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WATER SECURITY IN TIMES OF CONFLICT

PERCEPTIONS AND EXPERIENCES FROM SOUTHEAST LEBANON



The Litani River in December before the rains

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Abstract

The connection between water and conflicts has a long-standing history in southeast Lebanon. It has created a perception of threat to the water security, which affect the development of the area.

The aim of the research was to contribute to the under-researched discussion about how perceptions of water security are affected by conflicts. The research questions were concerned with how the Israeli occupation (1975-2000) and the war 2006 affect the current and future perceptions of water security and what is expected from the government and how its performance is perceived in terms of water security in times of conflict. The semi-structured interviews showed that the perception of Israel being a threat to water security is widespread despite few statements of testimony of real actions. This proves the power of perceptions. What is perceived as more important than Israel is the performance of the government, which is experienced as inadequate. The internal and the external situation mutually matter for the perceptions of water security and this need to be taken into account when working to improve the water security of the area. The interviews have showed that water security is connected to perceptions, which is important since perceptions guide actions.

Keywords: Water security, conflict, security, Lebanon, Israel

Wordcount: 14960

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Abbreviations and Acronyms

NGO	Non Governmental Organization
PLO	Palestine Liberation Organisation
UN	United Nations
UNDP	United Nations Development Programme
UNDP RBAS	United Nations Development Programme Regional Bureau for Arab States
UNEP	United Nations Environment Programme
UNIFIL	United Nations Interim Force in Lebanon
WE	Water Establishment

1. Introduction

In this first section I will introduce the research problem, questions and scope of the thesis, including demarcations and structure.

1.1 Research problem

Water is fundamental for life. The lack of access to water is a crisis that has widespread implications for human development and improvements in access to water can work as a catalyst for progress in education, health and poverty reduction (UNDP,2006a). According to Frey and Naff (1985:77), water is of strategic importance. This result in that when it is scarce it becomes a highly symbolic, intense, complicated, power- and prestige-packed issue and highly prone to conflicts which are difficult to solve.

However, instead of focusing on water as a possible reason for war, which many researchers do¹, I am interested in finding out how war may affect water. Specifically how war affects the perceptions of water security. According to United Nations Environment Programme (UNEP) several post-conflict assessments show that armed conflict causes significant harm to the environment and the communities dependent on natural resources (UNEP,2009:4). War may destroy infrastructure, waste water management facilities and pollute water resources (Gleick,1993:108f). Outcomes which obviously cause great distress due to the importance of water. As noted by Frey and Naff (1985), water is connected to strong feelings, justifying why it is interesting to study the perceptions of water security, especially since perceptions influence policy-making (Turton,2004:69).

To analyze the effects of conflicts related to water perceptions, the concept of water security is used. This can be defined as: “the availability of an acceptable quantity and quality of water for health, livelihoods, ecosystems and production, coupled with an acceptable level of water-related risks to people, environments and economies” (Grey and Sadoff,2007:548). However to understand the water security concept fully there is a need to deconstruct the term. Subsequently the concept of security is used; what it is, what insecurity is and how something becomes a security issue. These concepts of security, insecurity and securitization are used to theorize on the subject of perceptions of water security as a result of conflict.

¹ See for example; Gleick, Amery, Wolf, Naff, Homer-Dixon

The particular setting is Lebanon, where feelings around water and war are running high. As a sign of this a “hydrostrategic imperative theory” has emerged among officials and the public. The theory implies that Israel has been stealing water from within Lebanon and that Israel went to war and occupied Lebanon (1975-2000) to get hold of the country’s water resources (Medzini & Wolf,2004:199). To add to the strong connection between water and war, Amnesty International (2006:9) states that water most likely was a military target during the war 2006 between Israel and Lebanon. The experienced and perceived relationship between water and wars can consequently be that Israel threatens the water security in two ways; trying to get hold of the water and impairing the Lebanese people’s access to it. How the perceptions of water security are affected by the conflicts with Israel is explored in reference to the occupation and the war 2006 since these occurrences particularly influenced the strong relationship between water and conflict.

According to Amery (2000:126), the perception of Israel’s interests in the Lebanese water is one of the reasons for Lebanon’s inability to develop its southern region. The rhetoric, the threats and the conflicts with Israel have stalled the development of for example irrigation. Lebanon has accused Israel of objecting to using the water of the Litani River, which is located in the area, for irrigation. Blanc (2010) states that Israel’s claims to the water works as a partial explanation to why the development of irrigation in Lebanon is much less progressed than in other areas of the region.

The reason why this topic is important to study is hence that Lebanon’s development may be affected by the perceptions of water security as a result of the conflicts with Israel. This possible correlation is the rationale for me wanting to further explore the relationship between the perceptions of water security and conflict. I intend to illustrate and clarify how water security is perceived in the study area of southeast Lebanon where there is both a problem with general security and water access.

Lebanon has, despite its relatively ample water resources, large-scale problems with its water supply, both for the households and for agriculture, which is irregular and unsatisfactory in regards to quantity (Makdisi,2007). This is partly related to the conflicts with Israel and how the government performance has been affected by these. I therefore explore what is expected from the government and how its performance is perceived in times of conflict. In a conflict situation the government is moreover highly involved. This second research objective

furthermore serves the purpose of relating the importance of the conflicts with Israel to the perceptions of water security.

1.2 Aim and research questions

The aim of the research is to contribute to the under-researched discussion about how the perceptions of water security are affected by conflicts. Current literature tends to focus on conflicts caused by water. However, the effect of conflicts on water and the water security perceptions is still missing, which is why I want to clarify and elaborate on this connection further. For this reason I conducted a case study in southeast Lebanon, where the relationship between water and war is very strong due to the numerous conflicts with Israel having water components.

The objective of this thesis is to pursue the following research question:

- *How is water security perceived, experienced and spoken of in relation to the Israeli-Lebanese conflicts in the study area?*

To answer this I will pursue the following sub-questions:

- *To what extent and how do the occupation (1978-2000) and the war 2006 affect the current perceptions and experiences of water security and anticipations for the future?*
- *What is expected from the government and how is its performance experienced, perceived and spoken of in terms of water security in times of conflict?*

The use of perceptions and experiences is based on my will to mutually explore the interviewees understanding of the water issue and the meaning they give to it. The reason to include how they speak about it, is to understand what the issues of water are and how influential Israel's actions are.

1.3 Scope

This thesis is mainly focused on the provision of water for the household and not water for agriculture. There is a short discussion on the issue, but within this thesis it is not possible to fully explore the topic due to material resource constraints. Moreover the situation in the study area is constantly changing, which is why this thesis is to be regarded as an account of the situation in the autumn of 2010.

The structure of the thesis is that I will first present the methodology and secondly the research context. The third section will be the theoretical framework and lastly, the analysis leading up to the conclusion of the research.

2. Methodology

In this section I present the design, method, sampling strategy, quality consideration, limitations and ethical concerns.

2.1 A case study research design

I employ a single case study, where the case is referring to a location, being the area between the Litani River and the borders of Israel and Syria. The design allows an in-depth study of a particular case and is characterized by a willingness to elucidate the particular features of it (Bryman,2008:52ff). The design was furthermore chosen due to its suitability to investigate a current event over which you have little control and the research questions are concerned with “how” and “why” (Yin,2003:9). The study constitutes a combination between an instrumental and a revelatory case study, since it is used to illustrate the issue of water security in a conflict area, but also to study a topic which has not been researched before (Bryman,2008:56;Creswell,1998:62). The characteristics of the case consequently make a single case appropriate (Yin,2003:42). The case was selected by the criteria that it is a conflict area which has been under Israeli occupation and the boundaries were determined by the possibility of getting access to the area. My contacts with UNDP Lebanon, who conducts a project in the area, provided me the accessibility since I was able to accompany the staff when they went to the area. The critique of the design not offering possibilities for scientific generalization is addressed by attempting to make contributions to theoretical reasoning and understanding of a phenomenon and aiming for analytical transferability to similar cases (Bryman,2008:57;Yin,2003:10).

2.2 Semi-structured interviews as a method

This is an interview-based study where I, by conducting semi-structured interviews based on an interview guide, strived to encourage people to talk freely about their perceptions. The method encourages in-depth, detailed answers and flexibility in relation to the topic (Bryman,2008:437f). Mason (2002:231) additionally considers one of the strengths of more unstructured interviews to be that the interviewees have the opportunity to express their ways

of interpreting the world which was important for me since the research is about peoples' perceptions and experiences (Mason,2002:226f).

Based on a literature review and in discussion with individuals who have extended knowledge about the area I developed an interview guide ([see appendix 1](#)). I followed the guide to a large extent still leaving room for supplementary topics to come up. However the amount of "detours" from the guide was dependent on the interviewees' level of English and how comfortable they were discussing the topic. All but one of the interviews were recorded and I took notes throughout the interviews. These notes were later complemented with impressions, observations and thoughts of the interview. This gave me the opportunity to reflect upon my role as an interviewer and guided the adjustments of the interview guide (Bryman,2008:444;Silverman,2005:249). Overall the interviews went well and not many adjustments were needed since the interviewees understood the questions and were able to answer them.

I used secondary data such as United Nations (UN) reports, academic articles and governmental sources for clarifying the water issues in Lebanon and the particular situation of the study area. For notes on the conflict history with Israel I primarily used books written by scholars researching water and conflict in the Middle East such as Wolf and Amery.

2.3 Convenience sampling

I mainly used a convenience sampling with a snowball character, where two research assistants acted as gatekeepers in the initial stages (Bryman,2008:184,458). This implied that the assistants, which were employed by UNDP and its partner organization², provided me with contacts and interpreted for me ([see appendix 2 for presentation](#)). I used a convenience sampling because I primarily needed English speaking people, due to problems with the interpretation agreement and problems with accessing the area due to security reasons³ (Bryman,2008:458). The criteria for the sampling of the interviewees were that they lived in villages in the southeast of Lebanon that had been under Israeli occupation. It should be noted that I did not aim to interview representatives, but to have people from the area speak for themselves. The aim was to get a sample that was large enough and diverse, especially in terms of gender, to be able to make comparisons within the group. Due to the language and

² The Association of Friends of Ibrahim Abd El Al (AFIAL), <http://www.ibrahim-abdelal.org/index.html>

³ The area is controlled by UNIFIL and as a foreigner you need a special permission to go there which is why I mainly went there together with UNDP in their car.

accessibility restrictions it was not possible. In the later stages of the research I applied a theoretical sampling method to be able to determine, by moving back and forth between theory and data, when I had reached an acceptable number of interviews (Bryman,2008:459).

