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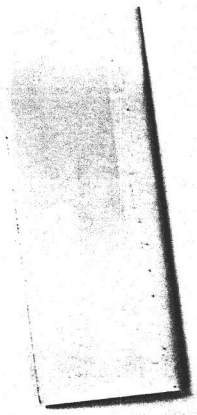

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Hazards to Stability in the Middle East in the 1990s: Economics, Population, and Water

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The most serious hazard to the stability of the Middle East in the coming decade will arise from the region's indigenous socio-economic problems--particularly those caused by population growth --in conjunction with an increasing scarcity and maldistribution of water resources. The fundamental determinants of stability--adequate food, health, housing, education, employment, and other quality of life factors--can no longer endure the perennial neglect and deferral for the sake of ideology and/or security that has characterized past governmental policies in the area. Failure to make significant progress in ameliorating these problems has brought several key countries in the Middle East to the threshold

of crisis.

The U.S. will have to contend with the destabilizing impact that long festering internal socio-economic problems will have on several pivotal actors in the region, such effects as violent regime changes, radicalization, religious militancy, hostility from a new generation of leadership, and economic dislocation. While all these problems will not necessarily be shared by every nation of the Middle East--for instance, with the exception of Iraq, once the effects of the 1990 Gulf War are ameliorated, the oil rich countries of the Gulf are predicted to increase their economic resources over the next decade--they will almost certainly infect in varying degrees five key regional actors who are crucial to American strategic and political interests in the area: Egypt, Israel, Jordan, Syria, and Turkey.

This strategic quintet has historically engaged American security interests and will continue to do so in the decade of the 1990s for several reasons: they are all strategically located in the eastern Mediterranean along the southern flank of NATO; they encompass two of the most important international waterways of the region, the Suez Canal and the Straits of Turkey; excepting Syria, they all are friendly toward the U.S. and, for the most part, represent the forces of moderation; they all play a critical role in the balance of power and stability of the entire region; they are all centrally involved in the issue of peace in the Middle East.

The forces bringing change to the Middle East in the coming decade are beyond the capacity of the U.S. or any other outside actor to control. Consequently, those changes that are destabilizing in nature will pose serious challenges to American security and economic interests in the region. Religious extremism, demands for independence by such ethnic groups as the Palestinians and Kurds, and ongoing regional conflicts will confront much of the Middle East with the threat of radicalism, particularly the moderate regimes on whose friendship the U.S. relies. Thus the Middle East will continue to be a very dangerous part of the world where the U.S. can expect to experience hostility in many quarters from a new generation shaped in part by robust anti-American sentiments stemming from the unresolved Arab-Israeli conflict.

In such circumstances, the loss of friends in the region would adversely affect U.S. security and political interests. For example, if Egypt and Jordan were to succumb to radical regime changes, the U.S. would lose their moderate leadership in promoting American peace initiatives and in mediating U.S. policies among other Arab states. The radicalization of these two pivotal Arab actors could alter the Middle East's balance of power, make the basic U.S. policy of protecting Israel more complicated and difficult, reduce the corps of moderate governments, add to the

forces of extremism, possibly lead to attacks on American facilities and citizens, cause normally friendly countries to distance themselves from the U.S., and in general significantly increase the processes of destabilization in the entire region.

These potential problems would not be susceptible to military solutions; indeed, they would be greatly exacerbated by such an approach. The aftermath of chaos and instability created by the Gulf War is bitter affirmation of this proposition. Rather, the projected conditions of the nineties require new diplomatic and economic strategies, ideally as collaborative efforts with regional and European allies. This would entail rethinking American military strategy in the Middle East in ways that involve the substitution of serious regional conflicts for superpower confrontation or milkitary intervention. Nor should any scenario discount possible diplomatic cooperation with the Soviet Union and the European Community.

There are three key variables, each integral to the others, that will determine the extent to which the Middle East will become destabilized in the 1990s: economic conditions, demographic trends, and the availability and distribution of vital water resources. The aforementioned pentad of nations--Egypt, Israel, Jordan, Syria, and Turkey--provide a good representation of how the variables of economics, population, and water operate in the changing conditions of the region. The five countries are linked

in various ways, for example, by the river basins they must share. Some, like Egypt, literally live day-to-day on the precipice of crisis.

Economic Factors

The contours of the economic landscape encompassing this regional quintet are discouraging. Collectively, unemployment averages more than 22%: Egypt and Jordan having the highest, about 30% and 40% respectively; Syria and Turkey following at 15% each; and Israel having the lowest rate, around 12%, but presently rising. Annual inflation rates average a collective 32% and are climbing: Turkey and Syria head the list with 90% and 50% respectively followed by Egypt at 45% and Jordan and Israel at 25%. Combined, the foreign debt among the five countries is $124 billion: Egypt leads the way owing $50 billion, followed by Turkey at $40 billion, Syria $20 billion, Jordan $11 billion, and Israel $3 billion.[1] The prognosis for the first half of the decade is for the rate of inflation to hold steady and for debts to increase at current rates.

This small but indicative compilation of statistics hardly reveals the seriousness of the situation. When one looks more closely, the picture becomes even darker. For example, in Jordan,

the ranks of the unemployed are filled mainly by persons under 30 years of age who are married with children and have had a secondary or college education. They are no longer able to find relief through employment in the Gulf countries. Indeed, even prior to the Gulf War there was a reverse flow of Jordanians from the Gulf states who were made redundant by the economic slowdown in the Gulf. This flow reached flood proportions with the combination of refugees from the hostilities and expulsions because of Jordan's support of Iraq. It is these educated younger members of Jordan's middle class who have been at the forefront of the newly revived opposition to government policies, demanding radical political and economic changes; particularly, they want a greater share of power for themselves.[2] It is among this segment of the population, which has its counter-parts throughout the Middle East, that anti-American feelings are growing most rapidly.

