

**Can Abundance and Scarcity Clash?
Environmental Security in Lebanon's Second Republic**

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This paper examines the ongoing threat to environmental security in Lebanon since the end of the civil war in 1990. It makes the case that there can be environmental causes and effects of conflict, as well as environmental targets of conflict in Lebanon. It examines why the government does not always implement international environmental treaties. The paper studies the hydrogeopolitics of the region, the ominous threat of water wars, and the claims of Syria and Israel on Lebanon's abundant water. It examines the Wazzani pump dispute that erupted in 2001 when, following Israeli withdrawal, the Lebanese government decided to divert water from the Hasbani River into surrounding impoverished villages. The dispute exemplifies how water tensions, in an area already fueled by political distrust, can easily inflate into war rhetoric. The implications for cooperation with Israel, as well as the role of water in the peace process are also analyzed.

As it continues to recover from its 15-year civil war (1975-90), Lebanon, with its limited economic, social and political resources, faces enormous challenges in its struggle for security, given its regional position – located between two powerful neighbors, Syria and Israel – where it bears the consequences of a failed peace process between Israel, the Palestinians, Syria, and of course Lebanon. In the geographical region where Lebanon is situated, environmental issues have been sources of conflict between Arabs and non-Arabs, both in the Near East and Africa. Wars have also contributed to the destruction of the environment in the Arab world. In a region where water is scarce, Lebanon's neighbors have always claimed its relatively abundant waters. A brief historical overview confirms this.

In the Middle East, water conflict is an age-old problem, mentioned as far back as in the Old Testament. The early systematic work of the Zionists for the utilization of the Litani River, which flows within Lebanon and drains not far from Israel, can be traced back to the end of the nineteenth century. During the war of 1948, the new state of Israel occupied Lebanese territory west of its northern tongue to the left bank of the Litani, only to vacate it a few months later partly because of its wrong assumption that water sharing arrangements would be worked out for joint exploitation of the waters of south Lebanon. Since 1949, when Israel and Lebanon signed an armistice agreement, no water arrangements have been put into place by the two neighbors, either through direct negotiation or any other form of formal agreement. As early as 1955, the abundance of water in Lebanon was noticed as a way to alleviate projected water problems in the

Jordan River Valley, under the US Johnston plan to divert water from the Litani River into Lake Kinneret in Israel. However, after Arabs protested, the plan was never officially formulated. Amery writes that while Israel may not have initiated the 1967 and 1978 wars solely for the purpose of increasing its water resources, it did have, as part of its larger calculation, gaining control over the headwaters.¹ Wachtel describes the 1967 war as “a territorial and resource dispute that remains one of the most serious and intractable unresolved security problems today.” He clarifies that, while the Jordan River diversion was just “one part of a larger matrix of political conflicts in the region,” it is nonetheless “an accepted explanation for the timing of military conflict and remains a perceptual cause of war.”² In 1978, the Israeli army invaded southern Lebanon and established the so-called “security zone” to allegedly prevent guerilla attacks from Lebanon. This occupation was motivated partly by Israel’s long-term water needs.³ Former Israeli Prime Minister Begin had water in mind as a consideration when he planned the 1982 invasion of Lebanon as well.⁴