I interviewed nineteen people from five villages; Kilya, Debbine, Jdeidet Marjeyoun, Kawkaba and Hasbaya ([see appendix 3 for map](#)) between the 23rd of November 2010 and the 18th of December 2010. The interviewees are 25-75 years old, with a median of 51, three are women and religiously simplified⁴ eight are Muslims, nine Christians and two Druze⁵. By interviewing farmers, businessmen, office personnel and a person from the water and wastewater establishment⁶ I am able to retrieve different views on the topic ([see appendix 4 for list](#)).

2.4 Data analysis

The interviews were continuously transcribed allowing for analysis throughout the entire process (Bryman,2008:451). For the transcription I employed more of a written form style where repetitions were removed, grammatical corrections were made and words added when needed to make sense of the statements (Kvale,1996:170). Following every interview the material was condensed into the most important statements to be able to get an overview and guide the following interviews. I used an ad hoc method of analysis as described by Kvale (1996:204) where I noted patterns, categorized the data, counted and made comparisons by putting the material into tables. The data was later compared and analyzed together with information from secondary sources and theory.

2.5 Quality considerations

In qualitative research Guba and Lincoln (1994 cited in Bryman,2008) suggest the use of trustworthiness as an alternative quality criteria to using reliability and validity. They question the perception that there are absolute truths about the world and therefore the application of validity and reliability is not feasible. Trustworthiness is made up by the four criteria of credibility, transferability, dependability and confirmability and to ensure it I have provided thick descriptions of the context, kept thorough notes of the process and made sure to stay as

⁴ The interviewees are Sunni and Shia Muslim, Catholic, Orthodox and Maronite Christians.

⁵ Druze is a religious sect which developed from a branch of Shia Islam and nowadays mainly lives in Lebanon (Encyclopedia Britannica,2011a).

⁶ Baseem ElHamra from the WE is foremost considered to be a respondent, since he did not have enough experience to act as an informant for the WE. However, when talking on behalf of the WE his title and full name is being used.

objective as possible (Bryman,2008:377ff). I explore how in agreement or disagreement the interviewees are with certain literature on the issue of water security and the conflicts with Israel without valuing their statements. However, one's personal background always influence the research (Creswell,1998:196) and I position myself by assuming that there is a correlation between the water security perceptions and the conflicts with Israel. Moreover, based on my initial literature study, I suggest that Israel has an interest in Lebanon's water resources.

I am furthermore aware that by interviewing people mainly on how the conflicts with Israel have affected their water security I can only speculate if there are other factors that have greater influence on their water situation. I therefore follow Silvermans' (2005:49) advice of stating that my way of tackling the topic of water security is only one way out of many possible.

2.6 Limitations

The most obvious limitation is the lack of a more varied sample in terms of gender and age which is partly related to the language barriers. By interviewing people who knows English there is a bias towards well-educated people, moreover these tended to give more in-depth answers than the ones that were translated, possibly because they are more used to being consulted about things. In Chambers (1983:18f) wording I have person biases in form of elite and male bias. Using snowball sampling resulted in that well-educated, powerful older men gave me contacts to others like them. It should however be noted that the majority of the interviewees do not speak English and that they have different occupations and are of different ages.

The three people that helped me with the interpretation are not formally trained translators; they do however know the area, which is the reason why they, despite the language weakness, were considered suitable. The transcripts were later sent to them for confirmation of their interpretation. Interpreters might omit or change elements of the research because they consider the information to be irrelevant which is why not being able to communicate directly to the interviewee is always a limitation (Leslie & Storey,2003:133).

To use the term water security, as was done in two of the interview questions, is a further limitation since the term might be understood in different ways, especially when being translated. Although the term was somewhat simplified by the interpreters who explained it as water availability and access, I find the translation to be adequate.

A limitation related to the use of methods is that, unfortunately, respondents were unwilling to participate in focus group discussion despite me and my research assistants' attempts to arrange such. The reason was the sensitivity of the topic, which might be related to that there is a widespread suspicion of spies.

The sensitivity of the topic might also have affected the interviewees' answers, especially when there were other people present during the interview. I saw no way of avoiding this as the interviews often took place in their homes and, as part of my attempt at recognizing the power dimensions, I let the interviewees guide the style of the interview to make them more comfortable (Scheyvens et al.,2003:151).

2.7 Ethical considerations

The interviews were preceded by obtaining an informed consent from the interviewee. The interviewee was also offered anonymity at different levels and the use of tape recorder was optional. Due to the sensitivity of the topic I tried to formulate the questions in a way that made them less sensitive and whenever an interviewee showed signs of being reluctant to talk about a topic, I proceeded to a new question. Furthermore, in regards to my positionality, I tried to adapt to the situation by for example wearing culturally appropriate clothes and following certain customs (Mikkelsen,2005:342f, Scheyvens et al.,2003:151).

Another ethical concern is that, by exploring the interviewees' opinions about Israel, I might have stirred up more resentment towards the country and its inhabitants. I hope that by providing the opportunity to talk about the issue of water it might also bring positive outcomes for the interviewees in terms of them exploring their situation and identifying ways to improve it, which can contribute to the development of the area (Scheyvens et al.,2003:155f). In the next section the area and its context is illustrated further.

3. Research context

This section illustrates the research context, see figure 1. To understand the perceptions there is a need for a presentation of the relationship between conflict and water, a description of the water situation in Lebanon and of the local setting. As part of the water situation in Lebanon and even more so in the historical context of conflicts between Israel and Lebanon an account to the involvement of the government is given. In the historical background the two ways of how Israel can be perceived to threaten the water security will be presented as it focuses on the war 2006 and the occupation.

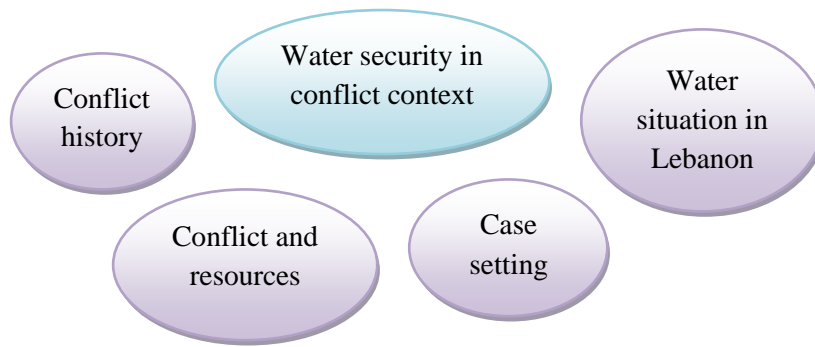


Figure 1 Research context

3.1 Conflict and natural resources

For several years, different scholars have debated the prevalence of water wars, whether water has caused wars or not. The Pacific Institute has identified six bases of conflicts related to water: control over water resources, a military tool, a political tool, terrorism, a military target and development disputes (Gleick,2009), many of which Lonergan (2000) states are prevalent in the Middle East. Using the Pacific Institutes terminology, water as a military target and control over water resources are of particular interest in this thesis since they can be related to the war 2006 and the Israeli occupation.

Environmental degradation might be an unintended outcome of war but also a deliberate one where certain facilities are targeted to degrade an opponent’s natural capital and operational environment (Barnett,2001:93). Armed conflicts moreover often cause environmental risks that can pose severe threats to people’s livelihood, security and health and in the long run undermine peacebuilding. This is due to the environmental damage in combination with the fact that post-conflicts settings often are characterized by weak institutional capacity where the government either is unwilling or unable to secure their borders, provide basic services and protect the people (UN,2009:4,28). As is elaborated on in the analysis the role of the government in providing water security in the study area is widely discussed by the interviewees. In the next part the Lebanese water situation, including the role of the government is explored.

3.2 The Lebanese water situation

To comprehend the interviewees’ perceptions of their water security one needs to understand the Lebanese water situation; what they see, hear and possibly experience.

Lebanon is exceptional, being one of the countries in the most water stressed region in the world, which is above the water stress threshold⁷ (UNDP,2006a:135). According to UNDPs 2006 figures, 100% of the Lebanese population use improved water sources⁸ (UNDP,2009a:176), however these figures do not shed light on the well-known shortages that people experience and the uneven regional and class distribution of services and resources (Makdisi,2007:373). The average leakages from pipes are estimated to be 50%, resulting in an annual water shortage of 40%, largely supplemented by water trucks and water from wells (IRIN,2007). Because of the water seepage the actual daily access is estimated at 60 liters and not the theoretical 160 liters⁹ (Makdisi,2007:378).

Access to water is seasonal with 80% of the people connected to networks experiencing delivery failure in the summer, which can mean being provided with water only a few hours per day or in the worst case only a few hours per week. Even in the wintertime, which is the season when there is precipitation, 50% of the households suffer from delivery failures (UNDP,2009b:63).

According to Makdisi (2007) the water situation is highly related to governmental mismanagement and inefficiency, lack of reliable data and unsatisfactory planning and capacity. Until 2005, the Lebanese water was managed by 22 separate institutions, which further exaggerated the problems. After reforms there are now four Regional Water Establishments (WEs)¹⁰ of which the South Lebanon WE is responsible for the study area. The WEs are accountable for all the water and sanitation projects within their jurisdictions and the Ministry of Energy and Water is only responsible for making long-term plans and implementing large scale projects (Makdisi,2007:375f).

Makdisi (2007) furthermore argues that the water has been seen as a security concern, resulting in a highly politicized management; thus being surrounded by secrecy, lack of planning and public participation, weak legislation, ineffective public administration and lack of reliable information. The reason why water is considered to be within a traditional security paradigm is according to Makdisi (2007:370ff) partly due to the occupation, when Israel controlled important water resources such as the Litani and the Hasbani Rivers. The civil war

⁷ The water stress threshold is set at 1700 cubic meters per person per year (UNDP, 2006a:14).

⁸ Meaning household connections, public standpipes, boreholes, protected dug wells, protected springs, and rainwater collection (UNDP,2009a:212).

⁹ According to SIWI et al. (2005:7) 50 liters per day per person is the recommended minimum for household use.

¹⁰ Moreover there is the Litani River Authority which implement all projects on the Litani river basin for drainage, irrigation, potable water and electricity (Makdisi,2007:375).

(1975-1990¹¹) moreover resulted in neglect and destruction of the water systems. After the end of the civil war the modernization of the system has been one of the major concerns for the government but the war 2006 stalled the rehabilitation and destroyed much of what was there, especially in the south of the country (UNEP,2007:118).

Experts and government officials agree that despite the relatively vast water resources, the country is facing a serious water crisis where the demand will outstrip the supply, something which is exacerbated by seasonal, regional and socio-economic inequalities, foremost affecting the poor. A part of the problem is connected to the lack of public awareness on conservation methods and that people often waste a lot of water (cleaning pavements etc.) (Makdisi,2007:373).