Israel, which would appear to be insulated from drastic economic hardship by its special relationship with the U.S.--the bulk of its foreign debt is owed to the U.S. and diaspora Jewry--is nevertheless vulnerable to rapid economic deterioration owing to paralysis of a national leadership which has been unable to take the bold economic initiatives and certain political risks essential to stemming serious erosion in vital sectors of the economy. The agricultural sector, for example, is in a downward spiral with the kibbutzim and moshavim in deep trouble. (A kibbutz is a collective farm or settlement, and a moshav is a cooperative settlement

consisting of small farms.) Only 3% of Israel's population live on kibbutzim, but among them they have accumulated a debt of $4 billion. On a per capita basis, this debt is thirty times that of Mexico.[3] The protection offered by American assistance is increasingly offset by a mounting flight of Israeli capital offshore--estimated to be $50 billion--especially from the middle class.

The most serious blow to Israel's economy, the one with the greatest potential for political and social dislocation, comes from the Intifada, which drains 2% of the GDP or between $700-900 million per year.[4] Until the beginning of the nineties, the Intifada was clearly the most destabilizing challenge facing Israel and probably the prime determinant of the nature and shape of Israel's future.

Since late 1989, Russian Jewish immigration must be added as a critical factor in assessing probable socio-economic developments in Israel in the 1990s. The Intifada will continue in some form until the issue of a Palestinian state is resolved; until then, the Uprising will go on draining the Israeli economy and psyche, and have a molding influence on the country's future. But of potentially equal significance will be the socio-economic and demographic impact of an expected one million Jews from the Soviet Union who must be sheltered and given employment within the first half of the decade. Israeli authorities estimate that settling the emigres will cost upward of $38 billion, a sum which would crush

the nation's fragile economy without massive foreign aid. This will make Israel's economy even more dependent on American assistance than it is now with serious implications for future American-Israeli relations.

Turkey and Egypt present contrasting case studies that demonstrate the socio-economic uncertainties and dangers facing the entire region in the 1990s. Turkey is patently in better shape than Egypt, but faces potential economic problems while Egypt is already in the midst of a very real crisis. Both nations are vital to American strategic planning in the Middle East: Turkey as a member of NATO and the only Middle Eastern country with American military bases that shares a border with the Soviet Union, Iraq, and Iran, and Egypt as the key Arab player in the U.S. peace-seeking process.

Turkey enjoys many advantages denied her neighbors: a large landmass with rich resources, extensive areas of fertile soil, surplus water stocks, and a crucial geopolitical location. Turkey has the potential to become a significant actor in the Middle East. Nevertheless, for all her advantages, Turkey's direction is not clear nor is a successful future assured.

The Turkish economy suffers serious internal regional disparities in prosperity. Her current 90% inflation rate, most of which spiraled upward within the last few years, has been

accompanied by aggregate government and commercial interest rates of over 100%.[5] If the foreign debt continues to ascend at its present rate, having trebled in the last decade, Turkey will have great difficulty within a few years in servicing the debt with commensurate consequences for the government's international credit rating. The prognosis, as stated, is for a continued rise in the foreign debt.

The Southeast Anatolia Project (GAP) is a vast hydrological undertaking involving the Euphrates and Tigris Rivers that is planned to encompass about 10% of Turkey's landmass. GAP aims to bring under irrigation 1.6 million hectares and generate 7561 MW of hydroelectric power. If successful, GAP would transform the economy and society of Turkey. But, because Turkey has placed most of her economic eggs in the GAP basket, the difficulties and risks are proportionate to the size and ambitions of the project. For example, GAP involves massive spending; upward of $25 billion is the projected cost of the completed project for both the Euphrates and Tigris basins. In some important respects GAP is a "crash" program requiring the acquisition of millions of dollars per day to keep it going. Such large amounts of foreign exchange are not readily available to Turkey; this has forced the government into large-scale international borrowing which has been difficult and often delayed. Turkish authorities have already been forced to request a rescheduling of the cost of foreign borrowing from short-term to mid-term obligations.[6]

GAP will require major social rearrangements in a region of Turkey where considerable tensions already exist, principally because Turkey's rebellious Kurdish minority is clustered in Southeast Anatolia. GAP requires large-scale resettlement of population, (mainly through internal migration), land redistribution, alteration of traditional life styles, development of social infra-structure, and regional planning. By allowing the Kurds to share in the economic benefits of GAP, and by the social restructuring of Southeast Anatolia, government authorities apparently intend to use the GAP project as a means of settling their Kurdish problem. However, it should be noted that the social scientific research necessary for effective planning and policy implementation, such as impact studies, has yet to be done.

It is clear that very soon after the turn of the century, Turkey must begin to realize some of the financial and social benefits from GAP that the public has been encouraged to expect, otherwise, the consequences of unrequited hardships and an inescapable economic crisis will be unavoidable. There is little evidence of serious contingency planning in the event that GAP does not meet its economic and social targets in a timely fashion.

However, despite perils and problems, it is unlikely that GAP will fail completely and there is a reasonable chance that it will succeed. Moreover, Turkey's natural, professional, and technical

resources provide an economic safety net and options for recovery that her neighbors, notably Egypt, lack. This means that although Turkey will be susceptible to destabilization in this decade, she will be less likely to go under. Thus, there is a good chance that Turkey will be, in relative terms, a bastion of stability in the region. Given Turkey's strategic position and friendly disposition toward the U.S., this circumstance will strengthen Ankara's putative claim to being America's most important Middle Eastern ally.

Egypt is struggling to avoid economic and demographic disaster. In the past Egypt has--fortunately for the Egyptian people and for the general stability of the Middle East--somehow muddled through her perennial economic crises. Underlying this muddling has been an assumption that with some structural reforms of the economy and massive foreign aid, the Egyptian economy would eventually right itself. However, circumstances in the 1980s so changed for the worse as to cast serious doubt whether the Egyptian economy can recover sufficiently to avoid a major dislocating crisis that could radicalize the country.

The supporting statistics are grim: the foreign debt is $50 billion; debt service in 1989 was $6.6 billion with a projected rise to $8 billion by 1992, but the government has never been able to service the debt at more than $3.3 million per year. The inflation rate is running at 35-45% and unemployment is officially

pegged at 15% but is certainly higher--about 30%--given the return flow of repatriated manpower from around the region. There is a net increase of 1.2 million Egyptians every nine months, forcing Egypt to become a significant importer of grains, meats, fruits, and vegetables paid for with dwindling hard currency reserves, earned, paradoxically, in part by the export of agricultural products.