Historical developments, then, caused the so-called “Jordan River Basin” to become an environmental security conflict between Lebanon and its neighbors. The Basin consists of a river system that is fed by four tributaries, including the Hasbani River in southeast Lebanon. After the 1967 war and the establishment of the security zone in south Lebanon, Israel became an upstream riparian on the Upper Jordan system, thus in a favorable strategic position vis-à-vis the downstream riparians of Jordan and the Palestinians.⁵ In 1991, the Middle East peace process was taking place in Madrid, in the form of a bilateral conference, as well as a multilateral conference that discussed five topics including Water Resources, Regional Security and the Environment. The multilateral conference convened in Moscow, but was of little use as Syria and Lebanon chose not to participate, and because the bilateral conference stalled on three of the tracks: the Syrian, the Lebanese and the Palestinians. Lebanon’s bilateral negotiations with Israel have been linked with the progress in Israeli negotiations with Syria.⁶ No bilateral negotiations have taken place between Lebanon and Israel since they were stalled after the Oslo Accord in 1993. Meanwhile, in 1994 Lebanon signed an agreement with Syria whereby 80 percent of Lebanese water would be allocated to the latter. In 2000, the Israeli army finally abandoned its security zone in Lebanon except for some disputed areas including the Sheba farms. The withdrawal was unconditional and unilateral, and hence no peace treaty was signed nor any understanding reached over any environmental or security matters between the two countries. Ever since, the Lebanese government has been struggling to rehabilitate the liberated southern villages. In 2001, Israel contested Lebanon’s decision to rebuild the room that had been built in the early 1970s to house a pump on the Wazzani Spring, itself a tributary of the Jordan River. The idea was to divert water from the Hasbani River, which flows into Israel, into the surrounding impoverished villages including Wazzani. Clearly, history shows the role of water stress in confrontation between states in the region.⁷ By the year 2025, the average annual net water resources in the Middle East are expected to be half of their present day level.⁸

Only recently did the link between security and the environment start to be taken seriously. In the Arab world, including Lebanon, attention to the environmental issues began in the early eighties as part of a trend towards broadening the concept of security. It was not until the early nineties that environmental security emerged in the Arab discourse. Undoubtedly influenced by global advances in security discourse, Arab policy statements and academic writings started referring more explicitly to the link between environmental concerns and security strategies.⁹

This paper examines the ongoing threat to environmental security in Lebanon since the end of the civil war in 1990. By “environmental security,” it is understood that the referent object is the ecosystem, the value at risk is sustainability, and the source of threat is mankind. Here, “sustainability” or “sustainable development” is understood to mean “development designed to meet the needs of the present without compromising the ability of future generations to meet their own needs.”¹⁰ Environmental security is defined in an Arab and Lebanese context, and the paper elucidates a framework of analysis that is appropriate for the case of Lebanon. It establishes a link between water security and food security. It makes the case that environmental security problems in Lebanon must be understood within the larger context of the struggles of developing countries in general: As globalization becomes more and more pervasive, there arises a need to re-examine the notions of “sovereignty” and the “nation-state” so as to account for how and why a country such as Lebanon complies with its environmental obligations.¹¹ The paper then studies the environmental and political impact of water scarcity in the region (hydropolitics) and the scholarly divide on the ominous threat of water wars in the Middle East, and the question of whether water should be securitized. It studies the claims of Syria and Israel on Lebanon’s relatively abundant river waters and aquifers. It examines in detail the case of the Wazzani pump dispute insofar as it exemplifies how water tensions, in an area already fueled by political distrust, can easily inflate into war rhetoric. The implications for potential cooperation with Israel (including desalinization and negotiated import of water from Lebanon), as well as the implications of water in the Middle East process are also considered.

Securitizing The Environment: Which Paradigm and Analytical Framework for Lebanon?

How are environmental issues being studied, in a region plagued by distrust due to long-standing tensions and economic and development needs? First and foremost, it must be noted that scholars disagree on the need to securitize the environment. Skeptics argue that environmental threats and conflicts interact with other variables, presenting methodological problems. Deudney sees environmental politics as subversive of the state and the state subversive of the emergent global environmental political sensibility, thus shedding doubt on the potential role of environmental degradation as a significant cause of interstate warfare. More generally, environmental security has been conceptualized either as a national security problem, or within the context of sustainable development.¹² The first dominates the discourse in the North, while the South (including Lebanon) adopts the second. Non-state actors, namely academics and non-governmental organizations, produce the bulk of Lebanese discourse on environmental security. This discourse tends to link environment and security only indirectly, through the intervening variable of development.¹³ Indeed, there is a direct linkage between political and economic problems and environmental conditions in the Middle East, where environmental issues have been both a direct and indirect cause of Middle Eastern conflict in the past, from water disputes to outright war. These conflicts have in turn exacerbated regional environmental problems, making them both cause and effect in several instances.¹⁴

