POLICY TRANSFORMATION AND IMPLEMENTATION IN THE WATER SECTOR IN LEBANON: THE ROLE OF POLITICS

by

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Occasional Paper No 27

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University of London
1998/99

Abstract

Policy transformation and implementation in the water sector of a Middle East and North Africa (MENA) country will prove to be a hazardous process because the individual political economies are often economically weak and poor in socio-political adaptive capacity. Imperfect knowledge (information gaps) prevails at all levels in the water sector and deeply entrenched beliefs, based upon past experience, are universally held and often hinder or even stop the process of policy innovation in national water sectors. Economically and environmentally sound water policies, often identified by alien actors do not prove to be politically feasible. There is, nevertheless, a need for information that would be useful to those who wish to introduce water policies based upon principles of water security and water use efficiency. Particularly important is any information that will help identify and analyse potential obstacles that result in political non-feasibility.

Lebanon is, to date, most certainly “un château d'eau” compared to its neighbours but current water delivery systems do not meet the national demand for water. During seventeen years of civil war the water sector was barely operational and, as a result, the whole sector needs rehabilitation. These necessary innovations do require major institutional and administrative reforms as well as a new approach to water rights, water use efficiency and sustainability. Introducing new water management and developing new water reforms will prove to be difficult. Little will change in the Lebanese water sector as long as the government of Lebanon and international donors fail to shape their message in a way that takes into account beliefs based on "existing knowledge" and political tensions. Information gaps have to be filled and beliefs held by those working in the current order, must be identified in order to formulate an implementation strategy for Lebanon. Only then can reform be introduced effectively and without the delay that normally attends the reform of water policy in MENA countries.

Key words:
Lebanon; water availability/demand; policy transformation/implementation; water use efficiency; imperfect knowledge; belief systems; sanctioned discourse; socio-political context; stakeholder analysis.

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1. Purpose of the Independent Study Project

The purpose of this independent study project is to analyse the role of politics in current attempts to transform and implement policy in the water sector in Lebanon. The Government of Lebanon (GoL) plans to implement a new water development and management policy in Lebanon. International donors such as the World Bank and the Kuwait Fund and assistance from France and Italy support the reform project that has its roots in the GoL decree 4517, a first reform draft dating back to 1972. It is impossible to predict how long it will take for the implementation of new water policies given the country's weak economic and social capacity and the fact that its water sector was barely operational during seventeen years of civil war. Lebanon requires major institutional and administrative reforms in its water sector. These innovations will have a major impact on existing institutions and on their employees and will generally confront those involved in the "current order". Furthermore, to solve Lebanon's water related problems, principles such as those of demand management (allocative efficiency and productive efficiency) should be implemented to improve returns to water, but these measures can be difficult to implement for political reasons. While the economic rationale implicit in the advice of donors such as the World Bank is understood by senior officials and politicians such as the Minister and the Director of Hydrological and Electrical Resources, these same officials are understandably

cautious of the political consequences of making overly-hasty announcements and rushing into implementation.

To prevent the frustration of efforts in bringing necessary innovation to the Lebanese water sector as a result of imperfect knowledge (information gaps), it is necessary to understand the link between existing beliefs that are deeply entrenched within the population and held, or at least understood, by senior officials and "new or different knowledge" recommended by alien “actors”. These “actors” have normally carried out their research elsewhere or are using research completed elsewhere.

There is a need for information that is relevant to those attempting to promote proposed reforms and institutional innovations. What is needed, is an understanding of the nature of local, regional and national policy priorities that are politically feasible and that will determine the pace of change in the Lebanese water sector. In order to be able to predict how long it will take to implement the new water management and development reforms and to formulate an effective implementation strategy it is necessary to evaluate the socio-political adaptive capacity of Lebanon.

Countries such as Israel and Jordan have shown that new beliefs based upon new knowledge take time to develop via a "sanctioned discourse". In order to acquire an understanding of the role of politics in respect to policy transformation and implementation in the Lebanese water sector, this study focused mainly upon what influence key players (actors) have on the reform project. It also focused on the importance that reform attributes to established interests and to the role of employees currently working in the water sector. How these stakeholders have been selected and questioned will be explained in chapter two of this paper. Chapter three looks at literature on hydrology and political economy in the Middle East and the link between politics and information gaps, belief systems and new knowledge. Chapter four examines Lebanon’s water availability and demand whilst chapter five will outline the reform projects and include a stakeholder analysis of the parts played by the key players and the secondary stakeholders who have been influenced by or are of importance to the reform project. Chapter six will consider the results of the stakeholder analysis within the determining socio-political context in Lebanon.

2. Methodology & Equipment

2.1. Background

The study required comprehensive research that was challenging for one researcher in the “field”. A pre-feasibility study was therefore conducted over a two-month period in summer 1998 and over a two-week period in winter 1998/99. The pre-feasibility study identified and analysed the belief systems of nine out of twenty-two water authorities in Lebanon. The study also includes an analysis of the opinions of leading key players with respect to the reform project. A village case study was also completed and can be found in the appendix. The purpose of the pre-feasibility study was to produce a study of scientific significance. This goal was achieved by ensuring that the selection of Lebanese water authorities and leading key players elicited a comprehensive perspective on attitudes to water and water management in Lebanon.

The research of this independent study project consists of a literature-based analysis, a theoretical framework and a stakeholder analysis. In addition to the sources upon which the theoretical section is based, the literature has been mainly sourced in Lebanon through relevant consulting firms such as BTD Consulting, CDS Consulting, and the university libraries of the American University of Beirut (AUB) and Kaslik University (USEK).

2.2. Concepts

The main concepts forming the basis of the study have their roots in social theory, and this is especially so when they are used to highlight the explanatory power of belief systems. Concepts such as knowledge, new knowledge and beliefs make it possible to identify major indicators of concerns, determine the strength of water related beliefs and the nature of social networks which appear to influence the acceptability of alien innovative approaches to accessing water, water distribution, pricing and conservation. These concepts help to explain the role of Lebanon's complex social matrix on water use and water management.

2.3. Methodology

The main field research method deployed in identifying and segmenting the institutional entities and key players was a stakeholder analysis. The purpose of the stakeholder analysis was first to identify the different stakeholders who might have an interest in, or be influenced by, the new water management and development policies for Lebanon (the relevant ministry, local administrative bodies, shareholders and international donors). A second purpose was to assess the relationship between the new policies and those actors. A third purpose of the stakeholder analysis was to provide those who wish to implement the proposed new policies with insights into the political risks associated with the new water development and management policies. The analysis highlights how important it is to consider the deeply entrenched belief systems of all the relevant stakeholders, especially the primary stakeholders as it is they who theoretically represent the inhabitants of their district, when attempting to implement such new policies. These beliefs have to be acknowledged in order to formulate an implementation strategy for water policy in Lebanon so that it can be introduced effectively and without the delays which normally attend the reform of water policy in the Middle East. The analysis was guided by the recently published Guidelines for Water Resources and Development Co-operation of the European Commission (Overseas Development Department, 1998). These guidelines include a stakeholder table, lists of projects with definitions of the status of stakeholders and a two-dimensional matrix. As a stakeholder analysis is not a formal methodology a variety of informal approaches can be used.

2.4. Field research

In the field, semi-structured interviews were conducted with staff of nine out of twenty-two water authorities. In addition, several senior officials and consultants to ministers including the Minister of Hydrology and the director of the Ministry of Hydrology and Electrical Resources (MHER) were interviewed. Interviews were also conducted with officials working in the Centre for Reconstruction and Development and team leaders of the Sector 1 Implementation Unit. A list of all people interviewed

and a questionnaire can be found in Appendix I. In addition, the author visited several state owned water irrigation projects and a private domestic water project. A list of the names and locations of the projects can be found in Appendix II.

2.5. Equipment

The equipment used in the field consisted of a mobile phone, a car and email access. The relevant computer programmes used were Word for Windows, Excel, IDRISI for Windows and a scanner.

2.6. Summary

Fluency in both French and English was an advantage to the author. Communication problems in the field only occurred on one occasion when the person interviewed could only speak Arabic. Here a translator helped to conduct the relevant interview, which may have lead to some biased answers. Therefore the risk of bias was relatively insignificant to the overall objective of the study. The translator was chosen for his qualifications and for his fluency in Arabic and English. The author's Lebanese descent facilitated the field research, as the author is very familiar with the country and with its diverse cultural influences. This, however, could well be a potential source of bias since the author's family is well-known in Lebanon. On the one hand, it enabled the author to establish an information network rapidly. On the other hand, some of the people interviewed, especially senior officials and ministerial consultants, might have been aware of the author's social status. Nevertheless, the author believes that these sources of bias are of minor importance to the overall objective of the conducted study.

