Downstream Impacts of Turkish Dam Construction on Syria and Iraq:

Joint Report of Fact-Finding Mission to Syria and Iraq

jointly researched, written and published by
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Summary

A delegation from three UK non-governmental organisations - the Ilisu Dam Campaign, the Kurdish Human Rights Project and The Corner House - travelled to Syria and Iraq from 29th January to 4th February 2002 on a Fact-Finding Mission, to conduct research and interviews on the potential downstream impacts of the proposed Ilisu Dam, scheduled for construction near the ancient town of Hasankeyf in southeast Turkey.

Despite the fact that the principal members of the original consortium to build the Ilisu Dam, the British construction company Balfour Beatty and the Italian company Impreglio, both withdrew from the project prior to the Mission, the Ilisu Dam Campaign was still concerned over the possible impacts of the project. For one, the possibility remained that the dam could be constructed through alternative sources of financial backing. In any case, the Ilisu Dam project was only one component of a far larger project, with much wider-reaching implications: the vast and ambitious Southeastern Anatolia Project, known as GAP after its Turkish title (Guneydogu Anadolu Projesi). Ilisu's anticipated repercussions are merely a microcosm of the projected consequences of the full GAP project, a network comprising 22 dams and 19 power plants.

In that context, the Fact-Finding Mission visited Iraq and Syria in order to:

1. Assess the extent to which international financial backing for dams in Turkey, and for Turkey more generally, has destabilised water politics in the region.

2. Assess the extent to which Turkey is abiding by international law governing shared rivers, in particular regarding notification, consultation and negotiation with downstream neighbours over proposed water projects.

3. Examine a) the known impacts of both dams already constructed in Turkey, and of those planned, on the quantity of downstream flows;
b) the impact of upstream irrigation and industry on water quality downstream;
c) the impact of constructed and planned dams on downstream agriculture, public health and environment.

4. Find out more about the positions of the riparian governments regarding future shared use of the Euphrates and Tigris.

The fact-finding mission met with government representatives directly concerned with water issues, including foreign affairs and the environment, in Syria and Iraq. Despite repeated requests for a meeting, including further inquiries made on return from the region, Turkey's Ministry for Foreign Affairs failed to take up the Mission's invitation to discuss the issues.

The Mission found that:

1. GAP dams have already caused a significant change in the flow regime of the Euphrates and to a lesser extent the Tigris, both in terms of quality and quantity. The reduced flow of the Euphrates has *already* caused increased salinity in the lower reaches of the river, seriously affecting agriculture, and the full implementation of GAP would have major adverse consequences for large numbers of people living in the region.

2. Turkey is in violation of the letter or spirit of, or is failing to comply with:

(a) A wide array of agreements, treaties and protocols signed with its co-riparians over the past century.

(b) International conventions on water sharing and use, in particular the UN Convention on the Law of Non-Navigable Uses of International Watercourses, and general international obligations incumbent on all states, even those which have not ratified specific conventions. These obligations consist in particular of:

- **(i) The duty to *notify* downstream or affected riparian states.**
- **(ii) The duty to *consult* downstream or affected riparian states.**
- **(iii) The duty to *negotiate* with downstream or affected riparian states.**

(c) "Best practice" guidelines for dam projects on shared rivers, including those laid down by international financial institutions like the World Bank, and by international commissions such as the World Commission on Dams, the World Commission on Water and the International Commission on Large Dams.

3. Collaboration over water in the region is not impossible; a system of consultations between Syria and Iraq regarding the two rivers is long established and operates well. The Mission recalls the finding of the World Commission on Dams that water conflict is intimately connected to imbalances of power amongst riparian states, and is of the firm view that continued sanctions against Iraq are potentially stoking the fires of future conflict over water in the region.

The Mission therefore considers that:

1. The threat to future water supplies in Syria and Iraq is a real one, which should be approached on the basis of the precautionary principle. The Mission therefore urges the international community to press Turkey to halt further GAP projects until an agreement has been reached with Syria and Iraq that secures sustainable development of the Euphrates and Tigris. In line with the recommendations of the World Commission on Dams, further funding of water sector projects in Turkey by bilateral, multilateral and export credit agencies should cease until such an agreement has been secured.

2. Despite the high level of collaboration between Syria and Iraq on the use of the Tigris and Euphrates, due to Turkey's intransigence, the three parties are still a long way from an agreement. The Mission thus urges the international community to join with Syria and Iraq in pressing Turkey to reach an agreement.

3. Those communities that have suffered the adverse downstream consequences of GAP, in the form of reduced flows and deteriorating water quality, should be adequately compensated. In particular, the Mission urges all the relevant states – Turkey, Iraq and Syria - to establish effective mechanisms designed to ensure the participation of key stakeholders, including minority communities such as the Kurds, affected community groups and water users, in any negotiations regarding water in the region.

"And tell them that water is to be divided between them: each one's right to drink being brought forward by turns."

The Koran, Alkamar: 28 iv

"Neither Syria nor Iraq can lay claim to Turkey's rivers any more than Ankara could claim their oil. This is a matter of sovereignty. We have a right to do anything we like. The water resources are Turkey's; the oil resources are theirs. We don't say we share their oil resources, and they cannot share our water resources."

Suleyman Demirel, Prime Minister of Turkey, 1992.[1]

"There can be no development, whether social, economic or technical, without adequate water supplies; there can be no lasting stability in regions where large quantities of water are shared across boundaries if this fundamental element in the life and growth of states and communities is not sustainably and equitably managed. Basin-wide cooperation is imperative."

Fiona Curtin, Green Cross International, 2000.[2]

" We do not want to be in conflict with Syria and we do appreciate the role played by Damascus in expelling members of the Kurdistan Workers Party, but the Euphrates reservoir is very important for the future of economic development in Turkey . . . We have completed works in almost 50% of the infrastructure and we at the meantime working in the final stages and we will extend the invitation to Syria to accept the inevitability of this project and to join negotiations on a rational use of waters. We are ready to deal fairly and generously, but the division of waters will not be equal as the Euphrates like any other Turkish river should be basically used for serving the interests of the Turkish people."

Mesut Yilmaz , Deputy Prime Minister, Turkey, February 2001,
commenting on a series of dams that
Turkey intends to build on the Uphort river.[3]

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[1] Quoted Dolatyar, M. and Gray, T.S., *Water Politics in the Middle East: A Context for Conflict or Co-Operation*?, Macmillan Press, London, 2000, p.148.

[2] Curtin, F., "Transboundary Impacts of Dams: Conflict Prevention Strategies", Working Paper prepared for World Commission on Dams (WCD), in Millington, P., "River Basin Management: Its Role in Major Water Infrastructure Projects", WCD Thematic Review V.3 prepared as an input to the World Commission on Dams, Cape Town, 2000, p.112, available from www.dams.org

[3] "Syria, Turkey and the water tension", *'Asharq Al-Awsat*, 13 Feb 2001

SECTION ONE

Background and Remit

In April 2000, the Ilisu Dam Campaign was established by a group of organizations and individuals concerned about the environmental and human rights impacts that would follow from the construction of a proposed dam on the River Tigris in Southeast Turkey. If built, the dam would have had catastrophic effects. It would have flooded a vast area, submerging or partially submerging some 183 villages and hamlets[4] and the ancient city of Hasankeyf, a site of international archaeological significance. Despite these enormous impacts, the Turkish government had failed to consult with the people affected or their representatives, had failed to draw up a resettlement plan that reflected internationally accepted practice, and had failed to satisfactorily assess the environmental impacts of the dam.[5]

Another cause for concern was that the Ilisu Dam is not an isolated project. It is but one part of Turkey's ambitious Southeast Anatolia Project, known as GAP. The GAP project includes plans to develop seven major water development projects on the Euphrates basin and six on the Tigris and, when completed, would cover a total of 74,000 square kilometres and as well as generating electricity, would irrigate 1.7 million hectares of land (see Box, "Planned and Implemented Dams", p.16).

Of particular concern to the Campaign was that the Ilisu Dam was to be built for the Turkish government's State Hydraulics Works Department (DSI) by a consortium of European and US companies which had sought financial backing from the export credit agencies (ECAs) of their respective national governments. In response to pressure from the public, NGOs and parliamentarians in various countries, in December 1999 the ECAs laid down four conditions that had to be met before export credits would be issued. These related to the drawing up of an adequate resettlement plan, the preservation of Hasankeyf, and two further conditions which highlighted in particular the interests of the states downstream of the Ilisu Dam: Syria and Iraq. One was that the Turkish government must make provision for upstream water treatment plants capable of ensuring that water quality is maintained. The other was that the government must give an assurance that adequate downstream flows would be maintained at all times.

These latter two conditions raised the alarming prospect that the construction of the dam might lead to regional conflict over water between Turkey on the one hand and Syria and Iraq on the other. Turkey dismissed this possibility, arguing that the Ilisu Dam would not have negative downstream impacts. Worryingly, an expert commissioned by the Ilisu Dam Campaign concluded that it would.[6] In April 2000, Friends of the Earth obtained an opinion from leading international legal experts set out Turkey's obligations under international law as regards the duty to consult with downstream states in relation to the Ilisu Dam. The duty to notify other riparians of projects on shared rivers is also a condition of World Bank financing.[7]

Concerned that the downstream impacts of Turkey's dam building programme and the extent to which genuine consultation had taken place between Turkey, Syria and Iraq were little known, at least outside the region, the Ilisu Dam Campaign decided to send Fact Finding Missions to Syria and Iraq with the following objectives:

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[4] Kudat, A, "Ilisu Dam's Resettlement Action Plan (RAP) – Achieving International Best Practice", Working Document, Distributed to export credit agencies, 16 August 2000.

[5] See: "If the River were a Pen … The Ilisu Dam, the World Commission on Dams and Export Credit Reform", Final Report of a Fact-Finding Mission to the Ilisu Dam Region 9-16 October 2000, the Ilisu Dam Campaign, the Kurdish Human Rights Project, The Corner House, World Economy, Ecology and Development, Eye on SACE Campaign and Pacific Environment Research Center.

[6] "A review of the hydrologic and geomorphic impacts of the proposed Ilisu Dam" prepared for Corner House by Philip Williams and Associates Ltd, Consultants in Hydrology, 31 August, 2001.

[7] Operational Policy 7.50, "Projects on International Waterways".

1. To assess to what extent international financial backing for dams in Turkey - and for Turkey more generally – has destabilised water politics in the region.

2. To assess to what extent Turkey is abiding by international law regarding notification, consultation and negotiation.

3. To examine a) the known impacts of dams already constructed in Turkey and of those planned on the quantity of downstream flows, b) the impact of upstream irrigation and industry on water quality downstream, and c) the impact of constructed and planned dams on downstream agriculture, public health and environment.

4. To find out more about the positions of the riparian governments regarding future shared use of the Euphrates and Tigris.

The fact-finding Mission visited Syria and Iraq between 29 January and 4 February 2002. It met with government representatives directly concerned with water issues, including foreign affairs and the environment, in those countries. Despite repeated requests, Turkey's Ministry for Foreign Affairs refused to meet with the Mission.

It was not the purpose of this particular Mission to examine the extent to which development projects in the three states comply with international standards relating to environmental and human rights, such as participation of affected people in decision-making, environmental impact assessments and resettlement. These issues have been the subject of previous fact finding Missions by the Ilisu Dam Campaign in relation to Turkey,[8] and may warrant future attention in relation to Syria and Iraq.

It is perhaps necessary to stress from the outset that the Ilisu Dam Campaign does not oppose development in Turkey, nor indeed in Syria or Iraq. On the contrary, the Campaign strongly supports the right of all peoples in the region to pursue their own development, stemming *inter alia* from the right of all peoples to self-determination,[9] and from the right to development.[10] However, the Campaign also urges that development projects must be planned and carried out in accordance with international law, including human rights and environmental standards and international law concerning shared water resources.

[8] "The Ilisu Dam: A Human Rights Disaster in the Making", the Kurdish Human Rights Project, London, November 1999 and "If the River were a Pen … The Ilisu Dam, the World Commission on Dams and Export Credit Reform", Final Report of a Fact-Finding Mission to the Ilisu Dam Region 9-16 October 2000, the Ilisu Dam Campaign, the Kurdish Human Rights Project, The Corner House, World Economy, Ecology and Development, Eye on SACE Campaign and Pacific Environment Research Center.

[9] This right is contained in common Article 1.2 of the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights, which provides that "All peoples may, for their own ends, freely dispose of their natural wealth and resources without prejudice to any obligations arising out of international economic cooperation, based upon the principle of mutual benefit, and international law. In no case may a people be deprived of its own means of subsistence."

[10] UN Declaration on the Right to Development, adopted by General Assembly resolution 41/128 of 4 December 1986.

SECTION TWO

CONTESTED WATERS – THE TIGRIS AND EUPHRATES

"Before the era of large dams, one could not have imagined that it would be possible to stop entirely the flow of a river running at 1000 cubic metres a second."
Dr Abdul Aziz Al-Masri, Chief of the Syrian International Water Bureau, 2002.[11]

DAMS AND CONFLICT

The last 50 years have seen a dramatic increase in the power of human societies - and in particular nation states - to control and manage rivers. Advances in structural engineering and concrete technology have made it possible to build dams and water transfer schemes of a size and magnitude that would have been impossible in previous generations. According to the International Commission on Large Dams (ICOLD), a major industry association, some 40,000 large dams now straddle the world's rivers. All but 5,000 of them have been built since 1950.[12]

Although water development projects can improve human welfare, the overall record of large dams to date has been one of poor performance and severe social and environmental impacts. Unsurprisingly, popular resistance to new dam projects has increased, prompting many professional, civil servants and politicians to reassess the role that dams might play in the future. In November 2000, a major report by the World Commission on Dams (WCD),[13] an international body charged with drawing up new guidelines for the hydro industry, found that whilst "dams have made an important and significant contribution to human development and the benefits derived from them have been considerable," "in too many cases an unacceptable and often unnecessary price has been paid to secure those benefits, especially in social and environmental terms, by people displaced, by communities downstream, by taxpayers and by the natural environment."[14]

A particular concern highlighted by the WCD is the role that dams and water transfer projects have played - or threaten to play - in exacerbating conflicts over water, both within countries and between countries. As

[11] Interview with Dr Abdul Aziz Al Masri, Chief of the International Water Bureau, Ministry of Irrigation, Damascus, 30 January 2002
[12] See McCully, P., *Silenced Rivers: The Ecology and Politics of Large Dams*, Zed Books, London, 1996, p.3.
[13] The World Commission on Dams (WCD) was established by the World Bank and IUCN- The World Conservation Union in May 1998 in response to the escalating local and international controversies over large dams. Its mandate was to review the development effectiveness of large dams and assess alternatives for water resources and energy development; and to develop internationally acceptable criteria, guidelines and standards for the planning, design, appraisal, construction, operation, monitoring and decommissioning of dams.
The 12 Commission members came from a variety of backgrounds, representing a broad spectrum of interests in large dams – including governments and dam operators, corporations and industry associations, consultants and academics, NGOs and grassroots movements. The WCD relied on extensive public consultation and commissioned a huge volume of research. A Forum with 68 members from 36 countries representing a cross-section of interests, views and institutions was consulted during the Commission's work. The $10 million necessary to fund the Commission came from more than fifty governments, international agencies, private corporations (including many of the main dam industry multinationals), foundations and NGOS.
[14] World Commission on Dams, *Dams and Development: A new framework for decision-making*, Earthscan, London, 2000, p.xxviii.

the WCD notes, "Dams fundamentally alter rivers and the use of a natural resource, frequently entailing a reallocation of benefits from local riparian users to new groups of beneficiaries at a regional or national level."[15]

Most obviously, by enabling large volumes of water to be stored, dams make it possible for one group in society to gain control over the water supply at the expense of another. As the WCD notes, those who have most frequently lost out include subsistence farmers, indigenous groups, women and ethnic minorities,[16] whose land and water has been expropriated, often with minimal compensation,[17] whilst the beneficiaries have tended to be richer sections of society, most notably commercial farmers and industry.

The process is not restricted to those most immediately affected by the dam's construction. In the longer term, it is often those living downstream - often in other countries - who must contend with some of the most severe long-term impacts of major water development projects, a problem which the WCD acknowledges has long been overlooked.[18] Such impacts include disruption to floodplain agriculture, changes in the pattern of floods, drainage and river flows, depleted fish stocks, reduced silt deposition and a deterioration in water quality.[19]

Where a dam is built to store water for irrigation, for example, the downstream flow of the river is invariably reduced, since a considerable volume of the water used is never returned to the river after irrigating the land. Moreover, the water that is returned is often heavily contaminated with salts washed out of the soil[20] and with pesticides and fertilisers, leading to a serious deterioration in downstream water quality. In addition, the management of dams for upstream irrigation or hydroelectric production may seriously disrupt the timing of downstream flows, making it hard for farmers downstream to match the expected flooding to their agricultural needs. As a result, those living downstream may not only be deprived of sufficient water at key periods during the agricultural cycle[21], but may also suffer adverse health effects from pollution.[22] Where a river's waters are shared by several states, water may also be deliberately used as a political weapon by upstream states, with dams being used exert pressure by reducing - or even halting - the flow of water for significant periods of time.