Because of the perception that environmental issues are technical, not posing immediate security threats, the prevalent paradigm in the Arab world is that environmental issues are residual, hence are allocated very meager financing. Inefficient bureaucracy and inadequate legislation worsen this effect.¹⁵ Sunderlin proposes three paradigms for tackling environmental issues: class, managerial and individualist.¹⁶ The Arab literature on the environment can be

classified under the managerial paradigm, treating environmental issues as the result of industrialization and modernization, and lack of proper state control and governance. The level of analysis is organizational, insofar as it focuses on the relationships among various state organizations. In other words, the reference point is the state, but only its organizational – not political – aspects, as the discourse is largely technical. Disaggregating environmental issues, this paper reveals how the discourse on *water* security specifically can explicitly refer to the political role of the state, which poses the obvious question of whether the majority of Lebanese and Arab scholars really consider water security as distinct and separate from environmental security. Buzan alludes to this by emphasizing that “to better trace the essence of such localizing, regionalizing, and globalizing dynamics, empirical research is needed issue area by issue area”, resulting in maps “presenting crucial regions with concentrated environmental problems.”¹⁷ In the case of the Middle East water disputes, “security interdependence involves the issues of dams, reduced water flow, salinization, and hydroelectricity. The Jordan, Yarmuk, Litani, and West Bank aquifer links Israel, Jordan, Syria, Lebanon, and West Bank Palestinians in another hydro security complex, with conflicts occurring over the allotment of water.”¹⁸

Selim does account for the fact that a minority of Arab scholars adopts a class paradigm and views environmental issues in political terms, assigning responsibility to the developed countries and their “environmental imperialism.”¹⁹ However, this minority seems to concentrate on nuclear waste disposal in developing countries, ozone depletion and global warming. Selim also accounts for the use of the environment as a “security tool” in the region, as exemplified by Israel’s destruction of Palestinian greenhouses and olive trees, dumping of hazardous waste in Palestinian-controlled areas, building of settlements and separation walls etc. Not only can the environment be a cause of conflict, then, but also an effect, and target, of conflict in the Middle East. Another example of how the environment can be a political tool is the use, by Egyptian negotiators, of “the card of environmental cooperation”, not because of any “adherence to a politicization paradigm”, but “to accelerate the peace process” in the Madrid conference.²⁰ Similarly in that same conference, Selim claims that, “despite its technical character, the Israeli approach had major political objectives, that is, to establish an Arab-Israeli regime for cooperation, a regime which will have political implications.”²¹

Lebanon’s environmental security is illustrated as a series of dilemmas, where one actor’s quest for security endangers the security of others, hence for example the ominous threat of a water war. The environmental questions must be assessed in a Middle Eastern framework too, especially when it comes to water issues. The link with security is articulated in two ways: first, the interaction of environmental degradation with conflicts in the Middle East, and second the merging conflicts over environmental issues.²² As is discussed in the next section, illicit drug production also has consequences that should be addressed as an environmental security issue alongside, of course, the traditional framework of narcotics abuse and trafficking. Drug production is a major regional environmental issue because of the potential disruption of Lebanese agriculture, economy and health, and the documented problems with smuggling and use. Joffe writes that “the involvement of state-level organs, transnational elites, and international organized crime in drug production in Lebanon further elevate the environmental consequences to a pressing security question.”²³

According to Buzan, the most successful environmental securitizing moves are local, as “many of the manifest existential threats involved are expressing themselves locally, which means people usually do not have to wait for a global-level solution to tackle these local

problems.”²⁴ Consequently, even when the concern is global, its political relevance is decided at the local level. This is true in the case of Lebanon, as the next section reveals the impediments to implementing environmental treaties.

