between the different stakeholders to identify the needs, initiatives, and financing tools for implementing a "regional WEM framework." Other regional organizations also emphasized the need for "testing"

and “demonstrating” WEM-related applications at the local level. For instance, for CEWAS Middle East, it is crucial to test various initiatives before settling on a concrete one, to identify how different stakeholders within the WEM nexus—including the youth—can come together to “make it happen.” In other words, operationalizing the WEM nexus requires increasing collaboration among the stakeholders, sharing more resources and information, and recognizing the pipeline of support and interventions needed along with the WEM nexus. In this sense, CEWAS considers “water entrepreneurship” as a catalyst, creating sustainable jobs in emerging economies and as a key component in providing much-needed relief to very stressed environments and natural resources.

Furthermore, for CIHEAM, this nexus has to be considered a “reform to a system and not as punctual intervention” that may incorporate the contributions of different stakeholders. For WWAP, putting the WEM nexus approach into practice requires data cross-analysis to mainstream the needs of the most vulnerable segments of society in national plans for employment, migration, and water. For the WANA Institute, in addition to data availability (and accessibility) and local to regional co-operation, the operationalization of the WEM nexus also requires a “willingness to act.” In other words, for the WEM nexus to be operational, water needs to be recognized by government ministries beyond the water sector as key for addressing current development challenges, and consequently see national policy and decision-making take on comprehensive agendas beyond the traditional water-sector actions.

The youth respondents also underline “cross-sectoral co-ordination and collaboration” among all stakeholders, including youth, for promoting and operationalizing the WEM nexus. According to an early career researcher from Morocco, it is vital to bring together researchers and policy-makers, ensuring targeted funding for research projects on water, employment and migration, and their interlinkages. A young Tunisian entrepreneur highlighted the need to involve the private sector and support start-ups and young entrepreneurs in creating new jobs for the youth. For a young Palestinian researcher, besides developing job opportunities aimed at youth in the region and promoting collaboration between countries, it is also crucial to involve the youth in addressing and solving the challenges related to water and migration.

5 | DISCUSSION AND CONCLUDING REMARKS

This article has shown the importance of implementing the WEM nexus, both from the lived experiences of youth from the Mediterranean region and regional organizations working there. For these different actors, the WEM nexus differs from previous ones as the region faces new challenges, expanding the environmental crisis with others in the socioeconomic field. Reflecting upon previous nexuses introduced and called for in the region, a consensus emerged on the need to reflect on how to bridge the theory–practice gap and ensure the implementation of such a WEM nexus. Regional organizations emphasized the need for holistic and participatory approaches, including all those (most) affected by the growing challenges facing the Mediterranean region (especially the southern shore), in particular youth unemployment. They stressed the need for pilot projects to test how such a WEM nexus can be implemented in the region's most affected areas. Youth underscored the need to move beyond “tokenism” and explore a range of approaches for operationalizing the WEM nexus, with youth at its core in the whole process, from its design to its implementation. Nevertheless, the question remains of how and to what extent the implementation and proposed best practices to ensure that the impact of this WEM nexus differs from the previous ones.

What emerged is that there are no concrete examples of how to operationalize the WEM nexus at the policy level. Many respondents highlighted the need to “mainstream WEM in policies and plans,” but they were vague when asked how. The understanding is that this would become clearer in attempting to do it, “learning while doing,” and running it on local pilots. There is therefore a need for more research on this aspect, particularly learning from best (and worst) practices from previous nexuses. Another issue that came up is the role of entrepreneurship, which seems to be a key approach to the WEM nexus. One question that needs to be addressed, however, is how it can be further promoted in the region, especially the culture of entrepreneurship. CEWAS Middle East has been working on this in the past years, having youth at its core when promoting “WEM labs” (i.e., sessions focused on real example on

water employment activities). There is a need for further reflections on such a model, especially on what has been learned from the field and how it could be replicated both in other locations and countries across the region and expanded at different scales. Another interesting aspect that emerged is the idea of youth platforms for knowledge and technology exchange, although this innovative aspect was mentioned primarily by youth respondents. This is an issue that regional organizations and promoters of the WEM nexus concept should reflect on and examine how they could include youth networks in the WEM nexus design, discussions, and implementation. Finally, one key question that is still pending relates to the interlinkages with other water-related nexuses and how the organizations and policy-makers can increase synergies between them. The UfM (2020b) mentioned this in its briefing note from the June 2020 meeting, but none of the respondents referred to it.