“Economics are an illusion, politics are real”
(Mark Reisner in Cadillac Desert, 1986)

3. Water in Lebanon and some essential theoretical issues

3.1. Hydrology and political economy in the MENA region

3.1.1. The water crisis in the MENA region

Water is vital in all sectors of life and is undoubtedly one of our most precious natural resources. It is, however, a resource that has become scarce in some parts of the world. Long term evaluations of the balance between water resources and water demand on the international level indicate that many countries will face water deficits in the next 25 years (Allan, 1994).

In the Middle East and North Africa, the world's driest region, this imbalance already exists because of the demographic explosion of the twentieth century. Over the last 30 years, the area’s population has doubled to about 280 million and water demand for domestic, industrial and agricultural uses has grown in proportion. Countries in the Middle East overexploit their ground waters, and the pollution of their freshwater resources with fertilisers and pesticides, as well as the dumping of industrial wastewater are just some of the factors that lead to the continued degradation of freshwater resources (World Bank, 1998). According to the World Bank, the main factor that causes the water crisis in the MENA region is the way water is used. It is estimated that 87% of the water withdrawn in the MENA region is allocated to irrigation and only 13% to municipal and industrial uses (World Bank, 1998, p.2).

3.1.2. Solutions to the water crisis

It is clear that for the Middle East, the time has come to re-shape its water policies in order to meet the challenges posed by water shortages. The main challenge is how to change existing patterns of water use rapidly to adapt to the constantly growing water gap. The key to this depends on how water is perceived by international donors, government officials and scholars since it is these actors who will advise and implement new water policies. In his article "Perspectives on Water", the Dutch water resources engineer Arien Hoekstra (Hoekstra, 1998) deploys the analytical framework of Mary Douglas to identify four main approaches adopted by actors. Mary Douglas (Douglas, 1982) identified hierarchist, egalitarian, individualist and fatalist approaches. Hoekstra applies them to hydrological cycles, water demand and public water supply. The four “solutions” offered by the differently inspired policies show how cultural theory can be used in different ways as an explanatory tool. Each group has a "specific perception of how the world functions (world-view) and how people act (management style)" (Hoekstra, 1998, p.123). For the World Bank, the answer to averting the crisis lies in the "implementation of sustainable and growth-oriented water policies based on new approaches to the way water is used and managed, adopting innovative approaches to investment finance, attracting the private sector, and redefining the role of governments" (World Bank, 1998, p.3). Behind this strategy lie initiatives to mobilise governments and people to use water more wisely by, for example, reducing the amount allocated to agriculture, to use water more efficiently so as to get most value from it, and, finally, to design policies and develop institutions and regulatory frameworks in order to implement the water strategy.

3.1.3. "Water is an economic resource? Water is not an economic resource"?

Diverse solutions to the growing water crisis in the Middle East mainly depend upon whether water is perceived as an economic good and whether it should be managed as such. As Thomas & Matson point out, water is "an incredibly complex matter, at once political, economic, legal, social and ecological in its nature" (Thomas & Matson, 1984. p.xviii). For some professionals and consultants, water is an economic resource because it is delivered at a cost, can have a price and can be sold on a market. They argue that, to overcome the current crisis in the Middle East, water should be treated as an economic good. They contend that improved water use efficiency should be achieved through allocatively and productively efficient measures. By implementing such measures, demand management should be applied to improve allocative efficiency and returns to water by, for example, inter-sectoral re-allocation or by raising water efficient crops. To achieve economic efficiency water should be used in a sector that brings a good or better return. Further, measures of productive efficiency should introduced by, for example, spending money on equipment, which improves returns to water, by emphasising institutions and pricing, and by water re-use in the industry. To most users, on the other hand, water is not an economic commodity but perceived as a resource of which there is plenty. People therefore expect it to be free and do not wish to pay for it. These beliefs attached to water determine the political feasibility of introducing water policy reform that incorporates principles of allocative efficiency and productive efficiency.

Remedies to the water predicament of the Middle East's economies are policies that will only partially be implemented. Not because they lack a sound economic basis, but because they are not politically feasible. Allan points out that very often "economically and environmentally urgent policies are not the 'politically logical' way to approach the amelioration of the region's water problems". He argues that "policies promoting improved water use efficiency by means of allocatively efficient measures, are unacceptable to Mid-East governments and officials because they are politically stressful" (Allan, 1999, p.8).

Finally, these politically stressful remedies are generally recommended by alien actors that provide advice to Mid-Eastern governments. Though officials and governments in the Middle East understand the economic rationale implicit in the advice of alien actors, the "discourse" about new water allocation policies is slow and difficult. In other words economic efficiency as an idea is accepted but the application of the idea in any water sector in the MENA region takes a long time. The bringers of the "new knowledge" should recognise the complexity of the political process in gaining currency for the new approach, an approach that is not perceived by users as being beneficial.

3.2. Politics, knowledge and belief systems in MENA countries

3.2.1. The politics of water in the MENA region

A vexing question is why the adoption of "new knowledge" takes so long considering the growing water crisis. The World Bank argues that the reason for marginal achievements at the local, national and international scale is because in the MENA

region "national institutions do not work together; plans and programs are often duplicated and sometimes contradictory; donor involvement is fragmented and unfocused" (1998, p.3). In addition, considering the region's politically unstable situation, senior officials and government representatives in the Middle East are understandably cautious concerning the political consequences of making overly-hasty announcements that refer to water as an economic resource. Moreover, the reality of their political economies does not allow for policies that will most probably contradict beliefs that are deeply entrenched within their population. Hence, there is the need for a more historically and politically grounded understanding of the resource in order to help explain the tensions between politically logical/feasible and economically/environmentally logical policy priorities.

3.2.2. The role of geopolitics

Water in the MENA region has a notion of scarcity attached to it that is unique in the world for such a large area. In this semi-arid and arid part of the world, the meanings attached to water have acquired new dimensions over the last 25 years. Water in the Middle East, especially water insecurity, has become a highly politicised issue. Arab leaders such as King Hussein and Anwar-el-Sadat began speaking about water insecurity in the late 1970s and early 1980s. Dr. Boutros-Boutros Ghali expressed a commonly held view when he stated that "le prochain conflit dans la region du Proche-Orient portera sur la question de l'eau" (Al-Ahram, Weekly, 19-25 march, 1992). However, states in the Middle East have so far not gone to war over water. This may be because of what Lowi calls "a theory of hegemonic co-operation" (1990, p.23) or because of what Allan (1999, p.7) suggests, namely, the availability of "virtual water", that is the water embedded in major commodities such as cereals. More water enters the MENA region as virtual water than flows down the Nile into Egypt for agriculture.

Whatever explanation, there is little doubt that "if there is political will for peace, water will not be a hindrance. If you want reason to fight, water gives you ample opportunity" (Versilind, 1993). A regional solution to the MENA water shortage is not something MENA governments place at the top of their political agendas. If there is the will to change existing policies on water allocation and distribution, the solution will have to be based within national boundaries. The reason for this is that water is "a conflict laden-determinant of both the domestic and external policies of the region's principal actors" (Thomas & Matson, 1984, p.xviii). Again, in the sphere of hydro-politics governments in the Middle East and North Africa have acted according to what proves to be politically feasible and not according to what proves to be economically and environmentally sound.

3.2.3. Social Theory: An analytical tool

It is very helpful to understand the interaction of state and society in the MENA region as proposed by Migdal's (1988) state-society analysis. It allows for a middle-level analysis of state-society dynamics that is most likely to yield the greatest insights into the politics of water reform in the MENA region. Often, state institutions are not strong enough to ensure that new water policies can be introduced effectively and without delay. Consequently, government elites, officials and people in the MENA region do not tend to speak publicly of a shortage of water because communities (stakeholders) might oppose unfamiliar innovations, as they do not correspond with

their existing belief systems on water. Belief systems of societies and elites represent existing knowledge that could be seen in terms of Bourdieu's notion of "symbolic capital". Here, "water can be analysed as being a resource that embraces both material as well as symbolic interests" (Bourdieu, 1977, p.182).