To conclude, Lebanon cannot guarantee sufficient water either to its agricultural or to the domestic sector all year around, a situation that is set to worsen (Makdisi,2007:377). The next part provide insight into the particular setting of the research area and its water situation.

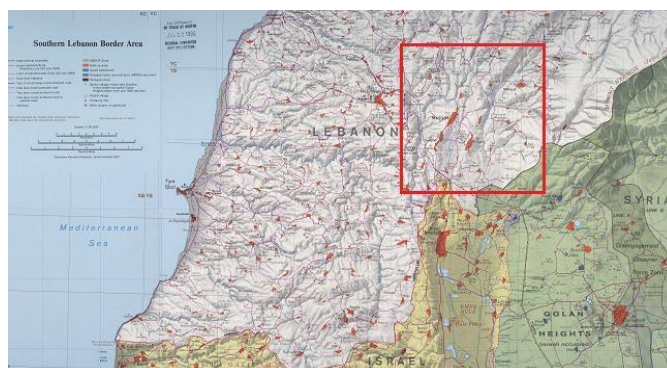
3.3 Southeast of Lebanon

In the southeast of Lebanon water and conflict are intertwined which is why I did the collection of primary data there, more specifically in villages within the Nabatieh governorate¹² which had about 222,000 inhabitants in 2004 (UNDP,2006b:25). See map 1 for location of the research area. The governorate hosts two of Lebanon's most important water sources; the Litani and the Hasbani Rivers, both of which there have been conflicts with Israel about. The Hasbani derives its discharge from springs within Lebanon and is a tributary to the Jordan River which is shared with Israel, Syria, Occupied Palestinian territories, Egypt and Jordan (Makdisi,2007:371;UNDP,2006a:206). The Litani lies entirely within the borders of Lebanon and is highly important since its water is being used for irrigation and for electro-power generation (Abu Ju'ub & Azzam,2004:359). The Litani makes a turn from going southwards to going to the west and the sea in the study area and is therefore only four kilometers from the Israeli border at one place, which explains why there has been so much discussion about its water (Makdisi, 2007:372).

¹¹ In the civil war different religious and ethnic groups within Lebanon fought each other for the political power of the country, resulting in approximately 100,000 deaths. The fighting involved several political party militias and also Palestinian guerilla groups and Syrian forces (Mark,2003:19).

¹² Kilya belongs to the Beqaa governorate and not the Nabatieh governorate.

The statistics for the Nabatieh governorate show that in 2000 the household income was estimated to be 248\$/month compared to the national average of 328\$ (Unger et al., 2010:143).



Map 1: Research area

My impression is that agriculture is very important in the area, 21% of the work force is involved in agriculture. Without water for irrigation it is however hard to make a living of the land. The 2005 figures for Nabatieh show that 11% of the land is cultivated and that only 5% of the total land is irrigated. These numbers stand out since the average irrigation level in Lebanon is 49% (Republic of Lebanon, Ministry of Agriculture, 2007:10f).

In Southern Lebanon (Nabatieh and the South governorate) only 64% of the households use the public network as a source of potable water, 19% buy mineral water and 11% use artesian wells (UNDP & Republic of Lebanon, Ministry of Social Affairs, 2004:3). These statistics can be compared with the data of this study- all interviewees get water from the public network but not every day, which they relate to bad water management. The interviewees furthermore mention that there is not enough water, especially in the summer when some also experience that the water is of bad quality. The consequence of this is that many mention that they buy water, which by some is considered to be expensive. Except for using water for the household the interviewees use water for irrigation and husbandry.

ElHamra (5)¹³, the director of the Hasbaya and Marjeyoun sector of the south WE, which is responsible for the public network that distributes water to peoples' private tanks, acknowledges that there are problems in the area. ElHamra mentions that they have distribution problems, as water is not distributed equally, that there is water pollution and lack of backup systems in case something breaks. Regarding the management ElHamra states that they do not have meters so they can only estimate how much water they supply and that his sector needs to get approval from the head office of the south WE before they can take

¹³All interviewees except for ElHamra are respondents and has been given a fictional first name. The number refers to the number of the interview. See appendix 3 for list of interviewees.

actions. ElHamra however mentions that he has a lot of plans for how to improve the WEs work and if 60-70% of them are implemented the water situation will be much better.

To conclude all the interviewees get water from the public network but seem to experience the same problems as the population as a whole. What is particular for the research area is thus that its geographical setting might affect the water security experiences and perceptions. This is due to the conflicts with Israel that are explored in the next part and discussed in the analysis.

3.4 Historical context

The following parts illustrate the Israeli- Lebanese conflict context of the area and its connections with the water situation. To research water security perceptions in a conflict area it is important to understand what might be perceived as signs of threat for the population. I therefore present the factors that may affect the water security perceptions, including Israel's rhetoric about the water, the supposed reasons for the conflicts, what resources Israel have gained access to and statements about them using the water resources. The implications of the war 2006 and the occupation are given special attention due to their importance to understand what might have shaped the water security perceptions.

3.4.1 The control of water resources as a source of war?

In Lebanon water and conflict is highly intertwined which has resulted in the development of a "hydrostrategic imperative theory" in the academic literature and the popular press (Wolf,2000:78). The theory consists of three aspects: that the war in 1982 was launched because of hydraulic reasons, that Israel has been trucking water from the Litani to Israel and that there are plans or exists a tunnel to divert water from the Litani (Medzini & Wolf,2004:199). According to Amery (2000), the reason why a theory including water diversion has evolved is because people respond to what they perceive as signs of alarm that their resource security is being threatened. One of the events that have been perceived as most threatening is the occupation. In combination with that high-ranking officials have expressed signs of alarms in the media, the theory has been popularized and fixed in the minds of the citizens (Amery,2000:124f). The water issues between Israel and Lebanon, although dates back to before the occupation and in the following part the possibility of control over water resources, as identified by the Pacific Institute as a possible basis for conflict, is discussed.

The Israeli water plans

Since the early 20th century the Zionist¹⁴ movement planned to use the water resources of the region which is why they have tried to incorporate both the Litani and the Jordan within the borders of Palestine (Abu Ju'ub & Azzam,2004:359ff). The reason for Israel's water surge can according to Wolf (2000:68) be explained by a high water demand that is foremost related to the Zionist emphasis on agriculture. Water has become a security issue and the water policy-making has become a weapon in a territorial struggle (ibid). The resources capture policies leading to the classification of hydrological data, securitization of water and institutionalization of structural scarcity politics has according to Turton (2003:68) resulted in the perception about an increasing water scarcity in the region. Amery (1993) states that countries, that suffer from resource scarcities, either being perceived or real; tend to reach past their borders. If the access is denied, the countries with superior capabilities seek to establish a pressure sometimes through military means of getting the resources (Amery,1993:229). Below is an account of Israel's military involvement in the water resources of Lebanon.

The 1967 war

Israel did not gain any hydrostrategic points in Lebanon during the war (Wolf,2000:83). However since then about a third of Israel's water consumption has originated from the occupied territories which is why the suspicion of Israel having a hidden water agenda for Lebanon is given fuel. In the aftermaths of the war Israel's defence minister Dayan made a statement that Israel had achieved "provisionally satisfying frontiers, with the exception of those with Lebanon" (Amery & Kubursi,1993). The statement in combination with Israel gaining territory and water resources during the war can be used to understand why the war can be seen as a threat to the Lebanese water security.

The 1978 Litani operation

Israel's official reason for the Litani operation in 1978 was to push the PLO (Palestine Liberation Organisation) forces north of the river but it is widely believed that another main reason was gaining control over the Litani (Abu Ju'ub & Azzam,2004:359ff). After the war a six mile deep buffer zone up to the river was created which meant that Israel indirectly was overseeing the economic, social and security needs of the zone (Amery,1998:29). The

¹⁴ The word Zionist is the one that is used by several authors when describing the Israeli history and it will therefore be used in this thesis as well.

invasion consequently left Israel in control of the Hasbani and the lower Litani headwaters (Wolf,2000:79). The United Nations Interim Force in Lebanon (UNIFIL) is furthermore up to today present, which implies that the security situation between the countries is considered to be continuously unstable, possibly being perceived as that there is a persistent threat from Israel.

The 1982 war

Israel invaded Lebanon in 1982 again and this time the intention of destroying the presence of the PLO was achieved and Israeli troops went as far as to Beirut (Ruebner,2003:199). Water wise Israel captured the Qaraoun¹⁵ Dam, made seismic soundings and surveys and confiscated all the hydrological charts related to the Litani (Wolf,2000:79). When Israel redeployed in 1985 they maintained a military occupation of about 10% of the Lebanese territory, containing approximately 100,000 people (Ruebner,2003:199;Sultan,2008:160). The zone meant, according to Lindholm (1995), that Lebanese farmers were prohibited from digging wells and pumping water without the permission of the Israel Department of Defense. This lack of water for irrigation particularly created grievances among the Shia Muslim population of the south (Lindholm 1995:76f).

The 1982 invasion resulted, according to Amery (2000:125,128), in a deepening of the water diversion theory since Israel gained control over important areas. This made it possible for them to divert water with a low probability of being exposed, which was interpreted as signals of potential danger. Living in an occupied area must furthermore influence ones experience of control and also bring about disbelief in the strength of the government.

Following the withdraw of Israeli troops in 2000 Hezbollah¹⁶ moreover to a large extent took the responsibility for the public order and to provide social services (Ruebner,2003:201f) which might be related to that governments as a result of conflict sometimes cannot provide this (UN,2009:4,28)¹⁷. Despite the Israeli withdrawal in 2000 the tense situation prevails and

¹⁵ There are many different spellings of this dam; the spelling I use is the one that my interpreters gave me.

¹⁶ Hezbollah is a militia group and a political party which was formed by Shiite Muslims after the 1982 Israeli invasion with the goal of driving Israel out of Lebanon and establishing an Islamic state. It is nowadays a leading political party in Lebanon (Encyclopedia Britannica, 2011b).

¹⁷ The role of Hezbollah in Lebanon and particularly in the south is important, especially in relation to the government but this cannot be further elaborated on in this thesis.

the Lebanese government has continuous problems with controlling the water, as seen in the next section.

The 2002 Hasbani dispute

Lebanon has filed several complaints to the UN about Israel's illegal restrictions on access to the Hasbani (Makdisi,2007:378). In 2002 the issue of Lebanon wanting to extract more water spurred a crisis close to war between the countries. The small project was according to Zeitoun (2008,112f) blown out of proportions with the Israeli media's extensive reporting and a statement from the foreign minister Peres describing it as a "dangerous provocation". The dispute was resolved after international negotiations but the extracted amount of water in 2005 was according to Zeitoun (2008:113) much lower than the apportioned share. This is attributed to low pumping capacity but also a desire to avoid diplomatic or military confrontation with Israel.