Reflections on these different points would increase the chances of operationalizing the WEM nexus in the region. Indeed, there is a need for more critical evidence to elevate the WEM nexus from a discussion topic among regional organizations, to a concept that can be useful and practical. Such evidence is how the WEM nexus approach could fulfil its potential role of increasing the region's environmental, economic, social, and political sustainability.

Water scarcity in the MENA region is a growing challenge that requires urgent action. While there are several water-related nexuses, the core challenge is to capture all nuances and interlinkages related to water. Rather than a new nexus, which would only capture a few sectors relating to water, what is needed is a systems-based perspective, that is, an approach that captures the complexity and multifaceted issues relating to water and allows policy-makers and practitioners to understand the interactions among different sectors and identify the synergies or trade-offs before implementation.

ACKNOWLEDGMENTS

We are grateful to the anonymous reviewers for their constructive and insightful comments. We also wish to thank the interviewees who kindly gave their time to this study. All errors and inaccuracies remain our own. Furthermore, the findings, conclusions, and recommendations expressed in the article are ours and do not necessarily reflect the view of our institutional affiliations.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ETHICS STATEMENT

This article reports analysis of primary data. The individuals from whom the data was collected gave their free, prior, and informed consent; the data has been kept confidential and the data and analysis have been anonymised.

ORCID

Hussam Hussein  <https://orcid.org/0000-0002-1238-1715>

Fatine Ezbakhe  <https://orcid.org/0000-0002-5474-393X>

REFERENCES

- Abadi, A. (2019, March 25–28). *The WEM Nexus within the UfM Policy Framework of Actions 2030* [PowerPoint slides]. CMI World Water Day 2019. https://www.cmimarseille.org/sites/default/files/newsite/ppt_wwd_2019-abadi-ufm.pdf
- Aboelnga, H. T., Khalifa, M., McNamara, I., Ribbe, L., & Sycz, J. (2018). *Water-Energy-Food Nexus literature review*. A review of nexus literature and ongoing nexus initiatives for policymakers. Nexus Regional Dialogue Programme & GIZ. <https://www.water-energy-food.org/resources/water-energy-food-nexus-literature-review-a-review-of-nexus-literature-and-ongoing-nexus-initiatives-for-policymakers>
- Allan, J. A. (1998). Virtual water: A strategic resource. *Ground Water*, 36(4), 545–547. <https://doi.org/10.1111/j.1745-6584.1998.tb02825.x>

