Turkey's H₂O Diplomacy in the Middle East

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Introduction

IN THE PAST DECADE, water has emerged as a salient problem in the Middle East peace process. Israel has bilateral water-sharing agreements with Jordan and the Palestinian Authority; however, the three parties are aware that Jordan River Basin water cannot supply their growing needs and have considered water imports within the scope of cooperative efforts to seek new sources.¹ Turkey is the likely exporter: during official visits to Israel in March 1996 and July 1999, former president Süleyman Demirel discussed transporting water from the Manavgat River to Israel, thus fueling speculations that Turkey was reviving its 'Peace Water Project', an unrealized scheme from the 1980s to pipe water from its Ceyhan and Seyhan rivers to neighboring Arab countries.

I argue here that the latest version of 'Peace Water' (the Manavgat Project) is intended to serve two key goals of Turkey's regional diplomacy. First, Ankara has consistently sought to minimize obstacles to building the Southeast Anatolia Project (Turkish acronym: GAP) which have been generated by Syria's and Iraq's opposition to it. The Turkish government has been unwilling to concede more Euphrates and Tigris river water to Syria and Iraq, and GAP increasingly threatens the quantity and environmental quality of the water reaching the downstream states. To obstruct GAP's progress, Syria and Iraq galvanized wider Arab criticism of the project, blocked World Bank funding, and opposed European government export credits to their national firms participating in a multinational consortium bidding to build the Ilisu Dam on the Tigris.² According to numerous accounts, Syria was also active in supporting the Kurdistan Workers Party (Kurdish acronym: PKK) guerrilla insurrection, which flourished in Turkey's southeast from 1984 to late 1998. More recently, in the US-led Israeli-Syrian peace talks, Damascus has

offered assurances that it would refrain from demanding Lake Kinneret/Tiberias (Sea of Galilee) water upon Israel's return of the contiguous Golan Heights as a means of increasing US and Israeli pressure on Turkey to concede more Euphrates water.

The second goal of the Manavgat Project is to alter the widespread perception of Turkey as a 'water rich' country. This perception originates in Ankara's 1987 'Peace Pipeline' proposal, which was premised on an earlier finding that numerous Mediterranean-area rivers in Turkey had large surplus flows, and in the 1989 GAP Master Plan, which underestimated Turkey's Euphrates River water consumption. A larger discourse on water-scarcity levels, which placed Turkey in comparatively favorable circumstances, was popularized by 1992, when a multilateral working group was created to address Middle East water resources, partly on the basis that Turkish water could play a vital role in meeting neighboring countries' needs. Besides earning hard currency, the Manavgat Project responds to US, Israeli, and European perceptions of Turkey's water richness, while also being intended to downplay the Euphrates's potential water-provider role.

The article first points to GAP's perceived significance for realizing Turkey's economic objectives and examines how Syrian-Iraqi opposition has reinforced Ankara's understanding of GAP as an instrument for consolidating sovereignty in the contested southeastern region. The next section looks into how the 1980s Peace Pipeline idea reflected Ankara's previous need to obtain political space for building GAP's Atatürk Dam and elaborates on the development of Turkey's water-rich image. After a consideration of how the Manavgat Project relates to Ankara's implicit goal of breaking Syria's linkage of the Euphrates and Galilee water-sharing issues, the fourth section discusses the project's prospects for success.

Rationale of the Southeast Anatolia Project

As envisaged, GAP contains 22 dams and 19 hydroelectric power plants in the Euphrates and Tigris river basins; while project irrigation may cover 1.7 million hectares (19% of Turkey's total irrigable land), existing installations generated on average 18 billion kWh of hydroelectricity each year (equivalent to approximately 18% of total energy produced) in the 1995–99 period.³ The 1989 Master Plan, which reflected Ankara's perception that a Southeast Anatolian agro-industrial base would contribute to sustained economic growth and social stability, broadened GAP's largely technical aims to encompass 'removing a socio-economic "gap" between the project area and more developed regions in Turkey'.⁴

From the start, controversy plagued the five main dams now existing on the Euphrates, especially Atatürk Dam, which generates hydroelectricity but also diverts water through large diversion tunnels. Syrian and Iraqi apprehensions seem consistent with the fact that the dams' combined reservoirs can impound a three-year supply of the river's estimated mean annual volume (approximately 31.5 billion cubic meters [BCM] at the Turkish–Syrian border). The Urfa tunnels will be capable of diverting almost one-third of the river's annual flow; moreover, even though Atatürk Dam's hydropower production returns water directly to the river, its reservoir must contain at least 61% of average annual streamflow before any power can be generated.⁵