After the war 2006 the issue re-emerged again (UNEP,2007:128) which portrays the constantly recurring issue of Israel's interests in the Lebanese water. This can help explain why large-scale water development projects are lacking and the perceptions of the interviewees.

The accuracy of the water diversion theory

Despite the fact that Israel is denying all aspects of the theory and officially recognizes the sovereignty of the Litani to Lebanon (Medizini & Wolf,2004:199) and that according to Murphy (2006) the current official position of the Lebanese government is that Israel has not diverted water from the Litani, the suspicions persist. According to Amery (2000:133f) it is feasible for Israel to use the water from the Litani, Israel has a clear desire to do so, but that it is unlikely that any large quantities have been diverted. However, due to the lack of Lebanese water data and the Israeli claims and actions in the past few people dispute the belief that Israel is the most persistent threat to Lebanon's water. Amery (2000:122) states that the adverse perceptions could affect the socioeconomic and political interactions between the countries. If these perceptions are present within the study area one might argue that it affects the perceptions about water security. Furthermore, apart from the continuous threat of Israel gaining control of the water resources, there might also be a threat of Israel impairing the water resources, as is discussed in the next section.

3.4.2 Water as a military target

According to Makdisi (2007:378,384) Israel's claims to the water have restricted the population in the south from accessing the surface- and the groundwater and Israel has also repeatedly bombed water installations as part of longstanding policies. This is another aspect of the Israeli threat to the water security and therefore important to understand.

The destruction of water facilities affected approximately 700 000 people in Southern Lebanon and for the South Lebanon WE the cost of the damage to the infrastructure (including destruction of water pipes because of the bombing of roads) was estimated to be \$19 million for the war 2006 (Makdisi,2007:385). The annihilation moreover affected the agriculture, thus the economic productivity. The Los Angeles Times reported that the effect of channels and pipes being targeted was a suspension of the use of the Litani water for irrigation (Murphy,2006). This recent war consequently caused great distress for the population and Israel's intents were once again questioned as is seen in a statement made by Shalaq, president of the Lebanese Council for Reconstruction and Development:

"They started [bombing] with the Litani water reservoir, the Litani dam. And we all know that the Litani has a special place in this country. It's a big reservoir of water, and the Israelis don't hide it that there are several parts of the Litani that they would like to take for themselves" (Murphy, 2006).

The effect of the war can possibly be increased perceptions of insecurity, especially if the damage to water facilities is perceived as intentional. According to Amnesty International (2006:9) and the Pacific institute (2010) water was a military target during the war 2006. Zeitoun (2008:92) additionally speculates that the destruction of water facilities was part of a plan to get the population to leave or at least not come back, something which some of the interviewees also express.

To conclude Israel and Lebanon has a longstanding history of conflicts involving water. The rhetoric of Israel and above all its actions is likely to cause vast distress for the population of the study area and affect their water security perceptions, which is explored in the analysis. To understand the particular context and how it shapes experiences and perceptions the concept of water security, as explored in the following section, is used.

4. Theoretical framework

This part presents the guiding concepts that I use to analyze and understand how conflicts affect water security perceptions. Water security is at the core of the research but to fully understand the concept one needs to deconstruct it and understand the meaning of security, subsequently also insecurity and how something becomes a security issue- securitization.

4.1 Water security

Water security is a concept with many definitions but the most common is; “every person has access to enough safe water at affordable cost to lead a clean, healthy and productive life, while ensuring the environment is protected and enhanced” (Grey & Sadoff,2007:547). Grey and Sadoff (2007:548) however define it as; “the availability of an acceptable quantity and quality of water for health, livelihoods, ecosystems and production, coupled with an acceptable level of water-related risks to people, environments and economies”. However, according to Gutierrez (in Wouters, 2005:167) water security is not only about supplies but a comprehensive definition should go beyond availability to the issue of access since access involves issues ranging from individual rights to national sovereignty over water.

4.2 The security concept

Security is a contested concept with many definitions, ranging from narrow views to broader ones. According to Barnett et al. (2010:5) security generally refers to “freedom from the risk of loss or damage to a thing that is important to survival and well-being”. Historically military security has been at the center of the security concept, in which state’s perceptions of each other’s intentions have been the focus (Buzan,1991:433). Although this traditionalist view on security still persists, a new thinking has emerged, security now not only concerns states and its citizens but individuals as human beings (Graeger,1996:109). There are now theories concerning economic, political, societal and environmental security (Buzan,1991:433).

When the 1994 UNDP Human Development Report gave special attention to human security it was a strong sign of the new meaning of security. There are many definitions but the Commission on Human Security¹⁸ defines human security as the protection of the “vital core of all human lives in ways that enhance human freedoms and human fulfillment” (UNDP RBAS,2009:20). According to Wouters (2005:169) the water security issue is embedded in

¹⁸ The commission was created as a result of former UN Secreatry-General, Annans’ Millennium Report (UNDP RBAS,2009:20).

the development initiatives and to ensure water security freedom from want, freedom from fear and freedom to live with human dignity, have to be ensured. These terms are highly associated with human security and development, which connect water security to this debate. The human security concept moreover offers possibilities to study water security from a wider perspective than state security, in this case the influence and military threat of Israel. The concept recognizes that threats can be varied, not necessarily having to be military, that the source of the threats does not have to be located outside the state and the object of the threat is the individuals lives and freedom instead of a states territory or power (UNDP RBAS,2009:19). This concept consequently brings the opportunity to relate how the conflicts with Israel affects water security perceptions to other factors, such as the governments' role. To gain further understanding of why people do not feel secure, a discussion on insecurity follows.

4.3 Insecurity

Security is related to power and the more power a person has to shape her life, the more secure she will feel, hence individuals with less power will feel more insecure which makes insecurity relative (Barnett,2001:123). In line with my way of thinking of security and the importance of perceptions, Turton (2003:69) states that the perception about insecurity might be more important than the actual insecurity since it is the perceptions that guides the political decision-making. This way real security and perceived security are highly interlinked and how people perceive their security situation will affect how they act.

According to Soroos (2010:178) humans experience security when their insecurities are minimized or totally avoided. Insecurity arises when two conditions are present; a threat, which exists when circumstances have the potential for considerable adverse impacts and vulnerability, which exists when people are exposed to potentially destructive developments and lack the means to effectively limit, manage or prevent the damage that may be the result of these (ibid). I use this to understand possible insecurities that the interviewees express regarding their water security. What is moreover important to understand is the way a security issue arises and how one actor's actions might influence the perceptions of others, explaining Israel's influence on the water security perceptions. The process of securitization is hence explored in the part to follow.

4.4 Securitization

The perception about insecurity results in the process of securitization (Turton,2003:69). Securitization is usually defined as making something a security issue which thereby raises its importance and justifies special actions to be taken (Barnett,2001:25). Securitization can be seen as an extreme version of politization, but the process does not need to go through the state, but can be initiated by other actors. To securitize an issue does not necessarily mean that there is a real existential threat but only that the issue is presented as such (Buzan et al.,1998:23f). Security can be approached both subjectively (there is a perceived threat) and objectively (there is a real threat) and according to Buzan et al. (1998:30) one should understand securitization as an intersubjective process.

In regards to securitization of water, a hydro political ideology is often developed, underpinned by a strong discourse which starts living a life of its own as it results in legal documents, institutional development and other long-term outcomes. What often happens in a closed basin, according to Turton (2003:70), is that the most economically and technology developed country gets a hegemonic role which results in an increased perception of insecurity within the other states. It can be argued that Israel has securitized water and one process that then takes place is an attempt to develop water infrastructure which the planned diversion of the Litani is an example of. Another process is that hydrological data becomes central where data is knowledge and therefore power (Turton,2003:69f). This may explain the confiscation of hydrological charts of the Litani following the 1982 war, as mentioned previously. The discussion above show that the Israeli securitization of water obviously has implications for the water development in the region and it is in this light that the perceptions of water security need to be understood.

5. Analysis

In this section I discuss the sub-questions with the aim to answer the main research question of the thesis; how water security is perceived, experienced and spoken of in relation to the Israeli- Lebanese conflicts in the study area. The aim is to contribute to a discussion of how perceptions of water security are affected by conflicts.

5.1 The effects of the occupation and the war 2006

This part aims to answer the first sub-question; in what ways and how the occupation 1975-2000 and the war 2006 affect the current water security perceptions. The last part discusses how these occurrences possibly have influenced the anticipations on the future water security.

5.1.1 The occupation

In this part I revisit the “hydrostrategic imperative theory”, which was presented in the research context and implies that the quest for water has been the motivator for Israeli military conquests and that Israel has been planning to or actually been stealing water from within Lebanon (Medzini & Wolf,2004:199). If the interviewees perceive and experience the elements of the theory to be true, it can affect the water security perceptions. It would imply that there is a perceived threat to what is defined as water security; access to an acceptable quantity and quality of water for livelihood and production (primarily for agriculture).

The perceptions of interests and intents

The first step is to explore how the interviewees speak about Israel and whether the interviewees perceive Israel to have interests in the Lebanese water, which would imply a threatening situation.

The common picture is that Israel is perceived to have interests in the Lebanese water since the interviewees have heard about Israel’s lack of water. Yousef (12) makes an example that the water Israel uses today is water from occupied territories, which implies that Israel is willing and capable to occupy land to see to their needs. The ways the interviewees speak of Israel’s water intents display deep distrust. They express that Israel’s interests are of Israel only and that they disregard the water needs and rights of the Lebanese. A cite from Nicolas (13) sheds light on how the state of Israel might be perceived:

” Israel has their own scheme, their own agenda that does not follow any modern 21st century rational but is following a false biblical claim that has no logic, that’s why you cannot talk sense into them, neither United Nations nor any legal entity or rational logic can make sense with Israel”

The general perception among the interviewees is that Israel is not to be trusted and that the state therefore is perceived to pose a threat to their water security.

Many interviewees mention as evidence of Israel’s water intents, that the state for a long time has made complaints or put a stop to water development projects in Lebanon. The Hasbani

dispute in 2002 is brought up as an example of that Israel is securing their access to water even after the occupation, since the Hasbani is a tributary to the Jordan River. What happens according to Turton (2003:69) when a country, which shares its water resources with other countries, take measures to increase their security as Lebanon did, is that the other countries might interpret the actions through their threat perceptions and translate these into a perceived national security concern, thus increasing the risk of conflict. Zeitoun (2008:113f) states that the dispute shows how easily the media and officials can use the securitization of water and that the publicity effectively has prevented any more development projects by Lebanon. That Israel has securitized water might add to the interviewees' insecurity since water gets an even more special status in Israel. This makes it harder to claim the right to use the water and if the Lebanese government does not, then the chances for improvements of the water security perceptions are affected.