- Allouche, J., Middleton, C., & Gyawal, D. (2014). *Nexus nirvana or nexus nullity? A dynamic approach to security and sustainability in the water–energy–food nexus* (STEPS Working Paper No. 63). STEPS Centre. <https://steps-centre.org/wp-content/uploads/Water-and-the-Nexus.pdf>
- Arora, S., & Romijn, H. (2012). The empty rhetoric of poverty reduction at the base of the pyramid. *Organization*, 19(4), 481–505. <https://doi.org/10.1177/1350508411414294>
- Avellán, T., Roidt, M., Emmer, A., Von Koerber, J., Schneider, P., & Raber, W. (2017). Making the water–soil–waste nexus work: Framing the boundaries of resource flows. *Sustainability*, 9(10), 1881. https://doi.org/10.1007/978-3-319-63951-2_474-1
- Beck, M. B., & Walker, R. V. (2013). On water security, sustainability, and the water–food–energy–climate nexus. *Frontiers of Environmental Science & Engineering*, 7(5), 626–639. <https://doi.org/10.1007/s11783-013-0548-6>
- Bizikova, L., Roy, D., Swanson, D., Venema, H. D., & McCandless, M. (2013, February). *The water–energy–food security nexus: Towards a practical planning and decision-support framework for landscape investment and risk management (IISD Report)*. International Institute for Sustainable Development. <https://www.iisd.org/publications/report/water-energy-food-security-nexus-towards-practical-planning-and-decision>
- Bréthaut, C., & Schweizer, R. (2018). Taking up practical and intellectual challenges posed by international water management trends: Some introductory remarks. In C. Bréthaut & R. Schweizer (Eds.), *A critical approach to international water management trends* (pp. 1–22). Palgrave Macmillan. https://doi.org/10.1057/978-1-137-60086-8_1
- Burrows, K., & Kinney, P. L. (2016). Exploring the climate change, migration and conflict nexus. *International Journal of Environmental Research and Public Health*, 13(4), 443. <https://doi.org/10.3390/ijerph13040443>
- Cairns, R., & Krzywoszyńska, A. (2016). Anatomy of a buzzword: The emergence of ‘the water–energy–food nexus’ in UK natural resource debates. *Environmental Science & Policy*, 64, 164–170. <https://doi.org/10.1016/j.envsci.2016.07.007>
- Cornwall, A. (2007). Buzzwords and fuzzwords: Deconstructing development discourse. *Development in Practice*, 17(4&5), 471–484. <https://doi.org/10.1080/09614520701469302>
- Cornwall, A., & Brock, K. (2005). What do buzzwords do for development policy? A critical look at ‘participation’, ‘empowerment’ and ‘poverty reduction’. *Third World Quarterly*, 26(7), 1043–1060. <https://doi.org/10.1080/01436590500235603>
- Cornwall, A., & Eade, D. (Eds.). (2010). *Deconstructing development discourse: Buzzwords and fuzzwords*. Practical Action Publishing & Oxfam GB.
- De Strasser, L., Lipponen, A., Howells, M., Stec, S., & Bréthaut, C. (2016). A methodology to assess the water energy food ecosystems nexus in transboundary river basins. *Water*, 8(2), 59. <https://doi.org/10.3390/w8020059>
- Ding, T., Liang, L., Zhou, K., Yang, M., & Wei, Y. (2020). Water-energy nexus: The origin, development and prospect. *Ecological Modelling*, 419, 108943. <https://doi.org/10.1016/j.ecolmodel.2020.108943>
- EIAlyf, A., Darwish, K. M., & Weber, O. (2020). Corporations and sustainable development goals communication on social media: Corporate social responsibility or just another buzzword? *Sustainable Development*, 28(5), 1418–1430. <https://doi.org/10.1002/sd.2095>
- European Policy Center. (2015). *Reaching for Blue Gold: How the EU can rise to the water challenge while reaping the rewards* (Vol. 80). EPC Issue Paper.
- Frey, K. (2008). Development, good governance, and local democracy. *Brazilian Political Science Review (Online)*, 3(se). http://socialsciences.scielo.org/scielo.php?script=sci_arttext&pid=S1981-38212008000100007
- Gleick, P. H. (1994). Water and energy. *Annual Review of Energy and the Environment*, 19(1), 267–299. <https://doi.org/10.1146/annurev.19.110194.001411>
- Global Water Partnership – Med. (2016). Profile: Global Water Partnership – Mediterranean (GWP-Med). <https://www.gwp.org/globalassets/global/gwp-med-files/knowledge-and-resources/gwp-med-profile.pdf>
- Hoff, H. (2011, November). *Understanding the nexus (Background Paper for the Bonn 2011 Conference: The Water, Energy and Food Security Nexus)*. Stockholm Environment Institute. <https://www.sei.org/publications/understanding-the-nexus/>
- Kamal, B. (2017). The ‘Water–Employment–Migration’ explosive nexus. *Inter Press Service News Agency*. <http://www.ipsnews.net/2017/05/the-water-employment-migration-explosive-nexus/>
- Karabulut, A., Ego, B. N., Lanzanova, D., Grizzetti, B., Bidoglio, G., Pagliero, L., Bouraoui, F., Aloe, A., Reynaud, A., Maes, J., & Vandecasteele, I. (2016). Mapping water provisioning services to support the ecosystem–water–food–energy nexus in the Danube river basin. *Ecosystem Services*, 17, 278–292. <https://doi.org/10.1016/j.ecoser.2015.08.002>
- Khadka, M. (2010). Actors, interactions at the policy level and implications for exclusion: Nepal’s community forestry. In G. M. Gómez, A. A. Corradi, P. Goulart, & R. Namara (Eds.), *Participation for what: Social change or social control?* (pp. 76–92). ISS & Hivos.
- Kurian, M., & Ardakanian, R. (2015). *Governing the nexus*. Springer International Publishing.
- Lam, G. Y. H., Holden, E., Fitzpatrick, M., Raffaele Mendez, L., & Berkman, K. (2020). Different but connected: Participatory action research using Photovoice to explore well-being in autistic young adults. *Autism*, 24(5), 1246–1259. [10.1177/2F1362361319898961](https://doi.org/10.1177/2F1362361319898961)
- Leck, H., Conway, D., Bradshaw, M., & Rees, J. (2015). Tracing the water–energy–food nexus: Description, theory and practice. *Geography Compass*, 9(8), 445–460. <https://doi.org/10.1111/gec3.12222>

