

Hydro-political Baseline of the Upper Jordan River



The Association of the Friends of Ibrahim Abd el Al



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Cover photo:

Hasbani Springs, one of the sources of the Jordan River. Hasbaya, Lebanon, January 2011 (Muna Dajani).

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Acronyms

AJTU	Al Jazeera Transparency Unit	LMoA	Lebanese Ministry of Agriculture
CAS	Central Administration of Statistics (Lebanon)	LMNI	Lebanese Ministry of National Infrastructure
CDR	Council for Development and Reconstruction (Lebanon)	LRA	Litani River Authority
CO	Commonwealth Office (UK)	MDM	Medecins du Monde
CoS	Council of the South (Lebanon)	MEDA	Euro-Mediterean Partnership (MEsures D'Accompagnement)
DO	Dominions Office (UK)	MO	<i>Moyen Orient</i> newspaper
EC	European Commission	MEW	Ministry of Energy and Water (Lebanon)
FAO	Food and Agriculture Organisation	NSU	Negotiation Support Unit
FNA	French National Archives	NWC	National Water Carrier (Israel)
OF	Foreign Office (UK)	PCIWS	The Parliamentary Committee of Inquiry on the Israeli Water Sector
FOEME	Friends of the Earth Middle East	ROL	Republic of Lebanon
GDHER	General Directorate of Hydraulic and Electrical Resources (Lebanon)	RWE	Regional Water Establishment
GDO	General Directorate of Oversight	SLWE	South Lebanon Water Establishment
GIZ	Gesellschaft fuer Internationale Zusammenarbeit	TWINS	Transboundary Water Interaction Nexus
GOI	Government of Israel	UN ILC	United Nations International Law Commission
GOL	Government of Lebanon	UNDP	United Nations Development Programme
GSI	Geological Survey Israel	UNEP	United Nations Environment Programme
HSI	Hydraulic Survey of Israel	UNHRL	United Nations Humanitarian Response in Lebanon
ICA	Israeli Civil Administration (of Judea and Samaria)	UNMACC	Mines Action Coordination Center
ICBS	Israel Central Bureau of Statistics	UNRWA	United Nations Relief and Works Agency
ICRC	International Committee of the Red Cross	US DOS	United States Department of State
IMEP	Israeli Ministry of Environmental Protection	USAID	United States Agency for International Development
IMFA	Israeli Ministry of Foreign Affairs	UXO	Unexploded ordinance
IRC	International Refugee Council	WB	World Bank
ISIIMM	Institutional and Social Innovations in Irrigation Mediterranean Management	WHO	World Health Organisation
IWL	International Water Law	WWTP	Waste Water Treatment Plant
IWMI	International Water Management Institute		
JEC	Jaffa Electric Company		
JVL	Jewish Virtual Library		

Preface

This study could not have been completed without the generous assistance of several people. We extend warm appreciation especially to Todd Jarvis, Alexis Carles, Agathe Maupin and Doris Summer for the considerable time and spirit they volunteered. Appreciation is also due to the several people from all continents who helped us track down (or attempt to track down) missing data. The study has been greatly focussed and refined thanks to the thoughtful comments of internal reviewers Gilbert Achcar, Tony Allan, Hussein Amery and Ralf Klingbeil. Very special thanks are due to Imane Abd el Al, Antoine Salaame, Kamal Kara'a, Wajdi al Najem, Chadi Abdallah and all the members of AFIAL. Their level of professionalism is matched by only by their generosity and spirit of cooperation, and this has made the work a pleasure. While the study does not necessarily reflect their views, we believe there is nonetheless a general consensus amongst all who have contributed to the study, and a shared concern to confront the nefarious effects of the Jordan River conflict.

EXECUTIVE SUMMARY

This study establishes a baseline upon which future analysis of the Jordan River conflict may build, by investigating the hydro-politics of the river's upper reaches. It reviews the record of use and distribution of the transboundary flows, and finding these to be asymmetric in the extreme, investigates how the inequity has been achieved and maintained.

The study chooses a broad and innovative approach to shed clarity on the subject, and the very different types of data are interpreted through a range of theoretical frames. Inspired loosely by political ecology and political economy, the frames include hydro-politics, International Relations, discourse theory, and international law. The study rejects the 'environmental determinist' approach, to situate the contestation over the transboundary flows instead as shaped by the broader political context. Water is part and parcel of that context, and should not be ascribed too much (nor too little) political importance. The Upper Jordan River conflict should be understood, in other words, as shaping and being shaped by (but not driving) the conflict between the states and peoples of Lebanon, Syria and Israel (and, to a lesser extent, of Jordan, and the West Bank and Gaza).

