

A Discursive Analysis of the Water Scarcity Discourse in Jordan

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Preface

I am pleased to present this working paper titled “A Discursive Analysis of the Water Scarcity Discourse in Jordan” by Mr. Hussam Hussien and Ms. Amal Bourhrous, while they were at the Centre for Strategic Studies (CSS) conducting field research for their graduate studies.

This paper analyses the discourse of water scarcity in Jordan, how it is constructed, and its impacts on the policies that the water scarcity discourse suggests for the water sector. The paper provides general background information on the current water resources in Jordan and their sectorial allocation. And it discusses the theoretical framework adopted for the analysis along with investigating the construction of the dominant mainstream discourse of water scarcity, by analysing the different story lines supporting it. It concludes by analysing the overall solutions that are currently pursued in Jordan for the water sector, and the role of the discourse of water scarcity.

It also sheds light on the water resources problem in Jordan and the different discourse that are used to present the problem and the solutions for it.

I would like to thank Mr. Hussam and Ms. Amal for their contribution which was in part motivated by the gratitude to the CSS that hosted them facilitated their work while they were conducting their research in Jordan.

Musa.M. Shteivi

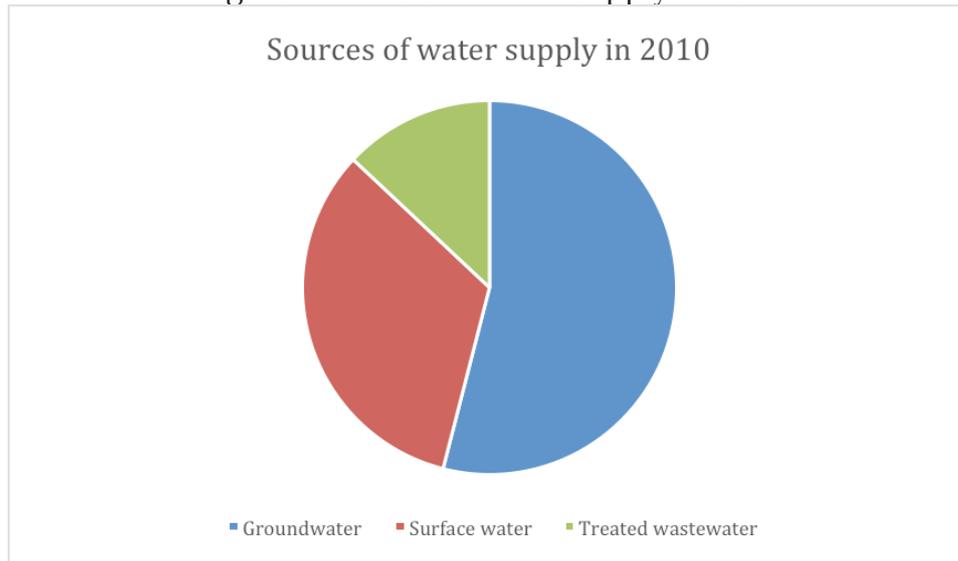
Introduction

This short paper investigates the discourse of water scarcity in Jordan, how it is constructed, and its impacts on the policies that the water scarcity discourse suggests for the water sector. To do so, this paper will first provide general background information on the current water resources in Jordan and their sectorial allocation. Second, it will discuss the theoretical framework adopted for the analysis. Third, it will investigate the construction of the dominant mainstream discourse of water scarcity, analysing the different story lines supporting it. Finally, it will analyse the overall solutions that are currently pursued in Jordan for the water sector, and the role of the discourse of water scarcity.

Background Information

According to the latest (2014) water budget of Ministry of Water and Irrigation (MWI), the total water resources in Jordan in 2013 were 864 MCM per year (MWI, 2014: 20). Also the total safe yield of the groundwater basins in Jordan is estimated at about 319 MCM per year for the Water Budget (2014: 19), while the total surface water resources in Jordan is 563 MCM per year, including treated wastewater. However, in 2010, as emerges from figure 1, groundwater represented the main source of water supply, with a total of approximately 54% of the total water supply - over 500 MCM; surface water supply represented only 33%, meaning 286 MCM; while treated wastewater accounts for more than 13% of the total water supply, meaning 117 MCM (MWI, Water Budget Projected Demand and Resources 2010-25, 2012, in Yorke, 2013: 14).