Advice (new knowledge) given by an alien actor will often only have marginal impact on the national and regional policies of governments in water scarce economies. Consequently, there is a need to analyse what happens when there is an attempt to introduce new knowledge based upon notions of allocative and productive efficiency. The lack of information (information gaps) that affects the alien adviser in combination with local, national and regionally held belief systems makes the transition from old beliefs to new knowledge a difficult process. Giddens' concept of "mutual knowledge" (1984, p.336) is a useful analytical tool in the understanding of precisely this transitional phase. Alien ideas might be accepted and understood by a small group and hence, become "mutual knowledge". However, this does not mean that water policy reform can be easily introduced. As Allan points out "the process of reform is subject to the protracted discourse (...) which is subject to the interests of stakeholders other than those enjoying "mutual knowledge" (1999, p.10). In order for belief systems to shift, "mutual knowledge" has to contend with the old knowledge that is based on farmers' and rural communities' long held beliefs about water. These familiar old beliefs inspire an alliance of great significance between water users and political leaders. Tripp (1997) has referred to the discourse that occurs in these circumstances as a "sanctioned discourse" (Tripp in Allan, 1999, p.3). Water users and legislators do not contradict each other and together reject alien ideas and proposals that would disrupt the conventional national hydrological knowledge. To shift the "sanctioned discourse" on water policy so that water policy reform can be introduced effectively, the stakeholders involved have to recognise and allow the assimilation of "mutual knowledge", which can in due course turn into new beliefs.

"Simple truths; vital lies. [Governments people]…can protect themselves from painful realisations by diminishing awareness…this trade-off between anxiety and awareness creates blind-spots of self-deception"

(after Goleman, 1997)

4. Water availability and demand in Lebanon

4.1. Background

The Republic of Lebanon is located at the eastern end of the Mediterranean Sea with a population of circa 3-4 million. Lebanon is a small country, 10 452 sq.km, with a north-south coastline of 210km and an east-west inland penetration of 50km. By virtue of its location and topography Lebanon receives plentiful rainfall and is hence blessed with a relative abundance of water resources. However, these resources are only partly developed. Within the MENA region only Lebanon and Turkey "have net surpluses and are the region's natural exporters of water"(U.S. Army Corps of Engineers, 1993, p.11). The Lebanese mountains, often referred to as 'the land of milk and honey', distribute their waters in all directions. Towards the sea in the west, towards Israel and Syria in the south, towards the Orontes river in the north and towards Syria in the east. Hence, Lebanon is often called the "Château d'eau de l'Orient". However, in

comparison with Turkey's large reservoirs, one can only speak of a "petit château d'eau". In Lebanon "there exist four major climatic regions: the coast, the lower reaches of the Lebanese mountains, the Bequaa Valley, and the Anti-Lebanon mountain range" (Dhananjai Shivakumar, 1989, p.3). The climate is strongly influenced by location and therefore varies greatly between, for example, the Eastern Mediterranean and the border of the Syrian desert. Lebanon enjoys winter rain and experiences the usual Mediterranean drought in the summer. The winter rains cover for about 70-80 days. The dominating winds are humid, coming from the south west. The minimum average temperature in winter in Beirut is 7°C and in summer the maximum average temperature is 27°C. Humidity is relatively high on the coast and on the western slopes of the Lebanon mountains with a mean minimum of 64% in November and a mean maximum of 73% in August. Lebanon receives a high amount of sunshine with 3225h/year. Potential evaporation is strongest in the Bequaa Valley with 1762mm/year; this however depends upon humidity, solar ray, wind speed and temperatures (Jaber, 1997, p.2-3). Lebanon's geology is dominated by fissured karstic limestone with 60% - 66% (6597 km^2) of the surface of Lebanon being composed of such rocks. This type of geological formation is permeable to water infiltration and favours the storage of underground water reserves. Volcanic basaltic formations are to be found in the North of the country.

4.2. Availability and geopolitics

Though Lebanon is most certainly in a favourable position with respect to water availability, its national demand for water is currently not met. Lebanon has been plagued by 15 years of civil war, economic collapse and the emigration of about two-thirds of its population. For 25 years, southern Lebanon has been a constant conflict area between Lebanon and Israel. "Many suspect Israel of occupying southern Lebanon because of water interests; allegedly, Israel is trying to divert Lebanon's Litani river" (D.Shivakumar, 1989, p.2). The Lebanese response to any claim voiced by Israel is simple. There is no doubt at all that "the Litani is 100% Lebanese" (Minister Hobeika, 1998, personal interview). "The official Israeli response to accusations of water theft has been that Israel not only has not been diverting the Litani, but that Israel also has no long term interest in staying in southern Lebanon" (D.Shivakumar, 1989, p.25). Lebanon's water potential is not only significant because of the quantity of water but also because of the region's geopolitics. It is worth noting that 15 of the region's 17 rivers flow entirely within Lebanon's borders. Of these,15 perennial watercourses 12 are coastal rivers flowing from east to west. The international watercourses are the Orontes, the Nahr El Kebir and the Hasbani.

Nevertheless, Lebanon's water resources are only partially developed, its water sector (institutions and administration) has barely been operational over the last twenty years and the lack of a sustainable management policy endangers the remaining freshwater resources. Political turmoil and chronic warfare are the reasons for the countries slow water development until the early 1990s. Warfare rendered many reservoirs and pipelines non-functional, caused shortages of water in Beirut and led to the marginalisation of the country's water sector and its associated local water authorities.

However, not all problems faced by the Lebanese water sector are related to the civil war. If future projects are not carefully planned and supervised, even Lebanon, which

is projected to have a water surplus, may face shortages. The hydrological metering network has almost broken down and other obstacles such as the poor distribution of precipitation in terms of time and place are challenging circumstances. Examples of these circumstances are the high proportion of Lebanon's water that flows into the Mediterranean Sea and the anarchic use of underground water i.e. over exploitation and degradation. The consequence of these problems is that information on water availability and demand in Lebanon is difficult to obtain and often less than reliable (Jaber, 1995, p.2-3).

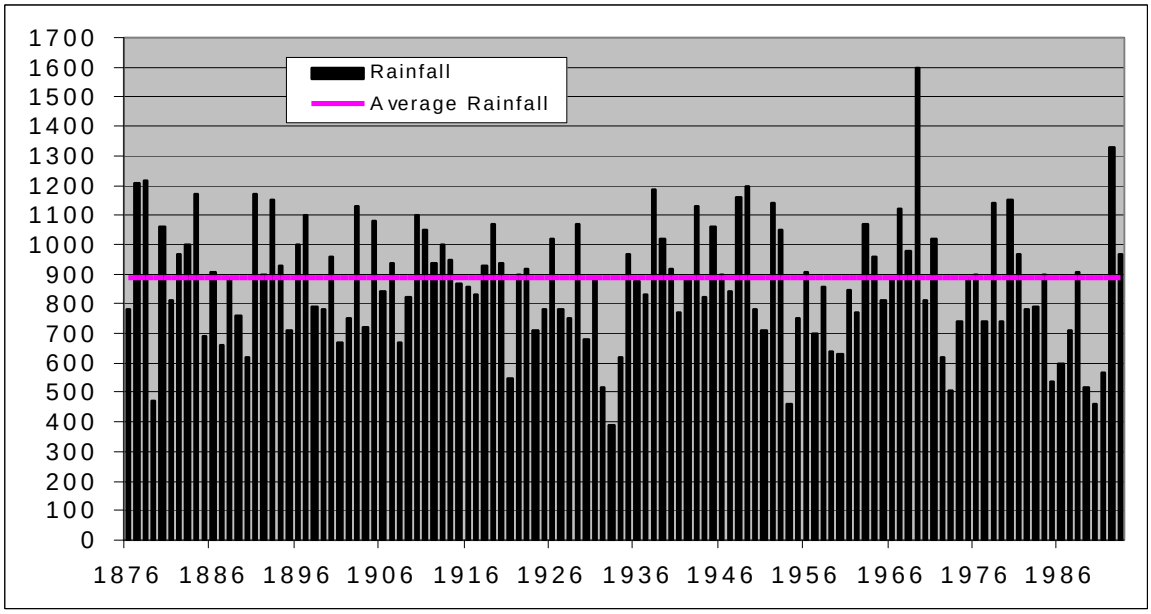
4.3. The lack of reliable and accurate data

A major problem for those managing Lebanese water availability and demand is the lack of accurate and reliable data. This circumstance has two causes. First, during the civil war hardly any research was carried out or data collected. Most of the data, reports, articles and books on water availability and demand in Lebanon were collected and written prior to 1986. Secondly, because of the regions' geopolitical situation, official reports are often false and subject to manipulation.