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[15] World Commission on Dams, *Dams and Development: A new framework for decision-making*, Earthscan, London, 2000, p.xxvii.

[16] World Commission on Dams, *Dams and Development: A new framework for decision-making*, Earthscan, London, 2000, p.124. The WCD notes: "These groups, who are often the poorest segments of society, tend to be over-represented in the numbers of people who are displaced from reservoir sites or lose access to their traditional livelihoods."

[17] For examples, see: McCully, P., *Silenced Rivers: The Ecology and Politics of Large Dams*, Zed Books, London, 1996; Colchester, M., "Dams, Indigenous People and Ethnic Minorities", WCD Thematic Review 1.2 prepared as an input to the World Commission on Dams, Cape Town, 2000, available from www.dams.org

[18] "Downstream impacts are not only among the most significant unassessed and unaddressed aspects of large dams, they are also indicative of the magnitude and spread of the impacts associated with an altered river regime." See: World Commission on Dams, *Dams and Development: A new framework for decision-making*, Earthscan, London, 2000, p.113.

[19] Curtin, F., "Transboundary Impacts of Dams: Conflict Prevention Strategies", Working Paper prepared for World Commission on Dams (WCD), in Millington, P., "River Basin Management: Its Role in Major Water Infrastructure Projects", WCD Thematic Review V.3 prepared as an input to the World Commission on Dams, Cape Town, 2000, p.113, available from www.dams.org

[20] Irrigation causes natural mineral salts to be washed out of rocks and soils. Where the land is inadequately drained, these salts rise to the surface through capillary action, rendering the land uncultivatable. To prevent such "salinisation", it is critical that adequate drainage is installed to allow used irrigation water, which contains high levels of dissolved salts, to be flushed away. Where the drained water is discharged into rivers, however, the salts simply accumulate, causing salinity levels to rise. In several instances - the Colorado River in the US, for example, or the Murray River in Australia - irrigation discharges have at times rendered the water is unsuitable for drinking.

[21] In Nigeria, for example, the Kainji directly displaced 44,000 people, but adversely affected hundreds of thousands more downstream who had formerly grazed their livestock and grown crops on land irrigated by the annual flood. Floodplain yam production reportedly fell by 100,000 tonnes after the dam was completed in 1968. Another Nigerian dam, Bakalori, reduced the area of rice grown downstream by 7,000 hectares and that of dry season crops by 5,000 hectares. One problem reported by downstream farmers was that they could no longer predict with any certainly the timing and extent of the river's annual flood.

[22] In the case of the Manantali dam on the Senegal River, all the water captured in the reservoir was initially used for irrigating local land. No water was released downstream for four years. According to the World Commission on Dams, "between 500,000 and 800,000 people suffered from loss of access to productive floodplains that provided most or part of their means of survival." See World Commission on Dams, *Dams and Development: A new framework for decision making*, Earthscan, London, 2000, p.113: also Resolve Inc et al., "Participation, Negotiation and Conflict Management in Large Dam Projects", Thematic Review V.5 prepared as an input to the World Commission on Dams, Cape Town, November 2000, p.18, available from www.dams.org

THE POLITICAL ECONOMY OF WATER SCARCITY

Disputes over water are neither new[23] (one of the earliest written records refers to a dispute over water resulting from an irrigation storage dam) nor inevitable. On the contrary, precisely because water is so essential to life, even hostile co-riparians have historically sought to compromise rather go to war over water, even as disputes have raged on other issues.[24] Indeed, the historical record is predominantly of water acting as a catalyst for co-operation rather than conflict. Whether at the local level or internationally, the vast majority of societies have successfully sought to evolve subtle (often unwritten) rules for collaboratively managing shared water resources for the common good.[25]

Where conflicts arise over water, their roots rarely lie in an *absolute* scarcity of supply, in the sense that local water resources are insufficient to meet local needs regardless of how equitably the water is distributed. The availability of water locally may indeed be limited, but its scarcity - or the fear of its future scarcity - is more often than not *socially generated*, the consequence of inequitable power relationships.[26]

As Ricardo Petrella, a former scientific advisor to the European Commission, points out, "The argument based on scarcity tells us only half the truth. Other analyses rightly stress the importance of factor such as ethnic rivalry, racism and xenophobia; nationalism of every kind; struggles for regional political, economic or cultural hegemony."[27] In effect, water conflict is often the *result* not the *cause* of conflict, exacerbating tensions that already exist and creating new tensions in the process.[28]

Even at the local level, such conflicts can quickly degenerate into violence.[29] But where states are involved,

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[23] As Ricardo Petrella notes, it may be no coincidence that the English words "rival" and "rivalry" derive from "rivus", the Latin for a brook or stream: "A rival is someone who uses the same source of water from the opposite bank - hence the idea of danger or attack." See Petrella, R., *The Water Manifesto: Arguments for a World Water Contract*, Zed Books, London, 2001, p.35.

[24] Wolf, A., "Development and Transboundary Waters: Obstacles and Opportunities", in Millington, P., "River Basin Management: Its Role in Major Water Infrastructure Projects", WCD Thematic Review V.3 prepared as an input to the World Commission on Dams, Cape Town, 2000, p.135, available from www.dams.org. According to Wolf: "The weight of historical evidence tends to favour water as a catalyst for co-operation: nations have signed 3,600 water-related treaties since AD 805, whilst in the same period there have been only seven minor international water-related skirmishes . . . The only water war between nations on record occurred over 4,500 years ago between the city states of Halgesh and Umma on the Tigris-Euphrates." See also: Wolf, A., "Transboundary Water: Sharing Waters, Sharing Benefits - Lessons Learned", Background Paper Presented to International Conference on Fresh Water, Bonn, 2001.

[25] At the local level, for example, many communities which rely on irrigated agriculture have evolved common property regimes which ensure a rough equity in access to water. Such common property regimes are most prevalent in the South, but can also be found in the industrialised countries of the North. For a US example, see Blomquist, W., *Dividing the Waters: Governing Groundwater in Southern California*, Centre for Self-Governance/ International Centre for Self-Governance, ICS Press, San Francisco, 1992. For a general discussion of common property regimes, see Fairlie, S., Hildyard, N., Lohmann, L., Sexton, S., *Whose Common Future? Reclaiming the Commons*, Earthscan, London, 1993 (available from www.thecornerhouse.org). For an analysis of how water disputes are negotiated in a North African commons-based water regime, see Wolf, A.T., "Indigenous approaches to water conflict negotiations and implications for international waters", International Negotiations, December 2000, www.transboundarywaters.orst.edu/documents/indigenous/

[26] In 1997, Green Cross International, an NGO which has focused on water conflict issues, noted: "A recent document produced by the WMO / UNESCO to raise public awareness on water is entitled "The World's Water: Is There Enough?". According to a number of scientific estimates, even with our finite global stocks - measured strictly in terms of volume- we probably do have enough freshwater for everyone. Therefore behind the question of global quantity, are the even trickier issues of *access* and *quality*. In this light, we might rephrase the above question more precisely as follows: The World's Water: How to Ensure Access and Quality?" (See: Samson, P. and Charrier, B., "International Freshwater Conflict: Issues and Prevention Strategies", Green Cross International, April 1997, http://www.gci.ch/GreenCrossPrograms/waterres/gcwater/study.html

[27] Petrella, R., *The Water Manifesto: Arguments for a World Water Contract*, Zed Books, London, 2001, p.43

[28] The Arab-Israeli conflict is a case in point. The primary cause of the conflict lies in the illegal occupation of Palestinian lands. But Stephan Libiszewski writes: " Hydrological matters undeniably represent an additional dimension to the Arab-Israeli conflict; a dimension the relative importance of which has been growing over recent years. Water resources in the Middle East are scarce by nature, and most of them are transboundary. Competition over the utilization of shared resources is therefore pre-programmed. Moreover, the catchment areas of water systems often coincide with disputed land. Israel, e.g., receives more than half of its water resources from occupied Arab territories. Therefore territorial and hydropolitical interests are highly intertwined in the Arab-Israeli conflict." (See: Libiszewski, S., "Water Disputes in the Jordan Basin Region and their Role in the Resolution of the Arab-Israeli Conflict", ENCOP Occasional Paper No. 13, Center for Security Policy and Conflict Research/ Swiss Peace Foundation, Zurich/ Berne, August 1995. Internet version at http://www.fsk.ethz.ch/encop/13/en13.htm)

[29] In India, for example, conflict over access to water has resulted in violence and death along the Cauvery River, whilst in California, farmers have blown up the pipeline carrying water to Los Angeles. A database of water-related conflicts and transboundary water agreements is kept by the Department of Geological Sciences, University of Oregon. It can be accessed at http://terra.geo.orst.edu/users/tfdd. For further information, see Wolf, A., "The Transboundary Freshwater Disputes Database Project", *Water International*, International Water Resources Association, June 1999. See also: Wolf, A., "Development and Transboundary

the risks of a major conflagration involving armed conflict are greatly increased. Indeed, the last two decades have seen growing international concern over the possibility of water wars between countries that draw their water supplies from shared rivers. Of the 261 shared international river basins worldwide, most do not have agreements covering water allocation between states.[30] In some cases, disputes over water have already led to "an extensive history of sub-acute tensions", if not outright conflict; the recent history of the Tigris and Euphrates is a case in point (see p.13).[31] Nor is the problem restricted to neighbouring states: even non-contiguous nations have exchanged heated words over water development projects which might impact on their access to water. A case in point is Egypt and Ethiopia, which have threatened to go to war over planned dams on the Blue Nile.[32]

How conflicts over water unfold depends critically on the relative power of the various parties that use a water resource. The point is made forcefully by the World Commission on Dams: "Conflict over transboundary rivers usually results from a power imbalance amongst riparians where one State or province is sufficiently influential to exert its authority over others. Generally, upstream States are considered to be in a more influential position as they can control the water source, but regional power imbalances may also make it possible for downstream riparians to exert influence over upstream States. Similar conflicts may also occur within States where rivers cross internal political borders."[33]

In that respect, the era of mega-dams has greatly increased the scope for conflict, not least through enabling whole watersheds to be controlled by a single party. As Fiona Curtin, a consultant to the WCD, notes, "It is only with dams that states can significantly re-direct, store and otherwise alter the course of rivers to the extent that would cause changes of conflict-invoking proportions in neighbouring states." Indeed, in Curtin's view, "the control of water by dams" is the single most important cause of "water related conflicts, including scarcity and water quality issues" in the world today. She continues:

> "The reluctance to name dams as an outright cause of conflict is another result of their controversial nature. It is more comfortable to speak of water scarcity, flooding, pollution etc. as causes of conflict than of outright man-made constructs, of which dams are the most visible and destructive example; but if one investigates almost any of the commonly cited conflicts, or potential conflicts, involving water, at the heart of the matter are one or more dams." [34]

Waters: Obstacles and Opportunities" in Millington, P., "River Basin Management: Its Role in Major Water Infrastructure Projects", WCD Thematic Review V.3 prepared as an input to the World Commission on Dams, Cape Town, 2000, p.135, available from www.dams.org; Wolf, A., "Transboundary Waters - Sharing Benefits: Lessons Learned" Thematic Background Paper prepared for International Conference on Freshwater, Bonn 2001, p.3.

[30]World Commission on Dams, *Dams and Development: A new framework for decision-making*, Earthscan, London, 2000, p.251. In his analysis of the 145 major treaties covering transboundary water issues, Aaron Wolf of the University of Oregon writes: "More than half of the treaties have no monitoring provisions and, perhaps as a consequence, two-thirds do not delineate specific allocations and four-fifths have no enforcement mechanisms . . . Multilateral basins are, almost without exception, governed by bilateral treaties, precluding the integrated basin management long-advocated by water managers." See Wolf, A., "Transboundary Waters - Sharing Benefits: Lessons Learned". Thematic Background Paper prepared for International Conference on Freshwater, Bonn 2001, p.6.

[31] Aaron Wolf of the University of Oregon has recorded 507 "conflict-related events" involving water in the last 50 years, of which 37 involved violence. Wolf stresses, however, that "the record of acute conflict over international water resources is overwhelmed by the record of co-operation", with 157 treaties signed or negotiated during the same 50 year period. See: Wolf, A., "Transboundary Waters - Sharing Benefits: Lessons Learned". Thematic Background Paper prepared for International Conference on Freshwater, Bonn 2001, p.3.

[32] Wolf, A., "Development and Transboundary Waters: Obstacles and Opportunities" in Millington, P., "River Basin Management: Its Role in Major Water Infrastructure Projects", WCD Thematic Review V.3 prepared as an input to the World Commission on Dams, Cape Town, 2000, p.135, available from www.dams.org . In the case of the Nile, politicians in Kenya and other upstream states have recently called for the treaties that currently govern use of the Nile to be renegotiated, in order to allow greater upstream use of the Nile's waters. The calls have sparked fears that Egypt will go to war over the prospect of reduced water flows. See for example: John Kamau, "Can EA Win the Nile War?" The Nation (Nairobi), March 28, 2002, posted to the web March 27, 2002.

[33] World Commission on Dams, *Dams and Development: A new framework for decision-making*, Earthscan, London, 2000, p.251. See also: Turton, A, Curtis, F., Iyer, R., Mostert, E. and Wolf, A., "Part 2 - Transboundary River Basin: Proposed principles and discussion paper", *in* Millington, P., "River Basin Management: Its Role in Major Water Infrastructure Projects", WCD Thematic Review V.3 prepared as an input to the World Commission on Dams, Cape Town, 2000, p.103, available from www.dams.org.

[34] Curtin, F., "Transboundary Impacts of Dams: Conflict Prevention Strategies", Working Paper prepared for World Commission on Dams (WCD), in Millington, P., "River Basin Management: Its Role in Major Water Infrastructure Projects", WCD Thematic Review V.3 prepared as an input to the World Commission on Dams, Cape Town, 2000, p.113, available from www.dams.org.

DAMS AND CONFLICT ON THE TIGRIS AND EUPHRATES

In the case of the Tigris and Euphrates basins (see Box below), the role that dams have played in exacerbating conflict between the major riparian States - Turkey, Syria and Iraq - is clear. All three countries rely on the waters of the Euphrates and Tigris for their agriculture and future development. Unsurprisingly, the development of engineering projects on the two rivers, notably large dams and irrigation works, has been a source of growing tension between the riparian states. Although outright violence has been avoided, hostilities have mounted each time that a new dam has been built or proposed. On at least three occasions, such hostilities have brought the various parties to the brink of war, with troops being mobilised and threats made to bomb existing dams.

Iraq, the last downstream state on the rivers, was the first to develop dams on the Euphrates, constructing the Hindiya barrage on the Euphrates in 1914 and a second barrage at ar-Ramadi in the 1950s.[35] Although both Turkey and Syria began feasibility studies for developing the two rivers in the mid-1950s,[36] neither country undertook construction of any major works until 1966 when Syria started the Tabqa High Dam, later renamed al-Thawrah ("The Revolution"), on the Euphrates and Turkey began construction of the Keban Dam, also on the Euphrates.

Both dams triggered major international disputes. The start of construction on the Keban Dam prompted protests from Syria to Turkey, whilst the completion of the Tabqua Dam led Iraq to threaten military action in 1974 and again in 1975,[37] with both Syria and Iraq mobilising their troops and moving them to the border.[38] Mediation by the Soviet Union and Saudi Arabia diffused the crisis after Syria agreed to release more water for the dam. Subsequently an agreement was reached between Syria and Iraq whereby Iraq receives 58% of the Euphrates water crossing the Syrian Turkey border. The agreement has greatly eased tension between the two countries, leading to what Syrian government sources describe as "an era of cooperation between the two countries over water".[39]

BOX
THE EUPHRATES AND TIGRIS BASINS

The Euphrates River originates in the mountains of Northeast Turkey, where several tributaries rise before merging near Keban to form the Euphrates River itself. After Keban, the river flows south, crossing into Syria at Jarablus. Within Syria, it is joined by the Sajur and Balikh rivers before entering Iraq at Al'Qa'em. It finally joins the Tigris in the south of Iraq to form the Shatt Al-Arab River, which drains into the Arabian Gulf near Al-Faw.

There is dispute over the length of the Euphrates and how much of it falls in each of the three co-riparian countries. The most recent figures are from the Government of Iraq, which put the length at 2,940 kilometres (km), with 40% in Turkey, 20.5% in Syria and 39.5% in Iraq.