The framework of analysis of Lebanon’s compliance with international environmental treaties can be posited in terms of “flows” as formulated by Makdisi,²⁵ which treats the world in a dynamic way, allowing the possibility for change. This analytical framework allows an escape from the rigid international relations theories that aim at defining, and hence limiting, the options available to us. It is not “liberal” because it exposes power, both theoretically in terms of the power of international relations theories to limit the choices available to policymakers, as well as practically in terms of the elite power in Lebanon within the context of Western hegemony. It is not “realist” either because the idea of flows “challenges the assumptions of a state-centric world and accepts that non-state players perform a crucial role.” To understand why Lebanon complies or not with environmental treaties, one must bear in mind the determining role of sectarianism, within the context of more powerful international and regional state interests:

Within this framework the elite dominate Lebanon; and this elite is allowed to have such a degree of control over the state apparatus that, for obvious reasons, environmental constraints serve only as a nuisance for the continued exploitation of the country’s natural resources and for ‘development.’²⁶

However, more optimistically, flows also mean “environmentalists in Lebanon can connect with environmentalists outside the country to push for higher environmental compliance standards.”²⁷ Of course, it is not the environmentalists that are bound by the treaties. It is Lebanon the *state* that gets bound by the norms it eventually agrees to. Therefore, the problem in compliance is this *gap* that forms between reality (transnational flows) and how the issue is conceived (inter-state system).

Furthermore, in the case of water, Lebanon illustrates Buzan’s framework that highlights the environmental sector’s role in pointing to the overspill from one sector to another: “failing to distribute scarce water jeopardizes basic human needs and will stimulate ‘my family first’ policies – that is, extremism.”²⁸

Securitizing the environment, in the sense of integrating the environment into national security strategy, is still lacking in Lebanon, and if instituted would require an increase in bureaucratic efficiency. In addition, the commitment still lacks, and the existing (managerial) paradigm remains unhelpful.

Environmental Threats

Environmental threats transcend borders and national sovereignty. As things stand today in the Middle East, no effective institution – or international agreement – is capable of meeting this challenge. The major environmental threats as perceived in the Arab world are water scarcity, desertification and land degradation. One can also add to the list: degradation of the marine environment, biodiversity, decline of the atmosphere, and climate change etc. Almost all Arab countries are below the “water poverty” line. About 60% of all Arab water resources originate from outside the region, which easily allows tensions in the use of water that is jointly shared.²⁹

In Lebanon, 70% of springs and aquifers have been found to be polluted or contaminated with harmful bacteria.³⁰ During the war years, Lebanon's infrastructure, pipelines and aquifers suffered heavy damage resulting in water shortages, intrusion of seawater in the coastal aquifer and neglect of farmlands due to the lack of water for irrigation.³¹ As water demands increase in the region, the likelihood of conflict over the other resources also increases. This is because this demand is directly related to increase in population, insufficiency of agriculture, the potential effects of climate change, and the effect of widespread regional pollution.³²

During the war, illicit drug production boomed, especially in the Bekaa valley in eastern Lebanon. Long-promised international aid never materialized, which means drug production could resume quickly. The chemical process involved in such extensive production resulted in hazardous wastes, with a detrimental impact on an already fragile environment:

The impact of chemical contaminants from illicit drug production will be especially profound in an environment such as Lebanon. Groundwater contamination is already a severe problem... As Lebanon rebuilds its water infrastructure, including detection monitoring network, contaminants from illicit drug production will come into greater focus. Solid waste is already a problem, and Lebanon does not appear prepared to deal with hazardous or toxic materials.³³

This problem has only recently attracted attention: "Little information is available which suggests that the scale of the environmental consequences from illicit drug production has either not been addressed... or that it is submerged within a vast range of other pollution problems."³⁴

Lebanon's geographical situation suffers from a vicious cycle of human and resource impoverishment, not only as a result of outdated technologies for delivering water to agriculture, and "the failure of agriculture to meet the increasing demands of what is rapidly becoming the least food self-sufficient area of the world," but also due to disputes over ownership of water.³⁵ Food security is thus connected to water security. Both are challenges to national security:

Countries that suffer from water deficits invariably have food deficits and these conditions contribute to tensions between themselves and neighboring countries that can erupt into violent confrontations. This chain of security problems derives from the usage of water for food production. Of all the uses of water, food and agricultural production are the most extensive and intensive.³⁶

Furthermore, governments who are dependent on food imports not only experience huge financial burdens, but also suffer from strategic vulnerability. Again, national security translates into food security, which in turn depends on water security. The Middle East is an excellent example of this, "because of the great, if not disproportionate, value that is put on self-sufficiency in a region where mistrust, rather than cooperation, has been the norm."³⁷ Security consequences are felt in terms of mounting debt, diversion of assets from infrastructure to debt repayment and crisis relief, disruptive population movements both intra- and inter-state, and "a further increase in the already dangerous tensions within the area."³⁸

Population growth adds to the problem. In the Middle East, population has doubled since the end of World War II, demanding more irrigation water, putting upstream states such as Lebanon at an advantage, and consequently reducing available downstream flows. Winnefeld estimates that the resulting environmental split of increasing inequities between the North and the South could, in the long term, surpass in significance the former East-West tensions.³⁹

With regard to the problem of enforcement of international environmental treaties, the case of Lebanon exemplifies the struggle of most developing countries. A recent study by Makdisi compares the hazardous waste crisis that first emerged in Lebanon in 1986 with the tension resulting from the Assi River Agreement of 1994. The study examines the impact, on both state and non-state players in Lebanon, of the 1989 *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal* and the 1997 *United Nations Convention on the Law of Non-Navigational Use of International Watercourses*. The puzzle was why there was compliance in the case of hazardous waste, but not the water case, given that the internal and external pressures on Lebanon were almost identical (the sectarian system and Lebanon's weakness as a state, respectively). The Assi River case began as a dispute with Syria over the sharing of water. It ended with the Assi River Agreement, which, Makdisi writes, was concluded in the same manner as other regional water agreements, including those regulating the Nile, Euphrates, and Jordan rivers. In other words, the agreement followed the "Harmon Doctrine" formula, whereby the state with more power (Syria) imposed its terms on the less powerful one (Lebanon). Since no transnational alliance was formed between non-state players, Makdisi concludes, the UN Water Convention was ineffective. On the other hand, in the case of the hazardous waste, an informal transnational alliance was formed between Lebanese and international non-state players. These alliances "close the gap between the ideals of international law (as expressed in international treaties) and the realities on the ground (i.e., the uneven capacity and will of the relevant state players to comply with the treaties)."⁴⁰ The non-state players challenged the state to accept changes in the international legal order by creating new international norms, in the form of international environmental treaties.⁴¹

The relevance of Makdisi's study is that it reveals a gap in the literature on international environmental compliance, which is the ignorance of the fact that states are for the most part neither equal nor sovereign, especially in the developing world. Instead, the literature assumes the existence of liberal-democratic states that "are supposed to intervene in order to manage the environment in a 'rational' manner... and whose decisions are carried out by apolitical and impartial state functionaries."⁴² Makdisi notes that the incorporation of environmental concerns into the international legal order has resulted in 1) an expanded role of non-governmental organizations (NGOs), 2) the greening of international institutions, and 3) the spread of sustainable development. This explains the role of non-state actors such as NGOs in catalyzing environmental compliance in developing countries, where the post-colonial state represents "a structural limit to effective environmental compliance."⁴³

Having clarified the scope and repercussions of threats to Lebanese environmental security, this paper shall now more narrowly focus on examples of *water* conflicts in Lebanon, including the Wazzani pump dispute of 2001.