Damascus and Baghdad first challenged Turkey's Euphrates and Tigris river-basin development efforts using the 1965 World Bank policy memorandum, which made loans to projects on international rivers conditional on basin states' agreement, an unachievable outcome at that time. Ankara nonetheless obtained US Agency for International Development and European Investment Bank funds for Keban Dam by agreeing in 1966 to deliver 350 cubic meters per second (m^3/s) of water – roughly one-third of streamflow – at the Syrian border. The simultaneous filling of Keban and Syria's Tabqa Dam during the early-1970s drought nearly triggered a Syrian–Iraqi war, so foreign credit for Karakaya Dam was initially less forthcoming. By 1980, however, four years after construction began, Turkey had obtained outside financing, including a World Bank loan, by accepting the bank's recommendation that at least 500 m^3/s of water reach Syria.⁶

As hydropower-only facilities built on a relatively free-flowing river, Keban and Karakaya dams did not provoke the degree of hostility associated with Atatürk Dam, which dramatically augmented Turkey's ability to control the Euphrates. As construction of the Urfa diversion tunnels had started in 1977, objections based on the dam's probable adverse effects downstream froze World Bank lending. Two years after initiating construction in 1983, however, Turkey had obtained loans from US and European banks covering roughly one-third of the dam's cost. To compensate for its lack of financial leverage, Syria began backing PKK incursions into Turkey in 1984. While not approving of GAP, Iraq, which was fighting Iran on its eastern front and Kurdish rebels in its northwest, wanted to avoid conflict with Turkey as much as Turkey sought to minimize the PKK's ability to infiltrate its southeast; consequently, Turkey obtained a Hot Pursuit agreement allowing it to launch raids into Iraq and pledged to deliver 500 m^3/s of Euphrates water to Iraq.⁷ Though it attributed PKK operations in northwestern Iraq to Baghdad's loss of control there, Ankara viewed PKK activity based in the Bekaa Valley as part of Damascus's deliberate plan to destabilize the GAP region. Nonetheless, Turkey's 1987 pledge to release 500 m^3/s into Syria is generally construed as a *quid pro quo* for Syria's agreement to suppress the PKK.⁸

Implying that Syria was violating this accord, President Turgut Özal's October 1987 threat to reduce Euphrates streamflow if Damascus continued supporting the PKK undoubtedly increased Syrian and Iraqi anxiety about Atatürk Dam. Incapable of halting the initial filling of the dam's reservoir in January 1990, Iraq and Syria jointly demanded more Euphrates water. Responding to Ankara's assertion that 509 m³/s reached Syria on average over three months ending in February 1990, Damascus and Baghdad complained that larger water releases in November and December did not compensate for January's shortfall, which harmed irrigation and water quality in unregulated stretches of the river and reduced hydropower output.⁹ After agreeing that Syria would obtain 42%, and Iraq 58%, of Euphrates water reaching the Turkish-Syrian border, the downstream states then requested 700 m³/s from Turkey in May 1990 and, in line with Syria's view of the 1987 agreement as temporary until Atatürk Dam began hydropower production in July 1992, Syria and Iraq unsuccessfully argued in the fall of 1992 that this larger flow-rate should form the basis of a permanent accord.¹⁰

Atatürk Dam's completion greatly decreased the downstream states' bargaining leverage. As prime minister, Demirel threatened in November 1991 to bomb the Bekaa Valley and implied that Turkey's dams would deter threats to GAP; the following April, Syria signed another security agreement with Turkey, without receiving reciprocal assurances on water.¹¹ Moreover, by the end of 1992, Ankara had obtained financing for the irrigation-capable Birecek Dam by signing a 'Build, Operate, Transfer' agreement with a multinational European consortium, which finished the dam in 1999 and will transfer operations to Turkey after recouping its investment. Damascus and Baghdad nevertheless appealed to Arab states not to finance GAP while calling 'on the international consortium to give up working for the Turkish government on what Damascus termed "Arab waters"'.¹²

At a January 1993 summit meeting in Damascus, Turkey pledged to find a permanent solution to the water issue by the year's end; however, although Syria concluded another security protocol with Turkey in late 1993, Ankara's rejection of coterminous demands for 700 m³/s and an equal three-way division of Euphrates water precluded settling the water dispute. At an August 1994 meeting of foreign ministers from the three countries, Ankara linked a permanent water accord to the expulsion of the PKK and its leader, Abdullah Öcalan, from Syrian territory. By the end of the next year, desperate to forestall Birecek Dam's construction, Syria had instead encouraged PKK expansion into the disputed Hatay province and assembled Arab states in Damascus, where they issued a declaration which demanded a 'just' water-sharing agreement, denounced the Birecek Dam, and complained of polluted water entering Syria. Despite this display of Arab solidarity, while attending a March 1996 meeting on terrorism in Cairo, which followed a Turko-Israeli military agreement intended in part to counter the PKK and Greco-Syrian

security cooperation, President Demirel stated Turkey's unwillingness to negotiate on the basis of 'more water for no terrorism'.¹³ A Syrian–Iraqi threat of legal action against the Birecek Dam consortium companies in April failed to block construction of either that dam or the fifth one – the hydropower-only Karkamis Dam sited close to the Turkish–Syrian border.¹⁴