- Mabrey, D., & Vittorio, M. (2018). Moving from theory to practice in the water–energy–food nexus: An evaluation of existing models and frameworks. *Water-Energy Nexus*, 1(1), 17–25. <https://doi.org/10.1016/j.wen.2018.04.001>
- Magsig, B. O. (2020). Water security: A litmus test for international law. *Review of European, Comparative & International Environmental Law*, 29(1), 44–55. <https://doi.org/10.1111/reel.12328>
- Markantonis, V., Arnaud, R., Karabulut, A., El Hajj, R., Altinbilek, D., Awad, I., Brugemann, A., Vangelis, C., Mysiak, J., Lamaddalena, N., & Matoussi, M. S. (2019). Can the implementation of the Water-Energy-Food nexus support economic growth in the Mediterranean region? The current status and the way forward. *Frontiers in Environmental Science*, 7, 84. <https://doi.org/10.3389/fenvs.2019.00084>
- McCalla, A. (1997, May 12–17). *The water, food, and trade nexus* [Paper presentation]. World Bank, Marrakesh.
- Metulini, R., Tamea, S., Laio, F., & Riccaboni, M. (2016). The water suitcase of migrants: Assessing virtual water fluxes associated to human migration. *PLoS One*, 11(4), e0153982. <https://doi.org/10.1371/journal.pone.0153982>
- Miletto, M., Caretta, M. A., Burchi, F. M., & Zanlucchi, G. (2017). *Migration and its interdependencies with water scarcity, gender and youth employment*. UNESCO Publishing. <https://unesdoc.unesco.org/ark:/48223/pf0000258968>
- Molle, F. (2008). Nirvana concepts, narratives and policy models: Insights from the water sector. *Water Alternatives*, 1(1), 131–156.
- Mukhtarov, F., & Cherp, A. (2014). The hegemony of integrated water resources management as a global water discourse. In V. R. Squires, H. M. Milner, & K. A. Daniell (Eds.), *River basin management in the twenty-first century: Understanding people and place* (pp. 3–21). CRC Press. <https://doi.org/10.1201/b171168-9>
- Newell, J. P., Goldstein, B., & Foster, A. (2019). A 40-year review of food–energy–water nexus literature and its application to the urban scale. *Environmental Research Letters*, 14(7), 073003. <https://doi.org/10.1088/1748-9326/ab0767>
- Patrick, M. J., Elsayah, S., Burgher, I., & Jakeman, A. J. (2016). Australian water security: A water–food–environment–energy nexus perspective. In C. Pahl-Wostl, A. Badhuri, & J. Gupta (Eds.), *Handbook on water security*. Edward Elgar Publishing.
- Rakhmatullaev, S., Abdullaev, I., & Kazbekov, J. (2017). Water-energy-food-environmental nexus in Central Asia: From transition to transformation. In S. L. Zhiltsov, I. S. Zonn, A. G. Kostianoy, & A. V. Semenov (Eds.), *Water resources in Central Asia: International context* (pp. 103–120). Springer.
- Ringler, C., Bhaduri, A., & Lawford, R. (2013). The nexus across water, energy, land and food (WELF): Potential for improved resource use efficiency? *Current Opinion in Environmental Sustainability*, 5(6), 617–624. <https://doi.org/10.1016/j.cosust.2013.11.002>
- Rist, G. (2007). Development as a buzzword. *Development in Practice*, 17(4&5), 485–491. <https://doi.org/10.1080/09614520701469328>
- Sarkodie, S. A., & Owusu, P. A. (2020). Bibliometric analysis of Water-Energy-Food nexus: Sustainability assessment of renewable energy. *Current Opinion in Environmental Science & Health*, 13, 29–34. <https://doi.org/10.1016/j.coesh.2019.10.008>
- Schlosberg, D. (2007). Reconceiving environmental justice: Global movements and political theories. *Environmental Politics*, 13(3), 517–540. <https://doi.org/10.1080/0964401042000229025>
- Schlosberg, D. (2013). Theorising environmental justice: The expanding sphere of a discourse. *Environmental Politics*, 22(1), 37–55. <https://doi.org/10.1080/09644016.2013.755387>
- Schnable, A., DeMattee, A., Sullivan Robinson, R., & Brass, J. N. (2021). International development buzzwords: Understanding their use among donors, NGOs, and academics. *The Journal of Development Studies*, 57(1), 26–44. <https://doi.org/10.1080/00220388.2020.1790532>
- Shannak, S., Mabrey, D., & Vittorio, M. (2018). Moving from theory to practice in the water–energy–food nexus: An evaluation of existing models and frameworks. *Water-Energy Nexus*, 1(1), 17–25. <https://doi.org/10.1016/j.wen.2018.04.001>
- Sharmina, M., Hoolohan, C., Bows-Larkin, A., Burgess, P. J., Colwill, J., Gilbert, P., Howard, D., Knox, J., & Anderson, K. (2016). A nexus perspective on competing land demands: Wider lessons from a UK policy case study. *Environmental Science & Policy*, 59, 74–84. <https://doi.org/10.1016/j.envsci.2016.02.008>
- Simpson, G. B., & Jewitt, G. P. (2019). The development of the water-energy-food nexus as a framework for achieving resource security: A review. *Frontiers in Environmental Science*, 7, 8. <https://doi.org/10.3389/fenvs.2019.00008>
- Toli, K. (2017). The Water-Employment-Migration nexus. *Revolve Magazine*, 22, 66–75. <https://issuu.com/revolve-magazine/docs/re22>
- Union for the Mediterranean. (2020a, October). *UfM Water Policy Framework for Actions 2030*. *Water agenda booklet*. <https://ufmsecretariat.org/publication-speech/ufm-water-policy-framework/>
- Union for the Mediterranean. (2020b, June 9–10) *UfM Water Policy Framework for Actions 2030* (Briefing Note). https://www.gwp.org/globalassets/global/gwp-med-files/news-and-activities/ufm_june-2020/4_ufm-water-policy-framework-for-actions_briefing-note_informal-weg-june-9-10-2020.pdf
- United Nations Economic Commission for Europe. (2013, April 4). *A proposed approach to assessing the Water-Food-Energy-Ecosystems Nexus under the UNECE Water Convention* (Discussion Paper). https://www.unecce.org/fileadmin/DAM/env/documents/2013/wat/Nexus_mtg/NexusAssessment_DiscussionPaperOnApproach_final_forWeb.pdf
- US Department of Energy. (2014). The Water-Energy Nexus: Challenges and Opportunities. <https://www.energy.gov/sites/default/files/2014/07/f17/Water%20Energy%20Nexus%20Full%20Report%20July%202014.pdf>