Water Disputes

The Issues:

At the outset, it must be clarified that some scholars still consider the Middle Eastern water crisis to be no more than a myth. Dan Zaslavsky, formerly the Israeli Water Commissioner, said that "there are local and temporary shortages because it's not the highest priority of the countries involved; that's all, nothing else."⁴⁴ Other scholars insist that, while oil was the commodity that dominated 20th century security conflicts, in the 21st century that commodity is

freshwater. The difference lies in that the latter has no substitutes.⁴⁵ Water courses through several countries, each trying to confine it for its purposes, whether withdrawal or power generation... so that ground water use in one country degrades and diminishes its availability in another. Water is an exemplar of a globalization that does not recognize borders and new security considerations... While these problems have always existed, they have now reached such a peak of importance that emerging water-induced national security challenges confront conventional analyses of national security threats.⁴⁶

In the Middle East, where many issues of “high politics” – particularly regarding territory – already cause disputes, the “low politics” of water disputes can become protracted and caught up in other matters that are difficult to resolve. But can water disputes *cause* war? One school of thought argues that resource scarcity triggers technological and diplomatic innovation, not war.⁴⁷ Another school of thought, exemplified by Gleick, maintains that if the resulting drag on the economy persists, social disruption and war are likely in resource-dependent countries.⁴⁸ United Nations Secretary-General Kofi Annan is of the opinion that “fierce competition for freshwater may well become a source of conflict and wars in the future” and that “environmental concerns are the national security issues of the future.”⁴⁹ It is probably safe to conclude that water scarcity per se does not suffice to provoke acute conflict between or among states. Rather, “an unstable international environment when combined with riparians that place a highly symbolic or economically irrational value on water increase the likelihood of an acute conflict.”⁵⁰ The persistence of water disputes is not so much because differences over water are irreconcilable, as much as the existence of other political and territorial conflicts: “states which are antagonists in ‘high politics’ conflicts tend not to agree willingly to collaboration in the sphere of ‘low politics’, centered around economic and welfare issues. Functional cooperation in river basins is impeded by the persistence of political rivalry.”⁵¹

The point was already made that Lebanon is located in an area with alarming water scarcity, making water disputes a major environmental security issue. In particular, Lebanon’s relatively abundant water resources make it vulnerable to water claims from its neighbors, which often take on a coercive character. When Israel bombarded the civilian population of southern Lebanon for 16 days in April 1996, the United Nations estimated that damage was caused to two water reservoirs and 91 water tanks. Given intense Israeli interest in water, it is possible that many of these water installations were deliberately targeted with a view to increasing Israeli water flows from southern Lebanese sources.⁵² One current, less public issue between Lebanon and Israel is that of trans-boundary groundwater reservoirs underlying the Lebanese and Israeli territories. Any future peace treaty should address the regulation of the exploitation of these reservoirs.⁵³ In addition, it is worth noting that when Israel withdrew from its security zone in southern Lebanon, it held onto (and still does to this day) the contested Sheba farms (considered Lebanese territory by Syria and Lebanon, but regarded as Syrian by Israel) because of their “clear hydrostrategic value,” located at 1250 meters above sea level and abundant in freshwater springs.⁵⁴ Perhaps the best illustration of the importance accorded by Israel to the water issues with Lebanon is the post-withdrawal Wazzani dispute, which this next paragraph examines in further detail.

After Israeli withdrawal in 2000, the Lebanese government was seeking ways to reconstruct and develop the territory that used to make up the security zone. It became clear that basic and adequate water infrastructure needed to be installed to ensure the return of the original inhabitants. One first observation was that “an accelerated return of residents would intensify

local demands for domestic and irrigation water and hence amplify the chances of tension over water with Israel.”⁵⁵ Secondly, rehabilitation of the South was hampered by the abundance of landmines – which hindered farming – and the destruction of orchards during the war, as well as the limited water resources. Furthermore, the burning of trees by Israeli forces to deprive the Hizballah guerillas of cover meant that another local resource was diminished.⁵⁶ The rehabilitation of the Wazzani pump by the Lebanese government – so as to divert some of the Hasbani River water to some impoverished villages – caused an outrage in Israel, because the Hasbani flows into Israel. On the other hand, almost all of the Hasbani’s flow has for decades been used only by Israel. Like all the other shared waters, Israel has been using all the discharge of the Hasbani and the Wazzani.⁵⁷ Very little is used by a few Lebanese farmers and households, who independently withdraw water for their needs. And yet, when news of the pump reached the public, there was “hysteria” and “scenarios of action, counteraction and of war” being aired inside Israel:

A Likud Member of the Knesset, Michael Kleiner, asked the government to destroy the pump because he considered any change in the water distribution a provocation necessitating a military response... There were expressions of concern from non-governmental organizations and from the public over the adverse effects on the ecology, and on the quality of life of Israelis in the Upper Galilee.⁵⁸

Of course it is understandable that Israel, experiencing water shortage and distrust of Lebanon’s water intentions, was worried that its northern neighbor might have plans to utilize the waters of this international spring in a unilateral, non-negotiated manner. Furthermore, employees working on the pump flew the flags of Lebanon and Hizballah in full view of the Israelis, exacerbating the atmosphere of tension and suspicion. Israel was provoked further by Hizballah’s warning that it would “cut off Israel’s hands” if it uses military force to stop the scheme.⁵⁹ On its part, Lebanon denied that it had any plans to build a dam on the Hasbani, let alone on the Wazzani. The US administration finally helped diffuse the “hydro-tension” that was building, by referring to the small diameter of the pipeline as proof that the project was local in character and orientation.⁶⁰ UN observers working in the region were astonished at Israeli threats because of such a small water project.⁶¹ The spokesman of the United Nations Interim Forces in Lebanon said: “You don’t divert a river with a pipe so small.”⁶² This helped to deflate the war rhetoric, leading the chief of staff of Israel’s armed forces, Lt-Gen Shaul Mofaz, to say: “I don’t think we should indulge in fiery rhetoric and should certainly not be talking about war.”⁶³

It now appears that the Israeli furor over the Wazzani was aimed at pressuring Lebanon to engage in negotiations over the establishment of official Lebanese authority in the border zone.⁶⁴ Amery also sees in the Wazzani dispute an attempt by Israel “to reassert its political position which experienced a perceived decline in the credibility of its deterrent power after its unilateral exit from south Lebanon.”⁶⁵ He asserts that the Wazzani case illustrates how water stress can cause war, if war is understood as not requiring “a full mobilization of armies, a clash along a clear front-line, nor does it require territorial conquest and counter conquest.”⁶⁶ He makes the case that water conflicts ought to be viewed in their multi-layered national and regional settings. In the case of the Wazzani, he sees an ordinary situation that turned into a major, albeit temporary, crisis. Factors that helped this happen include the protracted drought that was affecting many countries in the Middle East... the absence of a peace treaty between Israel and Lebanon... bitterness over Israel’s military occupation of the Security Zone for over two decades,

its continued occupation of the Syrian Golan and the Lebanese-claimed Sheba farms, and Israel's interest in not letting the pump incident be seen as a 'green light' to its neighboring states⁶⁷

Of course, Amery and other analysts are not always right. Before Israel withdrew from its security zone in Lebanon in 2000, the literature was filled with claims of water-motivated wars and predictions that water was behind many Israeli assaults on its neighbor. The fact is that although Israel withdrew unilaterally, under pressure of armed resistance by Hizballah, no sign of Israeli diversion of the Litani River during the occupation was detected. The Lebanese Government itself dismissed claims of Litani utilization by Israel, in a report that it submitted to the Arab League. Therefore, the claim that the invasion was motivated by water was baseless.⁶⁸ In a region where there is a fine line between wariness and paranoia, can prospects for cooperation be envisaged?

Prospects, Scenarios, Solutions...

