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THE NEED TO ALLEVIATE PALESTINIAN FEARS OF A DRY PEACE

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Abstract

Palestine, defined here as the Gaza Strip and the West Bank including East Jerusalem, is facing an acute water crisis not because of the area's arid conditions but primarily because of the abnormal political conditions represented by Israel's control over the Palestinian groundwater and surface water resources. Israel is currently utilizing more than 80 % of the Palestinian groundwater resources and denying Palestinians their rightful utilization of the Jordan River. Palestinians are currently allocated 80 mcm per year for domestic use leaving the per capita consumption under suppressed demand at an average of 30 cm/year which is far below the required standards of water supply. For agriculture, Palestinians have access to 150 mcm per year which they are using to irrigate around 10 % of their cultivated lands while Israel is enjoying abundant water to irrigate 50 % of its cultivated land. The situation is exacerbated by the fact that Jewish settlers are consuming more than 90 mcm per year from Palestinian water resources.

According to Oslo II agreement, Israel recognized the Palestinian water rights, but these are to be negotiated in the permanent status negotiations. However, so far, no negotiations have taken place to enumerate the Palestinian water rights. The issue of Palestinian water rights will be one of the most difficult issues in the permanent status negotiations. Palestinian water rights include both the groundwater of the West Bank and Gaza Aquifer Systems and the surface water of the Jordan River Basin. While Israel provided Palestinians with additional quantities of water, these quantities are not enough to meet the growing needs of the population which is still experiencing shortage of water supply.

The Oslo II interim agreement divided the West Bank into areas A, B and C where Palestinians have full authority in areas A (less than 3%) and civil responsibilities in area B (less than 27%). Area C which represents more than 70% of the West Bank area includes the most sensitive water resources especially in the Jordan Valley and the Israeli settlements. Different maps representing the Israeli security and strategic zones in the West Bank are being suggested by Israeli leaders. Water security became one of the criteria that was used for determining the extent of further re-deployment of Israeli forces. According to this map, Israel will not re-deploy from Palestinian areas overlying the Western Aquifer System in the West Bank. The Israeli Defense Forces came up with

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their own security map which calls for the retention of the Jordan valley by Israel. If these maps are both superimposed, it becomes clear that Israel intends to retain its control of the majority of Palestinian water resources.
To alleviate Palestinian fears of a dry peace, Israel needs to provide Palestinians with water data and to immediately satisfy Palestinians needs for water. Israel should also lift the restrictions imposed on Palestinians to utilize the land and water resources especially in the Jordan Valley. Israelis and Palestinians should start working immediately on clearing the heavily mined areas in preparation for the future. Israel, Jordan and Palestine need to start the process of constructing the West Ghour Canal which was agreed upon in the Johnston plan. The international community needs to start the process of building a basin wide regional authority for the Jordan River basin with participation of all riparians. A mechanism must be established to ensure that negotiations on Palestinian water rights between Israelis and Palestinians take off seriously. Unless the Palestinian water rights are addressed immediately and properly according to the international laws and principles that will translate their water rights to actual water in their pipes, Palestinian will remain the thirsty partner in the Middle East with a severe water crisis that will impact the sustainability of the peace process.

Hydropolitical Background

Soon after the Israeli occupation of the West Bank and Gaza Strip in 1967, Israel seized absolute control over all the Palestinian land and natural resources. Since that time, Israel has either confiscated or declared as closed areas over 55% of the West Bank and 22% of the Gaza Strip, thereby placing it out of Palestinian reach. Less than 20 % of the total West Bank water resources available to Palestinians are permitted for them to use. Israel has continued to expand its civilians colonies and their infrastructure on illegally confiscated Palestinian land.

Much has been written about water in the Middle East especially during the past few years. Most of the writings focused on hydropolitics and tended to create a hydrophobic environment towards the subject. Many speculate that the region's next war will be fought over water. Others focused their efforts to assert whether the water situation is acute, severe, chronic or catastrophic. Few went beyond that and offered a wide array of solutions to solve the water " crisis" ranging from peace canals or pipelines from Turkey, Yugoslavia, Lebanon, Egypt to medusa bags, icebergs, desalination etc. The regional parties met in both official and unofficial capacities to advocate the need for solving the water issue and included several aspects including joint management, data exchange, human resource development, enhancing water supplies, water conservation, equitable utilization, water banking, reallocation of water and prevention of environmental degradation.