With the dissipation of the PKK insurrection following Öcalan's flight from Syria in late 1998 and his subsequent capture and trial by Turkey in 1999, Syria and Iraq have focused on lobbying against Western government export credits to private companies interested in building the Ilisu Dam. One source notes that Turkey's potential use of this dam to block streamflow could trigger an attack by Syria and Iraq that would invite NATO intervention, but more realistic objections concern the dam's displacement of 100,000 inhabitants and the anticipated flooding of many towns, including ancient Hasankeyf, which Kurdish groups perceive as indicative of a plot to eradicate their culture.¹⁵ These arguments resonate within the European Union, which has granted Turkey candidate-member status and emphasizes the rights of local peoples to participate in developing and using the natural resources of areas they inhabit. In September 2000, London's disapproval of export credits induced a key British construction firm to withdraw from the multinational European consortium bidding on this dam.¹⁶

Opposition by Syria, Iraq, the PKK (which itself opposed GAP as a theft of Kurdish waters), and European-based Kurdish groups increased GAP's costs but impressed upon Ankara the project's perceived utility as a vehicle not only for spurring economic prosperity in the southeast but also for repairing the state's territorial integrity and reinforcing its right to use Euphrates and Tigris water. Ankara's commitment to GAP can be measured in the project's 7% average share of Turkey's public investment budget in the 1990s as well as the \$6–8 billion cost of a civil conflict which claimed more than 30,000 casualties and led to the sometimes forcible evacuation of 1 million villagers.¹⁷ A paranoia of encirclement and territorial dismemberment, which stems from the 1920 Sèvres Treaty's promise to Kurds of an independent state, has been nourished by this outside opposition and informs the Turkish political elite's perspective that the southeast's political unrest originates in foreign powers' exploitation of the GAP region's economic underdevelopment for the purposes of destabilizing the country. Consequently, Ankara has employed primarily military and economic tools to address what some independent observers regard as a more complex ethnic conflict.¹⁸

However, anti-GAP opposition has considerably slowed progress on the project. As early as 1989, GAP's Master Plan recommended that only 'priority irrigation and hydropower projects' be implemented by 2005.¹⁹ In 2000, 75% of necessary hydropower investments had been made, and completed dams generated 84% of the planned hydroelectric output for the Euphrates, but only 2% of that for the Tigris. Conversely, slightly over 10% of required irrigation

spending had been realized, leaving respective Euphrates and Tigris irrigation only 17% and 4.5% complete.²⁰ GAP's completion date has receded to 2010, which would still require mean yearly preparation of almost 90,000 hectares in the Euphrates basin and 57,000 in that of the Tigris. The slow process of land reform and on-farm training means that even this postponed deadline reflects an unrealistic assessment of the complexity of irrigation expansion. Ankara may come to favor permanently higher hydroelectricity output in order to reduce Turkey's imported energy bill, thus curtailing Euphrates water diversions and leaving more water (up to 638 m³/s if only Urfa-Harran irrigation comes on line) for Syria; moreover, Turkey's efforts to join the EU could work in the same direction, owing to Community agricultural regulations and political pressure from farmers in existing member-states Spain, Italy, and Greece.²¹

From 'Peace Pipeline' to Turkey's 'Water Rich' Image

Although Damascus never completely assuaged Turkey's concerns about the PKK between 1987 and 1998, Ankara's water diplomacy did not consist simply of threats to cut off Euphrates water or to bomb the Bekaa Valley. It also featured attempts to bring tranquility to Turkey's neighborhood through economic interdependence.

A trained engineer who studied economics in the United States during Eisenhower's Administration, which was promoting functionalist solutions to water conflict in the Jordan River Basin, Turgut Özal directed surveys of the Euphrates and Tigris rivers' hydropower potential, and, as Turkey's prime minister (1983–89) and president (1989–93), saw GAP as a means of selling electricity and food in exchange for Arab oil. His personal stake in minimizing political obstacles to Atatürk Dam's completion prompted Özal to propose offering some of Turkey's non-Euphrates water to various Arab countries as part of the aforementioned July 1987 agreement in which Turkey pledged to deliver 500 m³/s to Syria.²²