In the legal sphere, the legislative framework upon which water rights are based is clear. Under Lebanese law, water is a public good. The law states "L'eau en droit libanais appartient au domaine public" (Mattar, 1998, p.2), the basic principle behind this being "la domanilité des eaux". Water is subject to a set of regulations that have their roots in civil law as well as in administrative law. In favour of the administration, the Lebanese legislator created a "présomption selon laquelle toute eau est domaniale à moins que les particuliers aient acquis un droit sur ces eaux avant l'entrée en vigueur de l'arrêté 144/S" (Mattar, 1998, p.2). In sum, all waters in Lebanon belong to the public domain. However, waters where property rights, usage rights etc. were established prior to l'arrêté 144/S (10.06.1925) are exceptions to that rule. These waters belong to particular people.

Hydrological metering and information collection in Lebanon goes back to the mid-1960s. However, the application of such information for scientific use was then very limited. Such metering required a heavy investment to be made in a public sector domain. In the early 1970s the Direction Générale des Statistiques began collecting hydrological data but its work was interrupted by the political events following the crisis in 1975. At that time, various research projects were also launched under the supervision of the Lebanese CNRS. In the early 1980s some isolated action took place such as the report published by the Water Authority in Beirut. Towards the end of the 1980s the Council for Development and Reconstruction (CDR) launched a series of local studies. Since 1992 the Ministry has collected all the hydrological data available and is checking its relevance, accuracy and reliability. Further, the Ministry has begun to rehabilitate some of the hydrological metering network destroyed by the war (Catafago, 1998, p.2-5). Further projects include the drawing up of regional master plans, the computerisation of topographic maps etc.

In order to get an overall impression of the data available, the following rainfall chart has been reproduced.



Source: Hakim, 1993, p.6; reproduced by author

Figure 1. Values of annual precipitation (mm) in Beirut since 1876 (A.U.B. Station)

Lebanon does not have a large number of rainfall stations and of its 140 stations only seven have data sets that cover the last 30 years. Reports and studies give different figures concerning the actual amount of rain days. The range lies between 60- 90 rain days per year. Reports often do not take into account precipitation in form of snow. Nevertheless, official documents state that the total precipitation reaches about 8600Mm^3/year on average.

The same irregularities in figures occur with respect to evaporation. Evaporation in Lebanon is rarely measured or calculated but rough estimations centre around 48-50%, circa 4500Mm^3/year. Very little research on surface flows has been carried out over the last 20 years. Out of 89 existing limnigraphs, only 17 are in working order. Official figures estimate the transboundary flows (Orontes, Kebir, Hasbani) to be 670Mm^3/year. Ground Water losses to the sea, to the Houla Lake and to Syria are calculated to be about 850Mm^3/year. Estimations of the potential total water available are often solely based on technical criteria and do not account for financial, economic, social and political influences. Government figures claim that 2200 Mm^3/year are actually available. A recent study estimated that the total annual exploitable resource of 2182Mm^3, and 1750Mm^3 in the dry season, which lasts roughly from the 1st of June to the 30th of November (Treyer, 1998, p.49-56). Official reports estimate the potential total to be higher - at 2580Mm^3/year. To note is that out of the actually available surface flow of 2200Mm^3, 800Mm^3 are available in the seven months of the dry period. These figures assume 600Mm^3 of groundwater available and 800Mm^3 that could be stored behind dams (Jaber, 1997, p.4-5). A reduction in the quantity of available water supply of about 55% every 10 years and a decrease of at least two thirds due to three consecutive dry years 1988-91 has to be acknowledged. Another problem with most of the figures available is that they do not account for water quality. Recent studies and reports do state that between 50-65% of Lebanon's waters are potentially polluted (Howard Hymphreys & Partners).

As in most of the MENA countries, a large amount of water is allocated to agriculture. It is estimated that 65% of the water available flows into irrigation, 28% into domestic use and 7% into industrial uses (Debbané, 1998, p.1). Government documents state that need for domestic water amounts to 350Mm^3/year, that industry needs 70Mm^3/year and irrigation 900Mm^3/year. Projections for the year 2015 show that a drastic increase in these figures is expected, to 900Mm^3/year for domestic use, 240Mm^3/year for industry and 1700Mm^3/year for irrigation - a total of 2840Mm^3/year. This total is more than the estimated potential resource available of 2580Mm^3/year. Looking at these figures, it becomes clear that Lebanon's "chateau d'eau" is very small indeed. The government's rhetoric is that "it can be concluded that water resources in Lebanon are hardly sufficient to meet the actual needs and the future needs and it will be compulsory to resort to non traditional Water Resources" (Jaber, 1997, p.6).

Whether Lebanon will face such water shortages is difficult to assess considering the lack of accurate data available. Nevertheless, some have argued that, even if the government estimates are correct, one would simply have to apply advanced techniques in the agricultural sector to reduce the total need to about 2440Mm^3/year.
There exists three generations of projects for water supply in Lebanon. The first generation, dating from the 1940s and before includes projects for the conveyance and distribution of drinking water by gravity (Beirut, Saida, Tasseh etc.). The second generation, dating from the 1950s and 1960s includes mainly pumping projects, studied and executed mainly by American Aid (Point IV) (Chamsine, Tyr, Kadi etc.). Finally, the third generation, dating from after the 1960s, included the pumping of underground water through wells (Wadi Jilo, Jradeh etc.)[1](Jaber, 1997, p.7).

4.4 The lack of functioning administrations and institutions

The Lebanese water sector faces a variety of problems. Besides the previously mentioned scarcity of data, the sector's administration and institutions are currently barely working. The main government bodies in charge of the sector are the Ministry of Hydrological and Electrical Resources (MHER) and the Ministry of Finance. Under the MHER's tutelage there are 22 independent water authorities and more than 200 committees in charge of projects and operations. Officially, these 22 water authorities have been reduced to five offices located in five main areas. "Efforts are now being deployed in management, institutional reforms have brought the 222 offices and committees dealing with water down to five" (Catafago, in Hydroplus, 1998, p.12). However, this fusion has so far only been talked about and the 22 water authorities are still in place. Each of these water authorities has a director and several employees. The number of employees varies from office to office. The water authorities' role is to carry out projects of less than one million Lebanese Pounds (around 750 US $), maintenance, distribution and the collection of returns. All projects exceeding this small budget have to pass through the MHER and the Ministry of Finance. Consequently, almost all projects have to go through these government bodies and in many cases this means a possible delay for projects of three to four months.

The challenges the 22 water authorities face are twofold. On the one hand, there are the technical problems and equipment failures. Most of the installations are old and in

[1] A site visit to Wadi Jilo was conducted on the 07.08.1998; plates can be found in the appendix VI.

poor condition. Maintenance has not been carried out because of the 17 years of civil war. Plans for the renewal and development of old projects do not exist. Population growth and demographic displacements of large groups to specific areas has put excessive stress on the old system.
On the other hand, there are problems with the administrative and institutional side of the water sector. The average age of the staff currently employed is approximately 55 years and there is a massive shortage of qualified personnel due to freezing of recruitment during the war and poor pay. The average pay for a water authority director is about 450 US $ per month. Hence, it is not surprising that so few people choose to work in this area of the public sector considering Lebanon's high cost of living.

Several points are worth noting when comparing some of the existing water authorities. A water authority's success or failure is mostly determined by its local circumstances. Further, in comparing some of the directors' views on the reason for their success or failure a difference in perceptions and beliefs can be highlighted. Comparing the water authority of Jbail (Mount Lebanon) with Ain-el Delbeh (Mount Lebanon), Beirut (Mount Lebanon) and Baalbeck/Hermel (North Bekaa) a difference in figures and perceptions is noted, with respect to employment. The director of Jbeil, Mr.Khalife, has around 100 people working in his office, none of which is an engineer, a lawyer or an accountant. He argues that "60 people would easily be enough. The high figure of employees working in his offices represent disguised employment." He further states that "this is what happens when politics rule the administration" (Khalife, 1998, personal interview). In contrast, the director of the Ain-el Delbeh water authority has 90 people working in his office. Mr. Nizam (director) points out that "90 people is not enough for the organisation of the administration, the finances and the technical supervision" (Nizam, 1998, personal interview). Far more employees than in most offices are working for the Baalbeck/Hermel water authority, which is, out of the 22 water authorities, the worst in terms of returns. Its director, Mr. Mussawis, has 241 employees at his disposal, of which he says, "They are all too old and not trained. Most of these employees have been with the same job since the late 1960s. People, who are not trained and not qualified, are unproductive" (Mussawis, 1998, personal interview). The only water authority with access to a lawyer, 20 engineers, an accountant and a person in charge of service and collection of fees is the water authority of Beirut. Though the director, Mr. Freihe, claims that the success of the Beirut office is due to his personality and commitment, budget figures suggest that the only office to receive a large enough budget to pay for these specialists is his.