After all these meetings and negotiations, the gap in the positions among regional parties is still as wide as ever. The region's hydrologists and politicians are still talking at

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different wavelengths. In the coming few pages, We shall muddle in the waters of the Middle East focusing on the Israeli Palestinian dimension in light of the recent political developments. We realize that water is a particularly critical, as well as emotional, point of dispute for both Israelis and Palestinians. We also strongly believe that finding a common understanding of water issues in the Middle East would go far to enhance the possibilities of achieving stability in the region. Conversely, failure to reach consensus will, most definitely, obstruct any efforts to attain this goal. We realize that many will find this article provocative, but patronization and sweet talk will not solve the inequity in water distribution, allocation and usage among the regional parties which threatens the sustainability of the peace process. Neither will fantasies and hydrofictions.

The roots of the Water Crisis in Palestine

The current allocation of the shared water resources in the region are not the outcome of agreements, negotiations or equitable principles. Rather they reflect the asymmetries of power in existence and the abilities of the strong to impose their wills on the weak. The full control of Israel over the headwaters of the Jordan River has led to reduce the Arab water shares in the River basin far beyond those that any rational allocation system consistent with basic international law governing transboundary resources would entitle them to.

The headwaters of the Jordan River, located in northern Israel, the occupied Golan Heights and southern Lebanon (including Israel's self-proclaimed "security zone"), feed Lake Tiberias; Syrian and Jordanian waters (most importantly the Yarmouk River), meanwhile, West Bank and Israeli springs feed the Jordan River below Lake Tiberias. As a whole, these elements constitute the Jordan international drainage basin, a naturally-defined area that cannot be artificially sub-sectioned.

As a result of Israel's occupation of the Golan Heights and its control over southern Lebanon, Israel controls the headwaters of the Jordan River. Also, in its pre 1960 borders, Israel accounts for only 3% of the Jordan basin area; yet it currently has control of the greater part of its waters. At present, Israel is drawing an annual 70-100 million cubic meters (mcm) from the Yarmouk, and is piping 1.5 mcm per day from Lake Tiberias in its National Water Carrier (Rudge 1992). Consequently, the River Jordan, By its pre-1967 borders, Israel accounts for only 3% of the Jordan basin area; yet it currently has control of the greater part of its waters. At present, Israel is drawing an annual 70-100 million cubic meters (mcm) from the Yarmouk, and is piping 1.5 mcm per day from Lake Tiberias in its National Water Carrier (Rudge 1992). Consequently, the River Jordan, which, in 1953, had an average flow of 1250 mcm per year at the Allenby Bridge (Main 1953), now records annual flows of just 152-203 mcm (Soffer 1994).

Israel has restricted Palestinian water usage and exploited Palestinian water resources.

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Presently, more than 80% of the Palestinian water from the West Bank aquifers is taken by Israel, accounting for 25.3% of Israel's water needs. Palestinians are also denied their right to utilize water resources from the Jordan and Yarmouk Rivers, to which both Israel and Palestine are riparians. West Bank farmers historically used the waters of the Jordan River to irrigate their fields, but this source has become quite polluted as Israel is diverting saline water flows from around Lake Tiberias into the lower Jordan. Moreover, Israeli diversions from Lake Tiberias into the National Water Carrier have reduced the flow considerably, leaving Palestinians downstream with only effluent.

In Gaza, the coastal aquifer serves as the main water resource. Other Gazan water sources, such as runoff from the Hebron hills, have been diverted for Israeli purposes. The Gaza strip, which housed only 50,000 people before 1948 is now one of the most densely populated regions in the world as a result of both the high levels of forced immigration following the 1948 and 1967 conflicts, and the high rate of natural population increase. Gaza's coastal aquifer is now suffering from severe saltwater intrusion (Table 1). With regard to total water consumption, an Israeli uses cubic meters per year (CM/year), a Palestinian uses 107-156 CM/year, while a Jewish settler uses 640-1,480 CM/year (Figure 2). Israeli restrictions have drastically limited the irrigation of Palestinian land so that today only 5.5% of the West Bank land cultivated by Palestinians is under irrigation, the same proportion as in 1967. By contrast, about 70% of the area cultivated by Jewish settlers is irrigated.