This action, however, fostered Turkey's budding water-rich identity. Özal's proposal followed a 1984 Turkish government study which estimated the aggregate of excess runoff in Turkey's 26 drainage basins to be equal to two-thirds of total runoff.²³ The Seyhan and Ceyhan rivers, which drain close to where Turkey's and Syria's Mediterranean coastlines meet, became the focus of an idea to transport water through twin pipelines, a western one delivering water to Syrian, Jordanian, and Saudi Arabian cities and an eastern one going to the Gulf states. The mid-1980s peak in Arab–Turkish trade certainly enhanced Özal's awareness of the potential value of this \$20-billion project in balancing Turkey's dependence on Arab oil and promoting exports of Turkish

construction services. However, Arab states opposed the project not only because of cost-efficiency reasons and fears of water cut-offs, but primarily because of an abiding perception that Israel itself might receive water via Jordan.²⁴

A second event reinforcing Turkey's water-rich image was the publication of a seminal article, by Swedish hydrologist Malin Falkenmark, which popularized a discourse placing Turkey in favorable circumstances relative to most of its Mideastern neighbors. Falkenmark categorized countries by 'water competition intervals' (her measure – total population per 1 million cubic meters [MCM] of water – is customarily expressed as cubic meters per person per year [$\text{m}^3/\text{person}/\text{year}$]): countries with at least 10,000 $\text{m}^3/\text{person}/\text{year}$ have limited problems; those in the 1,667–10,000 range face general problems; countries with 1,000–1,667 are considered 'water stressed'; those in the 500–1,000 range suffer 'water scarcity'; and countries with less than 500 are thought to fall 'below the water barrier'.²⁵

The question whether Turkey actually has 'abundant' water on these terms is highly political. In 1991, Falkenmark herself placed Turkey, with 4,600 $\text{m}^3/\text{person}/\text{year}$, in a situation of abundance relative to Syria, with 1,300, and especially relative to extremely water-scarce Israel, Jordan, and the Palestinian territories, which have only 300, 300, and 165, respectively.²⁶ Conversely, Turkish sources find that Turkey had no more than 3,500 in the 1990s, if total water resources (198 BCM) are factored in, but may have had 1,830, when considering only 'usable' water, or even as little as 1,611, if only 'usable' water not allocated to Syria in 1987 is counted; nonetheless, all emphasize Turkey's non-richness in the sense of not having 10,000 $\text{m}^3/\text{person}/\text{year}$.²⁷

A third event, which also took place in 1989, may also have inadvertently trapped Turkey in a water-rich image vis-a-vis the Euphrates. The aforementioned GAP Master Plan seriously underestimated GAP's future maximum water consumption from this river at 10.4 BCM (equivalent to 335 m^3/sec).²⁸ Coupled with the Turkish government's earlier finding that the Euphrates's total average volume was 33 BCM per year, the Master Plan's figure seemed nonetheless to accommodate the 1990 Syrian–Iraqi demand that Turkey guarantee 700 m^3/sec rather than the 500 m^3/sec pledged in 1987.

By late 1991, Syria had shown reluctance to allow a pipeline to cross its territory, and Turkey, giving a low-key warning when Prime Minister Demirel suggested that Hatay Province might need Seyhan and Ceyhan water because of Syria's over-use of the Orontes/Asi River upstream, had discreetly scuttled the Peace Pipeline in favor of Özal's smaller-scale plan to export Manavgat River water. The shift in Turkey's position was signaled at the January 1992 multilateral talks in Moscow, where the foreign minister stated: 'We are ready to cooperate in this respect [water], but I must point out that ... Turkey is not a country which has abundant water resources. We may soon face problems in meeting our own needs'.²⁹ Speaking before an audience of foreign experts in

1994, a former Turkish minister of state even implied that promulgation of a water-rich image might be aimed at limiting Turkey's use of Euphrates and Tigris water. After reiterating that Turkey lacked 10,000 m³/person/year of water, he noted the misperception 'that Turkey has ample water sources' just before asserting that it 'is Turkey's natural right to use these water resources [of the Euphrates and Tigris rivers] according to its necessities and requirements'.³⁰

The Manavgat Project: 'Peace Water' Resurgent?

Turkey's water-rich image is rooted in Ankara's own actions, but by 1996 it had become a fixture of the wider discourse on Middle East water politics, crucially within Israel.³¹ Syria has, consciously or not, exploited this image of Turkey as a key Middle Eastern water reservoir and used its US-led peace talks with Israel as another opportunity to pursue the downstream states' demand for 700 m³/s of Euphrates water. Israel's condition for returning the Golan Heights – that Syria limit developments that could degrade the Sea of Galilee's water supply – was reportedly commented upon by late Syrian leader Hafez al-Assad as difficult to justify 'while completion of the major Turkish dams and irrigation projects on the Euphrates and Tigris seriously threatens Syria's own vital water resources'.³²