Although more than two thirds of the drainage area lies outside Turkey, 93% of the water in the river originates in Turkey – although some put the percentage at 88% and others at 98%. The drainage area of the Euphrates is widely accepted as 444,000 square kilometres (km2). However, as with the length of the river flowing through each country, the share of each state in the basin is hotly disputed. Some authorities put the

[35] Allan, J.A., *The Middle East Water Question: Hydropolitics and the Global Economy*, I.B.Taurus, London, 2000, p.72.
[36] Plans for the Ilisu Dam in Turkey, along with other dams which subsequently became part of the GAP project (see pp.15) were first mooted in the 1950s. The same period saw Russian engineers conducting hydro development studies on the Syria reach of the Euphrates. See Allan, J.A., *The Middle East Water Question: Hydropolitics and the Global Economy*, I.B.Taurus, London, 2000, p.72: Ilisu Dam Campaign and others, If the River were a Pen: The Ilisu Dam, The World Commission on Dams and Export Credit Reform, The Ilisu Dam Campaign, Oxford, 2001, p.9; Altinbilek, D., "The Ilisu Dam Project" in Turkish Embassy, *Water and Development in Southeastern Anatolia: Essays on the Ilisu Dam and GAP*, London, 2000, p.31.
[37] Petrella, R., *The Water Manifesto: Arguments for a World Water Contract*, Zed Books, London, 2001, p.45. The Tabqa High Dam was completed in 1973.
[38] Allan, J.A., *The Middle East Water Question: Hydropolitics and the Global Economy*, I.B.Taurus, London, 2000, p.73.
[39] Interview with Mr Waleed Mu'allim, Deputy Minister for Foreign Affairs, 31 January 2002.

Turkish share at 28%, with Syria at 17%, Iraq 40% and Saudi Arabia 15%. Others apportion the relative shares according to the length of the river in each country (see above).

Like the Euphrates, the Tigris (1,840 km) also flows through Turkey, Syria and Iraq. In Turkey, the Tigris flows through the southeast for about 400 km, forms the border with Syria for 40 km, and flows downstream to Iraq. As with the Euphrates, there is controversy over the river's length, its drainage area and each country's share of the river. Iraqi government figures put the drainage area at 235,000 km2, of which 105,750 km2 (45%) is in Iraq. Figures produced by geographer Hillel put Iraq's share of the basin at 78%, Turkey's share at 20% and Syria's at 2%. [1] The river's flow is characterized by a high annual and seasonal variability. The annual mean flow is 520 m3/s at the border between Turkey and Syria (16.2 billion m3). The lowest flow was 9.6 billion m3 in 1973, and the highest was 34.3 billion m3 in 1969. Mean flow in April is 1433 m3/s, while the driest month September is 113 m3/s. Downstream, at Baghdad, the average flow is 1236 m3/s. [2]

Within the last two decades Turkey and Iraq have started to implement ambitious water development schemes on both the Tigris and the Euphrates, transforming the river and the lives of people who depend on it. Iraq completed the large multi-purpose Mosul Dam (or Saddam Dam) with a reservoir capacity of 10 billion m3 in the late 1980s, and is currently constructing another big dam on the Tigris with a reservoir capacity of 12 billion m3. The Mosul Dam, combined with massive drainage works constructed after the Gulf War, has resulted in the transformation of the lower Tigris River and the destruction of the unique Mesopotamian marshland ecosystem. The consequent displacement of the indigenous Marsh Arabs is viewed by many as a deliberate act of genocide.[3]

The Turkish government has already built 5 major dams on the Euphrates as part of its Southeastern Anatolia Project (GAP) and is now seeking to exploit the upper part of the Tigris River (see p.16). The planned Ilisu Dam and Hydroelectric Power Plant is the centrepiece of the GAP development plan for the Tigris River. If built, it would displace some 78,000 people, mainly ethnic Kurds. However, as a result of international protest, the project has failed to find finance. Ilisu is planned to operate in conjunction with the Cizre Dam, to be constructed 45 km downstream. Cizre will act as a re-regulating reservoir to even out the highly variable peaking power releases and provide for diversion of water to irrigate 121,000 ha of arid lands.

Currently, also as part of GAP, there are eleven water projects in operation or under construction in the Tigris Basin, of which ten are upstream of Ilisu. These upstream projects cover around 300,000 ha of irrigation land, which will result in significant reductions in the river flow before reaching Ilisu. All the irrigation projects upstream and downstream of Ilisu cover a total of approximately 421,000 ha.

SOURCES

Philip Williams and Associates (PWA), *A Review of the Hydrological and Geomorphic Impacts of the Proposed Ilisu Dam*, Report for the Corner House, San Francisco, July 2001.
Dolatyar, M. and Gray, T.S., *Water Politics in the Middle East: A Context for Conflict or Co-Operation?*, Macmillan Press, Basingstoke, 2000, pp.119-124.

REFERENCES

[1] Dolatyar, M. and Gray, T.S., *Water Politics in the Middle East: A Context for Conflict or Co-Operation?*, Macmillan Press, Basingstoke, 2000, pp.121.
[2] Cited in Philip Williams and Associates (PWA), *A Review of the Hydrological and Geomorphic Impacts of the Proposed Ilisu Dam*, Report for the Corner House, San Francisco, July 2001.
[3] See UN General Assembly, Situation of Human Rights in Iraq, General Assembly Resolution 1994/203, available from www.unhchr.ch . For information on the persecution of the Marsh Arabs, see: www.amarappeal.org

THE GAP PROJECT

Relations between Syria and Iraq on the one hand, and Turkey on the other, have however remained tense, with both Syria and Iraq expressing grave concerns over Turkey's ambitious Southeast Anatolia Project, known as GAP, after its Turkish name "Guneydogu Anadolu Projesi". Under the GAP, the Turkish government plans to develop a cluster of 14 dams on the Euphrates basin and 8 on the Tigris (see Box, "Planned and Implemented Dams", p.16). Noting the strategic importance of the Tigris and Euphrates, a report by the UK Defence Forum (a think-tank which advises the government on regional risks) has warned that the GAP project as a whole is:

"[O]ne of the region's most dangerous water time bombs. The dispute has not erupted yet because the project has not yet reached its full potential. By the time of its planned completion in 2010, the vital interests involved give it the potential to become one of the region's most dangerous flashpoints." [40]

Launched in 1977[41] and covering nine provinces[42] with a total area of 74,000 square kilometres, the $32 billion project[43] is the largest development project ever undertaken in Turkey, and one of the largest of its kind in the world.[44] When completed, a total of 90 dams and 60 power plants[45] will have been built on the two river basins, regulating 28 per cent of Turkey's total water potential. In addition to generating 27 billion kilowatt hours of electricity,[46] the dams would be used to irrigate 1.7 million hectares of land in order to grow cash crops and encourage the growth of agro-industries, such as food processing for export.[47] According to Dogan Altinbilek, Director General of DSI, the project "has top national priority."[48]

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[40] Marsh, N., "Water Wars", UK Defence Forum, p.6 <www.ukdf.org.uk/ts5.htm>

[41] In 1977, the Turkish government's State Hydraulics Works department (DSI) drew together all its planned programmes for the Euphrates and Tigris basins under one package - subsequently named the GAP project. In 1989, the Turkish government established the Southeastern Anatolia Project Regional Development Administration (GAPRDA) to oversee the GAP project and to ensure co-ordination between the agencies and institutions concerned. The GAP Higher Board is the most senior decision-making body of GAPRDA and is responsible for decisions pertaining to planning, design and work programmes. The Board is headed by the Minister of State in charge of GAP, the Minister of State responsible for the State Planning Organisation and the Minister for Public Works and Reconstruction.

[42] The nine provinces are: Gaziantep, Diyarbakir, Sanliurfa, Mardin, Adiyaman, Batman, Kilis, Sirnak and Siirt.

[43] According to the GAP administration, just over 50 per cent of this figure will be spent on dams and irrigation infrastructure. As of February 2000 – thirty years after the project was first launched - the Turkish government had raised just 43.3 of the total projected expenditure. See: Olcay Unver, "The Southeastern Anatolia Project (GAP): An Overview", in Turkish Embassy, *Water and Development in Southeastern Anatolia: Essays on the Ilisu Dam and GAP*, London, 2000, pp.14-15.

[44] Sahan, E., Mason, S., Gilli, A., Zogg, A., "Southeastern Anatolia Project in Turkey – GAP, Swiss Federal Institute of Technology Zurich, 2000, p.1.

[45] Interview with Syrian officials. These figures include all the projects planned on tributaries of the Tigris and Euphrates. The more generally cited figure of 22 dams and 19 power plants only covers major components of the GAP project.

[46] The figure of 27 billion kilowatt hours of electricity takes no account of abstraction of water for irrigation. Once this is taken into account, the figure would be reduced. See: Olcay Unver, "The Southeastern Anatolia Project (GAP): An Overview", in Turkish Embassy, *Water and Development in Southeastern Anatolia: Essays on the Ilisu Dam and GAP*, London, 2000, pp.15-16.

[47] Southeastern Anatolia Regional Development Administration http://www.gap.gov.tr . Cited in: Sahan, E., Mason, S., Gilli, A., Zogg, A., "Southeastern Anatolia Project in Turkey – GAP, Swiss Federal Institute of Technology Zurich, 2000.

[48] Altinbilek, D., "The Ilisu Dam Project" in Turkish Embassy, *Water and Development in Southeastern Anatolia: Essays on the Ilisu Dam and GAP*, London, 2000, p.30.

Box

Planned and Implemented Dams on Euphrates and Tigris

EUPHRATES – 15 Dams (14 in GAP region)

Kaban Dam

GAP Dams – 14 Dams

Karakaya Dam and HEPP,
Ataturk Dam and HEPP,
Birecik Dam and HEPP,
Karkamis Dam and HEPP,
Gamgazi Dam
Gomikan Dam
Kocali Dam and HEPP
Sirimtas Dam and HEPP
Buyukcay Dam and HEPP
Kahta Dam and HEPP
Cataltepe Dam
Hancagiz Dam
Kayacik Dam
Kemlin Dam

Tigris Basin: 8 dams and 8 Hydroelectric Power Projects (HEPP)

Kralkizi Dam and HEPP
Dicle Dam and HEPP
Batman Dam and HEPP
Silvan Dam and HEPP
Kayseri Dam and HEPP
Garzan Dam and HEPP
Ilisu Dam and HEPP
Cizre Dam and HEPP

Source: DSI website (www.dsi.gov.tr/gap.htm)
Note: The official GAP website (www.gap.gov.tr) lists only 8 dams under Euphrates Basin Projects.

The newly irrigated land would increase the area in Turkey under irrigation by 40 per cent. Based on 1994 figures, the GAP authorities predict that the project will eventually increase vegetable production by 40 per cent, cotton by 300 per cent, barley by 40 per cent and wheat by 100 per cent. Around the Ataturk dam, the region has been transformed into one of the most important centres of cotton production in Turkey.[49] Overall, it is claimed that the GAP will generate 3.8 million jobs and raise per capita income in the region by 209 per cent.[50]

Numerous government departments are involved in the implementation of GAP, under the aegis of the Southeastern Anatolia Project Regional Development Administration (GAPRDA).

[49] Unver, O, "The Southeastern Anatolia Project (GAP): An Overview" in Turkish Embassy, *Water and Development in Southeastern Anatolia: Essays on the Ilisu Dam and GAP*, London, 2000, p.19.
[50] Unver, O, "The Southeastern Anatolia Project (GAP): An Overview" in Turkish Embassy, *Water and Development in Southeastern Anatolia: Essays on the Ilisu Dam and GAP*, London, 2000, p.16.

To date, Turkey has invested some $14 billion from its own domestic resources in GAP, with international institutions and the private sector investing a further $3.5 billion.[51] Of the planned water projects, 12 dams and 6 hydroelectric power plants have already been built - including the giant Ataturk, Karakaya, Keban and Birecik dams. Sixty per cent of the planned hydroelectric plants are running, generating 15 per cent of Turkey's total electricity production. As of December 1999, 11 per cent of the total planned irrigation target had been achieved, with 8 to 10 per cent under construction.

BOX
THE INTERNAL POLITICS OF GAP – SOCIAL, HUMAN RIGHTS AND ENVIRONMENTAL IMPACTS

Although originally conceived solely as a water development project, the GAP has now been expanded to include other infrastructure programmes, including the building of schools, health care centres, roads, housing and tourism centres. According to the GAP authorities, the integration of these projects into the GAP programme reflects Turkey's commitment to "*sustainable human development that is in conformity with the Rio principles*". As Dr. Oclay Unver, President of the GAP Administration, told a seminar held in London in February 2000: "This approach takes the human element as its focus. All physical structures and other investments become a means to serve this end." [1]

In reality, however, the GAP typifies "top down" development. There has been little or no consultation with affected communities and the projects are implemented without any local participation. Hundreds of thousands have now been displaced, often forcibly and rarely with adequate compensation. Many have ended up in the shantytowns of the major cities, unable to find full-time employment and living in poverty. Acknowledging these failures, the Turkish government announced in 1999 that it would review the project. [2]

The GAP has also caused major environmental degradation. Salinisation of irrigated land and soil erosion are now serious problems. According to Professor Dr. Alaeddin Taysun of the University of the Aegean, "*About 7 million hectares of land that are now irrigated or will be in the future are under threat from erosion. Precautions against erosion also need to be taken on about 5 million hectares which are suffering erosion at a low level.*" [3]

GAP AND THE KURDS – WAR BY OTHER MEANS?

Concern has also been expressed over the political motivations underlying GAP. There is little doubt that the majority of GAP officials and field workers are deeply committed to the programme's overt aims of poverty alleviation and economic development, or that the majority of people in the region, which is one of the poorest in Turkey [4], seek means to improve their living standards and to gain access to modern technologies, health care and education. Yet the project has from its inception been underpinned by the Turkish State's long-pursued policy of assimilating the region's Kurdish majority into mainstream Turkish society and culture. Indeed, the Turkish government's official publicity for the project explicitly states that the GAP is intended to "*dramatically change the social and cultural make-up of the region.*" The Director General of DSI has also stated:

> "*We do not have Kurdish people. We are all Turkish people. We do not look on Kurdish people as a minority like in the USA. All are citizens of Turkey no matter where they come from and who they are. Turkey's policy is that the citizens in GAP region will not be treated differently from other regions just because of their ethnic origin. We have a lot of Kurdish people in the government and some are in key positions.*"[5]

[51] According to the GAP Administration, "a little over $2 billion has come from international institutions and the equivalent of $1.5 billion is coming from a build, operate and transfer scheme on the Euphrates River from a European consortium".

To many Kurds who have been displaced from their homes in recent years, such statements have a sinister ring to them. Indeed, it is widely held in many quarters that the Turkish authorities have promoted the GAP project as a means of altering the demography of the region, through the displacement of Kurds into larger towns so as to exercise more effective control over the region. The period from 1984 to 1999 saw a vicious armed conflict between Turkish security forces and the Kurdistan Workers Party (PKK), now on cease-fire. As the UK Defence Forum notes:

> "*From the outset, the Southeast Anatolia Project has had profound security implications. It is no coincidence that the project is situated in the Kurdish region of Turkey – where a bitter civil war rages between the Kurds and the Turkish military. The expected security benefits are twofold; by increasing the income of hitherto impoverished Kurds, the government in Ankara hopes the new wealth will induce the people to support the government. More pragmatically, the project will transform the geography of Turkish Kurdistan. Improved communications, combined with new industries and farms, will shepherd the Kurds out of their traditional mountain fastnesses into planned urban areas where the government can keep greater control over them. An underlying motive of the project is to deny the Kurdish guerrillas the environment in which they operate*."[6]

This view has been confirmed by Turkish soldiers interviewed by Britain's Channel 4 News. The soldiers admitted that their interest in the Ilisu project, the biggest dam planned on the Tigris River, was entirely strategic. When the Ilisu waters rise, the escape routes to the mountains that have historically been used by fighters from the PKK would be cut off.[7]

GAP's claimed development objectives are also thrown into doubt by the skewed distribution of its benefits and its failure to tackle key structural causes of poverty. Indeed, it is clear that the last people to benefit are Kurds, and in particular poorer Kurds. Despite massive investment in the region through the GAP, for example, the social infrastructure of the east and southeast remains the most neglected in Turkey. Per capita income is barely 42 per cent of the national average; only 9 per cent of children complete secondary school; the average literacy rate is 27 per cent lower than the national average; and the Southeast receives less than 10 per cent of the national development budget. As David McDowall, author of *A Modern History of the Kurds*, points out, such neglect "*is longstanding and institutionalised, partly as a result of Turkey's longstanding determination to crush all expression of Kurdish identity*" and "*contradicts official claims of concern*."[8]

McDowall also points to the failure of the GAP to grasp the vital need for land reform, a key requirement if rural poverty in the region, where landlessness is widespread, is to be addressed. Instead, GAP planners have opted for the development of capital-intensive agriculture – an indication to many critics of the shallowness of GAP's claimed poverty alleviation objectives. "*The reason is simple*", argues McDowall. "*The landlord class largely control the vote of their villagers, useful in offsetting the dissident vote that finds expression in the region's towns*." Neglect of land reform means, according to GAP's own master plan, that 8 per cent of farming families still control over 50 per cent of the land, while 41 per cent hold 5 hectares or less (barely subsistence level) and 38 per cent have no land at all. GAP has little or nothing to offer this 79 per cent. "*In such conditions the capital required for this massive project will come either from entrepreneurs living elsewhere in Turkey or from abroad. In short, the indigenous population is unlikely to benefit from the investment opportunity or have the education and skills to benefit from the projects*."