l: Fresh groundwater balance of the Gaza Governate (1995)

Inflow Component	MCM/Year	Outflow Component	MCM/Year
Average recharge by rain	21	Domestic abstraction	32
Recharge from wadis	0	Irrigation abstraction	40
Groundwater from Israel	7	Industrial abstraction	1
Return flow (domestic)	13	Settlements abstraction	6
Return flow (irrigation)	18	Groundwater outflow	2
Brackish water inflow	20	Evaporation in Mawasy area	0
		Drop in groundwater table	-2
Total	79	Total	79

Source: Ministry of Planning and International Cooperation, 1996

The per capita water consumption among Palestinians, in sectors other than agriculture, ranges between 25 and 35 CM/year, while it is 100 CM/year in Israel. The prospect of substantial increases in water demand in the coming years renders it absolutely imperative to find a solution to Palestine's water shortage, which is expected to become more acute and critical as a result of over population, economic development and global warming.

Water in the Peace Process

It is now five years since the initial peace conference at Madrid was inaugurated. Upon Israel's insistence, the peace process was divided into two tracks namely the bilateral negotiations and the multilateral talks. The bilaterals were intended to lead to peace treaties

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between Israel one hand and each of the regional parties, namely Jordan, Lebanon, Palestine and Syria on the other. The multilateral track was intended to complement and support the bilateral track by promoting regional cooperation. A special working group was established for water resources in the multilateral negotiations.

So far, a peace treaty has been accomplished between Israel and Jordan in which the water dispute between the two states was resolved based on mutual recognition of the "rightful allocations" of both parties to the Jordan and Yarmouk Rivers as well as the Araba/ Arava ground waters. The agreement allows for the use of Lake Tiberias for storing Jordanian surplus rain flows from the Yarmouk and to be redrawn during the summer. It also maintained the right of Israeli farmers to draw water from the Nubian sandstone aquifers form the Jordanian territory in the Araba. Israel and Jordan are now working on constructing two dams in the lower Jordan River Basin. There is no doubt that this bilateral agreement will not be a substitute for an integrated and comprehensive one that should include all riparians to the Jordan River basin.

On the Israeli Palestinian track, water was one of the major sticking points in the negotiations leading to the signing of the interim agreement (Oslo B) in Washington D. C. in September 1995. Water is referred to under article 40 of Annex 3 " Protocol concerning Civil Affairs." The first principle in the article dealing with water and sewage states that " Israel recognizes the Palestinian water rights in the West Bank. These will be negotiated in the permanent status negotiations and settled in the Permanent Status Agreement relating to the various water resources." There is no doubt that this may be considered as a historical breakthrough as it is the first time that Israel has recognized the Palestinian water rights. While the agreement did not go into the details of the Palestinian water rights, the use of the term "various water resources" in the second sentence is very significant. For the Palestinians, they define their water rights as follows:

- a fair share of their riparian rights in the River Jordan basin
- a fair share of the Western and North Eastern Aquifer
- full rights in the Eastern aquifer
- storage and fishing rights in the lake of Tiberias
- full right to the Gaza coastal aquifer

While this recognition is a very important step forward, the second and third principles in the agreement attempt to undermine the significance of this issue by talking about maintaining existing utilization and recognizing the necessity to develop new resources, tacitly accepting that more water is needed to satisfy the needs of both populations. The agreement states that " all powers currently held by the civil administration and military government relating to water and sewage will be transferred to the Palestinians, except for those specified as issues for the "final status negotiations." Nevertheless, the Israeli authorities have not transferred the authority of the West Bank Water Department to the Palestinian Water Authority until now. Work on the agreed upon drilling new wells to

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meet the needs of the Palestinian community are stalled. So far, the Palestinians in the West Bank and Gaza have not seen the translation of this agreement to water in their taps, but are witnessing sever water shortages.