That the interviewees mention the Hasbani dispute implies that the water interests of Israel are perceived as having real effects as the Lebanese government refrains from doing development projects on the Hasbani. This is in line with Turton's (2003:69) notion that security perceptions might affect policy-making. The perceived intents of Israel and the Hasbani dispute are likely to affect the perceptions and experiences of water security.

The perceptions of effects on the water security

The next step is to explore whether and how the interviewees connect their experiences and perceptions of the occupation to water security.

The interviewees state that they do not trust Israel not to threaten their water security and many perceive it as water was one of the main reasons that Israel occupied Lebanon. In light of the Israeli rhetoric about the Lebanese water, as was presented in the conflict context, the occupation might be perceived as a proof that Israel can enforce their will. This would consequently mean that the feelings of threat to the water resources as was discussed in the previous part are not only threats but also a reality.

The perceived effects from the occupation on the water security seem fairly minor though. In regards to the water management during the occupation the interviewees state that the public network was operated by the government as before the occupation, however some express

that Israel controlled it¹⁹. The negative effects that the interviewees mention are that the Israeli troops were using the water, that there was bad maintenance of the public networks and lack of water for irrigation, which affected the economy. Many of the interviewees however seem to attribute the problems to the general situation of the occupation which made everything harder or that the problems were the same as before the occupation. Some of the interviewees express that the occupation had no effects at all on their water security²⁰, which might be because there was no change to their water situation.

To further elaborate on the effects of the occupation on the water security perceptions I explore the interviewees' perceptions regarding the water diversion element of the "hydrostrategic imperative theory". This element implies that Israel has been taken water from within Lebanon, mainly from the Litani. Despite that the interviewees state that they feel threatened by Israel and that Israel occupied Lebanon because of their quest for water, very few mention that Israel actually has taken any water. The ones that are convinced that Israel has stolen water mention pipes going to Israel both from the Hasbani and the Litani. Soraya (18) states that it was on TV last year that Israel is digging underground pipes and taking water from the south. A few interviewees mention it without affirmation and Yousef (12) is one of the interviewees who rejects it with a comment that it would not be feasible because the Litani is too far from the Israeli border.

The reasons why the interviewees do not mention the issue of Israel stealing water might be because I did not ask it explicitly due to the sensitivity of the topic and that the sensitivity influence what people know of the topic. It might also be because they were stressed, me being a stranger or because of the presence of others during the interview. Despite the influence of these factors, the prevalence of the water diversion theory, which seems to be widespread, and the interviewees' perceptions of insecurity due to Israel's water intents, leads one to expect more interviewees to mention the possibility of Israel stealing water.

Regardless of the lack of statements of water-related effects of the occupation, due to the long history of conflicts between the countries and the perceived Israeli quest for water, the trust in

¹⁹ Despite several tries of getting information from ElHamra and find secondary sources regarding the water management during the occupation I have not been able to retrieve any. I have however not read or heard anything that can contest the interviewees' experiences.

²⁰ I cannot detect any common characteristics of these persons as for example age, which may affect the experiences of the occupation.

Israel is likely to be very low. This can result in that it matters less that the interviewees have not experienced any effects of the occupation, Israel is still perceived as a threat to the water security. To understand this perception of threat I apply UNDP Regional Bureau for Arab States' (RBAS) (2009:24) way of measuring the degree of seriousness of a threat to my case:

1) Intensity

Even though the conflicts are not affecting the water access in such an extreme way one might argue that because of the importance of water for survival the threat of conflicts might be perceived as very intense.

2) Extent

If water facilities are destroyed or if there are restrictions on their usage it affects many people.

3) Temporal duration

The threatening rhetoric against the Lebanese water commenced in the 1910's, even before the formation of Israel.

4) Comprehensiveness

The water situation affects many aspects of life, for example the economic productivity.

This measurement exposes how serious the threat from the conflicts with Israel can be perceived. The fact that only a few interviewees mention any improvements that have been made after the occupation ended, even though this was not explicitly asked about, might however imply that the water security relies more on other things than on the presence of Israel. Nevertheless, despite that the interviewees express quite minor effects on the water, Israel might still be perceived as an important factor affecting the water security. This is further explored in the next part about the war 2006.

5.1.2 The war 2006

In this part I elaborate on the experiences of the war 2006, including whether water is perceived to have been a military target. If this is the case one can argue that it affects the water security perceptions to a great extent since it increases the sense of threat.

All interviewees state that they experienced destruction of water facilities during the war 2006, but only half did so in their own villages. The interviewees do however not perceive it to have been intentional to target water in particular, as Amnesty international (2006:9) state, but that everything was targeted. Therefore the perception of water as a special military target

during the war 2006 cannot be confirmed. Despite this, the war might still affect the water security perceptions since the interviewees express that water facilities were destroyed, there was pollution, they had to buy water, there was no electricity to pump the water and a water shortage occurred. To experience this might bring about intense feelings of threat and foremost risk. According to Barnett (2001:24), because of risk's subjective nature a person can feel secure despite a high risk of something happening and also the other way around. The risk perception can only become more accurate with the access to knowledge and information. The interviewees' perceptions of insecurity might therefore be related to that Israel's actions are perceived as unforeseeable. For instance Jamila (2) expresses that no one expected the war 2006.

Apart from being unexpected, the war might have brought increased feelings of insecurity since despite that it was short, it caused much damage. Half of the interviewees perceive it as a big risk that water facilities would be destroyed during another war and state that they are scared about this. They perceive Israel's intent to be to destroy infrastructure and that they do not have control. To compare this to the factors that according to Löfstedt and Perri (2008:149) influence the occurrence of risk perceptions it is possible to detect that the interviewees' feelings can be regarded as a result of their lack of control. That they are dreading the destruction of water facilities during a new war and that this would bring vast potential of catastrophe.

In another sense it is possible to interpret the responses as the interviewees feel safer after the war 2006 since they perceive it as they "won" and that Israel is not strong enough to occupy again. This might be related to the presence of Hezbollah, which some of the interviewees perceive as a source of increased security. Salim (6) explicitly expresses that it is the resistance (Hezbollah) that is the main reason for feeling somehow secure against Israel. Rafiq (3) furthermore argues that the current conflict regarding the weapons of the resistance gives Israel an opportunity to put their hands on the water, implying that Hezbollah's presence is a guarantee for water security. Security is according to Barnett (2001:123) related to power, the more power a person has, the more secure she will feel. The perception of Lebanon not losing the war 2006 can accordingly indicate a feeling of more power, hence security. Yousef (12) expresses the increased feeling of power as; "I think that in 2006 they [Israel] were defeated, at least morally if not military. Israel used to be the superpower in the Middle East and a superpower demolishes the enemy, right?"

What the effects on the perception of threat of the war 2006 are is not clear-cut. However, it seems like the perceptions of water security have been negatively affected. Although the interviewees do not perceive that the water was a military target, using Soroos' (2010) theory on insecurity, one might interpret it as the war brought increased feelings of water insecurity. The interviewees experienced a direct threat to their water security when water facilities were destroyed and moreover realized their vulnerability because of the lack of means to protect their water. In the next part the effects on the water security perceptions due to the conflicts are related to the anticipations for the future.

5.1.3 The anticipations for the future

This part aims to bring together the perceptions and experiences of the occupation 1975-2000 and the war 2006 and to relate them to the perceptions about the future water security. This offers the opportunity to explore to what extent these occurrences affect the current perceptions and future expectation of the water security.

Most of the interviewees want more water in the future to use for irrigation, plant in the garden, for the house or for cattle. The interviewees seem to experience that they have enough water for their daily needs and for the household but are lacking water to develop economic activities, mainly related to agriculture. Many of the interviewees mention that Marjeyoun means the plain of springs and that they are fortunate because there is a lot of groundwater in the area, which can easily be pumped. The local water situation is thus experienced as somewhat better than in Lebanon as a whole. Despite this, the interviewees express that they want and need more water which might be related to the perception that the water resources are not being used, something that I will come back to in the next part as it is related to the expectations on the government.

The interviewees are overall pessimistic about the future water situation and bring forward conditions for what is needed for a better water situation. These include good rain, building of dams, development projects and no problems with neighboring countries, most likely referring to both Israel and Syria. Why they perceive the future situation to be worse is due to climate change, misuse of water and bad management. None of the interviewees who states that the future water situation will be worse mention that it would be so because of Israel. This is surprising considering the perceptions that Israel has interests in the water and that they fear Israel's water intents and a new war with destruction to water facilities. Despite

these statements, the interviewees do not recognize Israel as a factor influencing their future water security to a large extent.

The reasons for this might be that other factors are perceived to influence the water security more. When asked whose actions will affect the water situation the most only a few mention Israel. It is only as many interviewees as those that mention the weather and donors and the international community. What the interviewees instead perceive as more important is Non-Governmental Organizations (NGOs), the community including the people and foremost the government. Consequently Israel's role is perceived as quite small when it comes to water security for the future. It should however be mentioned that the question can be interpreted as only meaning influencing the water situation in a positive way, which is why Israel is mentioned by so few. That one might expect more interviewees to mention Israel can be seen as a natural result of that the majority of the questions were concerned with the connection between Israel and water. The picture that is given is thus that the interviewees perceive Israel as a threat and that the conflicts with Israel consequently would affect the anticipations for the future water security to a great extent.

As seen in table 1 the conditions that the interviewees perceive important for them to feel that their water is secured and what they are requesting are not to a large extent related to Israel. What the interviewees foremost request is that the water is being used, which is related to the initiation of water projects and plans for the future. These factors can be linked to expectations on the government as is explored further in the next part.

Categories	Comments
Better governmental work	<ul style="list-style-type: none"> • Get what he pays for • Build dams, collect water • Wastewater treatment • Plans <ul style="list-style-type: none"> ○ Backup plans for war and damages ○ They are waiting for the problems and then do something without a plan • More control, restrictions <ul style="list-style-type: none"> ○ How much water people can consume • Installation of meters
That other countries intervene	<ul style="list-style-type: none"> • To oppose to Israel • Help government with projects
No conflict	<ul style="list-style-type: none"> • During conflict there is no water security • If people would feel that the water would be secure they would invest
Investment in agriculture and irrigation	<ul style="list-style-type: none"> • When we have irrigation then we will feel that we have water • Many lands are not cultivated due to lack of irrigation.
Awareness	<ul style="list-style-type: none"> • Educated people know what they should do with the water • How to use the water in a good way, now the people are not feeling the problem that is coming
Good weather	<ul style="list-style-type: none"> • If it's good there will be water security
To use the water	<ul style="list-style-type: none"> • We have a lot • Use the groundwater
“Use” the NGOs and donors	<ul style="list-style-type: none"> • Pick up on their expertise

Table 1: Conditions for water security

5.1.4 Concluding discussion

To conclude there are other issues that matter more for the interviewees' perceived water security than the conflicts, especially when you study what the interviewees express will affect their future water situation the most. The extent to which the conflicts with Israel influence the water security perceptions cannot be fully assessed, however the effects seem to be larger in people's minds than what they actually experience. This might be related to that the threat from Israel is perceived to be very strong but that there is difference between the perception of threat and what is perceived to really influence the water security.

