A BRIEF HISTORY OF WATER IN THE MODERN MIDDLE EAST

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As presenter of the first paper before this distinguished audience I feel a responsibility for helping to set the mood of what will follow. Paul Mitchell, the conference organizer, asked me to give an overview of the hydrologic situation in the Middle East and then most graciously gave me the freedom to shape my comments from my own point of view. My first inclination was to present an accounting or spread sheet of water resources and water needs on a country by country and/or river by river basis. I have just finished such a paper for the *Canadian Journal of Developmental Studies* special April issue which is devoted to the water situation in the Middle East and North Africa. A lot of thought and effort went into that accounting and I am confident that the data and descriptions which it presents are consistent with our general knowledge of today's condition. I am certain, however, that some experts could question the individual values given for almost every river and aquifer as well as the current and projected uses thereof. This, in turn, would only add fuel to what I perceive as an already complex and controversial subject. I will comment on those data as time permits (and I refer you to the journal issue I have just mentioned), but I believe that this conference will be much better served if I attempt a "Brief History of Water in the Modern Middle East." By

this I mean a review of the development of our perception of the Middle East Water Crisis and where we seem to be at present.

This Brief History can be divided into five stages:

1. Prophets Crying in the Wilderness
2. The Possible War over Water
3. The Search for a *Pax Aquarum*
4. Data Conflict, or Leave Us Alone We Can Work This Out by Ourselves
5. Creative Perspectives and Solutions.

In making such a classification it is not my purpose to discuss the long list of distinguished studies of specific projects and problems within the Middle East. Nor do I wish return to the proposals of W.C. Lowdermilk and Eric Johnston. What I am specifically referring to here are perceptions of an overarching shortage of water throughout the region that transcends the internal issues of nations and brings them into confrontation with one another. It is the sequential development of this theme which I wish to examine.

The Prophets who tried to bring the general need for concern over limited supplies of water in the Middle East to the world's attention go back at least to M.G. Ionides and his article, "The Disputed Waters of Jordan," in the Spring 1953 issue of the Middle East Journal. A. M. Goichon's L'Eau: Probleme Vital de la Region du Jordan continued this theme in 1965, as did Anne-Marie Bianquis, in "le Probleme de l'Eau a Damas et dan sa Ghouta," (1977). Addeane Caelleigh's, "Middle East Water: Vital Resource, Conflict and Cooperation," identified water as a regional problem in 1983 as did

Thomas Naff and Ruth C. Matson in 1984 in what has now become a standard reference, Water in the Middle East - Conflict or Cooperation?

Their effort to alert the decision makers and leaders of the international community was not an easy one. I can testify to that, for I began in 1980 to devote my lectures at the Foreign Service Institute to water in the Middle East, and it was only the foresightedness of the Director of the Middle East Section, Peter Bechtold, that allowed me to preach on what was then an obscure topic overshadowed by oil.

About that time a new theme appeared: the possibility of water wars. Thomas Stauffer sounded an early warning in his Christian Science Monitor 1982 commentary "Israel's Water Needs May Erode Path to Peace in Region". While John Cooley in an article entitled "The War Over Water," in the Spring 1984 issue of Foreign Policy brought the issue to full focus. The press, knowing a bad thing when it sees one finally got the idea, and typical of the media, U.S. News and World Report in November 1988 printed a story which began: "November 12, 1993. War errupted throughout the Middle East today in a desperate struggle for dwindling water supplies." In the same vein, British television showed a special, 'Rivers of Fire," a biased and sensationalist account which presented Turkey as a potential wielder of water as a weapon through its control of the sources of the Euphrates.

The horrors of war and the irreversibility of damage to a vital and fragile resource soon outweighed the fascination of such a newsworthy prospect and water as a means to peace began to be

considered. President, then Prime Minister, Turgut Ozal of Turkey attracted international attention in 1987 with his Peace Pipeline proposal. This idea was presented by Brown and Root Contractors in the form of a prolegomenon to a prospectus entitled, Source to Consumer. This suggested twin pipelines carrying water from southeastern Turkey as far as Sharjah in the U.A.E. in the east and Jeddah in the west of the Arabian Peninsula, and may have been motivated in part by a desire to counteract bad publicity stemming from the Turkish Southeast Anatolia Development Project on the Euphrates (GAP), which if fully realized may reduce the flow of the river into Syria and Iraq by one-half. Be that as it may, the idea and offer to share water marked a new approach to solving the problem in the region.

It was at this time that I presented a paper to the Middle East Studies Association in which I called for a Middle East *Pax Aquarum* as an alternative to destruction. Quite frankly, both the Peace Pipeline and the *Pax Aquarum* in their initial forms offered more sound then light. The ideas were good but the political complications of the former and the vagueness of the latter placed them at a far remove from *real politik* of the Middle East.

At about the same time a plethora of pipe schemes, or if you will pipe dreams, were suggested: a line from the Euphrates in Iraq to Amman, Jordan; a line from near Mosul to Kuwait; a line from the Nile to Gaza; A Med-Dead pipeline intended to drop water from the Mediterranean to the Dead Sea in order to generate electricity; a line from Iran to Bahrain; a line from the U.A.E. to Jordan. Even a line from the Indus to Saudi Arabia, and on a recent trip to the Peninsula

I heard mention of a line to bring desalinized water from the Indian Ocean coast of Oman to Saudi Arabia, and even that a pipeline from Turkey to the new Central Asian Republics might be worth considering. (All these were in addition to older ideas of bringing Litani Waters to Syria or to Jordan or to Israel.) In other words, the idea of seeking peaceful solutions to the problem had caught on and run away with itself.