Figure 1: sources of water supply in 2010



Presentation of data from MWI, Water Budget Projected Demand and Resources 2010-25, 2012, in Yorke, 2013: 14, in Hussein (forthcoming, 2016)

This is explainable if we further analyse the nature of the surface water. In fact, two of the three rivers, the Yarmouk and the Jordan, are both of transboundary nature, while the third one, the Zarqa, even if completely within Jordanian territory, is the smallest one and is also of low water quality. Jordan is bound by the bilateral agreements for the allocation of the Yarmouk and Jordan: the 1987 agreements between Jordan and Syria on the Yarmouk; and the 1994 agreements between Jordan and Israel on the Lower Jordan River. It results that Jordan is using mainly groundwater resources for its water supply, pumping it beyond its safe yield capacity.

However, the actual water uses in 2013 was almost 1,000 MCM, with a deficit of around 150 MCM, which was covered with a further over-pumping of groundwater resources (MWI, 2014: 20). While the resources are very limited, there is a tension between the agricultural, municipal, and industrial sectors for the allocation of water resources in Jordan. As King Abdullah II puts it, "we have to balance between drinking water needs and industrial and irrigation water requirements. Drinking water remains the most essential and the highest priority issue" (MWI, 2009: 2). In 2011,

the share used by the agricultural sector, including livestock, was 58%, the share of municipal uses around 37%, and industrial uses around 5%. Of the agricultural uses, two thirds were used in the Highlands, mainly groundwater resources, and one-third in the Jordan Valley, mainly surface water. Agriculture in the latter also resulted to be more efficient than the one in the former. In fact, in the Jordan Valley there is around 71% of the cultivated land while in the Highlands only 29% (FAO, 2009: 240-242).

Due to the several waves of refugees of Palestinian, Lebanese, Iraqi, and Syrian origins, who fled their home countries due to wars and occupations, the population of Jordan increased from 225,000 during the Emirate of Jordan in 1922 (Haddadin, 2006: 7) to more than 7 million in 2014. Jordan, being a stable country and bordering with Syria in the north, Iraq in the east, Saudi Arabia in the south and east, and Israel and the occupied West Bank in the west, served as a host country for millions of refugees in the past decades.

Table 1, Demography of Jordan over time

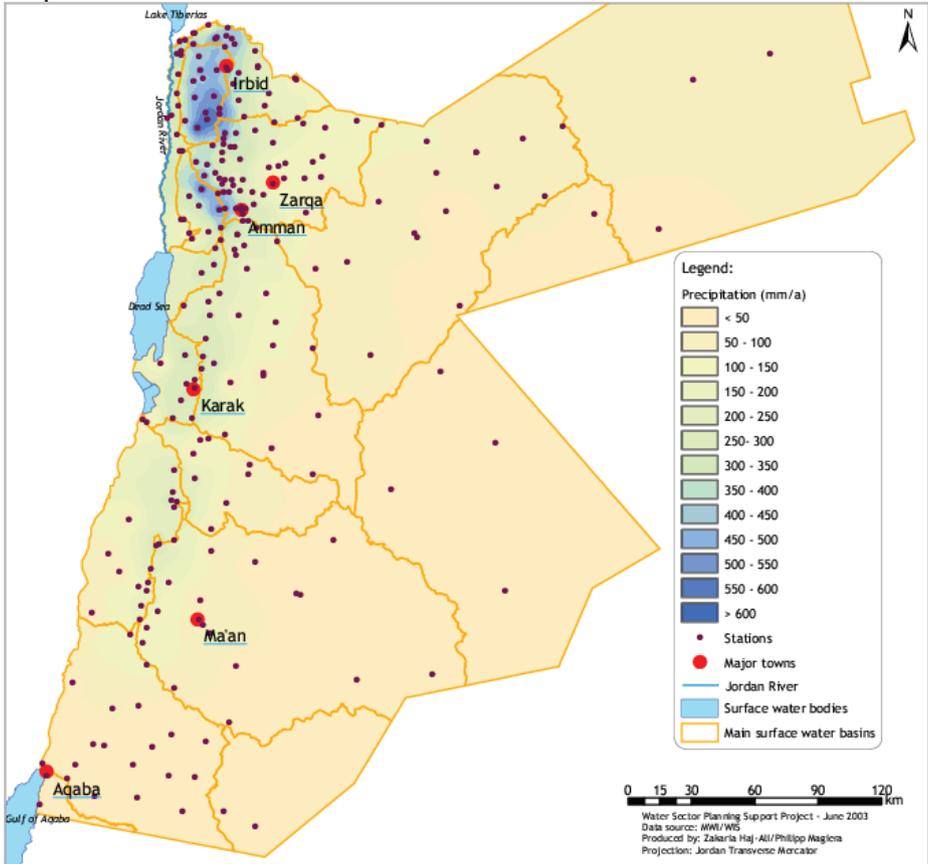
Year	Population of Jordan ³	Major political event
1922	225,000	Emirate of Transjordan founded in 1921
1947	473,200	One year before the establishment of Israel
1952	586,200	After the 1948-1949 war with Israel
1970	1,508,200	Three years after the six days war with Israel, when Israel occupied the West Bank
1989	3,144,000	One year before the Iraq-Kuwait war
1993	3,993,000	Two years after the Iraq-Kuwait war
2002	5,098,000	One year before the war against Iraq
2004	5,350,000	One year after the war against Iraq
2010	6,113,000	One year before the Syrian crisis
2012	6,388,000	One year after the start of the Syrian crisis
2014	7,500,000	Three years after the start of the Syrian crisis