With respect to returns, the major difference in figures becomes evident when looking at the low returns of the water authority of Baalbeck/Hermel (North Bequaa). Around half a million people are officially beneficiaries of water services but only 35% pay for these. Mr Mussawi argues that this low return is caused by "the economic situation of the area, the constant migration in and out of the district and a very old network system". He goes on to say that "if politics would not, from time to time, push his region at the centre of the governments attention his district would be long forgotten" (Mussawi, 1998, personal interview). In contrast, the water authority of Metn (Mount Lebanon) receives a return of 86-90%, the highest in the country. When asked what he believes makes beneficiaries pay, Mr. Manieh answered "people in Metn pay because

we provide a good service and because they have confidence in the office" (Mr. Manieh, 1998, personal interview).

What becomes apparent is that the allocation of financial and human resources varies drastically from district to district and even more between the five major regions[2]. Each of the 22 water authority directors currently employed has a different view and perception of the situation, which is largely determined by his beliefs and by local circumstances such as constant migration and whether the district economy is urban or rural.

4.5 Existing information gaps

Undoubtedly, the lack of reliable and accurate data results in information gaps that affect policy makers within Lebanon and influence the advice provided by alien actors (international donors). These information gaps have various effects on the country's future water resource development and management.

On a very basic level, this means that little can be done within Lebanon in terms of project work as long as policy makers and scientists have only rough estimates to base their plans for the future. As previously mentioned, the GoL (Government of Lebanon) has begun to contract agencies for the collection of local data. A study conducted by the MHER's minister's adviser revealed that this process of data collection takes about five to six months to complete (Catafago, 1998, personal interview).

The issue, however, becomes somewhat more complex with respect to the country's geopolitical situation. Ratzel argued that "l'idee politique ne contient jamais seulement le peuple, mais aussi son territoire (1989, p.17). With respect to the country's geopolitical situation and the tensions surrounding the issue of the Litani waters, information gaps give leading politicians an excuse to "avoid" the issue. An example of this would be the following event that occurred in the early 1990s. The GoL was prepared to send out a team of experts to investigate whether the Litani was losing water and, if so, how much. In other words it was a fact-finding mission to investigate whether the Litani river basin and the Jordan river basin are in any possible way connected. A further purpose of this trip was to find out whether Israel steals water or not. Several consultant firms reacted with an outcry, arguing that Lebanon is better off not knowing exactly whether there is a connection between the two river basins as any link could challenge the existing status quo. A status quo that states that the Litani is 100% Lebanese. Naturally, this would be beneficial to Israel's officials, who have for a long time tried to challenge the ruling of international law in that matter. Consequently, the GoL did not send out its team of experts and the issue has since then not been on any political agenda.

Considering the inherent tensions in the region's geopolitics, it comes as no surprise that the lack of accurate data sometimes proves useful. It gives the GoL the possibility of creating a "vérité officielle" that has a logic of its own, determined by what proves to be politically advantageous. Another example would be the failure of the Congrès International on "Education a une culture d'une eau partagée et protegée" in Kaslik (18/20 June, 1998, Lebanon). Though the congress did take place, the introductory

[2] North Lebanon, South Lebanon, Mount Lebanon, Bekaa south and Bekaa North

speech delivered by Minister Hobeika (MHER) pointed out several times that no such thing as “une eau partagée et protegée” existed in the region. He allowed the congress to continue but ensured that all papers addressing a regional solution were not delivered. In contrast to other government elites in the MENA region such as in Egypt, the GoL speaks openly about a future water shortage and conference papers addressing this issue were most welcomed. To present Lebanon as a country that will be short of water by the year 2015 proves to be politically sensible in terms of geopolitics and, at the same time, justifies pleas for increased international donor involvement.

Due to the country’s geopolitical situation the introduction of “new knowledge” by alien advisers becomes a difficult process. Some have argued that “the development and management of Lebanon’s water resources is the key to rebuilding Lebanon’s economy and solving the water problem of the region” (Parsons, 1992, p.1). Though this could be true, Lebanon’s geopolitical situation and national politics do not allow for such “radical” thought. Policy innovation for the Lebanese water sector is currently on the GoL’s agenda but does not deal with any issue that hints at a regional solution. Acceptable proposals for the GoL centre around technical rehabilitation and in some cases institutional and administrative change. Part of the advice given, mainly the part focusing on productive efficiency, will be accepted and will be assimilated to become “mutual knowledge”. However, advice that focuses on allocative efficiency and water security contradicts the GoL political agenda with respect to its neighbours.

For international donors, the lack of access to reliable and accurate data means that donor involvement is fragmented and unfocused. These conditions also mean that project proposals are often unrealistic, duplicated and sometimes even contradictory. To gain reasonable local credibility, international donors need a minimum of reliable information in order to be able to assess national and local needs properly. Finally, as long as there is no set of reliable and accurate data, smaller donors will not become involved. Small donors will not act unless international donors such as the World Bank make the first move and give the country a minimum of credibility.
Reform of the water sector’s administration and institutions is overdue. At the moment the lack of data and the lack of functioning institutions puts the development of the sector on hold. Meanwhile, remaining resources are overexploited and polluted, and project proposals become forgotten agendas.

“*Everything in the Lebanese water sector is down to politics”*
(Minister Hobeika, 1998, personal interview).

5. Water policy reform and stakeholder analysis

5.1. Water policy reform in Lebanon

Since the early 1970s, governments in Lebanon have wanted to restructure the water sector’s administration and institutions. The events of the last 20 years, however, made any change impossible. In the early 1990s, water policy reform once more became an issue on the government’s agenda and a new reform project was launched with the assistance of the World Bank under the “Coastal Pollution Control of Water Supply Projects”(Saghir, 1998, personal interview). In 1998 the reform proposals were passed

by the council of ministers and will soon go to parliament for debate and possible ratification. The reform proposals can be broadly divided into two categories: Proposals of a technical nature and proposals of an administrative/institutional nature.

On the technical level the process has been divided into short-term, medium-term and long-term solutions. Short-term solutions include the rehabilitation of old projects and the finalisation of semi-finished projects. These urgent works are being financed by the World Bank and the European Bank for Investment at a total cost of about 600 million US $. It is estimated that 80% of repairs will be completed by the year 2000. This first stage does also involve the training of staff.

Medium term solutions centre around the rehabilitation of the meteorological, pluviometric and limnimetric stations network. Within this phase, Water Master Plans that will outline the use of modern methods of management and operation will be drawn up. Technically, new resources will be developed through the construction of reservoirs and pumping stations. These works will be locally financed and will cost about 150 million US $.

The long-term stage involves the setting up of a national Water Policy based on the collected data. This stage also involves the control of surface water with the construction of dams and hill lakes, and the achievement of a rational use of ground water to support the surface water. In addition, the development of wastewater networks is being planned. Finally, the long-term phase ends with the execution of large projects such as the Awali-Beirut project, designed to resolve problems of scarcity in the major cities. Estimates state that the overall cost of this stage amount to about two billion US $ which would have to come from international funds (Jaber, 1997, p.8-9 and 1998, p.4-5).

On the administrative and institutional level two processes would run parallel. Firstly, the MHER would be restructured and made responsible for the National Water Policy. Its overall responsibilities should decrease with respect to equipment renewing, rehabilitation and even simpler operations. Second, the 22 water authorities would be regrouped into five authorities (companies) responsible for detailed studies within the frame of the Water Master Plan. The water authorities will be responsible for the implementation of such projects and for their operation and maintenance. They will be in charge of the renewal of installations where necessary, and for the repayment of contracted loans and their interest by using adequate tarification policy (Jaber, 1997, p.9). The aim is to modernise water laws and regulations, to render the water authorities more independent by making them operate under industrio-commercial conditions, and to introduce the private sector into activities such as maintenance and operation, collection of subscription fees and the management of treatment and pumping plants. Another aim is for poorly endowed regions/districts to be supported by the more developed or strongly endowed regions/districts.

From an overall assessment, it would seem as though the implementation of such a reform package could be followed through without major delays. This, however, is not the case as embedded in this reform package are major issues of controversy that will most probably cause unnecessary delay and opposition to its implementation.

