



Political-ideological constraints on intra-basin cooperation on transboundary waters

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This article offers a different perspective to the well known problems of water scarcity in the Middle East. It is argued that there are strong linkages between prevailing national ideologies and intra-regional water disputes. Domestic political necessities and commitments often limit foreign policy choices open to countries with regard to the settlement of water disputes. This tends to exacerbate existing conflict. Reasons given include ideologically intertwined issues related to national security, including food security and national independence in conjunction with a deep socio-cultural commitment to a prospering agricultural sector. Any proposed solution to Middle East water disputes needs to take ideological-political factors into account in addition to the physical, social, cultural and economic aspects. © 1997 United Nations. Published by Elsevier Science Ltd

The issue of transboundary watercourses, including international aquifers, has always been considered primarily a political problem related to multifaceted questions of scarcity and resource management. As the political actors involved in problems posed by border-crossing natural water resources are, by definition sovereign nation states, disputes that arise are international in nature. Consequently, it is normal that the literature on this subject has come to emphasize international legal and power-political aspects of the problem. These analyses often ignore domestic political constraints to which nation states, engaged in water disputes, are subject.

It is argued in this article that the overall behavior and foreign policy of a state is, to a large extent, determined by domestic political constraints. A more in depth understanding of the links between domestic political concerns and foreign policy attitudes, is therefore required in order to have a complete picture of the issues underlying water disputes, particularly official ideologies which, directly or indirectly promote increased water consumption.

Exploring ideological factors in national settings will contribute in two ways to our understanding of international politics of water disputes. First, it will shed more light on the reasons why a water allocation dispute between neighboring countries, that could possibly be solved through mutual understanding, cooperation, and the adoption of mutually acceptable technical means, instead escalates and reaches

proportions of international conflict. Second, such an exercise will offer valuable insight into the applicability of various solutions advanced as remedies. It will help toward establishing realistic guidelines for evaluating the political feasibility of these solutions, both within the domestic and the international context.

The political context of water problems in the Middle East

In the Middle East, international water conflicts are considered to be the most acute and potentially the most explosive in the world. Here, the relationship between domestic political concerns, ideological priorities, and official foreign policy attitudes are also among the most complex. In part, this is due to the general political characteristics of the region. Throughout the twentieth century, water disputes in the Middle East were closely associated with boundary drawing, state formation, nation building, domestic and international strife, and regime security issues.

It appears clear that the imposition of boundaries by the mandatory powers following the disintegration of the Ottoman Empire and during the post World War I era, are one of the major causes of the past and present tensions in the region (Hillel, 1994). For one thing, it strongly influenced the search for Arab unity, which remains one of the three cornerstones of Ba'ath ideology even today (Ma'oz, 1988). In the post World War II era, it was mainly the creation of the State of Israel and the ensuing protracted war that led to an atmosphere of distrust among regional states and to a

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search for state and regime security, as well as water self sufficiency. In the more recent years, intra-Ba'ath conflict in Iraq and Syria, among other things, interjected yet another dimension to intra-regional conflicts (Kienle, 1990). These historical developments and chain reactions are the background to water conflicts in the Middle East.

The role of international forces in shaping the politics of the region, just described, has been buttressed by other factors that have had direct impacts on the politics of individual countries as well as on regional political life. More specifically, the struggle to build nations has combined with a constant search for state and regime survival to produce challenges for achieving domestic and regional stability in an environment harboring many forces which constantly undermine such stability.

One source of instability has been the proclivity of many states in the region to resort to the use of armed force, as the frequent occurrence of wars in the region testifies. The absence of armed clashes does not necessarily mean peace between the states. Recent history records many more cease-fire agreements than peace treaties. Even when peace is eventually concluded, terrorist activities seem to continue to thrive.