The flight of Egyptian capital to offshore havens is about $25 billion and may be even more. A worrisome trend has emerged in the offshore capital flow: heretofore, most of the capital came from wealthy entrepreneurs and politicians, but now a rapidly increasing number of middle class Egyptians are sending their money out of the country, putting even greater stress on the Egyptian pound.[7]

Essential deep structural reforms in the economy--i.e. changes in the organization and units of production, in the agencies and institutions of the economy, in the allocation of resources, and in the processes of economic decision making--which may have been possible in the late 1970s or early 1980s, when there was positive balance of payments, are all but impossible now. The political risks of such structural reforms are too high, especially with the current unemployment rate and the growing strength of the religious right. As in the past, those risks would probably materialize in the form of widespread violent demonstrations. Just about the only reform the government can safely undertake is of the nibbling-around-the-edges variety. Even if all the difficult and correct

actions were taken immediately, the benefits would not be felt for at least five or six years, a time lag during which the government would be hard pressed to contain the potentially violent political and social consequences of such reforms. Egypt's economic problems have brought the country to the threshold of technical bankruptcy.[8]

Arguments have been made that a stable Egypt is so critical to the interests of the U.S. and the Gulf states that together they would not allow the Egyptian economy to collapse. That is probably true. But two factors militate against this proposition: 1) just keeping the Egyptian economy ticking or functioning at its present level will not suffice to avoid crises whose effects would be cumulative and would produce destructive political and social dislocations; and 2) current events in Europe are very likely to reorient U.S. spending priorities toward that region.

Given the limitations the U.S. deficit places on foreign aid, Congress may not be so willing to continue to pour money into Egypt (or other comparable recipients of U.S. assistance) at present levels if no tangible progress on economic reforms is made or if the need for massive aid appears unending. If the Egyptian economy collapses, radical or extremist solutions will be virtually irresistible and the voices of moderation will be stifled. If Egypt is radicalized, the political and strategic balance of the entire Middle East will change drastically, most probably in ways unfavorable to American interests, and the prospects for conflict

will increase accordingly.

The major implication to be drawn from these destabilizing economic trends in all five countries is that they suffer significant structural weaknesses in their economies, weaknesses that are both a product of and contributors to their social ills. All non-oil based economies in the region are still handicapped by very low GDP and GNP levels. They need urgently to make improvements in their economies which, owing to their structural nature, will require fundamental reordering of key sectors and changes in established policies (such as dropping or substantially reducing subsidies on basic commodities). Such reforms are extremely difficult to carry out successfully without violent civil upheavals, especially in nations where large portions of the population live an economically marginal existence, as is the case in most Middle Eastern countries. The violence that ensued in January 1977 when the Egyptian authorities reduced the subsidy on bread is a case in point. It is invariably the poorest, most vulnerable, and thus most volatile classes on whom the painful brunt of such economic reforms falls the hardest.

However, without some amelioration, destabilizing domestic strife will be inexorable rather than only probable. In economically hard-hit countries like Egypt, Jordan, and Syria, the most likely outcome would be new regimes more radical, nationalistic, bellicose, and anti-American than their

predecessors, which in turn will generate even more potential regional instability in the 1990s. If improvements are to be accomplished with any hope of success, strong, effective leadership, careful planning, and outside assistance specifically dedicated to cushioning the worst impact of change will be essential. But, owing to the high levels of poverty endemic to the Middle East, there remains a strong probability of violent reactions even during the process of reform itself. As so often happens, leaders could be powerfully tempted to create external crises to channel their people's frustrations and anger away from domestic problems. Here too Iraq has already provided an object example: Saddam Hussein, in his response to the economic squeeze caused by the war with Iran and by his overly ambitious military build-up intended to enable him to seize the leadership of the Arab camp, adopted bellicose, aggressive, nationalistic, and anti-American policies that resulted in the disastrous Gulf War with all of its destablizing consequences. A new radical Egyptian regime could align itself with Arab anti-Israeli sentiments, repudiate the Camp David accord, and opt out of the peace-seeking process. It appears very unlikely during the coming decade that the Middle East will escape a series of political and social convulsions.

Demographic Trends

Underpinning intrinsically all that happens in the economic life of the region are the demographic realities. The unchecked

increase in the number of inhabitants across the Middle East has become the prime long-term determinant of prosperity or poverty, stability or conflict.

Viewed from almost any aspect, the statistics are alarming. Since World War II the region's population has doubled and is projected to double again within the next twenty years. The combined average population growth rate for the five countries under examination is about 3.25% per annum. That is a rate, if unchecked, estimated to be about twice higher than the economic and natural resources of the area can sustain.[9] (Turkey might be a local exception.) If there is not a sharp downward swing in present trends, by about the year 2010 the combined population of this five nation cluster will be 200-210 million. None of the governments has as yet devised an effective and coherent policy to stabilize or reduce population growth or to manage the attendant problems.

In this context, it should be noted that, historically, Islamic religious doctrine and law do not prohibit the practice of birth control. Indeed, in the Middle Ages, Muslim Arabs, drawing on their experience in animal husbandry, were among the most knowledgeable, sophisticated, and earliest scientific practitioners of human birth control methods, even in the aftermath of the great plagues.[10]

While the demographic factor is evident in virtually every

major issue challenging the region, its manifestations, like an endlessly variable mosaic, can be seen to overlap and differ from country to country. Local values and attitudes, social and behavioral traditions, ideologies, national priorities, political and economic organization, and ecological systems account for the diverse situational and interrelated effects of demography.