At present, there is no adequate legal framework for the protection of trans-boundary watercourses in times of war. Furthermore, in times of peace settlements and in post-conflict reconstruction, water must also be protected. While environmental problems can be an incentive for further divisions between states, they can also be an incentive for regional cooperation that could strengthen agreements on political social, and economic problems. Water scarcity in the Middle East is an excellent example of this. In his conclusions on the Israeli-Jordanian Peace Treaty, Haddadin writes:

The water relations between Israel and Jordan have proven to be the smoothest. Relations in almost all other fields stipulated in the Treaty have not been as good. This fact testifies to the validity of the notion that water is a source of cooperation and can never cause a war. Water, after all, is used to extinguish fires, not ignite them.⁶⁹

A realist approach to water dispute is the most appropriate. In the case of the Wazzani dispute between Lebanon and Israel, clearly the issue calls for a bilateral resolution, but is best managed on a basin-wide scale. This remains unlikely today until a wider resolution of the Arab-Israeli conflict is worked out, including the return of the Golan Heights, occupied by Israel, back to Syria.⁷⁰ Sharing the international waters of Hasbani and Wazzani remains difficult because of the climate of political distrust, in addition to three constraints: "lack of hydrological, physical and socio-economic data, lack of an institutional framework, and the difficulties with the enforcement of the international water law."⁷¹ With respect to the first, a United Nations team started in 2001 to survey the watershed and to measure water flow, as it is difficult for Lebanon and Israel, who are in a state of war, to share such data. The aim is "to pre-empt a recurrence of the near-war situation by providing 'neutral' data that are up-to-date."⁷² Haddadin estimates that eventual water negotiations between Lebanon and Israel over the Jordan basin would be smooth. The problem, however, would lie with the question of shared groundwater aquifers since "these require intensive negotiations, and one doubts that Lebanon has up to date data on the aquifer, a factor that complicates negotiations."⁷³

With regard to the prospects of regional cooperation, skeptics abound. Some believe not only that regional cooperation is some way off, but also that it can only provide limited answers to the problem. This is why Nachmani is pushing for each state in the Middle East to act independently and desalinate as much water as possible. This would expand the regional water

supply and allow the desalinating state greater flexibility over natural resources, thus inducing “a positive chain reaction of tension reduction in the region.”⁷⁴

Instead of acting independently, what might induce riparians to seek cooperation? First, “the acute need for water resources”, and second, “if the dominant power in the basin will benefit from regional cooperation, it will take the lead in creating a regime and enforce compliance to it”⁷⁵ as was the case of the water-sharing agreement between Syria and Lebanon. Instead of leaving water out of mainstream negotiations, or not addressing the subject until other problems are resolved, water could be seen as a first step towards reconciliation and peace. Fragmented attempts at resolving water disputes, which exclude other basin states or important sectors of water-users, have seriously compromised chances of achieving long-term solutions. The section of the Basin involving Jordan and Israel has already been the subject of discussion, joint technical planning, and is currently at the stage of project implementation. These developments, however, remain hindered by the absence of neighbors including Lebanon, which is one of the critical countries in the headwaters of the Jordan River.⁷⁶

There is no greater cause of fear, and perceived threat to national sovereignty, than that felt by a nation totally excluded from negotiations that affect it. Transparency and openness build up confidence that can lead to international agreements over the sharing of resources in a sustainable manner. Lebanon, for example, enjoys a surplus of water and is a major water repository in a region that is water stressed. However, as much as 80 percent of the Litani’s flow is lost to the sea. A major sub-regional development package could be put in place, including hydroelectric and freshwater plans. Water could be supplied from the Litani to Lebanon’s neighbors on a commercial basis, perhaps under a peace agreement with shared management and inspection. With its high level of precipitation, and with facilities for water storage made efficient by technology, Lebanon could export water all year-round.⁷⁷ So, while a water security accord is conditional upon a broader political settlement, this does not preclude technical cooperation, “so that once such an accord is in place these plans can be taken off the shelf and implemented quickly without having to spend several years in their design.”⁷⁸

Environmental security requires the willingness to make mutually beneficial compromises. Lebanon’s challenge requires the immediate reduction of regional political tensions in an area already fueled by suspicion and scarcity. In this regard, the multilateral discussions on water that are part of the Jordanian-Israeli agreements on water sharing can set a significant standard for Lebanon and the region as a whole, providing a framework for a multitude of cooperative efforts and establishing a pattern of dialogue and communication that is sorely lacking in the Middle East.

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Notes

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