In addition, "*the most fundamental ingredient of development, full local participation, has been missing*". As a result, says McDowall, "*local people feel powerless in the face of something they either do not want or know nothing about*."

REFERENCES

[1] Unver, O., "The Southeastern Anatolia Project (GAP): An Overview" in Turkish Embassy, *Water and Development in Southeastern Anatolia: Essays on the Ilisu Dam and GAP*, London, 2000, p.17.

[2] "Turkey set to re-examine the GAP", *International Water Power and Dam Construction*, September 1999.
[3] "GAP is causing barrenness of the soil", *Ozgur Politika*, 28 April 2000.
[4] In a report on Turkey published by the United Nations Development Programme (UNDP) in 1997, the authors noted that the highest poverty rates in Turkey were to be found in the east and southeast. See www.undp.org/rbec/pubs/nhdr97/summary/turkey.htm. See also: Olcay Unver, "The Southeastern Anatolia Project (GAP): An Overview", in Turkish Embassy, *Water and Development in Southeastern Anatolia: Essays on the Ilisu Dam and GAP*, London, 2000, pp.13-14. See also: "Turkey set to re-examine the GAP", *International Water Power and Dam Construction*, September 1999.
[5] Quoted in ECGD, "Stakeholders' Attitudes to Involuntary Resettlement in the Context of the Ilisu Dam Project, Turkey", Department of Trade and Industry, London, 1999, p.25.
[6] Marsh, N., "Wars Downstream", UK Defence Forum, www.ukdf.org.uk/ts5.htm
[7] Rugman, J., "Turkish dam tests Cook's ethical vow", *The Observer*, 8 August 1999.
[8] McDowall, D., "Ilisu: the economic and political context", www.ilisu.org.uk .

GAP: SYRIAN AND IRAQI CONCERNS

Turkey argues that the GAP project is key to its future economic development. Although both Syria and Iraq are at pains to point out that they respect Turkey's right to develop, both countries fear that the GAP project will result in serious downstream impacts, including dramatically reduced flow and increased levels of pollution. Both countries also fear that Turkey is using the GAP to establish control over the waters of the Tigris and Euphrates as part of a wider policy of establishing regional hegemony.

Reducing the Flow

Much of the water stored in GAP dams is intended for irrigation. According to the GAP administration, the dams that form part of the GAP project would be used to irrigate a total of 1.7 million hectares of land.[52]

As regard the Tigris, according to Syrian sources[53], if fully completed, GAP projects on the Tigris are scheduled to irrigate a total of 601,824 hectares.[54] On the basis of the figures published by the GAP authorities, Iraq calculates that the Tigris irrigation projects will consume 5.8 Bm3[55] and reduce the flow of the Tigris as it passes the border into Syria at Cizre by 66%[56] - from an annual 16.72 Bm3[57] to 5.58 Bm3. Allowing for the water received by the Tigris from tributaries in Syria, Iraq estimates that it would receive 47% less water than at present. According to the Iraqi authorities:

> "Such a big shortage in the Tigris River resources will have grave repercussions for Iraq. The majority of Iraq's population depends on the Tigris to meet their drinking water needs, agricultural requirements and others. Agriculture has been practiced for thousands of years along the said river and technical studies have shown that a decrease of 1 Bm3 in the river's resources will result in the non-use of arable lands estimated at 62,500 hectares (ha). Since the current river's resources suggest a drop of 11.14 Bm3, the total agricultural area which will be deprived of water in Iraq

[52] Unver, O., "The Southeastern Anatolia Project (GAP): An Overview" in Turkish Embassy, *Water and Development in Southeastern Anatolia: Essays on the Ilisu Dam and GAP*, London, 2000, p.16.
[53] Information supplied by Syrian officials, who also supplied the following more specific figures: existing irrigated area - 26,312 ha; area under development - 97,744; area where implementation has still to be scheduled - 447,768.
[54] Lower figures are given by a number of other sources. Daoudy, for example, gives a figure of 1,024,000 hectares for the Euphrates projects and 456,664 for the Tigris. Syrian officials explain such discrepancies by whether or not smaller GAP projects are included. See: Daoudy, M., "The Development of the Euphrates and Tigris Basins: An Assessment of Upstream Development (Turkey) on Downstream Riparians (Syria)", Submission to the World Commission on Dams, Presented at the Africa/Middle-East Regional Consultation, December 1999, available from www.dams.org.
[55] Government of Iraq, *Position Paper Indicating Iraq's Position on the Utilization of the Tigris River Waters*, Baghdad, 2002. Syrian officials put the figure at 8 Bm3, since they take account of evaporation from reservoirs.
[56] Government of Iraq, *Position Paper Indicating Iraq's Position on the Utilization of the Tigris River Waters*, Baghdad, 2002.
[57] Information supplied by Syrian officials. Onal Ozish of the Ninth of September University, Turkey, gave a figure in 1993 of 16.2 Bm3; Ihsan Bagis of Hacettepe University (1989) put the figure at 16.7 Bm3.

> will reach 696,000 ha. The non-use of such areas will have severe consequences for the entire agricultural production and the water supply for existing farms, as well as other social and economic repercussions on farmers deprived of agricultural requirements, let alone the problem of desertification which will be exacerbated as a result of the above mentioned reduction of arable lands."[58]

Iraq also predicts that the reduced flow "will be reflected badly on power generation" from the Saddam and Samara dams. [59] "It is expected that power production in Saddam Dam will drop at a rate close to that of water reduction in the discharges coming to the dam: that is to say, that reduction of power generation in Saddam Dam will drop by approximately 53%."[60]

Syria, which has a similar dependency on the downstream flow of the Euphrates, forecasts similar problems arising from reduced flow of that river. Before the construction of the Keban Dam in 1966, Turkey used just 3% of the waters of the Euphrates for irrigation.[61] If GAP is completed, the total irrigated area for the Euphrates basin in Turkey will increase to 1,628,203 hectares,[62] requiring 9-16.9 Bm3 of water a year. Syrian officials estimate that the downstream flow of the Euphrates as it crosses the Syrian border will be reduced by 30%-60%.[63] In effect, "Turkey is planning to use completely half of the Euphrates yield, leaving Syria and Iraq the other half. Moreover, 11% of this half will be of lower quality water since it is return irrigation water from Turkey."[64]

Increased Water Pollution

The original planning for the GAP project appears to have paid little attention to the problem of return flows from irrigation schemes (see p.10). Both Syria and Iraq fear that the result will be increased levels of salinity in the waters of the Tigris and Euphrates, a problem which will be compounded by pesticide and fertiliser run-off and by increased sewage discharges from the new urban centres that GAP is seeking to stimulate. As Syrian officials told the Mission:

> "Deterioration of water quality results in a series of problems with negative impacts on human health and environment. The use of contaminated water in irrigation results in the transmission of contaminants to the irrigated plants and consequently to humans, as well as increasing soil salinity, reducing productivity and converting areas of agricultural land into barren land. The deterioration of water quality definitely reduces the uses to which the water can be put, even if it does not render the water completely unusable for human or agricultural consumption. This can create a shortage in water supply, converting the quality problem into a quantity problem."[65]

Estimates vary, but one independent study has predicted that insecticide levels in the Syrian portion of the Euphrates and its tributaries could increase by 35%.[66] Technical studies conducted by Iraq have also forecast a doubling of salinity levels in the Tigris as a result of upstream irrigation in Turkey.[67] Iraq also

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[58] Government of Iraq, *Position Paper Indicating Iraq's Position on the Utilization of the Tigris River Waters*, Baghdad, 2002.

[59] In 2000, the weekly *Sout Al Talaba (Students' Voice)* quoted Iraq's Irrigation Minister Mohamoud Diyab Al Ahmad as stating: "The construction of dams and projects on the Euphrates and Tigris has caused Iraq sustained damage . . . and led to great shortages in waters coming to Iraq," the paper said. "Such huge Turkish projects place Iraq in a difficult situation." See: "Iraq urges Turkey to reach water-sharing plan", Reuters, 16 April 2000.

[60] Government of Iraq, *Position Paper Indicating Iraq's Position on the Utilization of the Tigris River Waters*, Baghdad, 2002.

[61] Dolatyar, M. and Gray, T.S., *Water Politics in the Middle East: A context for Conflict or Co-Operation?*, Macmillan Press, London, 2000, p.144.

[62] This figure is derived from a Syrian analysis of GAP documents. It covers land already brought into irrigation through GAP (149,440 ha); land where work is underway to install irrigation (130,191ha); and an area (811,572 hectares) reported in the GAP general plan but where implementation has still to be scheduled. Information supplied by Syrian officials.

[63] Information supplied by Syrian officials. The 9 billion cubic metre (Bm3) figure is for irrigation water only. The higher figure - 16.9 bM3 - also takes into account evaporation and water losses from GAP reservoirs and is thus a more realistic estimate.

[64] Information supplied by Syrian officials.

[65] Information supplied by Syrian officials.

[66] Kolars, J. and Mitchell, W.A., *The Euphrates River and the Southeast Anatolia Development Project",* Southern Illinois University Press, Carbondale, 1991, cited in Daoudy, M., "The Development of the Euphrates and Tigris Basins: An Assessment of Upstream Development (Turkey) on Downstream Riparians (Syria)", Submission to the World Commission on Dams, Presented at the Africa/Middle-East Regional Consultation, December 1999, available from www.dams.org.

[67] Government of Iraq, *Position Paper Indicating Iraq's Position on the Utilization of the Tigris River Waters*, Baghdad, 2002.

believes that existing dam projects on the Tigris and Euphrates will affect about 1.3 million hectares of agricultural land - some 40 per cent of the agricultural land available - as a result of declining water quality.[68]

Turkey's Regional Ambitions; Controlling the Water

There are also fears that the dams that Turkey has built - or intends to build - will enable Turkey to exercise control over its downstream neighbours. Such fears are not without foundation. Over the years, Turkey has made a number of statements that leave little room for doubting its "first come, first served" approach to the waters of the Tigris and Euphrates. In 1992, for example, Turkey's Prime Minister Suleyman Demirel stated: "Neither Syria nor Iraq can lay claim to Turkey's rivers any more than Ankara could claim their oil. This is a matter of sovereignty. We have a right to do anything we like. The water resources are Turkey's; the oil resources are theirs. We don't say we share their oil resources, and they cannot share our water resources."[69] In recent years Turkey's tone has, in the words of *The Economist*, "softened somewhat from outright belligerence to studied imprecision."[70] Nonetheless, despite the talk of collaboration over the use of the Tigris and Euphrates, the language is still uncompromising. Commenting on a series of dams that Turkey intends to build on the Uphort river, Turkey's Deputy Prime Minister Mesut Yilmaz told the Arab daily newspaper *Al-sharq Al-Awsat* in February 2001: "We have completed works in almost 50% of the infrastructure and we are in the meantime working on the final stages, and we will extend the invitation to Syria to accept the inevitability of this project and to join negotiations on a rational use of waters. We are ready to deal fairly and generously, but the division of waters will not be equal, as the Euphrates, like any other Turkish river, should be basically used for serving the interests of the Turkish people."[71]

Turkey's aggressive water politics were illustrated most dramatically in 1990, when Turkey blocked the flow of the Euphrates for 9 days whilst filling the reservoir of the Atatűrk Dam.[72] Both Syria and Iraq accused Turkey of failing to inform them of the cut-off, prompting Iraq to threaten to bomb all the Euphrates dams.[73] Turkey's Ministry of Foreign Affairs rebutted such claims, arguing that its co-riparians had "been informed in a timely way that river flow would be interrupted for a period of one month, due to technical necessity"[74], and that, prior to impoundment, more water than usual was released downstream, in order to allow Syria and Iraq to store sufficient waters to carry them through the impoundment period.[75] Turkey also argued that the *average* flow downstream never fell below 500 million cubic metres per second (m3/s) - the minimum agreed under a 1987 Protocol signed between Turkey and Syria.[76] This is disputed by both Syria and Iraq, which point out that the decision to release "extra" water downstream prior to impoundment was taken unilaterally by Turkey and without sufficient notice. Syria also notes that whilst the average monthly discharge at Jarablus on the Turkish-Syrian border for the year 1989-90 may not have

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[68] Information supplied by Syrian officials.

[69] Quoted Dolatyar, M. and Gray, T.S., *Water Politics in the Middle East:: A Context for Conflict or Co-Operation?*, Macmillan Press, London, 2000, p.148.

[70] "Sharing Mesopotamia", *The Economist*, 13 November 1999, p.81.

[71] "Syria, Turkey and the water tension", *Asharq Al-Awsat*, 13 Feb 2001

[72] Turkey had originally announced that the flow would be blocked for 16 days, but relented after protests from Syria and Iraq. See: Turkish Embassy, *Water and Development in Southeastern Anatolia: Essays on the Ilisu Dam and GAP*, London 2000, pp. 68-69.

[73] Allan, J.A., *The Middle East Water Question: Hydropolitics and the Global Economy*, I.B.Taurus, London, 2000, p.73.

[74] Turkish Ministry of Foreign Affairs, quoted in Allan, J.A., *The Middle East Water Question: Hydropolitics and the Global Economy*, I.B.Taurus, London, 2000, p.73.

[75] For a Turkish view, see "Water Disputes in the Euphrates-Tigris Basin", www.mfa.gov.tr/grupa/ad/adg/adgb/Chaplc.HTM. The paper states: "Before the impounding period, Turkey released more water than the commitment of 500 m3/s which is undertaken by Turkey in accordance with the provisions of a Protocol signed in 1987 with Syria. Turkey has thus created an opportunity for the downstream countries to accumulate this additional water in their own reservoirs. In this context, 768 m3/s of flow has been released at the Turkey-Syria border within the period starting on 23rd November 1989 and ending at the beginning of the impoundment process on 13 January 1990. Water coming from the tributaries which join the Euphrates between the Ataturk Dam and the Turkish-Syrian border has also continued to flow into Syria in the slice of time between 13 January and 12 February 1990, covering the impounding period. Thus, the total amount of water crossing the border between 23 November 1989 and 12 February 1990 has amounted to 3.6 Bm3, corresponding to an average value of 509 m3/s. Therefore, even in this period of 82 days - which also covers the one month impounding period - Syria has received more water than the committed quantity of 500 m3/s. . . . Water in the Ataturk Dam has reached the level of 15 Bm3 during the January 1990-September 1991 period. In the same period, 27 Bm3 of water has been released to the downstream riparian countries on the basis of the 500 m3/s. As these figures indicate, Turkey could have long before concluded the filling of the dam, if it had completely cut water flow to its southern neighbours. Not opting for such a course of action is a proof of Turkey's good intentions and of its sensitivity not to cause damage to its neighbours."

[76] Ibid: "Water Disputes in the Euphrates-Tigris Basin", www.mfa.gov.tr/grupa/ad/adg/adgb/Chap1c.HTM

fallen below far the agreed 500 m3/s,[77] the monthly discharge in January and February 1990 was far lower – 321m3/sec and 3203 m3/sec respectively. **The Mission reviewed the discharge data from the measuring station at Jarablus and found the Syrian case persuasive (see pp.37-38).**

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The Ataturk incident serves as a constant reminder to Syria and Iraq of the potential hold which the GAP project, even uncompleted, gives Turkey over its downstream neighbours. Turkey's three major dams on the Euphrates - Keban, Karakaya and Ataturk - have a storage capacity (some 90-100 billion cubic metres of water), which greatly exceeds the *entire* annual flow of both the Tigris and Euphrates put together.[78] Should Turkey decide to cut off downstream flow completely, it would therefore have the means to do so for a considerable period of time. Inevitably, questions have been raised as to why Turkey should have built in such huge surplus storage capacity.