This comment compelled Ankara to intervene with the United States and Israel. At the aforementioned Cairo terrorism summit, Demirel explicitly refused to consider Euphrates concessions in order to facilitate Israeli-Syrian negotiations, and this refusal still stands.³³ That the Syrian linkage plays on Turkey's water-rich image is reflected in attention given to a US State Department press briefing during the January 2000 Israel-Syria talks, in which a spokesman stated that 'water ... is an issue that is not only between Israel and Syria but has a regional dimension as well, including Turkey, and any solutions could have regional dimensions'.³⁴ Turkey also fears that the EU, whose Water Framework Directive (undergoing co-decision in 2000) commits member-states to coordinate with non-member-states to achieve the Directive's environmental objectives for international river basins, might pressure candidate-member Turkey to cut a deal with Syria in order to enhance its prestige in the Middle East.³⁵

Although at the time he did not want to appear to be appeasing Syria with Euphrates concessions, Demirel, who, like Özal, had an academic background in engineering (hydrological) and experience in overseeing the financing of GAP projects (notably Keban Dam), recognized the political value of using Turkey's other sources of surplus runoff to assist the peace process in accordance with its regional image while also giving ally Israel an incentive to

share Lake Kinneret water, thereby weakening Syria's linkage.³⁶ On an official visit to Israel in March 1996, Demirel promoted the Manavgat Project. This second Özal-initiated project, which was intended to supply water first to other countries and then to Turkish buyers, underwent construction in 1992 and was completed in 1999 at a total cost of \$150 million. It is equipped to deliver up to 183 MCM of irrigation-quality and drinking water – less than 10% of the amount of the Peace Pipeline – to two platforms floating offshore near Antalya, where it will be loaded into supertankers.³⁷

Ironically, while Arab perceptions that Israel would receive water scuttled the pipeline, exporting Manavgat water depends primarily on Israel's purchase. Since Demirel's July 1999 visit there, Israel has completed unloading facilities at Ashkelon Port and has been discussing technical issues of the sale with Turkey. It appears that both sides converged on a more definitive proposal to tanker up to 50 MCM for the purposes of satisfying a portion of Israel's drinking-water requirements for an initial five- or ten-year contract period (Israel has requested information pertaining to the capacity to use this untested means of water delivery).³⁸

However, Turkey and Israel disagree on the relative cost-effectiveness of drinking-water imports. Israeli conservatives oppose imports, citing a \$0.61/m³ cost of desalinating water and the value of controlling its source. Consistent with a view that this figure reflects a projected result of technological advances that could bring costs per cubic meter down from an estimated \$0.80–1.00 to \$0.69 for seawater and \$0.48 for brackish water, Israel's water authority, Mekorot, has advocated purchases of Manavgat water in response to a prolonged drought. Turkish sources counter that desalinated water costs roughly \$1.08/m³, such that even after tankering costs are factored in, an overall cost of up to \$0.60/m³ for exports (including construction and annual operating and maintenance costs) remains competitive.³⁹ Turkish authorities are bolstering water exports politically in order to accommodate pressure on Ankara to play regional water provider (hence, claims have been advanced that Turkey will initially make minimal profit) but at the same time do not want to appear to be giving water away, since underpriced water exports reinforce the water-rich identity.⁴⁰

Conclusion

Leaving aside the issue of whether, for how long, and in what quantity neighboring countries are willing to purchase Turkey's water, Peace Water may not serve to expedite GAP's completion. By leaving Ankara with few options other than transferring Manavgat water to Turkey's own water-deficient coastal areas and forfeiting hard-currency revenues, lack of foreign customers

could indirectly demonstrate a greater level of water stress to the outside world. On the other hand, Israeli purchases of this water are unlikely to compensate for the quantity of Lake Kinneret/Tiberias water that Israel would have to relinquish to Syria for the latter to scale down its demand for more Euphrates water or to resolve the issue of how even existing Syrian and Iraqi use of Euphrates water will be protected.

Since 1984, Ankara has officially responded to Syrian and Iraqi demands by promulgating its 'Three-Stage Plan for Optimal, Equitable and Reasonable Utilization of the Transboundary Watercourses of the Euphrates-Tigris Basin', a proposal to inventory water resources, and then land resources, before evaluating both sets jointly with a view to determining the 'true water needs' of Turkey, Syria, and Iraq.⁴¹ This plan's scientific merits notwithstanding, as one author notes, 'it can be assumed that the most suitable lands to be irrigated lie on Turkish territory, where higher efficiency gains could be achieved'; thus, this plan 'would force Syria and Iraq to partly give up their development plans' and 'to accept a higher degree of dependency on Turkish food imports'.⁴²