5.2. Difficulties with the proposed reform

The first major obstacle the reform faces is the fusion of the existing 22 water authorities into five offices, each of which will come under the authority of a Président Directeur Général (PDG). Though the GoL argues that the selection of the five regions was based on the fact that water aquifers in each region are independent, this selection remains contestable. It is common knowledge that, within Lebanon, almost all water resources affect each other in one way or another (Corm, 1998, personal interview). Nevertheless, this selection stands and is not open for discussion. Many leading politicians such as Minister Jumblatt, leader of the Druze community, do not see any benefit at all in the merging of, for example, the five water authorities of Mount Lebanon into one office. There is a tendency for each water authority director to defend his own district, and for not wanting to share "his" resources with other districts of a region. Minister Hobeika refers to such behaviour as "Lebanon's tribal politics" (Hobeika, 1998, personal interview). The person in charge of the reform package argues that "the point of the reform is to get politics out of the system" (Majdalani, 1998, personal interview). Another problem with the fusion is that most of the current employees will have to leave and the question is where to, as it is politically not feasible to simply replace them with younger staff. In addition, there is the pressing question of which current water authority director will have a place in the new system, possibly even as one of the five PDGs. Major problems are raised by the selection of these PDGs, as each large community in Lebanon wishes to be represented (Maronite and Greek-Orthodox Christians, Druze, Shiite and Sunni Muslims). Some rightly question whether the new PDGs will be chosen on the basis of skill or because of their religious backgrounds. As Water Authority Director Mr. Khalife points out: "The PDG might be chosen because of political reasons, because of the man who stands behind him" (Khalife, 1998, personal interview).

Also highly controversial is the issue of privatisation. Here the views differ even between ministerial consultants. Mr. Catafago argues that "we are not ready yet. You cannot privatise a sector that is almost dying" (Catafago, 1998, personal interview). The minister himself believes in "bringing the spirit of the private enterprise into the public sector" (Hobeika, 1998, personal interview). Some argue that privatisation solely became an issue because of the World Bank. In 1992, the Bank froze a loan, causing Canadian donor involvement to cease as well, and the GoL is desperately trying to avoid this ever happening again (Saghir, 1998, personal interview). Since it is the World Bank that gives the country the credibility that it needs to attract cheaper loans from smaller donors, the GoL tries to conform to World Bank policy. One of the ministerial consultants states that "everybody is in the Bank game. No one tries to go beyond Bank standards" (Catafago, 1998, personal interview). What this statement proves is that some GoL representatives believe that the whole reform package, including the institutional reform and the measures of privatisation were suggested solely in order to meet the World Bank demands. Nevertheless, the Minister states that: "we are paranoid. We are aware of the fact that World Bank policy and advice is automatically linked to wider issues" (Hobeika, 1998, personal interview). The World Bank's response to such a claim is that: "the Bank has no defined strategy for Lebanon. However, nothing happens in a vacuum. The aim is to reduce the number of people who do not have access to water" (Saghir, 1998, personal interview).

It should by now be obvious that the implementation of the proposed reform package will prove difficult. Though a first draft was approved by the council of ministers, parliament will most certainly reject the proposals for privatisation and question the fusion of the 22 water authorities into five main offices (Hajjar, 1998, personal interview). In order to speed up the process of implementation and to identify those who might stand in the way of the reform, a stakeholder analysis was conducted.

5.3. Stakeholder Analysis

A stakeholder analysis identifies the reform proposal's key, primary and secondary stakeholders. It provides an assessment of stakeholders' interests, and the way in which these interests affect the reform's riskiness and viability. The method is linked to both institutional appraisal and social analysis. In chapter six the results will be incorporated within Lebanon's determining complex social-political matrix. For the purpose of this analysis the proposed reform was considered as a project. Three steps will be described: first, a stakeholder table will be drawn up, identifying and listing all potential stakeholders. The table will designate these stakeholders' interests (open or hidden) in relation to the reform project, and the potential impact the reform may have (+ positive; - negative; +/- uncertain and ? unknown). Second, the "influence" and "importance" of stakeholders with respect to the reform project will be assessed. Third, a matrix diagram that combines influence and importance will help to identify the political risks and assumptions that will need to be managed through adequate reform project design.

There exist three categories of stakeholders:

A. Key Stakeholders (key actors) who can significantly influence the reform project
B. Primary Stakeholders who are ultimately affected by the reform project (positive/negative)
C. Secondary Stakeholders who are intermediaries in the reform project delivery process

5.3.1. Step One: Identifying the stakeholders

As a first step of the stakeholder analysis, the various stakeholders and their interests were identified. It is worth remembering that the interests of stakeholders can involve open or hidden agendas. Further, it should also be noted that stakeholder tables are generally drawn up for small projects. When applying this method to a water sector reform, the analysis become much more complex and difficult.

Key stakeholders	Interests	Potential reform impact
MHER	-control over resource	+
	-control over funds/activities	+/-
	-control over content of reform	+/-
	-introduce productive efficiency e.g. technological innovations	+
	-avoid allocative efficiency	+/-
	-avoid conflict with WB	+/-
	-avoid regional solution	-
	-avoid politically tense issues	-
	-avoid liability for reform failure	-
	-eradicate "politics of favours"/ Lebanon's tribal politics	?
World Bank	-implement sustainable/growth oriented water policies	+/-
	-implementation of MENA strategy	-
	-mobilise and advise the GoL	+
	-using water more efficiently	+/-
	-integrating water resource management	+/-
	-promoting regional and international partnership	-
	- link public and private sector	+/-

Fig 2. Stakeholder Tables, author, 1999

The primary stakeholders are all the 22 water authorities. The author interviewed nine water authority directors of the following three regions: Mount Lebanon, Bequaa north and Bequaa south.

Primary stakeholders	Interests	potential reform impact
22 Water Authorities	control over maintenance/operation	+
	-control over all major projects	-
	-defend interests of their region/district against GoL and international donors	-
	-object/avoid alliance with poorly endowed district/region	-
	-support the reform if they personally	+/-
	have a place in the new order	
	-support reform if profits to be made	+/-

Secondary stakeholders	Interests	potential reform impact
Ministerial advisers	-achievement of targets	+/-
CDR	-achievement of targets	+/-
Other donors	-achievement of targets	+/-

Fig 2. Stakeholder Tables, author, 1999

5.3.2. Step Two: Assessing the 'Influence' and the 'Importance' of stakeholders

The second step was to assess the relationship between the reform and stakeholders on the basis of their influence and importance, so that a two-dimensional matrix could be drawn.

'Influence' defines how significant potential actions of the stakeholder are in affecting reform implementation. Influence is the power that stakeholders have over reform. Influence is maybe best understood as the *extent to which stakeholders are able to persuade or coerce others into making decisions,* and in following certain courses of action (Overseas Development Administration, 1995, p.8). *Power* may derive from the nature of a stakeholder's organisation, for instance, a ministry controls budgets and the *World Bank controls loans*. Other forms of influence may be less formal, such as a personal connection with ruling politicians. Variables affecting a stakeholder's relative power and influence on a formal level are, for example, the legal hierarchy (MHER and its 22 water authorities) and the authority of leadership (Minister Hobeika is powerful man with many cadre connections but very unpopular due to his past that is said to include responsibility for the massacres of Sabra and Chatila). The control of strategic resources for reform, the possession of specialist knowledge (alien advice) and the stakeholders' negotiating position (GoL versus WB) can also have an affect. On an informal level the variables are, for example, social, economic and political status (the status of a water authority director within his community), the informal influence through links with leading politicians (for example the indirect influence Minister Jumblatt or Minister Berri can display), the degree of dependence on other stakeholders (MHER versus water authority directors).

'Importance' defines how critical the stakeholder is to the success of reform. These stakeholders may have *weak capacity to participate* (formally) *in the reform*, and have *limited power to influence key decisions* (Overseas Development Administration, 1995, p.9). The assessment was done on an ordinal scale of 1 (very low influence and importance) to 5 (very high importance or influence). The relative influence and importance of all stakeholders can be shown on a two-dimensional matrix.