Even if an agreement is reached on water sharing, assurances that downstream flow rates will be maintained will ultimately depend on Turkey's political ambitions in the region. Turkey's membership of NATO, its close relations with the US and its acceptance for application for membership of the EU all place it in a strong bargaining position vis-a-vis its downstream neighbours, particularly Iraq, which has been weakened economically and militarily by a decade of sanctions. Indeed, officials in both Iraq and Syria expressed the view that Turkey had taken advantage of the sanctions against Iraq - and its pariah status internationally - to push ahead with its GAP projects on the Tigris, on the assumption that opposition from Iraq (the major downstream co-riparian, since the Tigris only flows through Syria for 40 kilometres) would be either ignored or muted. **Whilst consideration of UN policy toward Iraq is outside of the Mission's remit, the Mission was gravely concerned by the destabilizing effects of sanctions on regional power relations, in addition to their evident impact on the Iraqi people and in particular poorer sections of Iraqi society.[79] The Mission recalls the finding of the World Commission on Dams that water conflict is intimately connected to imbalances of power amongst riparian states, and is of the firm view that continued sanctions are potentially stoking the fires of future conflict in the region. The Mission was also disturbed to learn of the wide range of agricultural equipment and equipment relating to water engineering projects that had been denied to Iraq by the UN Sanctions Committee.[80] The denial of such equipment can only result in lower food production and, in the case of irrigation pumps, increased salinisation and environmental damage. The Mission considers this unacceptable.**

GAP AND RECENT TENSIONS WITH DOWNSTREAM STATES

The first dam to be built under GAP was the Karakaya Dam (constructed 1976-1987) on the Euphrates. Other dams have quickly followed - the Ataturk Dam (1983-92), the Karkamis Dam (1996-1999) and most recently the Birecik Dam (1993-2000). GAP projects on the Tigris include the Dicle Dam (1986-1997) and the Batman Dam (1986-98).[81]

As noted above, tensions came to a head in 1990 when the Turkish authorities effectively halted the flow of the Euphrates altogether in order to fill the Ataturk Dam. Further protests by Syria and Iraq were lodged

[77] Measurements put the annual average at 487.67 m3/sec. See: Ministry of Irrigation in Syria, "Average monthly discharge (m3/sec) of the Euphrates river at Jarablus – Syria", Damascus 1999.

[78] Dolatyar, M. and Gray, T.S., *Water Politics in the Middle East: A Context for Conflict or Co-Operation?*, Macmillan Press, London, 2000, p.145.

[79] It is estimated by UNICEF that economic sanctions against Iraq contributed to the deaths of some 500,000 Iraqi children a year. For the period 1990 to 2000, UNICEF found that of 188 countries surveyed, Iraq suffered the worst change in mortality levels amongst children under five years old. Child mortality rates in Iraq actually more than doubled during the decade. The resigning UN Assistant Secretary General and Humanitarian Coordinator in Iraq told the UK newspaper *The Independent* in 1998, "We are in the process of destroying an entire society. It is as simple and terrifying as that. It is illegal and immoral." For further details of the impacts of sanctions, see www.notinournames.org. For details of the UNICEF report, see: www.unicef.org/newswire/99pr29.htm .

[80] Lists of equipment that was held up in this process were supplied by Iraqi sources and included water pressure filters, pumps, pipes and hoses.

[81] For technical details of the dams, see DSI website: www.dsi.gov.tr

with Turkey in 1993, prior to the construction of the Birecik Dam on the Euphrates.[82] The same year, with many GAP dams at a low level due to drought, Turkey "chose to turn off the tap during the Muslim Feast of the Sacrifice in June, reducing the flow from 500 cubic metres per second to 170"[83] in contravention of its agreement under the 1987 Protocol with Syria.

In 1999 and 2000, the two downstream states also protested that they had not been consulted on the proposed construction of the Ilisu Dam on the Tigris, in contravention of international law (see p.27) and bilateral agreements (see pp.39-40).[84] The Turkish authorities denied the charge, arguing that it had informed Syria and Iraq of its plans with regard to every GAP project.[85]

The Turkish government also claimed that, contrary to Syrian and Iraqi fears, Ilisu would not adversely affect downstream flow. Independent analysis of the data presented in the Environmental Impact Assessment Report (EIAR) for the project, however, flatly contradicts the Turkish government's claim.[86] The analysis found that the construction and operation of the Ilisu Dam by itself would significantly affect the hydrology of the Tigris River. It would alter the seasonal flow pattern by capturing all except large flood flows in the spring and releasing them in the autumn, and would create large daily flow fluctuations whose influence would be felt more than 65 km downstream at the Syrian border. In addition, the operation of the Ilisu Dam in combination with diversions from the future downstream irrigation project at Cizre on the Syrian border would probably significantly reduce summer flows in Syria and Iraq below historic levels. It is likely that a significant portion of the recommended minimum flow release from Ilisu of 60 m^3/s during dry years would be diverted. It is even possible that, with full implementation of the Ilisu/Cizre projects, during drought periods *all* the summer flow could be diverted before it crossed the border. (For further details, see Box, "Potential Downstream Impacts of Ilisu" below.)

In 2000 tensions again mounted when Turkey again announced that it would be unable to meet the agreed downstream flow of 500 m3s to Syria, as a result of drought.

BOX
POTENTIAL DOWNSTREAM IMPACTS OF THE ILISU DAM

Considerable controversy has surrounded the downstream impacts of the proposed Ilisu Dam that Turkey plans to build on the Tigris.

Fears have been expressed in a number of quarters that Ilisu – in conjunction with other dams in Turkey – could severely disrupt the downstream flow of the Tigris to Syria and Iraq, affecting communities reliant on seasonal agriculture and, in what is already a volatile region, heightening political tensions between Turkey

[82] The Iraqi Embassy in Ankara gave a note to the Turkish Ministry of Foreign Affairs on 17 March 1993. Syria similarly handed a note to the Turkish Embassy in Damascus on 18th July 1993. See: "Water Disputes in the Euphrates-Tigris Basin", www.mfa.gov.tr/grupa/ad/adg/adgb/Chap1c.HTM

[83] de Villiers, M., *Water Wars: Is the World's Water Running Out*?, Weidenfield and Nicolson, London ,1999, p.255.

[84] In July 2000, the Syrian Minister of State for Foreign Affairs stated in a letter to Friends of the Earth (England and Northern Ireland) that, "The Government of the Republic of Turkey has not officially informed, consulted, or negotiated with us about the implementation of the Ilisu Dam Project on the Tigris, as stipulated by the rules of international law and the relevant agreement on the Tigris river and other agreements concluded between the two countries." Iraq has similarly stated that "construction of the dam will constitute a breach of international law and it would seriously harm Iraq's rights to the river waters." In August 2000, Dr. Fahmy Al-Qaysi, Director of the Legal Department of Iraq's Ministry of Foreign Affairs, stated, "The State of Iraq did not receive any official notification from the State of Turkey concerning its plans to construct the Ilisu Dam, and learned about the Turkish side's intentions through media reports." See: Letter to Friends of the Earth from Nasser Kaddour, Syrian Minister of State for Foreign Affairs, 3 July 2000; L.N. AL-Saidi, Iraqi Interests Section, Embassy of the Hashemite Kingdom of Jordan, Letter to Friends of the Earth, 24 March 1999; Dr. Fahmy Al-Qaysi, Director of Legal Department, Ministry of Foreign Affairs, Letter to Friends of the Earth, 18 August 2000.

[85] Turan, I., "International Aspects of Water Issues", in Turkish Embassy, *Water and Development in Southeastern Anatolia: Essays on the Ilisu Dam and GAP*, London, 2000.

[86] Philip Williams and Associates (PWA), *A Review of the Hydrological and Geomorphic Impacts of the Proposed Ilisu Dam*, Report for the Corner House, San Francisco, July 2001.

and its neighbours. The spare storage capacity of Ilisu's planned reservoir alone would be sufficient to block the flow of the River Tigris for an average of two to three months per year.

The project developers argue that such fears have been overplayed. They contend that:

- Ilisu is designed for power, not irrigation, and that hydro-electric uses do not impair downstream flows;
- Unlike the Euphrates, significant tributaries join the Tigris downstream of the Ilisu site;
- The proposed operational regime will ensure a satisfactory level of discharge in all seasons.

Fears that the lack of adequate sewage treatment in the towns that discharge upstream of Ilisu would lead to a deterioration of water quality in the reservoir have also been dismissed. Whilst the EIAR acknowledges that "serious eutrophication problems" [1] would occur without mitigation measures, it argues that the commissioning of wastewater treatment plants in Diyarbakir and other cities, coupled with changes in agricultural practices to reduce fertilizers and soil erosion through best management practices (BMPs) will mitigate the problem.

In 2001, The Corner House, a UK environmental and human rights research group, commissioned an independent analysis of the EIAR from hydrologists Philip Williams and Associates (PWA) of San Francisco. PWA concluded:

- The construction and operation of the Ilisu Dam by itself will significantly affect the hydrology of the Tigris River. It will alter the seasonal flow pattern by capturing all except large flood flows in the spring and releasing them in the autumn, and it will create large daily flow fluctuations whose influence would be felt more than 65 km downstream at the Syrian border;
- The operation of the Ilisu Dam in combination with diversions from the future downstream Cizre project would probably significantly reduce summer flows in Syria and Iraq below historic levels. It is likely that a significant portion of the recommended minimum flow release from Ilisu of 60 m3/s during dry years would be diverted. It is even possible that, with full implementation of the Ilisu/Cizre projects, during drought periods *all* the summer flow could be diverted before it crossed the border;
- Future depletions of the Tigris river for planned irrigated agriculture within Turkey would further reduce these flows;
- Filling of the Ilisu reservoir could create low flow conditions downstream in Syria and Iraq more severe than those experienced in an extreme drought for two successive years;
- The Ilisu reservoir would eliminate small to moderate flood peaks downstream but would not significantly reduce extreme large flood peaks;
- There are large uncertainties in estimates of reservoir sedimentation rates. It is possible that, with deteriorating watershed conditions in future, active reservoir storage losses would be in the range of 0.1 to 1 percent per year. This could adversely affect power generation within a few decades;
- Deposition of coarse sediments in the mouths of rivers discharging to the reservoir will cause increased flood levels, waterlogging, and increased channel migration along tributary rivers upstream;
- Large seasonal reservoir level fluctuations would typically expose approximately 100 km2 of reservoir bed. As summer diversions increase upstream, this drawdown area could increase to about 190 km2.
- Capturing of coarse sediment in the reservoir will tend to induce scouring of the river channel downstream, lowering the river level and possibly lowering the adjacent water table as well;
- High levels of nutrients from sewage and agricultural runoff will cause eutrophication and anoxic conditions in the reservoir. Planned sewage treatment plants will not significantly reduce these levels;
- Anoxic conditions will probably mobilize heavy metals from reservoir sediments;
- Discharges from the reservoir will be anoxic and likely to contain high levels of nutrients, organic matter and hydrogen sulphide (H2S);
- Downstream water supply in Syria and Iraq could be significantly affected by both reduction in summer flows and deterioration in water quality;

- There could be a significant increase in flood hazards downstream. The elimination of smaller floods will encourage the development of floodplain and river channel land, but these areas will still be subject to extreme flood events;
- The consequences of failure of the dam due to accident or act of war would be catastrophic, affecting millions of people living downstream;
- Pollution and eutrophication of the reservoir could create public health hazards for people drinking water or eating fish caught in the reservoir;
- Anoxic conditions in the reservoir will likely generate significantly higher levels of greenhouse gas methane emissions than occur from the existing landscape;
- Key EIAR conclusions are, variously, based on contradictory information, unsubstantiated, incomplete, of unknown accuracy, or based on an inappropriate level of analysis;
- The methodology or logic is seriously flawed because the Project definition is unclear, cumulative impacts were not addressed, trans-border impacts were ignored and impacts were not analysed over the lifecycle of the project;
- Key decisions on the dam and operational design seem to have been made over 20 years ago without integrating environmental planning, as is now the established practice. Instead, the EIAR attempts to analyse the consequences of decisions already taken and suggest mitigation actions, which are not part of the project, that might be taken to reduce adverse impacts;
- There is no substantiation provided in the EIAR for the selection of the minimum monthly flow release of 60 m^3/s. Nor is evidence presented that downstream riparian countries were consulted in order to establish such a minimum release rule;
- It does not appear that the proponents of the Ilisu dam have carried out the kind of technical studies that could reasonably be expected in order to evaluate environmental impacts for a major project of this type. For example: reservoir water quality modelling, operational scenarios for future watershed conditions, river and reservoir sedimentation modelling, dam break analysis, and flow fluctuation attenuation modelling.

REFERENCES:
[1] Consortia for Ilisu, *Ilisu Dam and HEPP: Environmental Impact Assessment Report*, April 2001, released July 2001, p.4-58.
[2] Philip Williams and Associates (PWA), *A Review of the Hydrological and Geomorphic Impacts of the Proposed Ilisu Dam*, Report for the Corner House, San Francisco, July 2001.

ATTEMPTS AT NEGOTIATION

Although Syria and Iraq have both sought to negotiate a tripartite agreement on the sharing of the Euphrates and Tigris waters, Turkey has refused to come to the table,[87] insisting on linking any negotiation to other issues such as Syria's alleged support during the 1980s for the Kurdistan Workers Party (PKK), and more recently the ongoing border dispute over Iskenderun.[88]

Syria and Iraq assert that their desire to reach a tripartite agreement on future use of the rivers is based both

[87] As Mustapha Dolatyar and Tim Gray note: "Syria and Iraq took every opportunity offered by diplomacy to prevent upstream developments or at least to modify them." If Turkey is now adopting a more conciliatory position, argue Dolatyar and Gray, this is largely due to Syria and Iraq's diplomatic conduct. See Dolatyar, M and Gray, T.S., *Water Politics in the Middle East: A Context for Conflict or Co-Operation?*, Macmillan Press, London, 2000, p.146.
[88] Turkey has insisted that any agreement on the Tigris and Euphrates must also include an agreement on use of the Orontes (Asi) river, which flows through territory disputed by Syria and Turkey. Syria refers to the territory as Iskenderun, whilst Turkey calls it Hatay Province. As Mustapha Dolatyar and Tim Gray note in their study of water politics in the region: "If a general water agreement were to cover the Orontes, both the Syrians and the Turks think it would imply recognition of Hatay as Turkish." See: Dolatyar, M and Gray, T.S., *Water Politics in the Middle East: A Context for Conflict or Co-operation?*, Macmillan Press, London, 2000, p.149.

on hard evidence of the severe damage that has already been done by Turkey's dam building project, and on the prospect of further severe damage should the dam project be completed without reaching any collective agreement on Turkey's use of the water. Syria's Deputy Foreign Minister, Mr Waleed Mu'allim, told the Mission:

> "*Water is life. Many analysts believe disputes over water will be a major cause of military conflict in the region. We want water to be a source of cooperation. We want to resolve this peacefully and in accordance with international law. But if the GAP project goes ahead as planned and without an agreement, within five years more than 7 million Syrians would suffer from salt water pollution and damage to agriculture and drinking water. We are doing our best to attract Turkey to the table to negotiate and to prevent military conflict*."[89]

Turkey insists that it has consulted fully with its downstream neighbours on its proposed dams and that it is ensuring adequate downstream flow of good quality water. Although a number of Iraq-Turkey and Turkey-Syria agreements have been negotiated, Turkey has not, in the view of the Syrian government, respected them.[90] In 1987, for example, Turkey agreed to ensure a minimum average monthly flow of the Euphrates across the border to Syria of 500 cubic metres per second over a full year. However, the flow often falls below that level in the summer months. In July 1999 official Turkish figures put the flow at 343 cubic metres per second and on one occasion the flow was stopped entirely.

Iraq also questions the good faith of the Turkish government. "The insistence of Turkey in continuing the implementation of the Southeast Anatolia Project (GAP), in spite of the repeated objections of Iraq and Syria, constitutes a flagrant violation of the principles and rules of international law . . . Turkey ignores all legal rules that bind it to coordinate and consult with Iraq. Meanwhile, Turkey tries to legalise this deliberate neglect through interpreting those rules in such a manner that corresponds with its own interests, regardless of the interests of the other littoral states."

Iraq and Syria thus continue to call on the Arab League to unite against Turkey over the GAP. Indeed, the League has passed a number of resolutions expressing concern over the building of dams on the Tigris and Euphrates.[91]

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[89] Interview with Mr Waleed Mu'allim, Deputy Minister for Foreign Affairs, 31 January 2002.

[90] Interview with Mr Waleed Mu'allim, Deputy Minister for Foreign Affairs, 31 January 2002.

[91] On 4th September 2000, for example, the League passed the following resolution (6017) expressing concern over potential UK funding for the proposed Ilisu Dam on the Tigris: "The League's Council, seeking to participate in finding a just solution to the issue of the use of the waters of the Euphrates and Tigris rivers, issued resolution number 5965 dated 28.3.00 expressing its concern regarding Turkey's continual building of dams and other projects on the Euphrates and Tigris rivers without prior consultation with the two other riparian states in which the rivers' courses also run, particularly in view of the serious damage which these projects would cause both qualitatively and quantitatively to these waters, including pollution of the waters flowing into Syria and Iraq, and the serious effects this would have on drinking and irrigation waters, and the damage done to the environment. It expressed its concern in connection with the British Government's intention to positively consider giving credit guarantees to finance the "Ilisu" Dam project on the river Tigris, and called upon the British Government to respond to the protests of official and unofficial bodies, both Arab and non-Arab, regarding the finance of this project."