- Weinthal, E., Zawahri, N., & Sowers, J. (2015). Securitized water, climate, and migration in Israel, Jordan, and Syria. *International Environmental Agreements: Politics, Law and Economics*, 15(3), 293–307. <https://doi.org/10.1007/s10784-015-9279-4>
- Wetherell, M., Taylor, S., & Yates, S. J. (Eds.). (2001). *Discourse as data: A guide for analysis*. Sage.
- White, M., Tengberg, A., Johansson, K., & Timboe, I. (2019). *How landscapes and water mitigate climate change (SIWI Policy Brief)*. Stockholm International Water Institute. <https://siwi.org/publications/how-landscapes-and-water-mitigate-climate-change/>
- World Economic Forum. (2011). *Water security: The Water-Energy-Food-Climate Nexus*. Island Press.

How to cite this article: Hussein, H., & Ezbakhe, F. (2023). The Water–Employment–Migration nexus: Buzzword or useful framework? *Development Policy Review*, 41, e12676. <https://doi.org/10.1111/dpr.12676>

ANNEX 1

Guide for questions to NGOs and organizations.

Question 1: What are the challenges facing the Mediterranean region, and why is the WEM nexus needed?

Question 2: How does the WEM nexus differ from other water-related nexuses, such as the Water–Energy–Food–Ecosystems nexus?

Question 3: Why are different Mediterranean regional organizations, such as yours, suggesting this new nexus? What is the rationale behind its conceptualization?

Question 4: How is your organization contributing to the operationalization of this nexus?

Question 5: Previous nexuses struggled to bridge the gap between theory and practice. What do you think is needed to translate this nexus into concrete policies?

Question 6: There have been various consultations on the WEM nexus (i.e. the WEM Labs). What is the objective of such discussions, and what are the outcomes so far?

Question 7: The WEM nexus has a strong focus on Youth and Gender targets. What role will the youth play in terms of nexus implementation and policymaking?

Guide for questions to youth.

Question 1: How familiar are you with the WEM nexus?

Question 2: Do you think a WEM nexus is needed in the Mediterranean, especially from a youth perspective?

Question 3: What do you think is needed to operationalize this nexus?

Question 4: Youth is currently one of the focuses of the WEM nexus. What role do you think youth should have in the implementation of this nexus?

Question 5: According to regional organizations such as the GWP-Med and UfM, youth should be part of the on-going and future actions for the implementation of the WEM nexus. In your opinion, what does it mean to be “part of the WEM nexus implementation”?

Question 6: In your view, what could be the role of youth organizations in the implementation and execution of the WEM nexus?