Source: presentation of data from Department of Statistics of Jordan Yearbook 2013 (Department of Statistics, 2014: 6) and Haddadin (2006: 7), in Hussein (forthcoming, 2016)

3- (estimated)

83% of the population lives in urban areas in the northern part of the country, namely in Amman, Irbid, Zarqa, and Zaatari camp. Therefore, most of the water demand for domestic use comes from the northern districts. In addition, Jordan is mainly an arid region, as over 90% of the country receives less than 200 mm per year and an overall average of 80 mm¹, as shown in map 1 below (FAO, 2009: 233). In addition, the surface water resources and the recharge of groundwater resources is being negatively impacted by a trend of decreased rainfall over the past 75 years, suggested at about 25% (Jassim and AlRaggad, 2009: 356).

Map 1: Spatial Distribution of Mean Annual Rainfall for the Period 1963-2002



Source: National Water Master Plan (MWI, 2004: 43)

1 As of 2005, according to FAO. 2014. AQUASTAT database, Food and Agriculture Organization of the United Nations (FAO). Website accessed on [30/12/2014 13:40]

Knowledge and Discursive Hegemony: A Brief Survey

A starting point for this analysis is the idea that reality is socially constructed. This is not to cast doubt on the real existence of material facts but rather to suggest that, on their own, material facts are meaningless. What matters is how they are perceived and interpreted (Julien, 2012: 45-46). Therefore, while a material objective reality exists, it is perceived differently, and the understanding of reality is mediated, we argue, mainly through discourses. A discursive analysis is about refraining from accepting facts at face value and questioning what is taken for granted. This paper aims to unpack the discourse of water scarcity in order to understand the mechanisms that govern it. The purpose here is to understand the politics that underlying such a seemingly apolitical question of water scarcity.

There is no consensus on what the term discourse refers to. Like other concepts in social sciences, discourse remains the terrain of contentious debates. Fairclough, the pioneer of critical discourse analysis (CDA), understands discourse to be “language as a form of social practice” (Fairclough, 2001: 22). Discourse is a social practice insofar as language is situated and anchored in a social context and it is endogenous to society rather than exogenous to it. Language use is conditioned and influenced by other social phenomena such as gender, class, historical background, etc. Once discourse is understood as social practice, analysis then goes beyond textual analysis to include the dynamics underlying the production, reproduction, and transformation of the discursive event: the processes of production and interpretation of an event or text. As Wodak puts it, analysing discourse in a critical fashion is about accounting for the “social processes and structures which give rise to the production of a text, and of the social structure and processes within which individuals or groups as social historical subjects, create meaning in their interaction with texts,” (Wodak, 2001: 3).

CDA is concerned with unveiling the relations of power and domination that hide behind discourse. In this sense, the link between the production of knowledge and discourses on one hand and the concept of power on

the other is of particular interest to CDA. What is presented as normal, neutral and non-negotiable is challenged (Fairclough, 2001).