Another source of instability, ironically, has been the undoubtedly rich oil reserves in some countries of the region. Being one of the most desirable resources in the world, oil has invited many outside interventions, direct and indirect, in the politics of the oil rich. The outcomes of such interventions, however, as was most recently evident in the Operation Desert Storm, produce security questions for all states in the region.

Ethnic, tribal, religious and sectarian disputes also abound in various combinations both domestically and across borders.

Instability has bred insecurity, often producing highly introvert regimes with strong opinions against "the others" both domestically and internationally. These regimes have also developed comprehensive agendas reflecting a complex set of interrelated priorities and practices, all relating one way or another to domestic control, national sovereignty and territorial integrity.

Although the historical, the international and inter-regional sources of excessive concern with national security in many countries of the region are not without foundation and therefore are understandable, it is also the case that national security issues have at times been used by political power-holders in the region as a means to mobilize public support and legitimize the current rule. Thus state survival is equated with regime survival, and regime survival with domestic stability. To ensure domestic stability, governments resort to various instruments of control—in many instances non-democratic ones concurrent with oppressive methods of rule—but in all instances, aimed at enhancing the legitimacy of the regime in place.

Water issues

Water issues occupy a central place in the national agendas of almost all states in the Middle East. All

countries want to be assured of a sufficient quantity of water. Although its relative scarcity varies among countries, water is scarce in the region. Furthermore, because national boundaries cut across most of the water courses, many countries are concerned that others may use more water, leaving less to them. Hence, in the quest for domestic stability and regime survival, governments see water issues both as a major problem area and as a valuable tool or resource (see also Lowi, 1993).

To begin with, water is indispensable as a major component in achieving economic development which is associated with more urbanization, a higher level of industrialization and greater productivity in agriculture. All three enhance the need for more water.

Economic development, it is expected, will contribute to the achievement of both domestic stability and regime survival in a number of ways. One of the more obvious ways is that bringing about economic prosperity tends to generate support for those in power. Another way is that economic development provides the state with more means to control society. A third way is that economic development may contribute to the realization of national integration.

The fact that economic development is identified as a strategic priority elevates having sufficient quantities of water to the level of a strategic priority, too. Energy production and modern agriculture, often viewed as the leading elements of economic development both depend, to a large extent, on the availability of renewable water resources (see also Naff, 1994). Hence, all governments seek answers to the questions of how to find enough water and how to distribute available water resources to the potential beneficiaries. Water, in other words, constitutes a major commodity about which political decisions need to be made.

Second, region-wide lack of trust between states has contributed to a widely held ideology of food security (Allan, 1995; Naff, 1994). This in turn motivates the desire for self sufficiency in agriculture, and consequently in water. "The risk of a politically motivated food embargo became something of an obsession with many government planners", observe Richards and Waterbury (1990, p. 44).

Third, since most of the regional watercourse basins are shared, usually in complicated ways and since countries may hold an upstream position *vis-à-vis* one transboundary river while a downstream position in relation to another, water disputes may therefore be handy to politicians in personifying real or perceived outside threats in the domestic context, and in this way serve to unite the society against "foreign enemies" and mobilize support for the government.

Thus, domestic political concerns and necessities severely exacerbate the already complicated legal issues related to the transboundary water disputes in the region. The prospect of regional cooperation become limited, as power politics become an extension of ideological orientations. The entire process promotes ever increasing water consumption. From Ba'athist agriculturalism to Israeli vision of "making the desert bloom", from Saudi approach to food security to Turkey's grand project of "national unity through regional economic development", much seems to be

geared towards securing more of the limited water resources than are available locally, to the detriment of other regional actors, not simply for the current needs, but also for potential use in the future.

At the root of these orientations, is the familiar set of broader ideological commitments in line with the political realities of the Middle East, but by no means particular to this region. Already mentioned political priorities such as national security, sovereignty, economic independence, self sufficiency, regime stability and domestic order are common everywhere, but the correlation with water consumption is particularly strong in the Middle East.