5.3.3. Step Three: Building a matrix diagram

High importance

A *4 *6	B *2 *1	**Stakeholders:** Key: 1 MHER 2 World Bank Primary: 3 22 Water Authorities
D *5	C *3	Secondary: 4 Ministerial Consultants 5 CDR 6 other donors

Low importance

Low influence High influence

Fig 3. Two by two matrix, author, 1999

Results:

A) The ministerial consultants and the (Council for Development and Reconstruction (CDR) are of importance to the reform, but low in formal influence. The differing views between the Minister and his consultants on the issue of privatisation show that consultants can only give advice but that the final decision remains with the Minister.

B) The (Ministry for Hydrological and Electrical Rescources (MHER) and the World Bank have a high degree of influence on the reform, and are also important for its success. They need a good working relationship between each other and other stakeholders to ensure an effective coalition of support for the reform.

C) The 22 Water Authorities have a high degree of informal influence, and can therefore affect the reforms' outcome, but their interests are not target of the reform. Interests, as listed in the stakeholder table such as the protection of their district/region, the assurance of having a place in the new order etc. This conclusion implies that these stakeholders may be a source of significant political risk, and that their interests will need to be addressed, managed and carefully monitored.

D) Other donors are of relatively low influence or importance to the reform objective as long as the World Bank gives Lebanon credibility. If the World Bank does not provide the credibility, the role of these other donors becomes more significant as the question then becomes whether they will keep their loans open or not. Under such circumstances, they could be placed under A in the matrix.“ In Lebanese politics, religion still matters more than ideology” (The Economist, 1996, p.15)

6. Lebanon's determining socio-political context

6.1. Lebanon's complex social matrix

Lebanon as a country and Lebanon's parliament are a mosaic of many colours. Following the civil war, it is not certain whether the mosaic of this small Republic has not been fractured beyond repair. The four largest single religious groups are currently, as a percentage of the population, the Christians 37,6%, the Sunnis 21,3%, the Shias 34,0% and the Druze 7,1%. Each religious group is represented in parliament and holds a number of seats the Maronite Chritians holding 34 seats, the Sunni Mulims 27seats, the Shia Muslims 27 seats, the Greek-Orthodox Christians 15 seats and the Druze 8 seats (The Economist, 1996, pp. 4, 16). These religious groups are also reflected within the water sector. The Minister himself, Mr.Hobeika is a Maronite Christian while the director of the Ministry, Mr.Jaber, is a Muslim. The director of the Jbeil water authority, Mr.Khalife is a Maronite Christian, the director of the Ain-el-Delbeh water authority is a Muslim and the director of the Barouk water authority, Mr. Sade, is a Druze. What "The Economist" described as confessional games when stating that "Lebanese politics remains a game of obstructionism and confessional patronage" (The Economist, 1996, p.16), the Minister described as "Lebanon's tribal politics".

6.2. Strong societies and powerful beliefs

In terms of the interaction between the state and its component societies, the Lebanese state is weak and its societies are strong. The MHER might, to date, have had the power to block projects but most of the time regions/districts follow their own agendas. Water authority directors reflect the beliefs deeply embedded within their religious community and these are frequently not compatible with some aspects of the proposed reform. The stakeholders that may object to the reform and cause political tensions are the 22 water authorities. An example of this would be the situation involving the Druze community. Water authority director Mr. Sade argues that "the fusion of the 22 offices was the worst idea he ever heard of. The main source of life in Lebanon is water. It is better that this resource is divided than controlled by a single representation". He further states that "every region/district behaves independently and no one has confidence in the reform. The reform serves only a special group of people. In Lebanon, religion and politics affect everything" (Sade, 1998, personal interview). On his own, Mr. Sade would most probably not represent any real threat to the implementation of the reform. However, the man standing behind Mr. Sade is the leader of the Druze community, Minister Jumblatt. It is no secret that Mr. Jumblatt does not want to share the water of his region with another region and therefore will not vote in favour of the reform. Minister Hobeika's response to this situation is that "Mr. Jumblatt cannot do anything directly against my decision" (Minister Hobeika, 1998, personal interview). Interestingly, even the World Bank's adviser Mr. Hajjar believes that "Mr. Jumblatt has a right to protest. The reform is a one-way project" (Hajjar, 1998, personal interview). Another example involves the water authority director, Mr. Mussawi from the Bekaa north. He argues that "the reform will solve some problems but not the main problem which is politics". He goes on to say "why should we have five offices? We should have one office for the whole country, that how you get the politics out of the system" (Mussawi, 1998, personal interview). The point is that water is power, the power to give and to choose. Director Mussawi highlights this fact in pointing out that "all comes down to religion. People such as

water authority directors are powerful, first because all 22 directors know each other, second because of the people who are behind them" (Mussawi, 1998, personal interview). Hence, stakeholders do not follow needs but follow the strongest support groups. As the Minister says: "the whole story is a story of the protection of interests". What is happening politically on a regional level (MENA), is also happening within the five regions on a national level" (Minister Hobeika, 1998, personal interview).

6.3. The GoL versus the World Bank?

The question that arises is whether the time is right for the introduction of a reform package that is loaded with many controversial issues. The World Bank adviser Mr. Hajjar believes that " the reform is not good and will not work" (Hajjar, 1998, personal interview). The GoL and Ministerial advisers feel, however, that "the reform has to start somewhere, even if the preconditions are not absolutely perfect. The adjustments have to be made along the way (Catafago, 1998, personal interview).

The introduction of alien advice by the World Bank partially assimilated into "mutual knowledge". Both the GoL and the World Bank are key stakeholders with respect to the influence and importance they can exert over reform. However, because of the region's geopolitics, not all alien advice is welcome. Lebanon has repeatedly stated that there is no 'regional water'. The paradox is that the GoL needs the Bank's credibility in order to attract cheaper loans - it is said that 1 US $ given by the World Bank represents 3 US $ from other donors (Saghir, 1998, personal interview). Hence, although the GoL might argue that "the Bank cannot dictate what has to happen" (Hobeika, 1998, personal interview) the reality is that the Bank will only give money for small projects and not for large projects such as dams. The Minister believes that the Bank will not pay for dams "as long as we do not agree to share our water" (Minister Hobeika, 1998, personal interview). The GoL fully understands the economic rationale implicit in the advice of the Bank. The Minister however states that "if we were to sell our water, the price would have to be decided by us. We would decide who we would sell it to" (Minister Hobeika, 1998, personal interview). In the view of the GoL, the Bank always looks for a wider regional issue, and the GoL does not like the regional implications of the Bank's policies. The World Bank strongly denies to have any kind of hidden agenda with respect to Lebanon's water (Saghir, 1998, personal interview). The official version or rhetoric of the GoL is that "Lebanon does not have much water, and is therefore not such a big economic resource" though with a data set as unreliable as the existing one, little can be said to contradict this official truth. (Minister Hobeika, 1998, personal interview). With the majority of the population believing that Israel steals water any other policy would prove to be political suicide. The GoL rhetoric can also be reflected with a comment the new minister, Mr. Traboulsi, made " Contrairement à ce qu'on pense, le Liban n'a pas assez d'eau (...) Si nous jouissions effectivement d'un excédent, nous l'aurions vendu comme d'autres vendent leur pétrole (l'Orient Le Jour, 1998). The Bank, nevertheless, makes a firm stand against the accusations of having a hidden agenda. The Bank states that "the only strategy we have is for the Great Beirut project to work and to bring water to people. The Bank has no hidden agenda but the Bank certainly considers regional implications" (Saghir, 1998, personal interview). The Bank has a multitrack approach towards Lebanon that involves project based loans and a public sector review. The Bank believes that its approach towards Lebanon should be "participatory" with its

main function being that of a co-ordinator. Undoubtedly, there is a fine balance between advice and involvement and much depends on who expresses the advice, in what circumstances, in what discourse style and with what nature (Giddens, 1984).

6.4 Towards reform implementation

The implementation of the proposed reform will prove to be difficult. The political tensions that exist between various stakeholder groups may cause major delays. Allan points out that "implementing new policies, there is no doubt, will be unpopular and counter to the interests of key players in the politics and the economics of the region" (Allan, 1994, p.66).

Though the debate about the fusion is not supposed to be re-opened, it is this part of the reform plan that will generate most resistance. Therefore, the discourse should be re-opened in order to accommodate complaints and ideas voiced by the 22 water authority directors. Even though most of the directors might technically not be qualified, it is they who have been working in the district/region with the local people. They are a small community of their own with powerful links to leading politicians. Until now they have only been partially informed about the reform and assigned very little significance, a fact that most of them do not appreciate. It will be difficult to satisfy every community, but choices such as those of the PDGs will have to be made with great care in order to avoid political turmoil. The beliefs and perceptions of each of these groups will have to be taken into account when making decisions that will ultimately affect their power to influence regional/district politics and their importance within a national context.