The perception of threat can easily be understood considering the longstanding rhetoric of Israel's intents for the Lebanese water resources and Israel's securitization of water, which the Hasbani dispute that some interviewees bring up is an example of. The conflicts of the region have furthermore made it obvious that Israel has the power to take the water. The perception of threat might moreover be related to the internal discourse and media coverage, where Israel possibly is being connected to Lebanon's' water security. This thesis does not offer the

opportunity to study the effects of the internal discourse on peoples' perceptions; this topic would however be interesting to study further.

To move away from the discussion on how the perceptions might be understood and instead study what the interviewees' experienced is of importance to clarify the connections between water security perceptions and conflict. Despite that the interviewees perceive Israel as a serious threat to their water security they do not speak much about experienced effects of the occupation, for example that Israel have stolen any water. To reconnect with the "hydrostrategic imperative theory" only the part of Israel's quest for water being the motivator for the conflicts can be regarded as perceived in the study area. Concerning the war 2006, water is not perceived as having been particularly targeted and in one sense the interviewees seem to perceive the war as a sign of Israel's deteriorating strength, which decreases the threat to their water security. However, the war did result in vast destruction of water facilities and was quite unexpected which might increase the perception of threat and the sense of vulnerability, which are the factors that according to Soroos (2010) influence the perception of insecurity.

How the occupation and the war 2006 affect the water security perceptions is furthermore related to that the interviewees express a general perception of threat related to Israel. The threat perception is not only connected to the water security but to all aspects of life in the study area, it is therefore hard to separate the water issue from other issues. In a UNDP RBAS study aiming to objectively measure human security 85% of the Lebanese respondents answered that what made them feel most insecure were occupation and foreign influence and 87% expressed that governmental failure to protect citizens was a threat. The UNDP RBAS study furthermore show that overall the respondents articulate a large insecurity, almost 60% declared that they don't feel safe at all and almost 50% expressed that they are not satisfied at all with the current situation (UNDP RBAS,2009:26ff). Despite that the perceived influence of Israel on for example the future water situation is quite minor, since the water security is so interlinked with the general security situation I believe that you cannot disregard the issue of the conflicts with Israel when trying to understand the water security perceptions.

5.2 The perceptions of performance of the government

In the following part I aim to answer the second sub-question concerning what is expected from the government and how its performance in terms of water security is experienced, perceived and spoken of in times of conflict. The rationale for this is the government's

importance in times of conflict and to relate the issue of Israel's influence on the water security perceptions.

5.2.1 The government and the conflicts with Israel

This part discusses the influence of the government on the water security perceptions compared to the influence of the conflicts with Israel. It moreover discusses the matter of how the governments' actions are perceived to be influenced by the conflicts with Israel.

The interviewees seem to perceive the governments' actions to matter more for their water security than Israel's actions. When given the opportunity to choose the interviewees do not assign the full responsibility to one party, however no one says that it is solely Israel's actions that influence their water security. Rafiq (3) expresses it as: "the conflicts with Israel have created a lot of problems and the government is not taking actions to resolve these problems". The way the interviewees speak about the government implies that there is a widespread dissatisfaction with its performance. Salim (6) expresses it as: "Israel may affect the situation negatively but it's been 20 years, the government could have done many things in water in these years but they just say that Israel is here so it's used as an excuse not to revise things".

In general the interviewees perceive the conflicts to have affected the work of the government. However, many also express that they have not been significant since the government is not doing anything anyway. The interviewees that perceive the governments' actions to have been affected by the conflicts express that fewer projects have been executed and that the conflicts have caused a lack of finance since international donors have been unwilling to provide funds to projects in such an unstable area. Nicolas (13) expresses it as: "south Lebanon has been deprived of international assistance and of NGO assistance simply because of the fear that, especially water projects, are a target of Israel". Some of the interviewees, like Basir (11), express that the conflicts have limited the possibilities for the government "...but they [the government] are afraid of Israel; if they build a dam they are afraid that they will destroy it". Nicolas (13) moreover mentions that the threat from Israel can be used as a justification for not taking enough action: "the government need to be more active but the fear for Israel, which is a passive, continuous fear, is like an impasse to stop moving".

To conclude the government's actions is perceived to matter more for the water security than the conflicts with Israel. However does Charbel (10) express that: "we all know that the organizers [the government] are not working, we don't care, this is the people of Lebanon but

Israel is easy to blame”, implying that people are aware of the governments’ role but that it is easier to assign the water problems to the conflicts with Israel. The next part goes further in to depth with how the performance of the government is perceived.

5.2.2 The government and water security

How the interviewees perceive and experience the government performance in general is discussed in this part.

Overall, the interviewees seem to perceive the water security to be the responsibility of the government. From the way they speak about the government it however seems like they do not perceive it to perform satisfactory for the water security to be assured. The problems that the interviewees bring up are; corruption, that it is indebted and foremost that it does not have any plans for the future. Elias (9) also expresses that: “the government is too busy talking, trying to defend themselves as the Lebanese government”, referring to the internal political problems in Lebanon. The governmental problems are brought up by Charbel (10) by using a parable of a company.

Box 1: The government as a company

Lebanon is like a company without management. Today is a public holiday but it is not a day off at my company. Despite that it is a public holiday I come to work, I do not say to the employees to go to work but then I am not here. Without me and the other managers being here the employees will not come. We need management; Lebanon is smaller than some companies!

Some of the interviewees mention the need for community participation for an improved water security and that they have to make more demands on the government to take their responsibility. Nadim (17) puts it as: “the government won’t make any project unless the community starts”. However, I get the impression that the interviewees are quite unwilling to try to influence the government and that they have given up on them. One example of this is that Nadim (17) mentions that when they had problems with their public water network the WE said that it would take a month to repair and that they then got help from Hezbollah, who did it faster. This might imply that some people have more confidence in Hezbollah than in the government and that Hezbollah has been able to grow more popular because of a perceived lack of government presence in the area.

A UNDP RBAS (2009) study shows the importance of the role of the state as for assuring its populations’ security. The report states that it is evident that an individual can only be secure in a well-governed, strong and accountable state. The state has to preserve security and maintain its political autonomy and territorial integrity for it to be given legitimacy and

maintain its populations support (UNDP RBAS,2009:24). The way the interviewees speak of the government indicates that there is a lack of trust in it, both regarding the protection of the territory and the interrelated issue of the provision of water security. It is important to understand that the water security perceptions are related to a much bigger issue of the legitimacy and the perceptions of the state. Amery (2000:126) for example states that predominantly the Shia Muslim population in the south has for a long time felt neglected and marginalized by the government which has been dominated by Christians. This thesis can thus only discuss the relationship between water security and the government in the context of the conflicts with Israel since the interviews were focused on this. Despite the lack of possibilities of getting the full picture on this topic, the importance that the interviewees assign to the government in terms of water security makes their perceptions of the government performance in time of conflict important to study. This is furthermore related to the expectation on the government for the future water security as is discussed in the next section.

5.2.3 The government and the future

What is expected from the government in general and in regards to the water security in particular is discussed in this section. This is moreover connected to how the interviewees experience and perceive the performance of the government.

The conditions that the interviewees perceive as needed to be fulfilled for them to feel that their water is secure are highly related to better governmental work. They include better maintenance, plans and building of dams; “the solution is to have dams where we can get electricity from²¹, we would have plenty of water, we would have plenty of cultivated land, we would have a green country”- Elias (9). The lack of plans for the future is something that many of the interviewees mention as very negative. Basir (11) expresses that if the government do not start working to improve the situation, “not in the far future but already in ten years time there will be many problems”. Charbel (10) however states that “Lebanese love to talk about politics but they don’t love to talk about the future or the problems to be solved”. Yousef (12) uses an example of a road to illustrate how the governments’ perceived lack of plans can be experienced.

²¹ The lack of electricity can also affect the water situation since without electricity it is not possible to pump water from the wells. The perceived government inability to provide the services needed is moreover most likely not to only be related to the water sector but also other sectors.

Box 2: The government's lack of plans

On the main street there is work being done now to put new asphalt. In three months there might be a new project so they have to take up the new asphalt to do the work- there is no planning. It is the same for all sectors of the government, including the water. If there is a war they come and fix something but only at a transitional level, so you fix something to put things on the move again but there is no major solution.

According to Soroos (2010) efforts to enhance human security are ideally anticipatory, i.e. actions are taken to prevent, limit the threats or reduce the vulnerabilities. This requires identification of problems, planning and implementation of special measures (Soroos,2010:179). The combination of the interviewees' anticipation of less rain in the future due to climate change and the perception that the government has no plans for the future might increase the perceptions of water insecurity further. The climate change some of the interviewees mention as a reason for why they perceive the future water situation to be worse and a good climate is perceived as a condition for them to feel secure about their future water situation. The climate change is something that can moreover be related to the conflicts with Israel since its water situation would also deteriorate. That Israel already has securitized water further adds to the unstable situation. Naff (1993:15) furthermore states that few Lebanese perceive Israel to stop for anything in their quest for water if experiencing a critical water shortage. Amery (1993:229) additionally states that countries that suffer from resource scarcities tend to reach past their borders and if the access is denied, the countries with superior capabilities seek to establish a pressure sometimes through military means of getting the resources. This can be used to understand the interviewees' perceptions of the future climate as a threat. A few of the interviewees mention that they believe that there will be future water wars due to the decreasing amounts of precipitation²² which can be connected to the perceived inability of the government to protect its citizens and natural resources.

What many researchers agree upon is that there will be a real water shortage in the future because of climate change but also due to bad water management, including weak awareness about measures for saving water (Makdisi,2007). The interviewees seem to perceive it as the current problems are not related to the lack of water resources, but that they are not being used; "the problem is that we have a lot of water in this river [Litani] and the water goes to the sea"- Basir (11). There seems to be a double frustration with the government; that the water

²² The focus on the climate and the lack of rain might be a result of that the interviews were made in December and the seasonal rains had not come as they should have by this time.

resources are not perceived as being used at the moment and that there are no plans for the future.