For example, at 3.8% a year, Jordan's population is increasing annually at a faster pace than Egypt's. Between 1986 and 2015, Jordan's citizenry is projected to grow by 178%, from 2.7 million to 7 million.[11] This rate of growth in a country that receives an average of 150mm of poorly distributed rainfall per annum portends serious problems. Jordan, where much stress is placed on education by both native Jordanians and resident Palestinians, has traditionally produced a surplus of well trained professionals and technocrats. Throughout the oil boom years the demand for trained manpower in the Gulf states provided an outlet for this accumulated talent. But the oil price recession of the late eighties and the Gulf War produced a return flow of this educated labor force with the resultant political and social consequences already cited. Although oil revenues are expected to rise again in the second half of the nineties, it is not likely that another economic "boom" similar to that of the seventies and early eighties will ensue (owing to Jordan's pro-Iraqi stand during the war, Jordanians--particularly Jordanian Palestinians--will probably not be welcomed back to the Gulf in large numbers). But an increase in oil

revenues should produce a modest employment market in the Gulf for most other Arabs and more aid to other Arab countries from the Gulf states. However, this anticipated economic upturn in the Gulf could not by itself offset all the negative socio-economic consequences of overpopulation. Moreover, the oil producing states have over the last two decades trained their own technical and managerial specialists reducing the number of opportunities for skilled labor from other Middle Eastern countries.

In Syria, the demography-education link functions differently due mainly to a combination of ideology and national priorities. Syria, which has the same population growth rate as Jordan, is endowed with more abundant natural resources, but a less well educated elite. While Syrians value education as much as Jordanians, Syria's educational system has been deeply politicized and poorly administered, and the best talent has been co-opted by the military establishment at the expense of the civilian sector. Because Syria's population is so heterogeneous, much educational effort is devoted to producing Syrian males whose traditional loyalties to region, group, or sect are superceded by an overriding loyalty to state, party, and Arabism. A concomitant of this Baathist strategy has been to use the educational system for political socialization and to mobilize its youth for the achievement of its economic development targets. Hence, there has been a "knowledge for the sake of work" approach to Syrian education since the advent of Baathist power.[12]

Although considerable improvements have been made in the system, the results, overall, have been disappointing. The attack on illiteracy has not succeeded, especially in rural areas. In 1960 rural illiteracy was 70% but it is still over 50% and is an important factor in Syria's high birth rate. The educational system suffers from lack of attendance, shortages of qualified teachers, overcrowding, poorly equipped schools, maladministration, and inefficiency. These conditions are reflected in the government's budget priorities. In the last five-year plan, ending in 1985, 8% of the budget was allocated to culture and information--the category of expenditures under which education was lumped--30% to the military, and 12% to industry. Education received about half of the 8% allocated to culture and information.[13] Should this pattern continue into the 1990s, Syria will be unable to use education as an effective tool for birth control, and President Hafez al-Asad's goal of strategic parity with Israel will be unattainable. Indeed, there are indications that President al-Asad is acknowledging reality and has all but abandoned that ambition.

The authorities' failure to institute an effective program to reduce the rate of population increase has contributed to its failure to overcome illiteracy which in turn continues to undermine the ability of the government to achieve its ambitious social and economic goals. Efforts to eradicate illiteracy and raise the

standards of education have been unable to keep pace with population growth. Much of this failure can be attributed to the authorities' primary efforts to control and indoctrinate rather than to educate. The upshot has been a largely under-educated population and a serious "brain drain" among those who are trained. Syrian students and other emigrants tend to stay abroad in larger proportions than those from many other Arab countries owing to political discontent, poor job opportunities at home, and low standards of pay and working conditions.

What these conditions mean for the future of Syria, whose population will approach 18 million in the year 2000 (a 71% increase), is that unless drastic improvements are made quickly, the human and financial resources required to maintain political and socio-economic stability will simply not be available. There is solid evidence that current policies could permanently impair the long-term viability of the economy, as in the case of Egypt, creating a potentially explosive internal situation that could have serious repercussions for Syria's neighbors should it be touched off.[14]

Should the consequences of present trends materialize in the course of the nineties, the U.S. and Israel (and Syria's other neighbors) will face a Syria with less capacity to generate an effective military machine even if it had the resources to do so, but one with far greater economic and political problems, less

stable and therefore in some respects potentially more dangerous as regards regional conflicts and any peace-seeking process.

The demographic factor operates in still other ways in Israel. There, the disparity in birth rates between Arabs and Jews and the problems of immigration and settlement have made the demographic issue a politically volatile one. The Jewish population within Israel proper, i.e., excluding the Occupied Territories, is growing at a rate of 1.9% per annum, while the Palestinian population is increasing at slightly more than 3% annually. Put another way, the Jewish birth rate is 22 per 1000 as compared to 34 per 1000 for Israeli Palestinians. In the Occupied Territories, the Jewish settlers' annual birth rate is 2% and the Palestinians' is about 3.4%, or 23 births per 1000 for the settlers and 44 births per 1000 for the Palestinians.[15] This has been a problem that has concerned Israeli leaders for decades.

The demographics of Israel cut across the vital questions of the future Jewishness of Israel, the status of Israeli Arabs, the disposition of the Occupied Territories, the peace-seeking process, and Israeli democracy. Unless Israel chooses to create a society that is permanently segregated both politically and socially--perforce at the expense of democracy--it is conceivable that Palestinians could in the future control one-quarter of the Knesset seats.

The projected immigration of one million Soviet Jews to Israel in the next few years is bound to have an immediate impact on the demographic pattern, but the long-term effects are indiscernible at this juncture. There is an informal consensus of opinion among specialists that in the short run the influx would alter the Jewish-Palestinian ratio in absolute numbers, but would not significantly alter the birth ratios. Since the new emigres will be mostly educated middle-class Russians who are ambitious to improve their economic status, it is assumed that they will not reproduce at a rate greater than Israel's Jewish population; thus, the current disproportionate Jewish-Palestinian birth ratio will be maintained.

However, settling the new immigrants will place a great burden on Israel's fragile economy and the regional tensions already generated by the Russian Jewish ingathering will certainly complicate the peace-seeking process and Israel's relations with her neighbors. If the government settles large numbers of the immigrants in the Occupied Territories, then the level of violence can be expected to rise and Israel's relations with the U.S. will also be made more difficult.