But for power to be exercised through discourse, van Dijk argues, a social actor not only needs to produce the discourse but also have access to means that are likely to render it a dominant discourse. “The central questions, are” van Dijk emphasises, “who can say or write what to whom in what situations? Who has access to the various forms or genres of discourse or the means of its production?” (Van Dijk, 1989: 21). In other words, exerting power through discourse rests on the power to create and broadcast specific forms of knowledge rather than others. And the more powerful an actor is, the greater is its ability to monopolize the processes of knowledge production and dissemination, thus effectively dominating and leaving little space for other social actors involved to make their voice heard. This being so, CDA sets itself the mission of giving a voice to the voiceless and clearly positions itself on the side of the dominated. While maintaining scientific rigour, CDA aims at exposing inequalities and struggles for emancipation.

The Story Lines of the Water Scarcity Discourse

In this section, we explore dynamics behind the production and the reproduction of the discourse of water scarcity as a dominant and mainstream discourse. More specifically, we highlight the story lines that inform and make up this discourse. This is based on both formal and informal interviews conducted in Jordan from July to December 2014.

Natural Scarcity

One of the most recurrent explanations of water scarcity in Jordan is the natural endowment of the country in terms of water resources. In this story line, emphasis is put on the relatively small quantities of available surface water, the rapidly decreasing underground water resources, the low rainfalls, and on the arid and semi-arid nature of the country (Ghanem, 2013: 203, Haddadin, 2001: 461, Freij, 2014). Mainly the Ministry of Water and Irrigation (MWI) and other official bodies such as the Royal Water

Committee, but donors, aid agencies, academics, as emerged from our interviews, construct this story line, and media reproduce it. It could be said that there is consensus and hegemony concerning this story line, which sees water scarcity as due to physical reasons. The climate change element reinforces this natural scarcity story line, as it is seen as a threaten multiplier to the already low water resources in the country. This emerges, for instance, in the foreword of the second national communication, where the former minister of environment Khalid Irani stated that “at the adaptation front Jordan is facing a severe challenge in water scarcity to be magnified by the impacts of Climate Change”, seeing climate change as a threat multiplier (MoE and UNDP, 2009: 1, MoE and UNDP, 2014: 21, MoE and UNDP, 2013, Nimry, 2013, Namrouqa, 2009).

The Syrian Refugee Crisis

Another story line is the huge influx of Syrian refugees that started in 2011 as well as the series of refugee flows that pour into the country after the eruption of conflicts in the region. Specifically, it is often argued that Jordan received refugees after the 1948 and 1967 Arab-Israeli wars. Due to civil war in Lebanon, many Lebanese nationals sought refuge in Jordan, and thousands of refugees did the same following the 1991 and 2003 Gulf Wars. The population growth caused by the successive waves of refugees is said to have put pressure on Jordan's natural resources in general and water in particular (Haddadin, 2006: 24-25, Salameh and Bannayan, 1993: 1, MWI, 2013: 19-22). The refugees' story line emerges also in the following words of Omar Salameh, spokesperson of Ministry of Water and Irrigation: “the deteriorating regional conditions and turmoil have led to waves of hundreds of thousands of refugees flowing into Jordan, pushing it over time from being one of the world's 10 water-poorest countries in the world, to the fourth and now the second, according to ranking by the United Nations [...]. The main challenge to the water sector, according to the report, is the increasing demand for water due to the ongoing influx of Syria refugees into the country” (Namrouqa, 2014).

Non-revenue Water

The water scarcity is also seen as due to the mismanagement of this resource. According to the donors and aid agencies, the main reason is the inefficient management of water, in particular due to the high non-revenue

water. This is water not accounted for due to leakages and thefts, which accounts for around 40% of the total amount of water (JICA, 2014: 3). For this reason, donors underline the importance of working on this aspect and on the demand side rather than investing in mega-project to increase the water supply in the country. While until 2013, the government and media overlooked this aspect and in particular the illegal uses, focusing mainly on leakages; since 2013 the campaign launched by the MWI under the leadership of Minister Hazem Nasser to discover and close down illegal wells is presented as a response to water theft. Since then, media and government became vocal also on this aspect of non-revenue water.

Transboundary Nature of Water

Another element of the water scarcity discourse is that most of the water resources are of transboundary nature and therefore Jordan cannot freely use the waters of the Jordan and Yarmouk Rivers, or the Disi groundwater resources, but needs to obey by bilateral agreements and negotiations with its neighbouring countries. This aspect emerged several times in the interviews with academics and governmental personnel, and is reproduced by the media.