As mentioned by Makdisi (2007) the lack of awareness of saving water is part of the reason for the future water shortages. Research has furthermore shown that local people will not participate in actions designed to manage their environment unless they are aware or perceive a risk to it (Stone,2001:208). A few interviewees express the need for greater awareness among the population about the water situation and how to manage the resources. Layla (16) expresses it like this: “even if you have four tanks of water you might need more water if you don’t manage it well”. Rafiq (3) articulates regarding the waste of water that “I lived in Europe for 15 years and there I never saw people just let the water run, not like here. Here it is ok to forget to turn off the tap /.../ people are not aware of the importance and value of water”. This lack of awareness can be related to the work of the government and some interviewees express that the government should take a larger responsibility of increasing it. However one might argue that it is the responsibility of every individual to save water. Elhamra (5), from the WE, for example mentions that every household should make sure to have a mechanism that stops the water from overflowing the tank when it is full.

5.2.4 Concluding discussion

What can be concluded is that water security in the study area can not solely be related to the security of the state, i.e. the influence and military threat of Israel but that it also has to be looked upon from a broader notion of security. The role of the government for water security is a recurring theme in the interviews and it is perceived as equally or more important than Israel.

The government is perceived as one of the most important factors for the water security, now and in the future. It is however evident that it is difficult to ensure water security without ensuring a stable state security in terms of the state not being threatened from the outside. The conflicts with Israel are perceived to partly be the reasons for the unsatisfactory performance of the government since the room for maneuver is diminished but the interviewees however also express that there is more to the poor government performance. The conflicts with Israel are perceived to be used as an excuse for not taking actions to improve the water security, indicating that they perceive the government to be able to do more. This might be related to the common perception that there are good water resources in the area that are not being used.

In general the expectations on the government seem to be quite low. Studying how the interviewees speak about the government makes it obvious that many lack confidence in the government. The conflicts with Israel might be the reason for this, Nader (4) for example mention that if there is a war they cannot get help from the capital but that the government can only help afterwards. He concludes that the government because of this is very weak in the area, that maybe they can do more in Beirut than there.

Despite that the trust in the government seems to be quite low the interviewees speak of the importance of the role of it to provide water security. The climate is something that is brought up as a concern and it adds to the perception that the government has to make more plans for the future and implement more projects. In the next part a discussion of the effects of the water security perceptions in regards to the conflicts with Israel and the perceptions of the government follows.

5.3 The effects of the perceived water security situation

The water security perceptions are shaped by the conflicts with Israel and how the government is perceived to perform. These perceptions have different effects, which are discussed in this part.

The interviewees use different strategies to cope with the insecure water situation such as using wells, buying mineral water, installing water filters and building tanks to collect more public water or rainwater. This can be seen as there is a need to improve the water situation. However a few of the interviewees mention that these are things you can do, if you have the money. According to Yousef (12), to complement the water service you get from the government you need to have the funds to for example buy an extra tank or dig a well. The impression I get is not that the interviewees' water security perceptions are dependent on their economic situation. I did however not ask about their economic conditions and it might be that the ones with a better economic situation feel more secure. From this research it is however not possible to detect any patterns in water security perceptions related to the observed economic situation of the interviewees.

Despite the perception of an insecure water situation due to the threat from Israel and a government which is not perceived to perform satisfactory, quite many interviewees express that they are not doing anything themselves to improve their water access. This might be explained by an incapability to do so, either perceived or real. It might however be that they

do smaller things that they do not mention or actually do not experience the water situation to be that bad. Most of the ones that do not take actions have not refrained from doing things, because of the water security situation, which might indicate that they experience their water security to be satisfactory or that they prioritize other things.

The interviewees who do not take actions and have refrained from doing things are only a few. What they have in common is that they are farming and what they have refrained from doing is related to agriculture, such as irrigation. Irrigation infrastructure might require vast investments and because of the risk of it being destroyed in a conflict, people might be reluctant to invest in it. Grey and Sadoff (2007:551) furthermore state that in water insecure countries, which according to my understanding Lebanon can be regarded as to some extent, without social safety nets the population tend to be very risk averse. Especially farming families will not invest in improvements for their lands and advanced technologies. Blanc (2010) states, as mentioned in the introduction, that the conflicts with Israel can act as a partial explanation to why the development of irrigation is much less in the south than in Lebanon as a whole. Albeit agriculture is not the focus of this thesis, from what the interviewees express, it seems likely that the development of irrigation has been affected in a negative way by the conflicts with Israel and the government's lack of capacity. This might consequently affect the economic opportunities in the area and be a reason for the migration from the area.

How I interpret it is that there are different levels of water security, a more everyday perception where the most important actor is not Israel but other factors, foremost the performance of the government and a more general level where the influence of Israel is extremely important. When connecting this with whether the interviewees have taken any actions to improve their water security one might argue that the more small-scale improvements that the interviewees make are needed for their everyday needs. To invest in irrigation can however be seen as more of a long-term investment that can improve the living situation, but is not necessary for the basic needs and is more expensive. The insecurity in regards to Israel's actions thus affects this part of the water security to a larger extent.

That the government is perceived as unable to ensure water security now and for the future, could lead to cooperation within the communities to increase the water security. However some of the interviewees perceive it as there is a lack of spirit of cooperation; "the Lebanese work separately, it's not collective work or collective solutions for the problems"- why? "it's

because of the culture, after so many wars either you depend on yourself or you cannot survive”-Yousef (12). The interviewees acknowledge the role of the government to provide water security but due to the conflicts and the perceived lack of capacity from the government the interviewees’ perceptions are that they have to rely on their own actions.

That cooperation may be fruitful, can possibly the perceptions of the interviewees from Kilya be a sign of. These interviewees seem to feel less threatened and more content with their water situation. This lay to question to whether the fact that they, during the occupation created their own water network, which still persists, has created a sense of water security in the community. Using the insecurity theory of Soroos (2010:178) the vulnerability part of feeling insecure would in this case be diminished because the interviewees have better control over their water security since they can to a larger extent limit, manage or prevent the possible destruction. This might certainly be because of other reasons as there is better access to water there, that Hezbollah is strong and does a lot etc. but it is an interesting issue which could be researched further.

The next section discusses some possible ways to improve the water security perceptions and decrease the insecurity and sense of threat.

5.4 The way forward

To conclude about the perceptions in the study area the interviewees seem to acknowledge a need for change for them to experience water security.

According to Wouters (2005:169) what is needed to ensure water security is freedom from fear, freedom from want and freedom to live with human dignity. Currently the interviewees seem to perceive the two first as not being ensured. The freedom from fear can be associated with security. Soroos (2010:179) presents two strategies to enhance security; the first is to take measures to manage threats by preventing them from occurring and if they do arise to limit and reduce them. The largest threat identified by the interviewees is Israel and the government can try to cooperate with the state to reduce the risk of another war between the countries. Another threat is the future climate and by the government issuing projects to use the existing water resources in a way that is perceived to be adequate and make plans for the future could decrease the perception of threat. As part of meeting the future climate threat there is also a need for better awareness among the population, something that can be regarded as both the responsibility of each individual and the government. The Commission on Human Security argues that two factors are needed for an operationalization of human

security. These are; a top-down approach of protection which is assigned to processes, institutions, the establishment of rule of law, governance and accountability and; a bottom-up approach which involves empowerment of individuals and communities to by themselves create the preconditions for human security (UN,2009:8,10). The community cooperation in the village of Kilya can be seen as an example of how the perceptions of water security can possibly be improved, by the individuals gaining control over the water situation. Collective action might also become more important in the future with the changing climate.

The second strategy that Soroos (2010:179) presents is to reduce vulnerabilities either by avoiding the potentially harmful situation or to establish some kind of protection against it. To increase the coping capacity mean to decrease how vulnerable a society is to threats (ibid). Providing the population with better water infrastructure and strengthen the institutional capacity of the WE could reduce the vulnerability which correlate with what the World Bank present as to what is needed for water security (Wouters,2005:167). To improve the infrastructure is an important part of improving the access to water, which the interviewees are requesting. The perception is that there is a need to increase the governmental water projects, something which could help to ensure freedom from want.

A method for the Lebanese government to address the peoples environmental security concerns would, according to Amery (2000), be to involve the public in the decision-making process. By doing so the government could gain the much needed legitimacy, especially in the southern parts of the country (Amery,2000:140ff).

6. Conclusion

The aim of this thesis was to contribute to the under-researched discussion about how perceptions of water security are affected by conflicts. The research focused on the Lebanese-Israeli conflicts and how water security is perceived, experienced and spoken of in the study area in the southeast of Lebanon.

The Israeli occupation (1975-2000) of south Lebanon and the war 2006 meant that the population lost control over their water resources and experienced Israel's power to affect their water situation. The threat of the occupation to the water security thus seems larger in peoples' minds that in reality since the interviewees did not experience it to cause many effects to the water. The war 2006 on the other hand showed how vulnerable their water security is since water facilities can be destroyed unpredictably. One of the objectives of the thesis was to clarify to what extent the conflicts affect the water security perceptions and the

interviewees' anticipations for the future. The findings reveals that Israel is probably not perceived as the most important factor when it comes to having water for the daily needs. Instead what is perceived as important is the performance of the government. The government is perceived to bear the main responsibility for the water security but the experiences of its performance disclose that it is perceived as unsatisfactory due to the lack of planning and lack of projects. The way the interviewees speak about the government reveals that there is deep misbelief in its work and that it is perceived as necessary that the government starts issuing projects to use the existing water resources and make plans for the future. To get a fuller picture of what shapes the water security perceptions and how the water security can be improved; an area for further research could be to more thoroughly explore the work of the government, Hezbollah and NGOs. This could help identify and bridge the gap between expectations and perceptions of performance.

This study discloses that although the water security perceptions to a large extent still are connected to the threat of conflicts the role of the government is important. To research further how individuals in other areas with water conflicts between countries, perceive the importance of the internal power for water security, such as the government in relation to the external power would be interesting. This could act to deepen the understanding of the role of different actors affecting water security.

The findings of this thesis provide empirical knowledge about the issue of water in southeastern Lebanon and how it has been affected by the conflicts with Israel. The research shows that water security is not only concerned with availability and access as the interviewees to a large extent have this, but that perceptions also matters. The perceptions of water security are especially important in regards to long-term investments into for example development of irrigation. This insight might hopefully contribute to an understanding of what is needed to take into account when issuing water projects in the study area and areas like it. Development efforts might to a higher degree need to provide security for the individual investments, both in terms of time and capital. One way could possibly be by working together in the community to get control and share the risk, as in Kilya. To facilitate practical use of the findings of this study it would be beneficial to research these issues further.