However emotionally and ideologically satisfying immigration of Russian Jews may be to the Israelis, and whatever future national benefits they are expected to bring, among their baggage they also carry problems of major proportions for Israel. They

must somehow be absorbed without dislocating Israeli Jews and Arabs, without pauperizing the country, and without displacing Palestinians in the Territories. The new Jewish influx is perceived by the Arab camp not only as a serious threat to the Palestinians in the form of creeping annexation of the Occupied Territories, but also as a disruption of the present uneasy balance of power in the region, making peace more difficult and war more likely.[16]

Moreover, the Soviet Jewish immigration will severely aggrevate Israel's water shortage problems. Israelis presently comsume water at the rate of 280-300 litres/per capita/per day (l/c/d) which is a rate of use as high as some of the nations of the industrialized world. There simply will not be enough water in either Israel or the Occupied Territories (where water is being overpumped by more than 100 million cubic meters a year) for another million Israelis who consume 280 l/c/d of water without dangerously over-exploiting future stocks. Nor, without the creation of significant new supplies of water in tandem with all out conservation programs, will the Israeli economy be able to expand sufficiently and rapidly enough to provide adequate livlihood for the new immigrants, not to mention native born Israeli Jews and Arabs. Those required new supplies of water are not known to exist within Israel; a massive crash effort at desalinization of sufficient quantities of sea water would cost million (perhaps billions) of dollars that Israel does not possess,

would not produce enough water before the turn of the century to meet needs already urgent, and would almost certainly be quite expensive for all consumers unless heavily subsidized. In these circumstances, accessible sources of water outside Israel such as the Yarmuk in Jordan and the Litani in Lebanon, or the costly importation of water from Turkey, take on very serious strategic implications.

The imminent presence of a million Soviet Jews in Israel confronts American and Israeli policy strategists with several critical questions: What will be the effect on Israel's domestic political balance? Will the new citizens give Likud a decisive electoral majority with a concomitant influence on American peace initiatives? Will they touch off violence among Israeli Arabs who already consider themselves second-class citizens and fear that the Russian Jews will rob them of the limited number of jobs open to them? How will disadvantaged Israelis react to perceived loss of housing and economic opportunities to the emigres? Will the new immigrants intensify further the growing strains between religious and secular Jews? Will social relations between ashkenazi and sephardic Jews be worsened? Will Israel become a more Zionist nation? Can Israel avoid a significant reorganization of her economy? What would be the implications of an Israel in turmoil for several years? Assuming the certainty that Israel will continue to request increased special economic assistance for absorbing the new immigrants, what should the American response be

in light of the U.S. deficit and other policy interests in the Middle East?

Beyond individual national patterns, there are certain general demographic characteristics that apply to the region as a whole. The population of the Middle East is quite young. About 40% are less than sixteen years old. Over 50% are thirty years or less.[17] Because of their numbers, the younger generation constitutes the greater part of the poor and underclasses of the region. At the same time, from the ranks of the young there is emerging an educated elite in larger numbers, politically sophisticated and aware of world events, more receptive to new ideas, with higher political and social expectations and a growing demand for the introduction of democratic systems of government. They want a greater share of power, appear to be committed to nationalistic and Islamic causes, and are critical of regimes that ignore public sentiments--especially their own. Their loyalties are more oriented toward the nation as opposed to a particular government with its ideology.[18] When this generation assumes power, because its attitudes toward the U.S. will probably be more negative than the current leadership, American influence in the area may be somewhat diminished and the new leaders more difficult to deal with.

The principal implications of the region's population growth rates and the other general demographic features are obvious:

enormous strains are placed on all major economic sectors--housing, education, health services, labor, agriculture, etc.--not to mention vital natural resources such as water. Development needs consistently outrun capacity to satisfy them, and development targets must grow ever more ambitious just to keep pace with the expanding populations.

The results in economic terms are unmanageable chronic debts, poor performance, low per capita incomes, corruption, and maldistribution of wealth manifested in extreme poverty often accompanied by extreme wealth among a small elite, a highly visible discrepancy which intensifies social tensions.

In human terms, these conditions produce a low quality of life if not oppressive misery, a sense of powerlessness and frustration accompanied by a rising anger, dashed hopes and expectations, and a receptivity to radical or violent solutions whether inspired by ideologies of the right or left, religious or secular, especially among the younger generation.

A typical ingredient of such a potentially explosive mix is a simplistic willingness to place blame on outside forces. Various opinion polls that have appeared in the region's local press would seem to indicate that most youths under the age of thirty focus much of their anger on the U.S. because of perceived American hostility toward the Palestinians and unconditional support of

Israel. It is from this segment of the population that the next generation of leadership will be recruited.

The poplularity of Iraq's invasion and annexation of Kuwait among youth throughout the Arab world, accompanied by a converse anger over U.S. military involvement in the crisis, has trenchantly demonstrated the negative attitude of much of the region's youth (and in this instance their elders) toward the U.S. At the same time, the event has shown some of the consequences of such an attitude. Even those Arab governments who welcomed U.S. intervention were confined in their expressions of support, whatever the form, by the popular sentiment in their countries opposed to the American military presence. Indeed, judging by extensive interviews among Arabs in both the Arabic and western media, Saddam Hussein's tough public defiance of the American-led condemnation and military intrusion gave his actions a certain legitimacy.

Water and the Prospects for Conflict

All of the foregoing socio-economic issues relate integrally to the question of the region's vital natural resources. The most patently reciprocal problems are those of scarce water supplies and rising demographic trends. Water resources most particularly determine the ability of any country to be productive and feed its citizens. In the Middle East water transverses and is the chief

determinant of all other socio-economic factors. There is virtually no human artifact or commodity that is produced in the absence of water. Agriculture is impossible without it and so are most manufacturing processes.

Scarcity of fresh water has always been a source of conflict. The word *rival*, is derived from the Latin *rivalis*, meaning "one living on the opposite bank of a stream from another, or one using the same stream as another." Water conflicts are notorious in the history and mythology of world civilizations. Gun fights over watering holes are a familiar feature of American westerns while other famous water-inspired conflicts, such as the rivalries over the wells of Beersheba between Abraham (and later Isaac) and Philistines, come to us from biblical "easterns."