On a higher level, there is the relationship between the GoL and the World Bank to consider. In October 1998 a new Lebanese parliament was elected and the new Minister of the MHER is now Mr. Traboulsi. In general, the new parliament takes a firm stand against the "politics of favours", and Mr. Traboulsi will continue with the implementation of the proposed reform package but rethink many of its legal details. Any fusion and projects are currently on hold as a new legal framework is under preparation, a process that is expected to take three to six months (Catafago, 1999, personal interview). Any introduction of "new knowledge " is welcomed and will be assimilated to "mutual knowledge" as long as the Bank has no wider agenda. The new Minister is reportedly taking a firm stand against the Bank arguing that if the Bank's strategy and the government's strategy do not match up, Lebanon will itself pay for future projects (Catafago, 1999, personal interview). Lebanon, however, does not have sufficient financial resources to pay for any major projects. Further, without the Bank's input and credibility, smaller donors will freeze their donations, which are vital for the future development and management of Lebanon's water sector. Hence, the discourse might have become a little stronger but the economic situation of country remains the same.

Finally, everybody involved in the reform project seems to agree on the fact that the implementation of the reform will take a very long time, in part, because it will be contested by various stakeholders, and because it may be rejected in parliament. It will also be a slow process because the country's national and geopolitical situation does not allow for the introduction of allocative efficient measures suggested by

international advice. In Lebanon, re-allocation of water is not yet an option. As long as changes in water policy in Lebanon are based solely on political processes and are not supported by well-informed government elites, well-informed alien advice, well-informed users and efficient institutions, the implementation of water policy reform will remain a long and hazardous process.

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7.6. Appendices

Appendix I. List of people interviewed in Lebanon during the summer and winter of 1998.

Appendix II. List of state and private water projects visited during the summer of 1998.

Appendix III. Questionnaire presented to nine out of 22 Water Authority Directors

Appendix IV. Short comment on the Wadi Jilo portable water project.
Photos of the Wadi Jilo portable water project, visited on the 07.08.1998

Appendix V. Comment on village case study: Mayfouk

Appendix I.

List of people interviewed in Lebanon during the summer and winter of 1998:
(Includes an identification of the relevant stakeholder groups)

Government Elite: personal stakeholders/key stakeholders:
Minister of the Ministry of Hydrological and Electrical Resources (MHER):
Elias Hobeika (semi-structured interview, 22.07.1998)
MHER Director Bassam Jaber (semi-structured interview, 25.06.1998)
Ministerial Consultant Selim Catafago (semi-structured interview, 10.07.1998, 05.01.1999)
Ministerial Consultant Michael Majdalami (semi-structured interview, 29.07.1998)
Consultant Wadi Najem (semi-structured interview, 09.07.1998)

External advice/alien actors/key stakeholders: World Bank
Sector leader Jamal Saghir (semi-structured interview, 01.08.1998)
Principal Agriculture Economist Jean Francois Barres (extensive email contact)
World Bank Consultant Eng. Ziad K. Hajjar (semi-structured interview, 13.08.1998)

Primary stakeholders:
Directors of two out of five water regions:

Mount Lebanon: six water authority directors
Beirut: R. Freihe (formal interview, 28.08.1998)
Ain el Delbeh: M. Nizam (formal interview, 16.08.1998)
Barouk: A. Sade (formal interview, 05.08.1998)
Metn: Manieh (formal interview, 19.07.1998)
Kesrouane: T. Fahed (formal interview, 15.07.1998)
Jbeil: R. Khalife (formal interview, 14.07.1998)

Bekaa North/South: three water authority directors
Baalbeck/Hermel: A.Moussawi (formal interview, 12.08.1998)
Zahle: G. Malik (formal interview, 12.08.1998)
Chamsine: M. Choubaciosy (formal interview, 12.08.1998)

Internal/external advice/ secondary stakeholders:
Center for Reconstruction and Development (CDR): Wafa ShauvaUddine (semi-structured interview, 23.07.1998)
Sector Implementation Unit 1: Project leader Dick Warren (informal interview, 05.01.1999)
French Embassy: Hospital (email contact)
Other donors: Italian, Kuwait Fund, French, and German

People classified as non-stakeholders:
Center for Lebanese Policy Studies: Rossi Nasser (project manager, helped with collection of background data)
Consulting & Development Services: G. Hatem (managing director, helped with collection of background data)

R. Corm, (helped analysing hydrological data)

Appendix II.

2. State and private water projects visited:

State projects in collaboration with the CDR and the World Bank:
Oasmieh, Ras el Ain and South Bekaa irrigation schemes
South Bekaa: Project of Badaune tourism, irrigation, and portable water (11.08.1998)
North Bekaa: Yamonmy irrigation scheme (12.08.1998)

Private projects:
South Lebanon:
Wadi Jilo portable water (07.08.1998)

Appendix III.

Questionnaire:
Questions presented to nine out of 22 Water Authority Directors

Introduction:
Hello my name in Emmanuelle Kunigk and I have been encouraged by the Ministry of Hydrological and Electrical Resources (MHER) to come to your office. I am trying to understand how your office functions, where its strengths and its weakness lie. Furthermore, whether you believe that the new water management and development reform that just passed the council of ministers will help to improve the actual situation in the water sector on a national level.
Could you please spare me a little time – about 20-30 minutes? I am asking Water Authority Directors from the regions of the Mount Lebanon and the Bekaa. There are no right or wrong answers to the questions and they do not ask you to comment directly on the regional situation Lebanon faces with respect to water.

Q1. Could you broadly outline the responsibilities your office has in the current order?

Q2. Could you assess how the water authority actually functions. Where lies the strength of the institution, where lies its weakness?

Q3. What do you know about the new water management and development reform that currently passed the council of ministers and now goes into parliament?

Q4. Do you believe that the reform is positive or negative and why is that the case?

Q5. Could you identify factors that might slow down or even stop the process of implementing such new water management and development policies?

Q6. How much time do you believe will it take to shift the current situation in the Lebanese water sector towards a more sustainable and productive solution?

Appendix IV.

Project visited on the 07/08.1998 with the guidance of its director Mr. Nizam.

The Wadi Jilo portable water project is located in the mountains of Tyr. The resource is state owned, maintenance and operations are carried out by a private contractor. The project is relevant to the reform as it signifies a proto-type of how future water authorities could work. The first phase of the project dealt with bringing water to Tyr and Jabal Aamel. The second phase of the project will bring water to 48 villages in the area (that number is to be increased). Around 150.000 people are currently receiving drinking water from this project. The projects engineer was educated in Germany and the project's director, Mr. Nizam, is also the director of the Ain-el Delhbe water authority. The project's

technical facilities (pumps and wells) are very well maintained in comparison to state owned pumping stations. To note is that the project lies in a politically very turbulent area and has consequently been destroyed several times. Undoubtedly, the Wadi Jilo project highlights the advantage of introducing the private sector into a public sector domain.

Appendix V.

The village Mayfouk is located in the mountains of Jbeil. The village's population are Maronite Christians and the village is spread over two hills and a valley. The valley inhabitants have direct access to all natural water resources (springs) located within the valley, the habitants of the hill area have no access to the water resources. The valley people sell "their" water to the hill habitants. The later ones, however, often drive to Amshite (a one hour drive) and buy water tanks there, as water in Amshite is cheaper than the water sold within Mayfouk. The people of Mayfouk are a very close community but when the issue centres on water, the village is deeply divided. Over the last 5 years, the hill inhabitants have tried to pressure the government in constructing either a pumping network or a basin so that water can be delivered to the hill areas of the village. Petitions have been signed, representatives were sent to Beirut but nothing changed. The GoL response was to send each year an engineer to Mayfouk, who would analysis the situation and then return to Beirut. However, nothing followed these visits and the hill population's frustration increased continuously.

In 1998, however, a new municipality was elected. Its president Mr. Wehbé lives himself in the hill area of the village and therefore, receiving water has become his major focus. Due to his close connections to the water authority of Jbeil, Mr. Wehbé was in a position of addressing the issue more directly. His connection to leading politicians and other influential persons led to an unexpected turn of events. In August the GoL contracted a private contractor to start building a water basin and the relevant connections to the houses located on the hills. By the end of September the constructions were finished and water delivered to the households on the hill areas.

The study highlight how stakeholders which themselves are affected by a water shortage and have the right political connections can be powerful enough to demand the implementation and follow up of projects.