Political ideologies and water needs

Political ideologies are important inputs in the policy making processes of society. They offer criteria which allow governments to prioritize certain policy areas as being more important than others. Political ideologies identify social groups whose interests are to be served, they describe the style with which political action is implemented, they help define values and goals which a society should achieve through politics, and they may elaborate the ways which are appropriate for the realization of those values and goals. In short, political ideologies give direction to political action.

Political ideologies are present in all societies. They gain added importance, however, in societies in which the political elite is interested in transforming society rapidly from where it stands at the moment to a future state which is substantially different. Many societies in the Middle East, harbor ideologies depicting a future which is preferable to the current situation. In this context, ideologies appear to be significant as both guides and explanations of political action. In general, Middle Eastern political ideologies do not deal clearly and explicitly with the use of water. They deal, as discussed above, with economic development, national unity, social justice, state building, national security, independence, national sovereignty, democracy and a set of other goals. But inevitably, some or many of these goals have a direct or indirect bearing on the use of water.

Let us start with the goal of achieving economic development. There is no single or unique path to economic advancement. Societies choose the particular paths which they feel will lead them to a more productive and prosperous economy. Mostly, governments formulate their economic development goals according to what means and resources are available to them, what their capabilities are, what part of society stands to gain from the advancements made, and their visions of ideal society. For example, both in the case of Syria and Iraq, the definition of economic development has very strong agricultural implications. The reasons behind this emphasis are varied. To begin with, it reflects a realistic assessment of the present situation in these societies where a significant part of the population is living in villages and already engaged in agriculture. An overall improvement of economic conditions may not materialize unless substantial economic advances are achieved in rural areas. To the

extent that agricultural lands are already being exploited extensively, as in the case of Iraq (as well as Jordan, Israel and Egypt which easily come to mind as countries exploiting their cultivable resources to their fullest), agricultural development necessitates irrigated farming with increased biological-chemical inputs such as insecticides and fertilizers.

Secondly, in the case of Syria which has access only to modest oil revenues, funds needed for industrial development have to come from savings accrued in the agricultural sector (Richards and Waterbury, 1990). Springborg points out that in Iraq the political leadership has emphasized agricultural development more than industrial development, arguing that "the former is a prerequisite for the latter" (Springborg, 1981, p. 194). Thirdly, the vision of the ideal society, as depicted by the political leadership in Syria and Iraq, includes an agriculturally prosperous countryside. And finally, agricultural development may be seen as a means of attaining other goals apart from economic advancement, such as national unity, social justice, state power, and democracy. Closely linked to the commitment to agricultural development as a basis of political action, is the commitment to *social justice*. The attention which the GAP (Southeast Anatolian) Project with its many dams and irrigation systems has received from the Turkish government is a direct consequence of this concept. The government feels that increased productivity in the agricultural sector would change the fortunes of the region, and elevate it from its present characteristic to economic prosperity (Kolars and Mitchell, 1991). The economic disparities that now exist between Southeast Anatolian and the rest of the country would be reduced and social justice would be served. A number of other goals would also be served, such as integrating the population of the region more closely with the national economy and with society, thereby enhancing the power of the state.

National unity, also a goal in itself, may constitute another achievement which governments hope to reach by promoting agricultural development. Again, the GAP project of Turkey may serve as an example. The Turkish government has argued, with some cogency, that the separatist terrorism that has plagued some parts of the region, breeds on poverty and lack of employment opportunities. The expansion of irrigated agriculture in the region, and the commercial activity which it is expected to generate, will go a long way in eliminating the domestic basis of separatist terrorism.