Why does water cause so much conflict? Generally, because it is essential to life, but specifically because water flows. Its unregulated flows are likely to be erratic, and in arid country, the consequences for any user unable to capture water the moment it is needed are likely to be dire. Also the unpredictable character of stream flow can create a tense environment of uncertainty that is disruptive of social relations. The greater objective becomes, then, to provide order and predictability so that water users can realize their other goals related to increased income, popular control, and social justice.[19] In the Middle East water exhibits all of these elements of conflict.

As a contemporary issue of security and international relations, water displays certain distinguishing characteristics:

-Water is always a terrain security issue, especially when scarce, since all concerned parties feel compelled to control the ground on or under which water flows.

-The relationship between water dependency and security is perceived as absolute, i.e., as zero-sum, especially where two or more mutually antagonistic actors compete for the same water source.

-As a zero-sum security issue, water carries a constant potential for conflict.

-Because of its complexity, water tends to be dealt with piecemeal--problem by problem rather than comprehensively, both domestically and internationally--thus tending to be fragmented as a strategic and foreign affairs issue.

-International law as a means of settling and regulating fresh water issues remains rudimentary and relatively ineffectual without prior treaty arrangements in place.

The five countries that share the Jordan and Euphrates River basins constitute excellent case studies of the complex nature of water problems and the role of water in future prospects for stability or conflict in the Middle East.

The Jordan River Basin

Very serious problems of water scarcity and quality exist in the Jordan River basin. The basin's principal riparians, Jordan and Israel, have been consuming about 108% of their total useable water stocks, i.e. overusing their renewable water stocks by 8% per year. The prognosis is for continuing water shortages and over-exploitation of water supplies in both the short and long term through 2015, unless immediate drastic and politically difficult remedial actions are taken basin wide.[20]

Another complicating dimension is the issue of energy, water, and oil. Significant amounts of energy are needed to extract and move water in the Jordan basin. For example, Israel uses about 18% of her total national energy supply to pump water and Jordan's 9% water-energy ratio is proportionately not far behind. In both countries oil is the principal source of energy, thus linking water issues with petroleum.

The effects of ongoing water deficits, already exigent in the Jordan basin, are cumulative and can quickly become irreversible. Neither known natural sources nor water technologies, now or in the foreseeable future, have the capacity to generate new useable water in needed quantities at an affordable cost. Failing a solution of scarcity, both Israel and Jordan will have to curtail their social and economic development. The result will be heightened

competition among riparians and among domestic sectors within each country for decreasing amounts of increasingl degraded water with concomitant destabilizing internal and regional repercussions.

Because of the current disparity in power among the Jordan basin's riparians--Jordan, Israel, Syria and Lebanon--there appears to be no immediate prospect of a water war, although, despite Israel's overwhelming power, water-based hostilities are possible. However, water issues are central to the strategic planning of all the basin's riparians and water problems contribute importantly to the basin's inter-riparian tensions. The potential for open conflict over the basin's diminishing water stocks are rising.

If current policies and patterns of consumption in Jordan and Israel persist, a mounting series of water crises will be touched off before the end of the decade, particularly if economic conditions deteriorate further or there is a drought (which is highly probable, given the drought history of the basin). The severity of the crisis could break present restraints on conflict. If that occurs, water will combine with other underlying forces of instability and hostility among the basin's riparians, and water-driven warfare would almost certainly ensue, spilling out into the region beyond the basin. King Hussein has stated privately that although he could conceive of few reasons to go to war with Israel, he could be compelled to fight over water despite the almost sure prospect of defeat.

Unless Israel and Jordan are able very quickly to devise effective policies for the reduction of water consumption, they will be unable to meet the developmental needs of their societies by the end of the decade. Whatever combination of actions might be taken, some degree of economic restructuring and a reduction in population growth must be a part of the process. Such alterations always result in social dislocation and hardship. Consequently, rather than warfare among riparians (which is certainly possible), what is more likely to ensue from water-related crises in the coming decade is internal civil disorders, regime changes, political radicalization, and instability, particularly in countries where there is a combination of water and economic problems such as Jordan, Syria, and Egypt, and under certain conditions, Israel.

The waters of the Occupied Territories have become so integral to Israel that the delicate balance of Israel's water system has become dependent on the water system of the Territories. In needy times, which has become the typical situation, Israel satisfies up to 35-40% of its water needs from the West Bank and Gaza.[21] It is inconceivable that an Israeli government would ever give up any part of the Occupied Territories without an effective plan, replete with a full array of guarantees and inducements, that gives Israel secure permanent access to sufficient quantities of the Territories' waters or guaranteed access to other comparable sources in the area (probably the Litani River in Lebanon).

Moreover, water scarcity, the Jordan basin's bedrock hydraulic reality, also precludes the "Jordan-is-Palestine" solution advocated by some Isaelis for several reasons: (1) The Hashemite Kingdom is already unable to supply water to its own burgeoning population without rationing; (2) There is already a serious problem of water quality; (3) Jordan lacks sufficient sea frontage to allow relief from desalination; and (4) there are not any known new sources of significant quantities of water within the Kingdom. Thus, there would not be enough water to absorm two million more Palestinians expelled (or "transferred") from the Occupied Territories. The situation would be inhumane and would crush the regime.

It might eventually be possible to overcome Israel's security justifications for retention of the Territories, but not the hydrological arguments, which will persist unless the water issue is settled. It is water, in the final analysis, that will determine the future of the Occupied Territories, and by extension, the issue of conflict or peace.

In the meantime, unless patterns of consumption change, sometime between 1995 and 2005, Israel, Jordan, and the Occupied Territories will begin to experience such acute and progressively worsening perennial water shortages and degradation of quality that

the effect can be likened to a situation in which the three areas were to run out of all renewable sources of fresh water. However, owing to insufficient financial resources, shortage of technical and managerial expertise, domestic and political constraints, and deep-seated, even implacable, feelings of mistrust and hostility among the basin's actors, the leaders of Israel and Jordan will be unable to solve their water-related problems without outside assistance, preferably from a combination of sources: the U.S., E.C., U.N., and such international funding agencies as the IMF and World Bank. Should water-driven hostilities break out in the Jordan basin, the conflict would almost certainly spill out to other parts of the region with potential major damage to American security and political interests.