Like Peace Water, then, the Three-Stage Plan's functionalist orientation remains as self-interested as the downstream states' anti-GAP opposition. Moreover, when feeling beleaguered by foreign criticism and pressure to reach a permanent water-sharing accord, Ankara's political elite openly reverts to asserting Turkey's sovereign rights. Claiming to abjure the doctrine that states can use water flowing within their territorial boundaries as they see fit, Ankara's definition of the Euphrates as a 'transboundary' river imputes an exclusive sovereignty over the river until its water flows into Syria. Demirel has quipped that 'water is an upstream resource and downstream users cannot tell us how to use our resources', and a former state minister in charge of GAP has claimed that the 'rivers concerned are not subject to international rules'.⁴³

Given these sentiments, downstream insecurities concerning GAP have hardly been allayed by Peace Water and the Three-Stage Plan. The project faces mounting political and financial constraints despite the waning of the PKK's armed rebellion. Turkey's legal position appears to contravene the EU's aforementioned Water Framework Directive, which would compel Turkey, even if it cannot reach a common river basin management plan in co-ordination with non-members Syria and Iraq, to modify its practices in order to 'ensure the application of the rules of this Directive' within the territory of all EU members.⁴⁴ The November 2000 report of the World Commission on Dams also promotes the idea of obtaining the consent of all parties affected by large dam projects. It recommends that external agencies, in the event of no agreement among basin states, condition their financing 'on the findings of an independent commission as envisaged under the 1997 UN Convention on the Law of the Non-Navigational Uses of International Watercourses', and that

they withdraw support when states proceed with projects in the absence of such a commission or reject its findings; nonetheless, implementing Commission guidelines that agencies improve standards of coordination 'at the international level to ensure that dam projects refused by one agency are not accepted by others' faces the same inherent difficulties that stymie the UN Convention.⁴⁵ GAP financial backer France abstained from signing the convention, as did Argentina; and China, whose Three Gorges Dam is highly controversial, opposed the convention outright (as did Turkey). In courting the latter states as potential Ilisu Dam partners, Ankara may be adding a global dimension to its regional water diplomacy.⁴⁶ In the end, though, Ankara has to consider whether bucking current water-management policy trends undermines Mideastern peace (let alone Turkey's chances of joining the EU) more than Peace Water can enhance it.

NOTES AND REFERENCES

- * Paul Williams is an Assistant Professor in the Department of International Relations, Bilkent University, Ankara, Turkey. The author would like to thank Thomas Diez, George Gruen, Scott Pegg, Wolfgang Piccoli, and three anonymous reviewers for their comments on an earlier draft of this article, and to express appreciation for the valuable research assistance of Nurcan Atalan and Sebnem Udum.
- 1 George E. Gruen, 'The Politics of Water and Middle East Peace', *American Foreign Policy Interests*, vol. 22, no. 2, April 2000, pp. 1–21, on p. 15.
- 2 Sami Kohen, 'A Thirsty Syria May Make Turkey's Water the Price of Peace', *Christian Science Monitor*, 9 January 1996; 'Middle East Economic Briefs', Xinhua News Agency, 20 September 2000.
- 3 GAP Regional Development Administration, *Southeast Anatolia Project* (Ankara, 1997), pp. 5–6; idem, *Status Report: Southeastern Anatolia Project* (June 2000) (Ankara, 2000), p. 13.
- 4 Quoted in Olcay I. Ünver, 'Innovations in Water Resources Development in the South-eastern Anatolia Project (GAP) of Turkey', in Ali Ihsan Bagis, ed., *Water as an Element of Cooperation and Development in the Middle East* (Ankara: Hacettepe University and the Friedrich Naumann Foundation in Turkey, 1994), pp. 27–37, on p. 28. See also Nippon Koei Co. Ltd. & Yüksel Proje A.S., *The Southeastern Anatolia Project Master Plan Study: Final Master Plan Report, vol. 1: Executive Summary* (Ankara, 1990), pp. 3–5.
- 5 John Kolars, 'Problems of International River Management: The Case of the Euphrates', in Asit Biswas, ed., *International Waters of the Middle East from Euphrates-Tigris to Nile* (Oxford: Oxford University Press, 1994), pp. 44–94, on p. 51; idem, 'Managing the Impact of Development: The Euphrates and Tigris Rivers and the Ecology of the Arabian Gulf – A Link in Forging Tri-Riparian Cooperation', in Bagis (note 4 above), pp. 129–153, on p. 137; and John F. Kolars & William A. Mitchell, *The Euphrates River and the Southeast Anatolia Development Project* (Carbondale & Edwardsville, IL: Southern Illinois University Press, 1991), pp. 39, 40.
- 6 Kolars & Mitchell (note 5 above), pp. 25–27; Gün Kut, 'Burning Waters: The Hydro-politics of the Euphrates and Tigris', *New Perspectives on Turkey*, vol. 9, Fall 1993, pp. 1–17, on p. 4; Özden Bilen, *Turkey and Water Issues in the Middle East* (Ankara:

- Southeastern Anatolia Project (GAP) Regional Development Administration, 1997), pp. 114–115.
- 7 Kolars & Mitchell (note 5 above), p. 31; Philip Robins, *Turkey and the Middle East* (London: Pinter, 1991), pp. 54, 59–61.
 - 8 Robins (note 7 above), p. 52.
 - 9 Ibid., p. 93; Natasha Beschorner, *Water and Instability in the Middle East*, Adelphi Paper no. 273 (London: Brassey's for the International Institute for Strategic Studies, 1992), p. 37; Turkish Ministry of Foreign Affairs, *Water Issues Between Turkey, Syria and Iraq* (Ankara, 1996), pp. 10–11.
 - 10 George E. Gruen, 'Recent Negotiations over the Waters of the Euphrates and Tigris', in International Water Resources Association, *Proceedings of the International Symposium on Water Resources in the Middle East* (Urbana-Champaign, IL, 1993), pp. 100–108, on pp. 103, 104; Waltina Scheumann, 'Conflict on the Euphrates: An Analysis of Water and Non-Water Issues', in Waltina Scheumann & Manuel Schiffler, eds, *Water in the Middle East: Potential for Conflicts and Prospects for Cooperation* (Berlin: Springer-Verlag, 1998), pp. 113–135, on p. 124.
 - 11 Beschorner (note 9 above), pp. 37, 42.
 - 12 Gruen (note 10 above), p. 105.
 - 13 Robert Olson, 'Turkey-Syria Relations Since the Gulf War: Kurds and Water', *Middle East Policy*, vol. 5, no. 2, May 1997, pp. 168–193, on pp. 171–173, 176, 183; Turkish Ministry of Foreign Affairs (note 9 above), pp. 12–13.
 - 14 Alan George, 'Syria and Iraq Threaten Anti-European Action', *Middle East*, vol. 255, April 1996, p. 21.
 - 15 Charlie Cray, 'Export Credit Agencies Out of Control', *Multinational Monitor*, vol. 21, no. 3, March 2000, p. 22; 'Turkey's Latest Controversial Dam', *The Economist*, 29 April 2000.
 - 16 Ibrahim Erdogan, 'Avrupa Toplulugu'na Tam Üyelik Türkiye'nin Fırat ve Dicle Su Politikasını Ne Sekilde Etkiler?' [How Does Full Membership in the European Union Affect Turkey's Euphrates and Tigris Water Policies?], in Bülent Gökay, ed., *Türkiye Avrupa'nın Neresinde? Gümrük Birliği Anlaşmasının Düşündürdükleri* [Where Is Turkey in Europe? Impact of the Customs Union] (Ankara: Aytac, 1997), pp. 107–123, on pp. 121–122; Xinhua News Agency (note 2 above).
 - 17 Compiled from Olson (note 13 above), p. 179; Serdar Alyamaç, 'Heading Home to an Economic Wasteland', *Turkish Daily News*, 31 May 2000; *Status Report* (note 3 above), p. 10.
 - 18 On the Sèvres issue, see Henri J. Barkey & Graham E. Fuller, *Turkey's Kurdish Question* (Lanham, MD: Rowman & Littlefield, 1998), pp. 9, 34–36, 142; Dietrich Jung & Wolfango Piccoli, 'The Turkish-Israeli Alignment: Paranoia or Pragmatism?', *Security Dialogue*, vol. 31, no. 1, March 2000, pp. 91–104, on p. 93.
 - 19 Nippon Koei Co. Ltd. & Yüksel Proje A.S. (note 4 above), pp. 9–10, 13.
 - 20 Derived from *Status Report* (note 3 above), pp. 7–9, 13–16.
 - 21 Kolars in Biswas (note 5 above), pp. 67–68, 70–75; Erdogan (note 16 above), pp. 118–119.
 - 22 The 1955 US Johnston Plan for solving Jordan River Basin water disputes is discussed in Aaron Wolf, 'Principles for Confidence-Building Measures in the Jordan River Watershed', in Iwao Kobori & Michael H. Glantz, eds, *Central Eurasian Water Crisis: Caspian, Aral, and Dead Seas* (New York: United Nations University Press, 1998), pp. 125–153, on pp. 128–129. The other information comes from Kolars & Mitchell (note 5 above), pp. 25–26; Howard A. Reed, 'Turgut Özal', in John L. Esposito, ed., *The Oxford*