From the perspective of government, national unity usually entails the economic integration of a sub-region into the national economy and the enhancement of people's loyalties to the broader collectivity. It may also involve an increasing ability of the national government to penetrate and control outlying regions. The growth of the agricultural sector, particularly through irrigated farming, enables the central government to reach rural areas and exercise more effective control over them. Irrigated farming requires a larger work force to work in a smaller area. Production thereby becomes more predictable and commercialization is encouraged. In this process, farmers become more dependent on the national

economy both as a provider of required inputs such as fertilizers, and as a market for the sale of produce. The type of rural situation created through irrigated farming offers more modalities and opportunities for governments to exercise control over the region than if the population is settled more disparately and able to survive with less reliance on the national government. The governments of Iraq and Syria, for example, have chosen to emphasize irrigated agriculture rather than supporting improvements in rain-fed farming, although the former is considerably more expensive. The fact leads one to speculate that irrigated agriculture may well offer attractions as a way of building national unity by enhancing political capability at the center.

National security has also been a factor prompting governments to enhance agricultural development. For example, it has been noted that, during its founding period, Israel used the setting up of new villages in desert areas as a way of achieving "territorial consolidation" (Lustick, 1981, p. 38). These new units created in areas where the Bedouin had roamed freely, also generated previously non-existent demands for water. Here the origin of the increased demand for water was security, a motive which may not necessarily come to mind as a major reason for intensified water needs.

A much more obvious case of security and water demands being intertwined is the area of *food security*. Although food security simply means "guaranteeing that consumers are reasonably certain of being able to eat properly", it is often taken to mean "food self sufficiency" (Richards, 1993, p. 223). Many countries of the Middle East are net importers of foodstuffs. In some years, for example, Egypt has imported 25%, Israel 34% and Morocco 20% of its grain needs from abroad (Richards and Waterbury, 1990).

While importing food may offer political leaders some efficiency and administrative convenience, it also exposes them to great risks, since failure to import the needed foodstuffs is likely to lead to grave political consequences within the country. Furthermore, exporters, it is feared, may gain undue influence over importers which the former could use to their own ends. The possibility of a food embargo is also viewed with utmost concern. These apprehensions may appear unjustified to outside observers, but they are real in the minds of policymakers in many Middle Eastern countries. When compounded by economic concerns that "food importation is a heavy drain on the economy" (Springborg, 1981), the aspiration for autarchy in food production is easily translated into an import substitution policy actively pursued by many a leader.

Aspiring to become self sufficient in food forms part of an intense commitment to *independence*. Most countries of the Middle East came into being as political units after the First World War, but remained under tutelage of outside powers until after the Second World War. Having their borders drawn somewhat arbitrarily together with the quasi-colonial experience of most Arab countries of the Middle East has left a legacy of insecurity. Hillel (1994, p. 75) illustrates the point, arguing that "... lines contrived as if on an

empty map by self-serving outsiders have become hardened and practically immutable national borders, all too often thwarting rather than promoting regional cooperation". This has contributed to an inability to cope with the pressures of the superpowers taking a constant and close interest in the affairs of the region to insure the flow of oil to industrialized markets. The above background elements have fostered suspicion of the outside world and great yearning for complete independence. Such a vision of independence is hardly compatible with the growing imperative for interdependence in the contemporary world. Nevertheless, it must be reckoned with as a real motivating force in the behavior of states in the region. Ironically, even a country such as Saudi Arabia has not been able to free itself from a commitment to unqualified independence, despite the fact that its prosperity, from its oil wealth, is so closely linked to integration with the international economy. It is difficult, otherwise, to explain the Saudi cultivation of wheat including production for export, at costs several times higher than in other areas of the world.

The above discussion has demonstrated that governments of Middle Eastern countries are, not infrequently, constrained in their choice of policy by ideological themes, common to the societies in the region. These include, among others, a commitment to economic development and its special link to agricultural development, social justice, economic self sufficiency, food security (often identified as self-sufficiency in basic foodstuffs), national integration, national security, and national independence. While these themes do not directly deal with questions of water resources, as pointed out above, the policies devised under such constraints often lead to significant additional demands for water which is a scarce commodity in most of the region.