SECTION THREE

The Regulation of Shared Rivers - International Law and Best Practice

Almost without exception, the world's shared river basins are currently governed primarily through *bilateral* agreements.[92] In recent years, however, considerable attention has been paid to developing *international* principles and standards to encourage states to reach agreement on the use and management of shared rivers, and to set out the legal principles on which such agreements should be based. In some cases, the standards that have emerged are purely aspirational: in others, they are binding on the parties involved. Broadly, the standards fall into four categories:

- international conventions on the use of shared rivers;
- standards applied by the major international development banks which constrain the financing of water projects on international rivers;
- international guidelines for the planning and implementation of dams, such as those promulgated by the WCD; and
- industry standards.

Such standards are central to Iraqi and Syrian claims that Turkey's current exploitation of the Tigris and Euphrates is in contravention of international law and best practice. The four categories are considered in more detail below.

INTERNATIONAL CONVENTIONS

According to general international law, a river that flows through more than one country is known as an international river or watercourse.[93] A major development in international law was the conclusion, in 1997, of a UN Convention on the Law of the Non-Navigational Uses of International Watercourses.[94] The Convention, which took 27 years to develop, was adopted by 103 votes in favour to 3 against (Turkey, China and Burundi), with 27 abstentions. To date, 16 states have signed and 12 have become parties.[95]

The Convention is intended to provide principles and rules to guide states in negotiating future agreements on specific watercourses. In this sense, it acts as a "framework convention".[96] Part 2 of the Convention sets out general principles:

- The principle of equitable and reasonable utilization and participation (Articles 5[97] and 6[98])

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[92] Wolf, A., "Transboundary Waters - Sharing Benefits: Lessons Learned", Thematic Background Paper prepared for International Conference on Freshwater, Bonn 2001, p.8. As Wolf notes, bilateral agreements effectively preclude "the integrated basin management long advocated by water managers."

[93] Article 2 (a) of the UN Convention on the Law of the Non-Navigational Uses of International Watercourses defines a watercourse as a "system of surface waters and groundwaters, constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus". Article 2 (b) defines international watercourse as "a watercourse, parts of which are situated in different States".

[94] UN Document A/51/869.

[95] According to Article 36 of the Convention, the Convention will enter into force when 35 states have become parties.

[96] Samson, P. and Charrier, B, "International Freshwater Conflict - Issues and Prevention Strategies", Green Cross International, 1997, available from www.gci.ch/GreenCrossPrograms/waterres/gcwater/study.html

[97] Article 5 states: " 1. Watercourse States shall in their respective territories utilize an international watercourse in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed by watercourse States with a view to attaining optimal and sustainable utilization thereof and benefits therefrom, taking into account the interests of the watercourse States concerned, consistent with adequate protection of the watercourse. 2. Watercourse States shall participate in the use, development and protection of an international watercourse in an equitable and reasonable manner. Such participation includes both the right to utilize the watercourse and the duty to cooperate in the protection and development thereof, as provided in the present Convention. "

- The obligation not to cause significant harm (Article 7[99])

- The general obligation to cooperate and exchange data and information (Articles 8[100] and 9[101])

Part 3 of the Convention addresses "Planned Measures", setting out in detail the duties of states in instances where measures planned by one watercourse state may have a significant adverse effect upon other watercourse states, including notification and consultation.

A General Obligation on All States

In the context of the Tigris and Euphrates, two of the riparian states - Syria and Iraq - have now ratified the Convention.[102] Turkey, however, is not even a signatory and was one of only three states to vote against its adoption. It might therefore be said that the Convention has no legal purchase on the disputes between the three riparians. However, an authoritative legal opinion prepared for Friends of the Earth (FOE) in April 2000 finds that the approach set out in Part 3 of the Convention reflects a *general* obligation of *all* states under customary international law, regardless of whether or not they are signatories or parties to the Convention, even if the particular details and timetables set out in the Convention may not apply. This is also the view of the World Commission on Dams.[103] The FOE opinion, drawn up by Professor James Crawford QC, Professor Philippe Sands and Professor Boisson de Chazournes, is included in this report at Appendix I.

Surveying the applicable law, the opinion concludes that general international law places obligations on riparian states of shared rivers to notify, consult and negotiate. In summary, the main state obligations are as follows:

- *Duty to notify*
  The duty to notify downstream states of any projects which could have significant effects on the use of the waters by those states. Notification should take place *before*

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[98] Article 6 states: "1. Utilization of an international watercourse in an equitable and reasonable manner within the meaning of article 5 requires taking into account all relevant factors and circumstances, including: (a) Geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character; (b) The social and economic needs of the watercourse States concerned; (c) The population dependent on the watercourse in each watercourse State; (d) The effects of the use or uses of the watercourses in one watercourse State on other watercourse States; (e) Existing and potential uses of the watercourse; (f) Conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect; (g) The availability of alternatives, of comparable value, to a particular planned or existing use. 2. In the application of article 5 or paragraph 1 of this article, watercourse States concerned shall, when the need arises, enter into consultations in a spirit of cooperation. 3. The weight to be given to each factor is to be determined by its importance in comparison with that of other relevant factors. In determining what is a reasonable and equitable use, all relevant factors are to be considered together and a conclusion reached on the basis of the whole. "

[99] Article 7 states: "1. Watercourse States shall, in utilizing an international watercourse in their territories, take all appropriate measures to prevent the causing of significant harm to other watercourse States. 2. Where significant harm nevertheless is caused to another watercourse State, the States whose use causes such harm shall, in the absence of agreement to such use, take all appropriate measures, having due regard for the provisions of articles 5 and 6, in consultation with the affected State, to eliminate or mitigate such harm and, where appropriate, to discuss the question of compensation. "

[100] Article 8 states: "Watercourse States shall cooperate on the basis of sovereign equality, territorial integrity, mutual benefit and good faith in order to attain optimal utilization and adequate protection of an international watercourse. 2. In determining the manner of such cooperation, watercourse States may consider the establishment of joint mechanisms or commissions, as deemed necessary by them, to facilitate cooperation on relevant measures and procedures in the light of experience gained through cooperation in existing joint mechanisms and commissions in various regions."

[101] Article 9 states: "1. Pursuant to article 8, watercourse States shall on a regular basis exchange readily available data and information on the condition of the watercourse, in particular that of a hydrological, meteorological, hydro-geological and ecological nature and related to the water quality as well as related forecasts. 2. If a watercourse State is requested by another watercourse State to provide data or information that is not readily available, it shall employ its best efforts to comply with the request but may condition its compliance upon payment by the requesting State of the reasonable costs of collecting and, where appropriate, processing such data or information. 3. Watercourse States shall employ their best efforts to collect and, where appropriate, to process data and information in a manner which facilitates its utilization by the other watercourse States to which it is communicated. "

[102] Syria ratified the Convention on 2 April 1998, while Iraq acceded on 9 July 2001.

[103] World Commission on Dams, *Dams and Development: A new framework for decision-making*, Earthscan, London, 2000, p.252: "The Commission views the principles of the UN Convention as an emerging body of customary law and considers that States will reduce the possibility of conflict if they are prepared to endorse and adhere to them."

construction of the dam or other project is authorised, and should include the technical specifications and other information and data to ensure that the affected states are in a position to determine the potential harm to their interests.

- *Duty to consult*

If, after notification, the downstream states consider that the proposed project does have potential for causing significant harm and informs the upstream state of this position, the upstream state is required to enter into consultations with them. In conducting such consultations, the upstream state must examine the concerns of the downstream states, and propose a solution that may give preference to its own scheme, but takes into account in a reasonable manner the interests of the downstream states.

- *Duty to negotiate*

If consultations do not resolve the issue to the satisfaction of all parties, negotiations should be entered into. Such negotiations must be meaningful, and should lead to an equitable solution derived from the applicable law of international watercourses.

Deficiencies in the Convention

Several commentators have criticised the Convention for being imprecise and for lacking enforcement mechanisms. Aaron Wolf, a leading academic in the field of water conflicts, argues: "Although it provides many important principles, including responsibility for cooperation and joint management, the Convention is also vague and occasionally contradictory[104] . . . In addition, cases are heard by the International Court of Justice (ICJ) only with the consent of the parties involved, and there is no practical enforcement mechanism to back up the Court's findings, except in the most extreme cases. A nation with pressing national interests can disclaim entirely the court's jurisdiction or findings."[105]

A further deficiency lies in the nature of international law itself, since international law concerns itself only with the rights and responsibilities that hold between nations. As Aaron Wolf comments: "Some political entities, such as Palestinians along the Jordan River or Kurdish peoples along the Euphrates River, who might claim water rights, would not be represented." **This failing is of considerable concern to the Fact Finding Mission, particularly given the autocratic nature of the regimes that are in power in the three principal co-riparian states along the Tigris and Euphrates (see Box, p.30) The issue is given further consideration in Section Four (p.37), where the Mission also sets out its recommendations for future negotiations.**

These deficiencies aside, the Convention represents a major step forward in laying down a collaborative framework for managing shared rivers peacefully and for the benefit of all. **The Mission therefore greatly regrets that the Convention still lacks the requisite number of ratifying states to bring it into force, and urges signatory countries that have not ratified to do so with all haste. In addition, the Mission considers it essential that signatory countries commit themselves to ensuring that future negotiations on shared watercourses are conducted in a participatory manner, one which reflects the views and aspirations of those who depend directly on the river's water for their livelihoods. In this respect, the Mission commends the guidelines recommended by the World Commission on Dams (WCD) and the World Commission on Water for the 21st Century with respect to international rivers and participation (see below, pp.33-35).**

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[104] That view is also shared by the recent World Commission on Water for the 21st Century (see p.34), which describes the Convention as "limited and relatively weak". See: World Commission on Water for the 21st Century, *A Water Secure World: Vision for Water, Life and the Environment*, World Water Council, 2000, p.43, available from www.worldwatercouncil.org

[105] Wolf, A., "Transboundary Waters - Sharing Benefits: Lessons Learned", Thematic Background Paper prepared for International Conference on Freshwater, Bonn 2001, p.2.

BOX: RIGHTS OF MINORITIES

Syria

Great emphasis is placed in Syrian legal and constitutional provisions on Arabic unity, and ethnic minorities are not formally recognised. [1] While the Government generally allows minorities to conduct traditional, religious, and cultural activities, their attitude toward the Kurdish minority represents a significant exception to this policy. Under Decree No. 93 of 1962, 120,000 Kurds in Syria were stripped of their citizenship and passports and labelled "foreigners".[2] Today, the UNHCR estimates that there are 200,000 stateless Kurds in Syria who are denied basic citizen's rights such as the right to vote, own property, enter government employment, obtain a passport or be admitted to public hospitals. Additional government discrimination includes the prohibition of publication of books and other materials in Kurdish, restrictions on the use and teaching of the Kurdish language and refusal to grant identity documents to some persons of Kurdish descent.[3] However, with the exception of Jews and stateless Kurds, other minorities participate in Syria's political system without restriction.[4] As regards participation of minorities in public affairs, the UN Committee on Human Rights has expressed concern about restrictions on freedom of expression, assembly and association in Syria.[5] The Supreme State Security Court has also tried members of the Kurdish community for expressing support for greater Kurdish autonomy or independence.[6]

Iraq (not including the autonomous Kurdish "safe haven" in northern Iraq)

Since the 1970s, Iraq has enacted constitutional and legislative provisions guaranteeing minority rights.[7] Nevertheless, the UN Special Rapporteur on Iraq has noted that "The situation of many ethnic and religious communities also remains very difficult. Minority protection, in the form of cultural and educational rights, is not generally accorded."[8] The concentration of power in one political party (the Arab Ba'ath Socialist Party), dominated by Saddam Hussein, has been identified by the Special Rapporteur as the root of the problems facing minorities in Iraq.[9] The percentage of minorities in government and politics does not correspond to their percentages of the population; although Kurds have been appointed to political positions, it has been broadly recognised that these appointments were symbolic, devoid of real power.[10] Additionally, the Government does not recognise political parties formed by minority groups, including Shi'a Muslims and Kurds, despite the fact that these political groups continue to attract support despite their illegal status. The Iraqi Government has reacted with extreme repression against those who oppose or even question it. In 2001, the Government continued to execute summarily alleged political opponents and maintained its severe restrictions on freedoms of speech, the press, assembly, association, religion and movement.[11] The Government has also continued to pursue an "Arabisation" campaign of ethnic cleansing, designed to harass and expel ethnic Kurds from Kurdish areas such as the urban centres of Kirkuk and Mosul through the forced displacement of local residents from their homes and villages and their replacement by Arabs from outside the area. In addition to forcibly displacing hundreds of families, the Government has also conducted house demolitions and day-long house-to-house searches and taken hostage members of minority groups, in order to intimidate their families into leaving their home regions.[12] It is estimated that since 1991, this "Arabisation" campaign has displaced more than 100,000 people; from 1998 to 1999 alone, it is estimated that as many as 10,000 fled to the autonomous northern "safe haven" governate.[13] Non-Arabs are denied equal access to employment, education, and physical security and are not permitted to sell their homes except to Arabs, nor to register or inherit property.[14]

Turkey

The efforts of the Kurds, the principal minority group in Turkey, to achieve democratic representation have consistently fallen foul of a wider historical and political agenda. As is well documented, the establishment of the modern Turkish state by Mustafa Kemal Atatürk in 1923 was predicated, with an unusual degree of ideological fervour, on unitary secular nationalism. Atatürk's iconic status is enshrined in Turkish law; the Turkish Constitution refers to him as "the founder of the Republic of Turkey, its immortal leader and unrivalled hero".

The reforms Atatürk instituted, establishing Turkey as a unitary republic, are treated with similar reverence. In particular, the principle of the "indivisible integrity" of the state, territorially and politically, is absolutely

fundamental to the ideology and self-perception of the Turkish polity. Anyone attempting to craft an alternative ethnic identity or political space is thus not merely acting in defiance of state authority, but striking at the most deeply embedded legal and ideological foundations of the Turkish republic.

Thus, simply by insisting on their very existence, the Kurds have incurred the enmity of the Turkish state, which has made prolonged systematic efforts to eliminate or assimilate them. In 1924, an official decree banned all Kurdish schools, organisations and publications. Use of the words "Kurd" and "Kurdistan" was forbidden and references to them were removed from Turkish history books. Over the course of the next decade, the newly established state used brutal methods, including mass deportations, to pacify the rebellious Kurdish Southeast of the country and to try to forcibly assimilate the Kurds into the Turkish population.

The tradition of Atatürk persists to this day and is embodied in the present Turkish Constitution, which does not recognise the Kurds as a national, racial or ethnic minority. Today, the more than 15 million Kurds who live in Turkey are still denied basic human and cultural rights. Turkey's human rights record in 2001 remained abysmal – especially in regard to its Kurdish population. In 2001, extra-judicial killings continued, including deaths due to excessive use of force and torture; torture, beatings and other abuses by security forces remained widespread; democratically elected officials and members of legally registered pro-Kurdish political parties continued to be 'disappeared', intimidated and imprisoned; ongoing violations of freedom of expression remained grave; ethnic minorities continued to face discrimination and the risk of harassment and prosecution; and Kurds who publicly or political asserted their Kurdish identity or publicly espoused the use of Kurdish in the public domain continued to risk intimidation and prosecution.[15]

It will be interesting to see the extent to which the Harmonisation Law of August 2, 2002, passed in some haste in an attempt to show Turkey's willingness to achieve the Copenhagen Criteria necessary for accession to the EU, opens up political space for autonomous Kurdish cultural and linguistic groups. The amendments ostensibly permit, for example, greater freedom to broadcast in and study the Kurdish language, and to criticise the state. Yet the new laws are sufficiently hedged around with warnings not to "contradict the fundamental principles of the Turkish Republic enshrined in the Constitution" [16], as to provide plenty of latitude for the state to continue its policy of forced cultural homogeneity should it so please.

[1] KHRP and Medico International, "Cultural and Language Rights of the Kurds", February 1997, p.17.

[2] David McDowall, *A Modern History of the Kurds*, I.B. Taurus, London, 2000, pp. 474-476.

[3] US State Department 2001 Country Reports on Human Rights Practices – Syria, March 2002.

[4] US State Department 2001 Country Reports on Human Rights Practices – Syria, March 2002.

[5] Concluding Observations of the Human Rights Committee: Syrian Arab Republic, CCPR/CO/71/SYR, 5 April 2000, paras. 24-26.