Palestinian fears of a dry peace

There is a growing fear among Palestinians that the Israeli government is not serious in its peace aspirations. Israel has not implemented its commitments stipulated in the interim agreements, while at the same time, it is continuing its unilateral steps of swallowing more Palestinian land for settlements and bypass roads. There is very little that the Palestinian layperson can point out to indicate visible fruits of the peace process. Over the past three years, the GNP per capita in Palestine declined by 30 % and unemployment rose to record levels of up to 40 %. Restrictions on movement and closures are becoming the norm rather than the exception. In the field of water, the peace process did not translate into continuous supply or additional waters in the taps. On the contrary, water shortages especially during the summer months are exacerbating. While the PWA is doing its utmost to rehabilitate the water infrastructure, its efforts are being impeded by Israel's practices. The Herodion, Ramallah and Jenin wells that have been agreed upon in OSLO II are still not operational.

The Palestinian bureau of statistics have just completed the population census which revealed that the total Palestinian population in the West Bank and Gaza strip including Jerusalem is 2.8 million persons. This figure is far beyond the estimated figure which the Israeli authorities used to float. Based on the new figures, it becomes apparent that on average, a Palestinian is allocated less than 25 cm of water for domestic and industrial purposes annually. This means that Palestinians need immediately an additional 70 mcm of water per year in order to bring the domestic consumption per capita to 50 cm per year which is the minimum requirement for basic water needs. This shows that the 9.5 mcm of water which Israel agreed to provide the Palestinians according to Oslo II are simply too little.

The basic problem is that Israel so far has refused to approach the water conflicts with its Arab neighbors in an integrated manner. Israel's strategy is to strike a separate deal with each of its neighbors without any consideration to the geohydrological nature of surface and groundwater basins. Since Israel is holding all the water cards in its hands, it is using this tactic to ensure that it will have the overall control and responsibility for managing the water resources and providing its neighbors with certain quantities of water that are agreed upon. Certainly, such an approach is neither acceptable nor sustainable.

Israeli policy on final status issues has begun to be debated publicly during the past several months. This marks a change, as the delineation of Israel’s territorial demands had not been openly before. Regrettably, the outcome points toward the peace process being transformed from negotiations between two parties to an internal Israeli debate

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with the goal of determining unilaterally the land areas they choose to retain and the areas they might return to the Palestinian people.

The Israeli deliberations have primarily taken place via three distinct but related maps: the Allon-Plus Map devised by the Israeli Inner Ministerial Cabinet; the Security Interests Map devised by the Planning Branch of the Israeli Defense Forces; and the Sharon Map devised by the Israeli Minister of Infrastructure Ariel Sharon. Although only the Allon-Plus Map has been published, on 4 December 1997 (Figure 1) the Hebrew-Language newspaper *Ma'arev* printed a map detailing the common areas between the three. This strategic combined map reveals the basic land scheme that Israel would propose as a final status solution during the upcoming negotiations. In addition, a hydrostrategic map was printed in the same newspaper which is very similar to the strategic combined map. None of theses maps address the situation in the Gaza Strip.

Israeli Proposed Final Status Maps

The Security Interests map was submitted for Israeli cabinet discussion by the Israeli Defense Forces (IDF) Planning Branch nearly one year ago. An initial version of this map was prepared at the request of the late Prime Minister Rabin during the Taba talks in September 1995. Similar to the Allon Plus map, this map leaves 40-45% of West Bank land to the Palestinian Authority and divides it into three disconnected areas separated by colonies and areas under IDF control. According to Israeli Minister of Defense Yitzhak Mordechai unspecified 'special arrangements' would be made for the approximately 45 of the 196 West Bank Israeli colonies remaining in the Palestinian Authority areas. The Sharon map allows for the Israeli annexation of between 64-70% of the West Bank. All Israeli colonies would be included in a specially devised security zone and additional areas would be slated for their expansion. The Hydrostrategic map, published in the Israel *Ma'arev* newspaper on 4 December 1997, outlines Israel's strategic groundwater interests. A large portion of the West Bank, mainly the Jordan Valley and the Eastern Slopes, are not even designated on the map and thus presumed to be completed under Israeli control.