The Euphrates Basin

The Euphrates basin does not suffer from water scarcity, except in a few highly localized situations. Rather, its problems lie in the hydropolitics of Turkey, Syria, and Iraq, the riparians who must share the river. The principal issues revolve around the reduction and diversion of flow to the lower riparian users (Syria and Iraq) and degeneration of water quality. These problems stem from the large hydrological projects being undertaken in the upper reaches of the basin (chiefly, Turkey's GAP project) without prior agreement among the riparians on their political, economic, and strategic implications. Moreover, water quality has been

deteriorating because of indiscriminate polluting and too few purification facilities. Turkey and Syria are engaged in massive hydrological development schemes which if fully carried out will use up much of the available water in the Euphrates River.

Without an apportionment agreement among the riparians, and if Turkey utilizes all the water its plans call for, the flow to Syria could be reduced by 40%, and when both Turkey and Syria have taken what they need, the flow to Iraq could be reduced to "...a briny trickle sufficient only to flush the river bed," that is, only one-fifth to one-fourth of what it currently receives.[22] Whatever regime might be in power, and whatever Iraq's military condition, this circumstance would be unacceptable.

The context of these conflictual issues has been changed by the recent Gulf War. Turkey's advantage as the controlling upper riparian has been dramatically augmented by the destruction of Iraq's projectable power, giving Turkey greater than ever dominance in the Euphrates-Tigris basins. There is virtually no liklihood in the foreseeable future for a water-driven war between Iraq and Turkey--which was not highly probable anyway--or, for that matter, between Iraq and Syria, which was a greater threat.

Moreover, Iraq shorn of its military power and with its net oil revenues projected to be significantly diminished will be far more dependent on and therefore vulnerable to the good will of

Turkey and Syria (which appears miniscule at present) for its water supply. So far, Turkey has given no sign that it intends to assert its enhanced ascendancy aggressively. However, there are emerging indications that the Turks are fully aware of their magnified position and intend to parlay it into political benefits in the region and in its relations with the U.S. and Europe.

At present, a short opportunity for urgently needed negotiations is available since neither the Turkish nor the Syrian projects are proceeding on schedule, due mostly to a shortage of funding, and Iraq and Syria need an agreement more than ever. But owing to the continuation of traditional obstacles, particulary mistrust, the matter will need the good offices of another party.

If the issues are to be effectively resolved, they must be negotiated on a basin-wide basis and ideally produce a basin-wide authority. So far, owing chiefly to Syrian-Iraqi antagonism, two decades of effort have only been sporadic, largely bilateral, and unsuccessful. Prior to the Gulf War, because of the gravity of the situation, the pace of the talks among the three riparians was picking up a little, but were still preliminary.

The hydropolitics of the Euphrates basin require outside facilitation and mediation if a a future crisis is to be averted. Because of the nature of the basin's political alignments, help will have to come from a combination of regional and extra-regional

sources. Turkey and Syria need hard currency financing and expert help in water management, technology, and social planning. Neither is yet treating seriously enough the social impacts of their projects. Iraq has the same needs plus a massive recovery program which will require a foreign workforce to supplement Iraqi manpower reduced by the casualties of war. All three riparians need a basin-wide agreement, the two lower riparians, Syria and Iraq, profoundly so.[23]

Generally speaking, the most plausible expectation for the Euphrates basin is that little international progress over the Euphrates' waters will be made for some time. The situation will fester in a minor way until sharp shortages are experienced downstream, at which time the tensions may erupt dramatically. Effecting a resolution before a dangerous flashpoint is reached is plainly an important interest for all the concerned actors, including the U.S.

U.S. Role in the Region's Hydropolitics

If the hydraulic problems of the region are to be mitigated in time to avoid conflict, the U.S. must play an immediate, sustained, central, and genuinely even-handed role, acting mainly as a facilitator/mediator, providing necessary inducements and guarantees for agreements, as well as mobilizing and working with

other outside parties to assist in the effort. Also, the U.S. must be prepared to provide--preferably in conjunction with other powers--sufficient, strictly dedicated financial resources to make possible the economic restructuring essential to solving the region's water problems without destabilizing political and socio-economic hardships.

Clearly, the ideal solution to the hydropolitical problems of both basins would be the creation of basin-wide authorities with enough independence, power, funding, and expertise to determine and regulate water usage among the riparians.

American influence among the principal users of the Jordan basin's waters is sufficiently strong that the U.S. could play a positive role. However, American influence (or that of any other single outside party) in the Euphrates basin is in most respects limited. Nevertheless, there is a circumscribed but effective role for the U.S. Its largest stake is in Turkey, which is where its endeavors should be focused. In addition to using its limited leverage, the U.S. can mobilize international diplomatic efforts to encourage a basin-wide agreement with inducements of economic aid and political support in the international arena when possible, e.g. for various initiatives in the U.N. or World Bank.

Such actions, together with judiciously proffered water technology and expertise could advance American interests in the

basins and region simultaneously. Although the recalcitrant Syrian-Iraqi hostility is best left in the first instance to regional mediators, the United States can play a positive secondary role through its Arab friends and as part of a western coalition.

In the U.S. government, as in Middle Eastern countries, the issue of international fresh water use, allocation, and preservation suffers badly from piecemeal approaches and consequent fragmentation. In this regard, there is something significant that the U.S. can do to serve its own interests and simultaneously those of riparian nations globally, that is to form a special interagency group, encompassing both the executive and legislative branches, to coordinate American policy formulation in the realm of international fresh water issues. This group should serve functions of coordination, data collection, policy and project assessment, education, and review. It could also serve as an international data clearinghouse and a reservoir of international expertise. Its purview should include the technological, political, socio-economic, strategic, and legal dimensions of international water use issues.

In addition, there are various short-term actions that U.S. authorities can take toward easing the water crisis in key parts of the Middle East. These actions are achievable and would have a salutary effect without having to await settlement of larger, recalcitrant political issues:

--Provide technical expertise and appropriate water technology, especially in respect to return flow, extraction, and purification (including desalination), as soon as possible.