[6] US State Department 2001 Country Reports on Human Rights Practices – Syria, March 2002.

[7] Article 5(b) of the Provisional Constitution of 1970 states that "This Constitution recognizes the ethnic rights of the Kurdish people as well as the legitimate rights of all minorities within the framework of Iraqi unity."

[8] UN Doc. E/CN.4/1995/56 para. 30.

[9] UN Doc. E/CN.4/1993/45 at para. 177.

[10] KHRP and Medico International, "Cultural and Language Rights of the Kurds", February 1997, p.13.

[11] US State Department 2001 Country Reports on Human Rights Practices – Iraq, March 2002.

[12] UN Doc E/CN.4/2001/42, paras. 55-56 and US State Department 2001 Country Reports on Human Rights Practices – Iraq, March 2002.

[13] David McDowall, *A Modern History of the Kurds*, I.B. Taurus, London, 2000, p. 391

[14] US State Department 2001 Country Reports on Human Rights Practices – Iraq, March 2002.

[15] US State Department 2001 Country Reports on Human Rights Practices – Turkey, March 2002.

[16] Harmonisation Law, August 3, 2002, unofficial translation, Office of the Prime Minister, Directorate General of Press and Information, available from www.byegm.gov.tr/on-sayfa/uyum/uyum-ing-3.htm

INTERNATIONAL FINANCIAL INSTITUTIONS: STANDARDS CONSTRAINING FINANCING

One set of standards applies to the financing of water projects on shared waterways. Since the early 1990s, the World Bank (historically the largest funder of dams in the developing world) has adopted a number of policies aimed at ensuring that the projects it finances "do no harm". These include Operational Policy 7.50, "Projects on International Waterways", which requires any state requesting World Bank finance for a water project on a shared river to notify other riparians of the proposal. If the state is unwilling to do so or to allow the Bank to do so on its behalf, the Bank automatically discontinues processing of the project.[106] Prior to financing the project, the Bank normally "urges the beneficiary state to offer to negotiate in good faith with the other riparians to reach appropriate agreements or arrangements."[107] If other riparians object, the Bank may commission an independent review of the issues. The Bank may only proceed in the face of objections if Bank staff are satisfied that the project "will not cause appreciable harm to the other riparians."[108]

Although the policy is only binding in projects involving the World Bank, it represents "best practice" for international financial institutions and there is considerable pressure for other agencies - such as export credit agencies - to adopt similar policies.[109] As the World Commission on Dams (WCD) comments: "The international community needs to take a strong and concerted stand in the case of shared rivers. While the decision to build a dam is often considered a sovereign decision, the decision of external agencies to support a dam depends on whether the proposed project complies with that agency's policies and guidelines. It is therefore of concern that bilateral, multilateral and export credit agencies have not yet harmonised their policies towards shared watercourses."[110] Such policies, argues the WCD, "should incorporate aspects of notification to riparian States, the desirability of 'consent' or 'no objection' from riparian States and independent expert assessment of social and environmental impacts."[111]

The WCD goes on to recommend (Policy Principle 7.5, Strategic Priority 7) that:

> "Where a government agency plans or facilitates the construction of a dam on a shared river in contravention of the principle of good faith negotiations between riparians, external financing bodies withdraw their support for projects and programmes promoted by that agency."[112]

The general nature of the sanctions proposed by the WCD reflects the Commission's concern that, even where external agencies refuse funding for a specific project that contravenes the principles of international customary law on shared rivers, they may nonetheless enable the project to be built by supporting other developments in the same sector (dams on other rivers, for example), thereby freeing up national resources which can then be allocated to the rejected project.[113]

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[106] World Bank, Projects on International Waterways, OP/BP 7.50, June 2001, para 4.
[107] World Bank, Projects on International Waterways, OP/BP 7.50, June 2001 para 3.
[108] World Bank, Projects on International Waterways, OP/BP 7.50, June 2001 para 8c.
[109] The lack of such standards has meant a willingness on the part of export credit agencies to fund dams that have been refused financing by the World Bank. In the case of Turkey's GAP project (see p.15), the World Bank refused to participate, partly out of fears about the project's impacts on Turkey's downstream neighbours. By contrast, export credit agencies approved funded for the Birecik dam and are actively considering funding other projects, such as the Ilisu and Munzur dams in the Kurdish region of Turkey. Export credits are possibly to be sought for the proposed Hakkari Dam on the Zap River, which drains into the Tigris.
[110] World Commission on Dams, *Dams and Development: A New Framework for Decision-Making*, Earthscan, London, 2000, p.255.
[111] World Commission on Dams, *Dams and Development: A New Framework for Decision-Making*, Earthscan, London, 2000, p.256. Like the World Bank, the WCD recommends the use of independent review but, unlike the Bank, it stipulates that the findings of the review should be binding on all parties, rather than discretionary: "In the absence of agreement among riparian States, external agencies should make their involvement conditional on the findings of an independent commission . . . In cases where States proceed with projects in the absence of such a commission, or reject its findings, the external financing agency should withdraw its support from the sectors concerned."
[112]"Policy Principle 7.5, Strategic Priority 7.0 - Sharing Rivers for Peace, Development and Security", World Commission on Dams, *Dams and Development: A New Framework for Decision-Making*, Earthscan, London, 2000, p.255.
[113] World Commission on Dams*, Dams and Development: A New Framework for Decision-Making*, Earthscan, London, 2000, p.255-256. The WCD states: "[The] often-inconsistent policies [of external financing agencies] make it more difficult to improve the way transboundary issues are handled. The complexity of the situation is increased by the disparate and fluid nature of financial support. This inconsistency often results in situations where, although an external agency may not be directly financing a dam on a shared watercourse, its support for other projects in the same sector allows national resources to be allocated for the purpose."

The Fact Finding Mission concurs with the WCD and regrets that OECD Export Credit Agencies are continuing to fund the water sector in Turkey regardless of protests by its riparian neighbours - Georgia in the North and Turkey and Syria in the South - that they have not been properly consulted on the building of dams on shared rivers. Under the WCD guidelines, such continuing disputes should have been sufficient to trigger sectoral sanctions. Since the publication of the WCD report, however, Austria's ECA (OeKB) and Hermes, the German ECA, have given export credits or insurance guarantees for the Ermenek dam.[114] Export credits and investment guarantees are also being considered for the Yusufeli dam on the Coruh River in Northeast Turkey by France's COFACE and a number of other European ECAs.[115]

The Mission urges the governments of Germany and Austria to reconsider their export credit support for Ermenek and to reject the applications they are currently considering for the Ilisu project. It also calls on the export credit agencies, bilateral agencies and the multilateral development banks to reject any future support for the water sector in Turkey, unless and until Turkey demonstrates that it is committed to abiding by the principle of good faith negotiations with its co-riparians.

The Mission also calls on all publicly-funded international financial institutions, such as export credit agencies and bilateral aid agencies, urgently to introduce legally binding standards that incorporate the five policy principles laid down by the WCD in recommendations for "Sharing Rivers for Peace, Development and Security" (Strategic Priority 7). The Mission also urges that the World Bank strengthens its existing guidelines to reflect the WCD's recommendations.

"BEST PRACTICE" GUIDELINES FOR DAM PROJECTS ON SHARED RIVERS

A number of international guidelines covering the planning and implementation of dam projects on shared rivers have recently been proposed or adopted by industry groups, professional bodies or multi-stakeholder commissions. Although not legally binding, such guidelines are widely accepted as constituting international best practice for projects involving international waterways. Collectively, they stress the need for co-operation, consultation and negotiation if conflict is to be avoided in the use of shared rivers.

The World Commission on Dams

The World Commission on Dams (WCD) recommends that rivers must be shared for peace, development and security. The storage and diversion of water from transboundary rivers should be based "on principles of equitable and reasonable utilisation, no significant harm, prior information and the Commission's strategic priorities."[116]

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[114] The Ermenek dam would be built on the Göksu River near Konya. Austria's export credit agency (OeKB), approved credits worth over $500 million for the project in March 2002, despite there being no environmental impact assessment, social impact assessment or resettlement action plan for the project. In April 2000, Hermes, the German export credit and insurance guarantee agency, approved a guarantee. The dam would flood at least one community completely. Companies and banks involved include: ABN AMRO, Bayerische Landesbank, Bank Austria Creditanstalt, Alstom, Alpine Mayreder Bau, VA Tech Hydro, Voith Siemens.

[115] The Coruh River runs from the Mescit mountains through northeastern Turkey into Georgia and down to the Black Sea at Batumi. According to the Georgian Ministry of the Environment, Turkey has not consulted Georgia on the dam. In correspondence with the Greens of Georgia, the Ministry stated: " In spite of the agreement made within the frame of the environmental protection between Georgia and Turkey, dated 1997 July 14 (article III point 17), Turkey is obliged to inform Georgia about joint discussion of EIA. Unfortunately Turkey has provided no information about the construction of Yusufeli dam on the river Choruch." Companies involved at the time the dam contract was awarded included: Spie Batignolles TP; Abay TS (Belgium); Alstom Acec Energie (Belgium); ABB Generacion SA (Spain); Alstom Hydro SA (Spain); AMEC (UK). AMEC was involved in the consortium until March 2002, when they withdrew from the project. AMEC still have a considerable interest, however, through its 46 per cent ownership of Spie. AMEC also has the option to purchase the remainder of Spie in July 2002. Export credits are being sought from France and other countries. No environmental impact assessment or resettlement plan has been made public, although the dam will potentially affect 30,000 people. Until AMEC withdrew from the project, the UK Export Credits Guarantee Department was actively considering an application for support.

[116] "Policy Principle 7.1, Strategic Priority 7.0 - Sharing Rivers for Peace, Development and Security", World Commission on Dams,

The WCD sets out five policy principles that should govern the planning and implementation of dam projects on shared rivers in the interests of peace, development and security. The full text of the WCD's recommendations can be found in Appendix II. In addition to recommending reforms to the financing of dams (see above), the policy principles also stipulate that:

- National water policies should make specific provision for basin agreements in shared river basins;[117]

- Riparian States should embrace an approach that equitably allocates not the water in shared rivers but the benefits that can be derived from it;[118]

- Dams on shared rivers should not be built in cases where riparian States raise an objection that is upheld by an independent panel, with intractable disputes being resolved through "various means of dispute resolution including, in the last instance, the International Court of Justice."[119] [120]

World Commission on Water for the 21st Century

In 1998, the World Water Council[121] - an international water policy think tank, with a membership that brings together public institutions, private sector firms, United Nations Organizations and non-governmental organizations - set up an international World Commission on Water for the 21st Century to recommend reforms that would encourage the sustainable use of water.[122] The Commission, chaired by Ismail Serageldin, World Bank Vice President for Special Programs, reported in 2000.

In its report, *A Water Secure World: Vision for Water, Life and the Environment,* [123] the Commission emphasised the need for a participatory, "holistic" approach to the use of shared rivers. The report recommended:

> - *The basin-wide management of rivers*. Current political and administrative institutions for managing water are deemed obsolete, since the institutions "seldom conform to the catchment and basin areas that nature prescribes as the management units for water."[124]
>
> - *Participatory institutional mechanisms*. "The old model of 'this is government's business' must be replaced by a model in which stakeholders participate at all levels. At the local level, community groups and user associations have a major role—sometimes in providing and managing local sewerage or irrigation works, sometimes in monitoring the performance of public

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Dams and Development: A New Framework for Decision-Making, Earthscan, London, 2000, p.251.

[117] "Policy Principle 7.1, Strategic Priority 7.0 - Sharing Rivers for Peace, Development and Security", World Commission on Dams, *Dams and Development: A New Framework for Decision-Making*, Earthscan, London, 2000, p.251. The WCD elaborates (p.253): "In addition to having ratified international agreements, individual States should specifically address shared river basins in their water policy or legislation, providing clarity on their intention to co-operate in water resources management."

[118]"Policy Principle 7.2, Strategic Priority 7.0 - Sharing Rivers for Peace, Development and Security", World Commission on Dams, *Dams and Development: A New Framework for Decision-Making*, Earthscan, London, 2000, p.251.

[119] "Policy Principle 7.3, Strategic Priority 7.0 - Sharing Rivers for Peace, Development and Security", World Commission on Dams, *Dams and Development: A New Framework for Decision-Making*, Earthscan, London, 2000, p.251.

[120]The International Court of Justice is the principal judicial organ of the United Nations. It was established in 1945. It adjudicates legal disputes between states and issues advisory opinions.

[121] The World Water Council was founded in 1996, following recommendations issued at the 1992 Rio Earth Summit.

[122] The Commission is co-sponsored by the following international organizations: FAO, Organization of American States (OAS), United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), UNESCO, UNICEF, United Nations University (UNU), World Health Organization (WHO), World Meteorological Organization (WMO), and World Bank.

[123] World Commission on Water for the 21st Century, *Water Secure World, Vision for Water, Life and the Environment*, World Water Council, 2000, available from www.worldwatercouncil.org.

[124] World Commission on Water for the 21st Century, *Water Secure World, Vision for Water, Life and the Environment*, World Water Council, 2000, p.11 available from www.worldwatercouncil.org. Elsewhere, the World Water Council also notes: "The sectoral approach to water resource planning and use has failed – it only leads to conflicts and cannot achieve consensus. Co-operation is needed among sectors; but it is also needed among technical disciplines, nations, governments and government agencies, industrial interests and NGOs. There is a strong belief that adopting a river-basin approach to water resource management is important to ensure that all interests are heard, conflicts are addressed, and consensus is achieved." See: Richard Conner, "Unresolved issues" in Murray, C., (ed), *Changing Course: Report of the Technical Sessions, 2nd General Assembly, Marseilles, 18-20 October 2000,* World Water Council, 2001. Available from: www.worldwatercouncil.org.

and private service providers, sometimes in managing land use in local watersheds. At more aggregate levels, water users have a major role in "user parliaments", which work with government to manage aquifers and river basins. Experience shows that this participation must be real and not symbolic, and it shows that these users' associations and parliaments must have a decisive role in deciding what is done, how it is done, and who pays for it. Experience also shows that what works are partnerships between governments and stakeholders, with governments playing a vital role in creating the enabling environment and in providing technical and enforcement support. Empowering women's groups, the poor, youth and community-based groups to give them an adequate voice in participatory decision-making is a necessary pillar of this approach."[125]

- *Ratification of the UN Convention on the Law of the Non-Navigational Uses of International Watercourses* (see above, p.27). "The doctrine (embodied in the Convention) is of no appreciable harm to other riparians, and equitable and reasonable treatment of the precious resource must be the guide for pragmatic action in internationally shared river basins."[126] The Commission also recommends that, " nations voluntarily restrict their sovereignty to make it possible to apply the principles of integrated water resource management in international watercourses."[127]

Subsequently, in a separate technical report, prepared for its 2nd General Assembly in 2001, the World Water Council again addressed the issue of water conflict. It concluded:

- Institutional and policy barriers to effective multi-sectoral integrated catchment management, especially in international basins, should be removed.

- Common approaches should be developed to water resource management in international basins, including the establishment of legal references and the definition of principles, rules and practices for international co-operation, dispute settlement, and conflict resolution.

- The rights of both upstream and downstream states should be respected, as well as the need for transparency and communication, the no-harm principle, the law of prior notification, and the sovereign rights of peoples.[128]

Industry standards

The International Commission on Large Dams (ICOLD), an industry body with chapters in 87 countries,[129] has also considered the issue of dams on shared rivers and laid down guidelines. In its 1997 position paper, Dams and the Environment, ICOLD recommends: "The larger the project, the greater the effects on the natural and social environment to be expected, and the wider the scope of the multidisciplinary, holistic studies which they require. Large-scale development demands integrated planning for an entire river basin before the implementation of the first individual project(s). Where river basins are part of more than one country, such planning presupposes international cooperation."[130]

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[125] World Commission on Water for the 21st Century, *Water Secure World, Vision for Water, Life and the Environment*, World Water Council, 2000, p.12, available from www.worldwatercouncil.org.

[126] World Commission on Water for the 21st Century, *Water Secure World, Vision for Water, Life and the Environment*, World Water Council, 2000, p.43, available from www.worldwatercouncil.org.

[127] World Commission on Water for the 21st Century, Vision Statement and Key Messages, March 2000, p.5, available from www.worldwatercouncil.org.

[128] Murray, C., (ed), *Changing Course: Report of the Technical Sessions, 2nd General Assembly, Marseilles, 18-20 October 2000*, World Water Council, 2001. Available from: www.worldwatercouncil.org.

[129] ICOLD was founded in 1928 and has National Committees from 82 countries and approximately 7,000 individual members, who are practising engineers, geologists and scientists from governmental and private organizations, consulting firms, universities, laboratories and construction companies.