The research team's fluency in Arabic, Hebrew, French and English has enabled it access to and interpretation of previously un-examined or under-examined data. This has led to exploration of the archives of the French and British authorities that ruled Lebanon, Syria and Palestine, reconciliation of both Lebanese and Israeli river flow data, exploration of Lebanese and Israeli newspapers, and unpublished reports by authorities on these sides of the Upper Jordan River.

The research scrutinises the location and flows of the main Hasbani, Liddan and Baniyas upper tributaries, confirming that the basin and recharge area of each are international. Six decades of flow measured just upstream of their confluence shows that the Liddan is by far the largest (about 240 million cubic metres per year (MCM/y)) and the most stable of the Upper Jordan River sources. The Hasbani and Baniyas flow about half as strong, and are highly variable throughout the year. Most of the flows of all the tributaries discharge from springs which are fed by groundwater from transboundary aquifers recharged by the snow and rains of the Israeli-occupied Syrian Golan, or by the slopes of Mount Hermon. These have been very roughly estimated here at 250 – 350 million cubic metres per year (MCM/y).

As the figure below shows, the struggle for use of and control over these flows began with the carving up of the land by British and French forces, following their conquest of the Ottoman empire. Zionist lobbying to include much of the Jordan River sources as part of British Mandate Palestine succeeded in 1921, though continued pressure in the following decades for the Litani River did not. The contestation turned much more physical after the 1948 *nakba* and the creation of the state of Israel, when the construction and destruction of grand water master plans and projects took centre stage of the inter-state wars. Israeli

control of the flows was assured following its military conquest of the Syrian Golan in 1967, and invasion of Lebanon in 1978 (and subsequent occupation until 2000). Since that time, Israel has used essentially all of the Upper Jordan Flows, Lebanon about 1%, and Syria none.

The distribution by Israel has been maintained even following its withdrawal from most of Lebanon in 2000. As it still occupies the Syrian Golan (including parts of Mount Hermon), the town of Ghajar and the Cheba'a Farms, Israel retains complete territorial control over the sources and surface recharge area of two of the three tributaries – the Liddan and the Banias.

Lebanon's construction of the Wazzani pumping station on the Hasbani River in 2002 suggests that Israel's relinquishment of the territory of the upper Hasbani led to a loss of control of the flows. The research finds that reaction of the Israeli side (threatening war, and prompting international mediation) has served to re-assert control of the flows, however, by deterring any future Lebanese development of the river. This leads to one of the study's several implications for theory: that the control of upstream flows can be achieved without the need for control of the territory, as shown in the figure below.

Nonetheless, the flows of the Upper Jordan River are today not of critical importance to the survival of the state of Israel. The tributaries are the main source to the Lake of Tiberias, and provide about one-sixth of total freshwater produced in Israel (one-third, if evaporation is not counted). The flows are used for industrial agriculture to produce cash export crops in the Negev desert, as well as for domestic consumption. Considering this use of precious resources together with current Israeli levels of food imports and desalination capacity, there are more rationale alternatives. Thus, while the continued Israeli occupation of the Cheba'a Farms and Ghajar may be or have been partly about ensuring continued water flows, it should also be interpreted alongside the more important religious and military motives.