Mismanagement in Agriculture

Donors and aid agencies blame in their reports the mismanagement of the agricultural water use. This sector uses around 60% of the water resources and contributes only to 3% of the GDP. Water, in particular for agriculture, is highly subsidised and therefore it gives low incentives to farmers to be efficient in its uses. In addition, Jordan is exporting (virtual) water through food products. Donors criticise Jordan for several reasons, including: products exported are of low quality compared to international standards; these products are very water intensive, like tomatoes, and therefore Jordan should switch to non-water intensive products; two thirds of the water used by agriculture in Jordan is used in the Highlands, which produces far less than what is produced in the Jordan Valley and therefore more technology and efficiency should be adopted especially in the Highland's.

How is the Discourse Constructed?

In this section, we briefly present, although not exhaustively, some of the channels that contribute to the reproduction and transformation of the water scarcity discourse in the social arena. Softly, the narratives that make it up are reproduced and gain wider currency, which further entrenches and reinforces the discourse to the point that it becomes established truth that people no longer question. Here, we examine three main channels that are relied upon, namely the educational system, the religious institutions, and media.

The Educational System

In order to understand how school and the educational system serve as a platform for propagating knowledge related to the water situation in Jordan, its causes and possible solutions, we surveyed science and geography textbooks used from the first to tenth grades. Analysis reveals considerable emphasis on the acuteness of the water shortage in Jordan, with the sentence “Jordan is the fourth water-scarce country in the world” being almost omnipresent. It is also suggested that a major remedy to the problem is the increase the supply of water through the engaging in mega structures and the construction of dams and canals.

Religious Institutions

The mainstream discourse on scarcity in Jordan is perhaps best served by the use of religious references and institutions. In a country where around 90 percent of the population sees itself as “religious” or “relatively religious,” (al-Fodeilat, 2012) religious messages resonate more effectively. Recognizing this, the MWI has mobilized an array of religious instruments as part of its awareness and communication campaign. A partnership concluded with the Ministry of Awqaf and Religious Affairs instructs Imams and preachers to address the question of water scarcity and the necessity to adopt good practices in the Friday sermons and other religious forums. The MWI also prepared a booklet titled “Water Between Use and Conservation: An Islamic Perspective” in which is explored the place of water in Islam and its insistence on individuals' obligation to use this resource wisely.

The Media

The water scarcity discourse is channeled through official media and newspapers. The Jordan Times for instance frequently publishes stories related to the water sector in Jordan. It reproduces the official narrative of water scarcity (Bonn, 2013: 730). While the pieces on Jordan's water sector are informative about the activities and policies of the MWI, they are rarely critical. Thus, the average reader receives the mainstream discourse about water scarcity, which they are unlikely to question.

Discussion/Conclusion

The discourse of water scarcity emerged to be the dominant discourse in Jordan, constructed and reproduced both by governmental officials, donors, academics, media, NGOs, and international organisations. However, the story lines are framed in a way to blame certain actors and to suggest certain solutions to the problem of water scarcity.

The story lines constructed mainly by donors, which are non-revenue water and mismanagement in agriculture, blame mainly the management of water resources and therefore the governmental institutions, utilities, and the farmers. These story lines suggest therefore finding solutions on the demand side, through better management of the water resources available. The story lines constructed by the government, which are natural scarcity, transboundary nature of resources, and refugees, blame the nature and environment as well as the refugees. Therefore, those are seen as reasons outside of the sphere of responsibilities of the government and of Jordan. For this reason, the solutions that these story lines suggest are on the supply side, pushing for the necessity to find new sources of water.

However, this tension behind the discourse of water scarcity results in a compromise between the two visions. The national strategy and water policies, in fact, predominantly reflect the governmental vision, but also incorporates some suggestions from the donors' vision. However, while the supply solutions like the Red Dead Canal and the Disi project are seen as essential and vital for solving the water scarcity in Jordan, the demand policies and strategies are not as vital as the supply side one. This clearly

emerges in the Water for Life national water strategy. The demand actions are mainly on changing people's behaviour and on raising awareness, and focusing on the household level rather than on the agricultural sector. From this paper, it results that the government has an interest to maintain the current sectorial uses, because of the political economy behind it and of the interests behind it, from agribusinesses to large farmers. It is more difficult to reduce the water use of these categories, and therefore it results easier to blame the already marginalised communities of the refugees or more simply climate change, the nature, and the neighbouring countries.

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