Implications of the Strategic Combined Map

Common areas between the above described maps are represented in a strategic combined map made public on 4 December 1997. According to this map, 60.5% of the West Bank is to be placed under Israeli control and 39.5% is to be designed for the Palestinian Authority. This 39.5% is divided into three separate and distinct cantons. The Jordan Valley, the 'food basket' of the West Bank, is completely out of Palestinian reach, as are the Eastern Slopes which serve as natural grazing areas and host hundreds of endemic flora and fauna species. No free and unencumbered access is provided between the southern canton and the northern two cantons. Absolutely no sustainable and

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integrated development of Palestinian infrastructure could take place, essentially rendering a Palestinian state physically unattainable and unsustainable.

In regard to the issue of water, under such a final status situation, Palestinian would not only be left with their water rights undefined and therefore, in essences, non-existent, but they would not have access to enough water for domestic, agricultural or industrial uses. Again, this proposed scheme deprives Palestinians of their own natural resources which are crucial to building a sustainable future. For example, Palestinians would have no physical access to the Jordan River Basin even though they are riparians of this international water system. Under the Johnston Plan of 1955, a West Ghour canal was to be constructed to provide Palestinians with their rightful share from the River Jordan. The vast majority of West Bank Palestinian wells fall within the areas designated for Israeli control, according to the strategic combined map. It is expected that those wells remaining in Palestinian controlled areas may continue to be subject to current Israeli imposed drilling restrictions. All of the approximately 58 Israeli groundwater wells which serve Israeli colonies will remain under Israeli control, as even those located in areas to be returned to the Palestinians lie within the boundaries of Israeli colonies.

However and perhaps most importantly, it is critical to point out that such a final status proposal directly contradicts the Oslo II Interim Agreement, as well as international resolutions, namely United Nations Resolutions 242 and 338 and the principle of land for peace.

Looking ahead

While in principle, the resolution of the Middle East water allocations and disputes will be based on the principles of international law, there is no mechanism for this issue to be institutionalized. If the issue of water allocation continues to be addressed with an eye for might rather than justice, Palestinians will remain the thirsty partner to an unjust peace. And, as is so often pointed out, an unjust peace is no peace at all. It is clear that the question of controlling the region's waters is basically related to various perspectives of different parties to their 'legitimate national rights'. As a matter of fact, all parties involved in the region's confrontation over water invoke a variety of legal principles to establish their claims: first-in-use first-in-right, customary or equitable utilization, absolute sovereignty, beneficial use, basic justice and fairness, good neighborliness, prior use, etc. In making their claims, these parties are merely selective, so that each riparian in the conflicted basin chooses the legal principles that buttress its claims. This raises questions about the explicitness/ambiguity of international law in respect to settling down disputes of this kind. Actually, there is at this time no regular system of a binding international law that can supply clear-cut principles for the situation of conflict between nations that share water resources. This is particularly true when the shared resources of water are subterranean.

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Now with conflicting parties finally negotiating a lasting and sustainable political solution, the question of the egg and the chicken is being increasingly risen: which should come first, consensus over the use and control of the region's vital water resources or settling the area's political contention? Since the two issues are utterly inseparable, it is believed here that the two questions should be addressed simultaneously and in parallel tracks.

After all, a political settlement should involve the question of distributing the waters available to the region over its inhabitants, and an agreement on the use and distribution of the region's waters would, most certainly, enhance the chances for ending the region's political confrontation.

To alleviate Palestinian fears of a dry peace, the following steps are needed:

1. Israel to freely provide Palestinians with water data. It is regrettable that although Israel committed itself to such an undertaking, it has so far done very little.
2. Israel need to immediately satisfy Palestinians needs for water . Assuming that a Palestinian immediate water demand per capita to be 50 CM, then the Palestinians should be allocated an additional 70 MCM per year .
3. Israel should lift the restrictions imposed on Palestinians to utilize the land and water resources especially in the Jordan Valley. Israelis and Palestinians should start working immediately on clearing the heavily mined areas in preparation for the future. The international community is asked to assist in this task.
4. Israel, Jordan and Palestine need to start the process of constructing the West Ghour Canal which was agreed upon by the Johnston plan.
5. The international community need to start the process of building a basin wide regional authority for the Jordan River basin. All riparians need to be involved. I hope that this forum will initiate such an important step.
6. A mechanism must be established to ensure that negotiations on Palestinian water rights between Israelis and Palestinians take off seriously. So far, there has been no progress on this front and it appears that Israel is attempting to impose its will on the Palestinian

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