Another approach to the water question has begun to develop. Parties concerned with the use and/or sharing of water are now engaged in negotiations both at the multi-lateral and *ad hoc* bi-lateral levels. These negotiations often hinge on differences in estimates of the actual amounts of water concerned in each case as well as on a much broader consideration of the total amount of water available in the Middle East. Questions continually arise as to how each supply is being used and the efficiency of such use, as well as the assigning of new priorities to the distribution of available water whether already in use or still unexploited.

Two elements are at work here. The first is that nations and/or groups of water users often do not agree on either the actual amounts of water available nor on the amounts of water currently being removed from the systems which are involved. In a similar vein, there are two opposing schools of thought: on the one hand that there is no water shortage but only structural problems in the economies involved, and on the other that there is a genuine and rapidly increasing shortage throughout the region. It should be noted that the first school admits that Jordan, the West Bank and Gaza are already in need and that Israel is on the brink of a serious shortage.

The second school recognizes that the reallocation of water from the agricultural sector to the domestic and industrial ones would alleviate the crisis. It adds, however, that in developing nations heavily dependent upon agriculture for employment and food security, that water security as a surrogate of the first two transcends the economists' point of view that if water were charged its real price inefficient uses would be eliminated.

Nor do opposing users agree on the proposed amounts of water to be used from a single source. For example, Turkey, Syria, and Iraq have yet to resolve their different interpretations of the flow of the Euphrates and how its waters should be shared. Syria has asked for 500 cms across the border into its territory; Iraq in its turn has asked for 500 cms and again for as much as 750 cms. The contradiction and need for clarification should be obvious. Meanwhile, the Turks have suggested a plan for the joint development of the entire basin in which crops and hectarages would be allocated among the three riparians.

I have personally encountered in the last two months a clear disagreement between parties interested in the flow of the Yarmouk. Intermingled in this debate are questions of removals by Syria, changes in flow attributable to the drought, removals by Israel, and opposing data sets relating to the long term natural flow of the river.

Nearby, Palestinians and Israelis seriously disagree on the amount of water being removed from West Bank aquifers -- particularly the Yarqon-Taninim or Mountain aquifer. This debate

hinges on the interpretation of right of prior usage as well as on the amount of water removed by Israeli and Arab wells. Palestinian hydrologists charge that they are prevented from examining the well logs of Jewish settlements and that overpumping on the coastal plain is depleting sources in the uplands, Israelis counter charge that water actually went unused before they arrived and that "cataract formations" in the aquifer obviate the possibility of overpumping downslope. I do not wish to enter into this arena of contention but cite it as one in which opposing data sets or the lack of data cloud the situation.

Every such case falls under the rubric of "Data Conflict" as described by water mediator Merle Lefkoff. Every side has its own set of figures and people only believe their own data. This is not entirely bad for it shows that the water crisis in its many forms is recognized and that negotiations, however troubled, are underway.

I come now to the fifth and newest of approaches to the Middle East water crisis: Creative Perspectives and Solutions. The debate will continue whether the water problem will be solved as an adjunct to the achievement of regional peace or whether step by step solutions to a host of water problems will be the wedge with which the peace process is opened and peace achieved. Meanwhile, a spate of new suggestions and a number of meetings and discussions like today's indicate that there is hope where water is concerned. Certainly, a start might be made by creating a Regional Information Clearing House (RICH), or several basin clearing houses in order to establish an agreed upon set of base-line data.

Progress might also come from a few initial "Confidence Building Measures." These could be simple projects, relatively inexpensive and outside the context of the so-called zero sum situation that now exists. For example, if Israel were to extend its diversion of the salt springs bordering Lake Tiberius beyond the present debouchment of the discharge into the Jordan River just below the confluence of the Yarmouk and the main stream, thus helping to clean up the lower stem of the river, this would cost little, and provide a bit more water that might be shared by Jordan, the West Bank, and/or Israel.

More ambitious plans might include a Red-Dead Canal, the benefits of which could be shared by Jordan and Israel. Storing the winter flood waters of the Yarmouk for use in Jordan and the West Bank might follow. (This is a good case for the need for better, more complete data.)

Turning to another river basin, I think that all else being equal, objections to the Peace Pipeline might be overcome if the water being delivered were used to recharge aquifers rather then being used directly for daily consumption. Thus, the fear of the water's being arbitrarily cut off, either at the source or along its way, would be obviated since all that had arrived would be "money in the bank," and meanwhile, day to day dependency would have been avoided.

The idea of a mini-Peace Pipeline to Amman, and of its water being used en route -- as recently suggested by Boas Wachtel -- for a tank barrier on the Golan, thus allowing the return of that area to

Syrian civilian control, may sound like another kind of pipe dream, but this is at least an exercise in constructive imagination. Needless to say, I recognize the central and sovereign right of Turkey in such projects.

This final, or should I say most recent, stage in our perception of water in the Middle East requires people of good will and imagination to have it bear fruit. I would like to close with the thought that many of us are from outside the region, and that it should only be with the cognizance and acceptance and invitation of the people of the region themselves that we presume to enter into discussions and negotiations, or to make suggestions however sound or fanciful, concerning a topic so vital to their lives and fortunes.