- Encyclopedia of the Modern Islamic World* (New York: Oxford University Press, 1995), pp. 276–278; Scheumann (note 10 above), p. 122.
- 23 The government study is mentioned in Kolars & Mitchell (note 5 above), pp. 291, 294–295.
 - 24 A figure that was often cited was that water could be desalinated for \$0.60/m³; against that estimate, a US consultancy firm that made a feasibility study in 1987 calculated that the \$0.84–1.07/m³ cost of piped Turkish water would be one-third that of desalination. See Robins (note 7 above), pp. 96–98, 101–113; and Bilen (note 6 above), pp. 168–173.
 - 25 Malin Falkenmark, 'The Massive Water Scarcity Now Threatening Africa: Why Isn't It Being Addressed?', *Ambio*, vol. 18, no. 2, 1989, cited in Robin Clarke, *Water: The International Crisis* (Cambridge, MA: MIT Press, 1993), pp. 66, 78.
 - 26 Cited in Gruen (note 1 above), p. 3.
 - 27 Taken from Mehmet Tomanbay, 'Sharing the Euphrates: Turkey', *Research & Exploration*, Special Water Issue, November 1993, pp. 52–61, on p. 54; Turkish Ministry of Foreign Affairs (note 9 above), pp. 2–3; Bilen (note 6 above), pp. 93–94, 97–98.
 - 28 Kolars in Biswas (note 5 above), p. 75, says that the estimate did not incorporate reservoir evaporation and conveyance losses, but that nonetheless it dovetails roughly with his estimate of 10.8 km³ for a smaller area.
 - 29 Beschorner (note 9 above), p. 44.
 - 30 Mehmet Gölhan, 'Welcoming Address', in Bagis (note 4 above), pp. 7–12, on p. 9.
 - 31 See proposals of Hillel Shuval, 'Proposals for Cooperation in the Management of the Transboundary Water Resources Shared by Israel and Her Neighbors', and of Boaz Wachtel, 'The "Peace Canal" Plan: A New Model for the Distribution and Management of Water Resources and a Catalyst for Cooperation in the Middle East', in Bagis (note 4 above), pp. 289–300 and pp. 389–404, respectively.
 - 32 Quoted in Gruen (note 1 above), p. 2.
 - 33 Olson (note 13 above), p. 183; Lale Sariibrahimoglu, 'Barak Advocates Water Purchases From Israel', *Turkish Daily News*, 13 February 2000.
 - 34 US State Department, Daily Press Briefing, January 12 2000, available at <http://secretary.state.gov>; and 'Solution With Turkey for the Water Problem', *Milliyet*, 14 January 2000, available at <http://www.mfa.gov.tr>.
 - 35 Erdogan (note 16 above), pp. 110–111, 114–115; Commission of the European Communities, COM (2000) 219 Final (Brussels, 5 June 2000), pp. 1–119, on pp. 22–23, available at <http://europa.eu.int/eur-lex>.
 - 36 On Demirel's background, see Kolars & Mitchell (note 5 above), pp. 25–26.
 - 37 Turkish State Water Works, *Manavgat River Water Supply Project* (Ankara, 1999); interview conducted at Turkish State Water Works on 10 October 2000.
 - 38 'Water Sales Could Boost Turkey's Clout', *Wall Street Journal*, 31 July 2000. The joint Israeli Infrastructure Ministry–Finance Ministry's 'Request for Information (RFI) on the Issue of Supply of Drinking Water from Manavgat – Turkey' can be found at <http://www.mof.gov.il>.
 - 39 On the \$0.61 estimate and Turkish counterarguments, see 'Water Sales' (note 38 above); 'Israeli Delegation Meets with Turkish Officials to Discuss Water', *Turkish Daily News*, 20 June 2000. Present cost is cited in Gruen (note 1 above), p. 17. The \$0.48 and \$0.69 estimates come from Masahiro Murakami, 'Alternative Strategies in the Inter-State Regional Development of the Jordan Rift Valley', in Kobori & Glantz (note 22 above), pp. 154–178.

- 40 The project's negligible initial profitability and denial that Manavgat water's base cost lies below \$0.10 per cubic meter were mentioned in separate interviews conducted with officials at the Turkish State Water Works on 7 June and 10 October 2000.
- 41 Turkish Ministry of Foreign Affairs (note 9 above), pp. 21–23.
- 42 Scheumann (note 10 above), p. 128.
- 43 Quoted in Ali Ihsan Bagis, 'Turkey's Hydropolitics of the Euphrates-Tigris Basin', *Water Resources Development*, vol. 13, no. 4, 1997, pp. 567–581, on p. 577.
- 44 Erdogan (note 16 above), pp. 110–111; Commission of the European Communities (note 35 above), p. 23.
- 45 World Commission on Dams, *Dams and Development: A New Framework for Decision-Making* (London & Sterling, VA: Earthscan, November 2000), pp. 256, 316; available at <http://www.dams.org>.
- 46 On support for, or interest in, GAP from Argentina, China, and France, see *The Economist* (note 15 above); and Jörg Barandat & Aytül Kaplan, 'International Water Law: Regulations for Cooperation and the Discussion of the International Water Convention', in Scheumann & Schiffler (note 10 above), pp. 11–29, on p. 21.