Ideology, regime stability and consumer constituencies: linkages

One important consequence of policies based on ideological preferences and political expediency is, of course, that constituencies are created whose political allegiance and support is conditional upon the continuation of these same policies. Ideologically motivated politics may thus effectively back decision makers into a corner, where they cannot change course, even in the case of policy failure. Thus, a direct linkage is established between regime stability and vested interests of consumer constituencies.

For example, favoring import-substituting agricultural policies over export-based food security (Richards and Waterbury, 1990), many Middle Eastern governments were trying to do two things at once. They were trying to achieve food security and, at the same time, politically mobilize and perhaps co-opt domestic agricultural constituencies. As a result, both ideological commitments and regime stability could be maintained. Land reforms, economically irrational water pricing and agricultural taxation practices, expensive land reclamation and irrigation projects were

among the frequently used instruments for this purpose. However, this also meant that governments had to meet a continuous demand for cheap (or free) and abundant agricultural inputs, the most important among them being water. Thus, extensive projects requiring huge investments went hand in hand with increasing pressure for more water. This pressure, inevitably, was exerted on neighboring countries that share the same transboundary watercourses, the same arid regional climate, often the same ideology-based policy choices. In the late 1970s when Iraq was engaged in an ambitious agricultural "leap forward", Springborg observed: "If money can buy agricultural development, then the Iraqis will have it, and have it fast. If, however the agricultural sectors fail to respond adequately to this enormous infusion of capital, one can expect considerable soul searching, recrimination, and possibly political turmoil following in the wake of the shattered dreams of planners and politicians" (Springborg, 1981). As policy failure seriously challenges the legitimacy of both ideology and the government in place, managing water scarcity became a major preoccupation of politicians. Frequent attempts were made to externalize water shortage crises, in certain situations by blaming upstream neighbors, in others by taking measures to limit the water consumption of downstream neighbors.

The result of the historic, political and ideological developments discussed in the foregoing, is that when it comes to water disputes between upstream and downstream countries, most governments in the region take a generally recalcitrant foreign policy attitude, and adopt a maximalist negotiating position if and when these issues are subject to negotiation. The situation gets even further complicated when the same country is in upstream position in relation to one transboundary watercourse and in a downstream position in another. Given the rudimentary state of international law on transboundary watercourses and the absence of long standing international practice based on a scientific understanding of the hydrogeological behavior of river basins, including the relationship between groundwater and rivers, no solid ground exists for legal settlement. Consequently, power politics seeps in and further hardens individual foreign policy attitudes of the parties.

Possible solutions to water problems: questions of political feasibility

As is well known, some countries in the Middle East are already experiencing water shortages to varying degrees. Worst hit by shortages are parts of Palestine followed by Jordan. Certain other countries also argue that they do not have as much water as they need; and all say that they will encounter severe shortages in the near future (cf. e.g. Turan, 1996). Different authors have drawn attention to the possibility that sharing the waters of transboundary water resources may constitute the next major source of international conflict in the Middle East. A large variety of solutions have been proposed to help meet the increasing

demand for water in the region. These can be classified into three types (Turan, 1993).

Type I. Increased supply

The first type of solution (Type I) aims to increase the amount of water available for use in the region or in a single country through indigenous or external resources. Measures which are included in this category include building desalination plants, exploring for additional sources of groundwater and bringing known sources into use, and the importation of water into the region from external sources.

Type II. Re-allocation of existing resources

The second type of solution (Type II) emphasizes sharing the existing stock of water in the region according to different criteria than those currently employed. There exists a variety of ways to redistribute the currently available water resources. A few examples of this type of solution come to mind immediately: commercial sale of water from relatively well endowed countries to those in greater need, shipping the water by tanker or pipeline, or specifying the amounts each country will receive from a transboundary river on a different basis than current allocations.

Let it be emphasized that the distinction between Type I and Type II described above lies in whether the total amount of water available in the region is augmented or not. Therefore, all solutions involving bringing water into the region will be considered Type I, whereas if the same transportation systems are used to bring water from one country to another country within the region, that solution would be included in Type II.