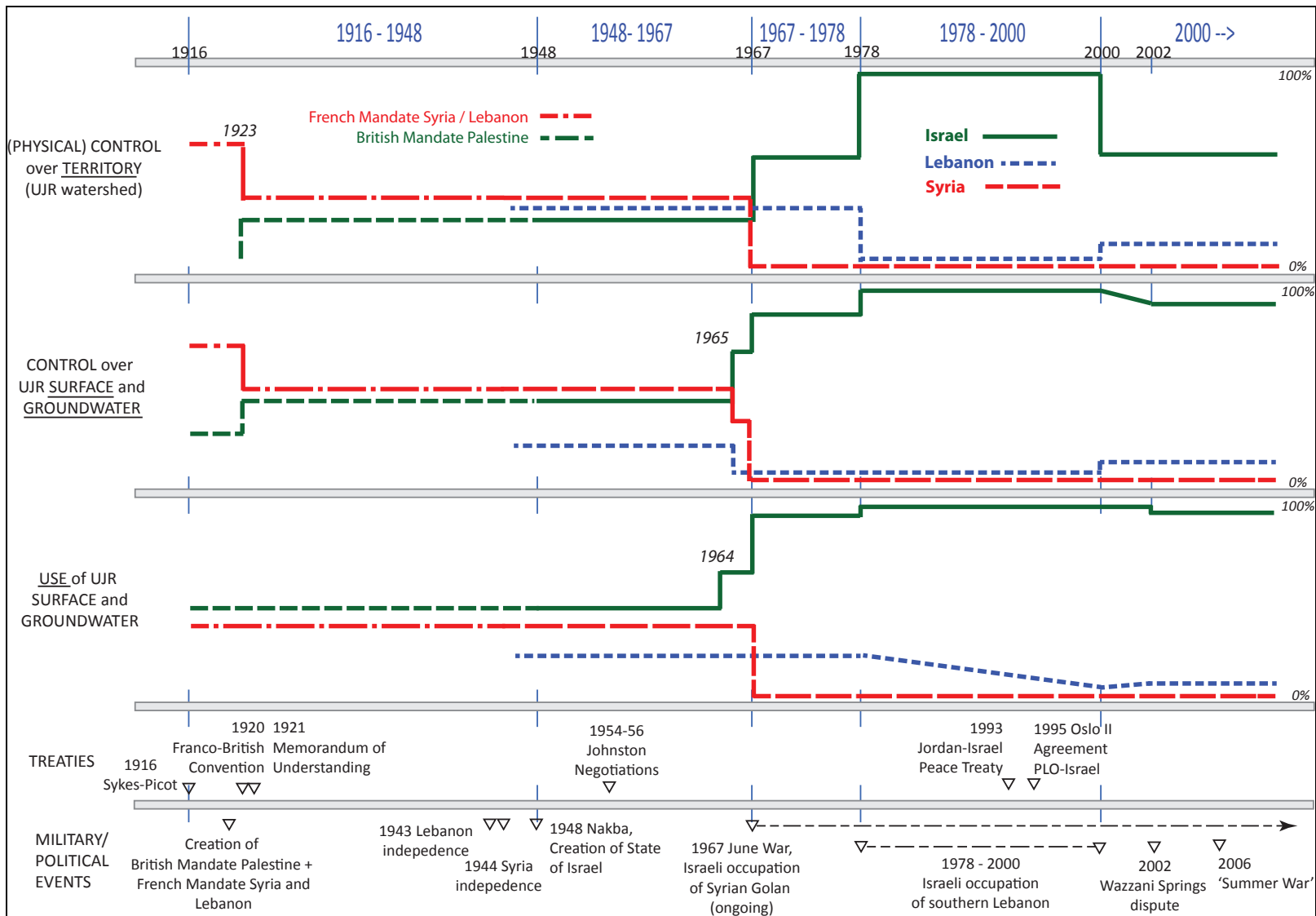
In the same way, the study concludes that control of the Litani was not one of the main motives of the Israeli invasions of Lebanon in 1978, 1982 and 2006. Water resources and water infrastructure certainly have been targets in these wars, however, and are routinely used as tools to wage them. Deliberate or indiscriminate Israeli damage of over 50 public water reservoirs in southern Lebanon in 2006 have proven not only violations of International Humanitarian Law, but effective means of clearing civilians from their homes, and of preventing their return. The 2006 war also served to re-enforce the 'hydro-hegemony' that Israel has maintained over the transboundary flows – by degrading and deterring any further Lebanese development of the Hasbani.

The great political, military and financial costs Israeli governments have incurred to achieve and maintain essentially exclusive use of the Upper Jordan flows is not matched by the

relatively slight importance of these to state security. The disconnect is explained in part through an investigation into the perceptions of the water conflict. Maintenance of the established order through violent acts (hard power) is found to be supplemented through a number of narratives and discourses (soft power). The most dominant of these latter is the Israeli discourse linking the transboundary flows with Israeli state security, on the basis of constructed narratives of scarcity and of strategic territory. The link appears firmly established across the Israeli political spectrum, and is found to have influenced international mediators during the 2002 Wazzani Springs dispute.

The efforts of the international diplomatic community during the Wazzani and earlier disputes are found to be more concerned at not upsetting the established order, than at addressing the root causes of conflict. By focussing on managing the water conflict, they have missed opportunities to begin to resolve it, thereby smoothing concerns on one side of the border while raising them on the other. Such efforts also yield to the temptation of incoherently dividing the Jordan River Basin into its upper and lower sub-basins. Diplomatic efforts focussed on the Jordan's lower reaches are ultimately compromised by ignoring the tensions over the source of the flows, while upstream activity cannot be (and evidently is not) disregarded by downstream riparians. This study itself succumbs to the artificial division by focussing on the Upper Jordan, but emphasises the importance of situating it within the entire Jordan River Basin.

Potential sources of future violent conflict identified may come about through transboundary pollution, extensive groundwater development, or plans to construct reservoirs. Efforts to predict any such outbreaks should first consider the broader political context, which will continue to shape, for instance, whether wastewater re-use and desalination technology will be used by either side to maintain or reduce the effects of the water conflict. In between the destructive bouts of war, the lower intensity chronic water conflict continues, with its effects felt chiefly in Lebanon. Should shifts in power or relations allow it, just resolution of the water conflict could be swift indeed. To that end, the study re-emphasises that tensions over the Upper Jordan River will not disappear unless analysis considers, and diplomatic efforts confront, the asymmetry in transboundary water use and distribution throughout the basin.



Hydropolitical Baseline of the Upper Jordan River