Despite that the outcomes of this thesis is limited to the study area I hope that the research contributes to the under-researched discussion of how water security perceptions are affected

by conflicts. By illustrating the issue of water security in the study area, I contribute to clarify and illustrate how water security might be experienced and perceived as a result of conflict. The research moreover hopefully provides insights into the importance of perceptions for water security improvements and that to disregard the power of people's perceptions of threat and insecurity is to simplify the issue of water security. Hence the thesis might serve to provide a more nuanced understanding of the concept of water security. The findings of this thesis imply that further research on perceptions importance for water security would be valuable.

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Appendix 1 Interview guide

Date:

Time:

Venue:

Present:

Name

Age

Family situation

Occupation

Place of residence

Religious affiliation

The current water situation

1. Where do you get the water you use from?
 - a. Wells, public etc.

2. What do you use the water for?
 - a. Domestic
 - b. Irrigation
 - c. Animals

3. Are there any problems with getting the water you need?
 - a. Not enough from the public
 - b. High price
 - c. Bad quality

The occupation of the south's influence on water access

4. Did you live here during the occupation?

5. How did the occupation affect the water situation?
 - a. Did you start using wells?
 - b. Did you get cut off from the public network?
 - c. How was the water management functioning?
 - d. How did the presence of the Israeli troops affect the water situation?
 - i. The existence of military bases (cause of pollution, getting cut off from springs etc.)
 - e. The presence of UNIFIL troops

6. What do you think of Israel's interests in the Litani?
 - a. Did they occupy the land because of the water?

7. Do you trust Israel in the sense that they won't threaten your water security?

- a. Do you think they will occupy the land again?
 - i. How would that affect your water situation?

Wars and destruction of water facilities

- 8. Where you here during the July war in 2006?
- 9. Was any water facilities destroyed during or any water polluted in the July war in 2006?
 - a. What about earlier, have you experienced any destruction of water facilities or pollution?
 - b. Was it intentional?
- 10. Do you feel scared that water facilitates would be destroyed if there was another war?
 - a. Do you feel that there is a big risk of that? What do you base your opinion on?

The implication of the water security situation

- 11. How do you think that the government actions in regards to water have been affected by the conflicts?
 - a. Have they invested less money into this region?
- 12. How have you been affected by the water security situation?
 - a. Have you taken any special measures to secure your water?
 - i. Wells or something else?
 - b. Have you refrained from doing things because of the water security situation?
 - c. Is the water security situation dependent on the governments' actions or the conflicts with Israel?

The future

- 13. Do you want more water?
 - a. What would you use it for?
- 14. What do you think about your future water situation?
 - a. Will it be better or worse or the same?
- 15. What do you think will affect your water situation?
 - a. Is it the Lebanese government, NGO's, Israel's actions, your own actions, the community?
 - b. Who has the ultimate responsibility?
- 16. What conditions needs to be fulfilled for you to feel that your water situation is secure?
 - a. Which ones are missing now?

Appendix 2 Information about the interpreters and research assistants

Research assistant and interpreter 1

She worked as a site engineer for the UNDP project. The people she introduced me to were farmers and other people in the area whom she had been in contact with for the sake of informing them about the project. She interpreted two of the interviews for me.

Research assistant and interpreter 2

He worked as a site engineer for AFIAL which is partnering with UNDP on the project. He lives in the village of Kilya which is why he was also interviewed. He interpreted three of the interviews for me and these were people that he were acquainted with or did not know at all. He introduced himself as working for the project, which is well-known in the area. He also introduced me to two more interviewees which he is related to.

Interpreter 3

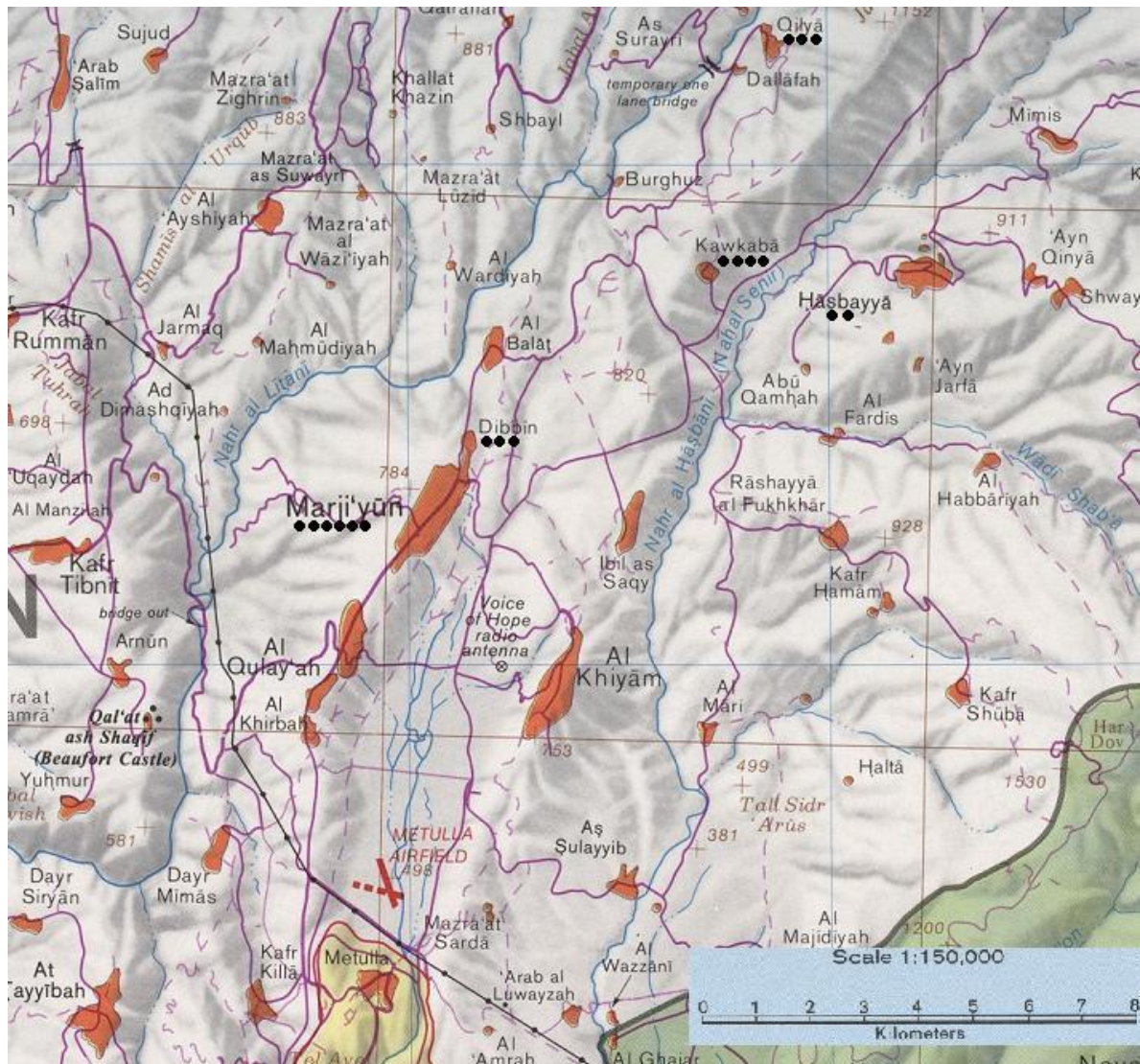
She is related to the two of the interviewees she helped me interpret for.

Translation agreement

I am fully aware of that the interpretation agreement with using staff from AFIAL and UNDP to interpret for me is not the most appropriate. However did I not see any possibility of bringing a trained interpreter from outside because of the particular setting of the research area. The organizations had no influence over what questions I asked and to a large extent was I able to by myself make contacts with interviewees. The research assistants helped me more as a personal favor and not because of any agreement with the organizations.

The persons that did interpret for me are well acquainted with the area and they are fairly known among the population. UNDP and AFIAL was at the same time as I was collecting data following up on interviews they had previously made with farmers in the area. Despite that people were informed about their presence there were some problems of them being questioned and unwelcome. This in combination with an unexpected work load on the staff put me in a difficult position since the UNDP staff in the end was not able to interpret and take responsibility for me. I was therefore forced to without their facilitation get in contact with and interview people, resulting in the need for English speaking interviewees. That I used a third interpreter who is related to the interviewees is especially unfortunate but I was not in the position of making it in another way and despite these limitations I still feel that their contributions are important.

Appendix 3 Map of interviewees geographical spread



Source: Global atlas of crisis areas, 1986.

There are only 18 points since one of the interviewees did not want to state the village belonging to keep further anonymity.

Appendix 4 List of interviewees

Interview	Name*	Sex	Age	Religion	Occupation	Village	In English
1	Walid	M	75	Shia	Farmer and mayor of Debbine	Debbine	
	Aban	M	75	Shia	Farmer	Debbine	
2	Jamila	F	32	Liberal Muslim	UNDP field officer of Marjeyoun	Debbine	Yes
3	Rafiq	M	57	Muslim	Journalist	Debbine	
4	Nader	M	42	Christian	Worldvision sponsorship coordinator	Jdeidet Marjeyoun	Yes
5	Baseem ElHamra	M	40	Druze	Director of Hasbay & Marjeyoun sector of the south WE	Hasbaya	Yes
6	Salim	M	25	Shia (as written in ID)	Goatfarmer and engineer	Kilya	Yes
7	Bashir	M	51	Sunni	Farmer	Jdeidet Marjeyoun	
8	Ahmed	M	-	Christian	Office Personell	Jdeidet Marjeyoun	Yes
9	Elias	M	62	Greek Orthodox	Businessman	Jdeidet Marjeyoun	Yes
10	Charbel	M	69	Christian Maronite	Businessman	Kawkaba	Yes
11	Basir	M	52	Catholic	Principal of school	Jdeidet Marjeyoun	Yes
12	Yousef	M	28	Christian	Advisor for the president of the municipality of Jdeidet Marjeyoun	Jdeidet Marjeyoun	Yes
13	Nicolas	M	65	Christian	Engineer	Marjeyoun area	Yes
14	Wassim	M	50	Christian Maronite	Smith	Kawkaba	

15	Hadi	M	63	Christian Maronite	Owens and works in a garden center	Kawkaba	
16	Layla	F	40	Christian Maronite	Owens and works in bakery	Kawkaba	
17	Fadi	M	37	Shia	Farmer	Kilya	
18	Soraya	F	46	Shia	Housewife	Kilya	
19	Imad	M	58	Druze	Mayor of Hasbaya, owns travel agency in Beirut	Hasbaya	Yes

*All the interviewees' names have been changed for the sake of their anonymity, except for Baseem ElHamra who acts as a representative for the WE.