Type III. Efficiency improvement, demand management

The third type of solution (Type III) involves improving efficiency in water resources use. Again, a variety of processes are available. Among these are the recycling of sewage water, reducing waterloss from existing water supply systems, reduction of water loss from evapo-transpiration, improved irrigation instruments and techniques, the introduction of crops which consume less water as well as other means to produce equivalent output with less water. Allowing the market mechanism to distribute the available water would also come under this type of solution since markets would insure the most efficient distribution of water.

Type IV. Reorientation of ideologies/policies promoting high level water use

Turan (1993) has argued that a fourth type of solution (Type IV) should also be entertained. Even if all the preceding solutions are tried, a point may still be reached where no more water is available, except at costs which no society is willing or has the resources to meet. If this is true, then the first three solutions may be no more than palliative responses delaying the inevitable end. The author has concluded that longer term solutions cannot avoid looking for ways to reverse the ideological and political trends that are

based on the assumption of limitless water availability, which simply is not there. Such measures might include pursuing strict policies of birth control, the de-emphasizing of agricultural production based on irrigated farming and the encouragement of a shift toward dry-land farming, and the establishment of industries that do not require large quantities of water (Turan, 1993).

In light of the ideological constraints under which the governments of the region have to operate—many of their own making, these four types of solutions require different levels of international cooperation and have different levels of domestic political feasibility. Although it is important that all types of solutions also be evaluated from the perspective of international relations, this line of inquiry falls outside the scope of this article. The present article will address the question of how ideology serves as a constraint on domestic policy-making and how such constraints affect the political feasibility of different types of solutions regarding allocation of water resources.

Type I solutions, i.e. the further development of indigenous resources and the importation of water into the region, or more probably, to any country in the region—appear, for the most part, to be politically feasible. We say “for the most part” because the importation of water from outside sources may not find favor with adherents of absolute independence that view reliance on external sources of water as submitting to the mercy of the suppliers. However, it should be recalled that the intensity of the water need and the inability to meet it from indigenous resources, may render acceptable a reliance on external resources as a reasonable way of solving the problem. Given the fact that some countries of the region, e.g. Israel and the Palestinian Authority, have expressed an interest in buying water from the Manavgat River in Turkey (which is a Type II solution in our classification), it may be reasonable to assume that they would also be willing to buy water from outside the region (Type I).

Aside from the possible reluctance to rely on external sources of supply on the part of political groups favoring absolute independence, the generation of additional water from indigenous resources would, in principle, be welcome by each country on political grounds. However, such solutions may encounter serious economic or even natural impediments to their implementation. For example, it is known that Israel, the Palestinian Authority are already exploiting existing rivers and aquifers to their limits, and that there are no more resources which can be tapped. With currently available technology the desalination of sea water appears to be economically unfeasible. The lack of economic feasibility, it may be surmised, is partly a political limitation in the sense that governments do not feel that they can get the public to accept the economic burden of substantial investment in desalination facilities. If, however, some naturally available water in a country is still untapped (e.g. Syria, Iraq, Turkey), then governments would be expected to be willing to turn to the exploitation of these resources.

Type II solutions involve questions of redistribution of existing known resources. Questions of reallocation,

even within the context of national politics, tend to be divisive and sometimes explosive. To affect a redistribution of hydraulic resources region-wise runs counter to the basic ideological tenets discussed above, and subscribed to by almost all states of the region. Independence and national sovereignty are so deeply engrained in all the regimes of the region that it seems very difficult to get either the governments or the populations of the region to accept any redistribution scheme very easily. The problem is exacerbated by the lack of an international legal order concerning the non-navigational uses of international waterways. However, in explaining state behavior with regard to the Type II solutions suggested above (redistribution), ideologically derived domestic constraints are far more significant than the lack of an international legal framework. The debate between Syria and Turkey regarding the waters of the Euphrates and the Orontes is a case in point. The former has insisted that the waters of the Euphrates has to be divided between the riparians. In contrast, the Turks have insisted that the part of Euphrates flowing in Turkish territory is national waters, but that Turkey would always allocate a reasonable amount of water to its downstream neighbors. As regards the Orontes, on the other hand, while Turkey argues that it is entitled to some of the water from the Orontes, Syria has treated it as a national river, and has refused to discuss allocating some water to Turkey (Kut, 1993).