--Provide training, on site and in the U.S., on advanced techniques of conservation, irrigation, crop planning, and efficient water management.

--Assist in the creation of local water research and training centers (such as the one at Jordan University) to encompass such programs as the use of effluents in agriculture, the development of marketable saline-tolerant and low-water-consuming crops, etc.

--Encourage the investment of private capital in the infrastructure of Middle Eastern water establishments.

--Support and encourage World Bank and United Nations agencies in their efforts to assist Middle Eastern nations with their water problems.

--Consult with the European Community and Japan on devising joint efforts aimed at easing the most critical water problems in the region.

--Use whatever influence the U.S. can to encourage the creation of basin-wide authorities for the management and allocation of water resources and discourage any of the region's riparians from using water as a political weapon.

--In various ways, give official public acknowledgement of Congress's recognition of the urgency of water issues in the Middle East--for example, by having a report on the issue prepared and given wide dissemination and extensive media coverage.

--In the various economic aid packages Congress makes available to Middle Eastern nations with water problems, earmark

rigorously those funds that are to be spent exclusively on water-related projects.

A final Observation: Interconnections

The quintet of nations occupying the Jordan and Euphrates basins are linked by certain commonalities and rivalries: common geopolitical and strategic locales, shared (often scarce) water resources, competing development schemes, contending ideologies, similar demographic trends, mutual hostilities, analogous maldistribution of wealth and natural resources, migrant labor, and various other problems and needs.

These linkages yield the following proposition: All major events in one area of the Middle East will ultimately have an impact on events in all other areas. If the promotion and protection of American interests in the area are to be successful, this axiom of Middle Eastern politics must be taken into account by policymakers.

The single issue of Jordan's proposed Unity Dam encapsulates this maxim and shows how it can affect U.S. interests. Without going into the background details of Unity, it is possible to demonstrate how this issue ramifies across basins and borders, and involves both socio-economic and strategic matters.

The Unity Dam is planned to regulate the flow of the Yarmuk River, further develop the Jordan Valley, and enable Jordan to increase industrial and domestic consumption by capturing 195 Mcm of water per year behind the dam. The site of Unity is close to the previously planned Maqarin Dam, which was never built. Like the Maqarin, Unity will have one base in Syria, thus the necessity of an agreement with Damascus whereby Syria will get almost all of the hydroelectricity generated at no cost. In return, Syria has promised not to build a large network of hydroelectric and irrigation projects that would have used up much of the sources of the Yarmuk.

The construction of Unity Dam involves several questions critical to the area's economic future and political stability: Whether Israel will obstruct the construction of Unity Dam on which Jordan is pegging much of its water security and future development; whether Syria will acquiesce to whatever Jordan and Israel agree on without pulling out of its accord with Jordan on Unity; future guaranteed allocations of Yarmuk water among its riparians; the impact on Jordanian-U.S. and U.S.-Israeli relations of the American mediation efforts in the Jordanian-Israeli Unity Dam negotiations; whether Turkey will actively assume a pivotal role in the hydropolitics-at-large of the region.

Construction of the Unity Dam constitutes Jordan's main hope for a politically stable and viable socio-economic future. Despite Unity's limitations, there is no other comparable option for

Jordan. Therefore, Jordan must negotiate with Israel until a workable arrangement is reached. Military action except *in extremis*, is not a viable choice.

Should the presently moribund talks resume, if the Israelis negotiators and the U.S. mediators play their hand badly, they will lose much. Creating a water-based political or economic crisis could destabilize Jordan, perhaps topple King Hussein's regime, and radicalize the government. Israel could be faced with another radical and militarily hostile neighbor, and American policies, which revolve so largely around Israel, would be exponentially complicated. On the other hand, a reasonable apportionment agreement on the Yarmuk would probably assure Israel an average 60-70 Mcm/yr--about three times as much allocated under the 1955 Johnston Plan--without the current political tensions.

However, owing to Israel's critical water shortage, the Soviet Jewish immigration makes it far less likely that Israel would accept less than the 100 Mcm/year that she has been drawing out of the Yarmuk River for the several years. Consequently, the best that Jordan could hope for after the combined Israeli-Syrian extractions would be only about 170 Mcm/year for the dam, less than the planned and projected need of at least 195 Mcm/year, unless Jordan were willing to settle for a very slow fill time and long carry-over from year to year. It is doubtful that Jordan's economy would be strong enough to sustain these conditions without a serious destablizing crisis.

Syria could gain much from a successful Unity negotiation; in addition to more electricity and water, Syria could win political credit in the Arab camp, more influence in Amman, possibly more U.S. economic cooperation in return for constructive behavior over Unity, and a small improvement in its position vis a vis Turkey and the Euphrates. In hydropolitics, incremental advantages matter.

Turkey looms important in the background of the Jordan-Israel-Syria talks because of her links with the negotiators and the mediator and because Turkey's good offices and influence--in part because of its advantageous upper riparian status on the Euphrates--are available to all of the principals (though the Syrians are not likely to make use of them). A further possible connection is Turkey's proposed "peace pipeline" for the transport of water out of the Euphrates basin in Turkey to the Gulf region. This plan, though technically feasible (and costly), requires the acquiescence of Jordan, Syria, and Israel and could supply water to the Jordan basin as part of a political agreement.

All of the basins' actors and the U.S., whose Middle East policies and security interests are based significantly on Turkey, Israel, and Jordan, have a stake in the future of Unity.

The Unity negotiations offer the U.S. an extraordinary opportunity to advance its Middle East interests and pursuit of

peace in the region. Although the inherent volatility of the issues involved and the seemingly unmitigated enmity of some of the actors could overwhelm the American mediatory venture, if the U.S. can re-activate the discussions and performs with great finesse, flexibility, equitability (fairness is an essential factor), and persistence, it could emerge from the unity negotiations having achieved a major milestone in its Middle East policies with a definite possibility of parlaying a successful result into further exchanges over other peace issues.

Endnotes

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