Type III solutions (improved efficiency/demand management), somewhat like Type I solutions (increased supply) promise to have high political feasibility, but may require large expenditures. More efficient use of water appears to be compatible with political goals, as it is associated with higher levels of economic development which is politically desirable in itself. Furthermore, higher levels of production deriving from the more efficient use of water tends to enhance self sufficiency in foodstuffs and reduce dependence on the outside world. Political concerns are not totally lacking, however, as water conservation equipment and materials may have to be imported, generating another source of dependence on the outside world. There is also a more subtle dimension to water conservation that may put the economizer at a disadvantage. Unless all users of the same water source adopt water conservation measures somewhat simultaneously, the country which adopts the conservation technology earlier would appear to be meeting its water needs more satisfactorily. This may weaken its claims for additional water whereas those who use their water less efficiently would appear to be “justifiably” in greater need of water. Turning to the economic dimension, the more efficient use of water often requires substantial new investments in facilities and equipment. Their maintenance may also not only be more expensive but also require skills that are not easily available in rural settings. The impediments to water conservation measures would, therefore, less likely be ideological-political than economical and socio-political. The economic question revolves around the cost of new water saving technologies and the alternative costs of diverting resources into water

conservation. The socio-political question is related to the resistance to innovations, particularly among the poorer farmers. Unfamiliar with the new ways, they often fear that they will accrue new costs which they will not be able to meet, that their attempts to adjust to the innovations will fail, and they will go under.

Type IV solutions, i.e. solutions related to the radical reduction of water demand resulting from a change in the kind of thinking that promotes high levels of water consumption will present significant political difficulties. Population control, for example, would be thought by some to undermine the national goal of becoming a bigger power. Similarly, reducing the role and the share of agriculture in the national economy may be judged to be undesirable both in terms of the vision of "good society" harbored by some governments, and in terms of food security and independence from the outside world. Political difficulties would be compounded by economic and socio-political difficulties which are well known.

Finally, it is of course possible and likely that solution packages will include elements from two or more types at the same time. These mixed packages will have individual political feasibilities that have to be evaluated case by case.

Conclusion

The preceding brief discussion demonstrates that different types of solutions to meet water needs of societies in the Middle East, or in many other parts of the world, have different levels of political feasibility. International organizations, both intergovernmental and non-governmental, and national governments that are interested in helping regions or specific countries to overcome their water demands are more likely to be successful if they take into account the political constraints imposed on national governments by political ideology. Although no solutions are free of political constraints, Type I (increased supply) and Type III (demand management) solutions discussed above appear to possess higher political feasibility than Type II (regional redistribution) and Type IV (realignment of ideology) solutions.

Solving water shortage problems is often viewed to be technical in nature. It is important to remember that without highly supportive political parameters, technical solutions may not be devised and applied. It

may be more appropriate to see these problems as being political in which technology is mobilized for implementation purposes.

Nevertheless, it should be taken into consideration that in the long run political considerations and ideologies too have to be realigned, when all the possible policies associated with them fail to bring about the expected outcomes. Making too direct a connection between water and state or regime survival, for example, may in fact insure that the state or regime will definitely be at risk when, for some reason, water is not available. Knowing that water is becoming scarcer and scarcer for all the parties involved, it is perhaps time for the states and regimes in the region to find more reliable bases of support for their security and survival.

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