[130] ICOLD, Position Paper on Dams and the Environment, 1997, http://genepi.louis-jean.com/cigb/chartean.html

SECTION FOUR

The Mission's Findings

EVIDENCE OF DAMAGE

The Mission was given access to flow data for the Euphrates and Tigris collected by the Governments of Syria and Iraq, together with data on water quality. From the data provided, the Mission concludes that GAP dams have already caused a significant change in the flow regime of the Euphrates and to a lesser extent the Tigris. It also supports the view expressed by Syrian officials that, whilst water quality in Syria has yet to be seriously affected by GAP dams, the full implementation of GAP would have major adverse consequences. The Mission also found that the reduced flow of the Euphrates has *already* caused increased salinity in the lower reaches of the river, seriously affecting agriculture.

Reduced Flow
As a result of dams already built on the Euphrates and its tributaries, combined with drought in the region, estimates suggest that the flow of water to Iraq has been reduced by 20 per cent.[131] The figures reviewed by the Mission suggest that the rivers' flow could be reduced still further due to GAP, possibly by 50%.[132] The Ministry of Irrigation in Iraq has estimated that for every one billion m3 decrease in water flow, 62,500 hectares of irrigated land within Iraq are lost.[133]

The Mission notes that three of the tributaries to the Euphrates - the Al-Sajur, Al-Balikh and Al-Khabur - have been developed by Turkey to the point where their natural flow has been all but stopped during the summer and autumn.[134]

Water Quality
Installing adequate drainage in irrigated areas is critical to avoiding soil salinisation. However, as discussed earlier (p.10), the water that is drained away is heavily contaminated with salts and often with chemical pesticides. For that reason, best practice dictates that efforts are made to minimise the impacts of drained water on watercourses.[135] The Mission was deeply disturbed to learn that the GAP "Master Plan" devoted no more than a small paragraph to the issue of drainage waters and that GAP irrigation projects are not required to follow international drainage guidelines.[136] By contrast, in Iraq, major drainage works have been built to remove drainage water from irrigated land and transport it directly to the sea, via a newly built canal known as the Saddam River.[137]

The Mission notes that the concentration of salt in Euphrates river water, at the point where the river enters Syria, is currently between 200-250 milligrams per litre,[138] a level where the water can still be considered

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[131] Channel 4, "Thirsting for Water", 30 September 2000, directed by Christopher Mitchell. A higher figure is given by Mohammed Al-Najim of the School of African and Oriental Studies, London: "*The water problem of the Tigris and Euphrates rivers is being seriously affected by . . . GAP. The emerging effects are that the water volume, at the entrance point on the Syrian border, has now been decreased to half of its original amount*". See: Al-Najim, "Tigris-Euphrates Water – Political, Economical and Regional Relations", SOAS, University of London, unpublished.
[132] Information supplied by Syrian officials.
[133] Republic of Iraq, *The Division of Waters in International Law: Facts on the Joint Water with Turkey*, Ministry of Foreign Affairs and Ministry of Irrigation, Baghdad, 1999, p.15.
[134] Information supplied by Syrian officials.
[135] World Commission on Dams, *Dams and Development: A New Framework for Decision-Making*, Earthscan, London, 2000, p.140.
[136] Information supplied by Syrian officials.
[137] In Iraq, a massive canal - the Saddam River - has been constructed to take drainage water from irrigated land directly to the sea.
[138] Information supplied by Syrian officials.

"fresh".[139] Some studies suggest that the GAP project will increase levels of salinity in the Euphrates at the Turkish-Syrian border to 700mg/l - a level that exceeds the World Health Organisation safety standard for human consumption, currently 600mg/l. Levels in the Al-Balikh River, a tributary of the Euphrates, already exceed WHO standards; salinity levels as high as 2000 mg/l have been recorded recently.[140] Should the full GAP programme be implemented, Syria fears that salinity levels will similarly rise in the Euphrates. "Within five years of GAP being fulfilled, more than 7 million Syrians would suffer. Salinity would make the water unfit for consumption and would seriously affect our farmers."[141]

Within Iraq, salinity levels are already high in many stretches of the Euphrates and Tigris, due both to returned irrigation water but also to reduced flows, which have permitted the intrusion of saline groundwater in the floodplains around Baghdad. During the filling of the Keban, Ataturk and Al-Thawrah reservoirs in Turkey and Syria, salinity levels in the Euphrates on the Syria-Iraq border increased dramatically - more than doubling due to the reduced flow of the river.[142] The Mission learned that water quality in some areas has already declined to the point that villagers can no longer use the water and must buy in drinking water, causing many to abandon their homes and lands.[143] Iraqi and Syrian officials predict that full implementation of the GAP will increase the salinity of the Euphrates near the Iraqi-Syrian border to 1300 mg/l. In addition to rendering many water supplies non-potable, increased salinity levels in the Euphrates will also directly affect agricultural productivity: one estimate suggests that some 1.3 million hectares of rich agricultural land (some 40% of the area in Iraq that is suitable for cultivation) could be lost to production.[144]

The Mission views the threat to future water supplies in Syria and Iraq as a real one, which should be approached on the basis of the precautionary principle. It urges the international community to press Turkey to halt further GAP projects until an agreement has been reached with Syria and Iraq that secures sustainable development of the Euphrates and Tigris. In line with the recommendations of the World Commission on Dams, further funding of water sector projects in Turkey by bilateral, multilateral and export credit agencies should cease until such an agreement has been secured.

BOX

Downstream Impacts in Iraq

No research has been undertaken in Iraq specifically on the impacts of reduced flows of the Euphrates and Tigris Rivers on human health. Nonetheless, Iraqi officials view such reduced flows as a major contributory factor, alongside sanctions, in exacerbating the impacts of the recent 1999 drought in Iraq.

The drought, which spanned two successive seasons, was the worst recorded in the past 100 years. The shortage of water had severe impacts on agriculture and consequently on local livelihoods. In many rain-fed areas, the wheat and barley crop was reduced by 70%. According to the UN Food and Agriculture Organisation (FAO), the irrigated sector fared little better.

In Diyala governate, where the river Dylala was down to 27% of its normal average flow, irrigation water was in such short supply that orchards which should have been watered weekly could only be irrigated every 70 days. Many suffered irrevocable damage as a result.

[139] Information supplied by Syrian officials.
[140] Information supplied by Syrian officials.
[141] Interview with Waleed Mu'alim, Deputy Minister for Foreign Affairs, 31 February 2002.
[142] Figures supplied by Syrian officials show the levels of salt in the river at the Al Husaibeh monitoring station on the Syrian-Iraqi border rising from 402 parts per million (ppm) in 1987 to 938 ppm in 1989. The Government of Iraq puts the level of salinity in the Euphrates prior to upstream development at 457 milligrams/litre (mg/l), as compared to 1220-1275 mg/l after development. It is not clear, however, whether this later set of figures is a projection based on the full implementation of the GAP project. See: Republic of Iraq, *The Division of Waters in the International Law: Facts on the Joint Water with Turkey*, Ministry of Foreign Affairs and Ministry of Irrigation, Baghdad, 1999, p.16.
[143] Information supplied by Iraqi officials.
[144] Information supplied by Syrian officials.

Elsewhere, water shortages prevented the flushing out of salts from irrigated land, leading to increased salinisation. The problem was compounded by sanctions, which meant that spare parts were not available for the equipment needed to clean out drainage canals or to pump saline water off the land.

According to a report by the FAO representative in Iraq, the flow of Iraq's major rivers declined by some 40%. The FAO ascribed the reduced flow in part to the "reduction in water released downstream from dams constructed in the riparian state, Turkey."

SOURCE
FAO Representation in Iraq, *Drought Situation in Iraq*, Submitted to the UN SC661 Committee, 28 May 2000.

CONSULTATION

Applicable Legal Standards
There are two main sources of law applicable to the sharing of the waters of the Euphrates and Tigris rivers between Turkey, Syria and Iraq. One is general international law relating to international watercourses (see Section 2) and international environmental law, and the other is a series of bilateral and tripartite agreements, protocols and official communiqués, through which the three states have taken on specific obligations in relation to each other.

According to general international law, a river that flows through more than one country is known as an international river or watercourse.[145] As documented in the previous section, the applicable law places obligations on riparian states of shared rivers to *notify*, *consult* and *negotiate* (see pp.28-29).

Turkey's relations with its downstream neighbours are also governed by a number of agreements and protocols made over the years:

- The Treaty of Paris, concluded on 23 December 1920 between France and Britain (who at that time held Mandates to govern Syria and Iraq respectively), stipulated that a joint committee must be formed to study any project planned by Syria that would affect the flow of the Euphrates or the Tigris into Iraq.

- The Treaty of Lausanne, the Peace Agreement between Turkey and the Allies, concluded on 24 July 1923, stipulated in article 109 that:

  > "*In default of any provisions to the contrary, when as the result of the fixing of a new frontier, the hydraulic system (canalisation, inundation, irrigation, drainage or similar matters) in a State is dependent on works executed within the territory of another State, or when use is made on the territory of a State in virtue of pre-war usage, of water or hydraulic power, the source of which is on the territory of another State, an agreement shall be made between the States concerned to safeguard the interests and rights acquired by each of them. Failing an agreement, the matter shall be regulated by arbitration.*"

- The Protocol regarding the borders between France (the Mandatory power for Syria) and Turkey signed on 30 March 1930 provides that where the River Tigris forms the border between the two countries, any dispute regarding navigation, fishing, the utilisation of the water and river policing

[145]Article 2(a) of the UN Convention on the Law of the Non-Navigational Uses of International Watercourses defines a watercourse as a "system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus". Article 2(b) defines international watercourse as "a watercourse, parts of which are situated in different States".

are to be resolved on the basis of equality, and through agreements to be reached by a Borders Committee.

- The Treaty of Friendship and Neighbourly Relations concluded between Iraq and Turkey on 29 March 1946 included a First Protocol dealing with regulation of waters of the Euphrates and the Tigris and their tributaries. Article 5 obliges Turkey to inform Iraq of any projects it may construct on either river or their tributaries, "in order that these works may as far as possible be adapted, by common agreement, to the interests of both Iraq and Turkey." Other articles provide for technical cooperation including measurement of water flows and sharing of the information collected, and guaranteed access for Iraq to upstream waters for the purposes of carrying out surveys and other works.

- An Agreement between Iraq and Turkey reached in 1980 to establish a technical committee to study issues concerning regional waters. The technical committee was to produce a report, following which the three governments would meet at ministerial level to determine the quantity of water required by each country from the shared rivers. Syria joined in 1983, marking the beginning of tripartite meetings that lasted until 1992.

- A Protocol signed between Turkey and Syria on 17 July 1987 on matters pertaining to economic co-operation.[146] Crucially, this Protocol includes the following provision regarding water:

> "*During the period of filling the Ataturk Dam reservoir and until the final distribution of the Euphrates water between the three countries on both its sides,* ***the Turkish side guarantees to maintain an annual rate of more than 500 m3 per second at the Syrian-Turkish borders****. In cases where the monthly flow is less than 500 m3 per second, the Turkish side agrees to compensate the difference during the following month.* ***Both sides will work, together with the Iraqi side, to distribute the waters of the Euphrates and Tigris Rivers as soon as possible****. The two sides agree to expedite the work of the mutual technical regional water committee. The two sides have also agreed on the principle of construction and operation of mutual projects in both countries on the Euphrates and Tigris Rivers for irrigation and power generation, on the condition that economic feasibility studies are carried out regarding these projects by experts from both countries*." (emphases added).

- An Agreement signed between Syria and Iraq, in force since 16 April 1990, on the sharing of the waters of the Euphrates. According to the Agreement, Syria is entitled to a fixed annual percentage of 42% of the water crossing the border into Syria from Turkey, while Iraq is entitled to 58%.

Extent of Turkey's Compliance with International Legal Standards

As already noted, according to general international law, a river that flows through more than one country is known as an international river or watercourse, and the sharing of the waters should be based on a balancing of the interests of the states concerned. Each state should make use of the water in an equitable and reasonable manner, while avoiding causing significant harm to other riparians.[147] In other words, it is accepted that states may not dispose of water from shared rivers without regard to the rights of other riparian states. While the idea that a nation has absolute sovereignty over its natural resources has now been discarded, including by Turkey,[148] nevertheless Turkey continues to assert views regarding the sharing of

[146] The Protocol was registered by Syria with the Secretary General of the United Nations on 1 June 1993, No. 30069.
[147] These principles are contained in Articles 5 and 7 of the UN Convention on the Law of the Non-Navigational Uses of International Watercourses, but were accepted as rules of international law prior to this codification. See for example the International Law Association's "Helsinki Rules" of 1966.
[148] In a legal opinion prepared in the late nineteenth century for the State Department regarding a dispute with Mexico over the Rio Grande, US Attorney General Judson Harmon espoused a view that became known as the Harmon Doctrine. The US, he said, had

the waters of the Tigris and the Euphrates that differ from the views of its neighbours, and depart from internationally accepted standards.

- Turkey has been reluctant to accept the definition of "international" rivers in the 1997 Convention, and instead continues to refer to the Tigris and Euphrates as "transboundary" rivers. The crucial issue appears to be that Turkey rejects the idea of considering water that crosses state boundaries as a "shared resource".[149]

- Turkey asserts that the facts that 88.7% of the waters of the Euphrates, and 51.9% of the waters of the Tigris originate within its territory, are significant factors as regards the share of the waters of the rivers to which it is entitled.[150]

- Syria and Iraq object to Turkey's claim that the waters of the Tigris and Euphrates must be utilized not only in an equitable and reasonable manner, but also in an *optimal* manner.[151]

- Syria and Iraq object to Turkey's claim that the two rivers constitute a single river basin, since this would allow shortfalls on one river to be made up by the other.[152]

The 1997 Convention on the Non-Navigational Uses of International Watercourses makes absolutely clear the basis on which shared waters should be shared. In order to determine how waters can be shared in an equitable and reasonable manner, *all* the relevant factors and circumstances must be taken into account, and the Convention sets out in Article 6 the following factors as being relevant:

(a) Geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character;
(b) The social and economic needs of the watercourse States concerned;
(c) The population dependent on the watercourse in each watercourse state;
(d) The effects of the use or uses of the watercourses in one watercourse state on other watercourse states;
(e) Existing and potential uses of the watercourse;
(f) Conversation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect;
(g) The availability of alternatives, of comparable value, to a particular planned or existing use.

The Mission considers that there is no difference in international law between an "international" river and a "transboundary" river in terms of the duties imposed on the riparian states by international law. The essential point is that the watercourse is shared between more than one state. The Mission therefore finds Turkey's objection to be without legal substance or effect.

Another argument raised by Turkey is that the demands of its neighbours are based on the notion that they possess "acquired rights", based on usage back to ancient times, over the rivers.[153] **However, both governments expressed to the Mission the desire above all to see the sharing of the waters of the Euphrates and the Tigris agreed on the basis of international law.**

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absolute sovereignty over its natural resources, and no international law existed that compelled the US to share its water. This view has since been discredited, as the international legal principles outlined in the previous section became accepted. See for example de Villers, M., *Water Wars – Is the World Running out of Water?*, Weidenfield and Nicolson, London, 1999, p.267.

[149] See for example the web site of the Turkish Ministry of Foreign Affairs, www.mfa.gov.tr/grupa/ad/adg, section on Turkey's views on the arguments of its neighbours.

[150] See for example the web site of the Turkish Ministry of Foreign Affairs, www.mfa.gov.tr/grupa/ad/adg.

[151] *The Division of Waters in International Law: Facts on the Joint Waters with Turkey*, Ministry of Foreign Affairs and Ministry of Irrigation, Baghdad, Iraq, 1999. p.18

[152] Ibid, p.20

[153] See for example the web site of the Turkish Ministry of Foreign Affairs, www.mfa.gov.tr/grupa/ad/adg.

As already described, international law obliges Turkey to consult, inform and negotiate with its downstream neighbours prior to building any new dams or irrigation schemes on the Euphrates and Tigris. Both Syria and Iraq deny that these obligations have been fulfilled. **The mission found the assertions made by Syria and Iraq that Turkey had failed to comply with its international obligation to consult on the impacts of Ilisu and other dams justified on a number of counts.**

BOX

International or Transboundary?

The difference a word can make

TURKEY

Turkey insists that the Tigris and Euphrates are transboundary rivers, rather than international rivers, since the rivers themselves do not constitute a boundary for any of their length and their waters are not therefore shared territorially. As such, they should not be subject to international law.

IRAQ AND SYRIA

The Tigris and Euphrates are international rivers as defined in international law, and are subject to the rules of international law that govern international rivers and watercourses. [1]

INTERNATIONAL LAW

International law recognizes the principle of acquired rights and protects existing uses of riparian states.

REFERENCES

[1] *The Division of Waters in International Law: Facts on the Joint Waters with Turkey*, Ministry of Foreign Affairs and Ministry of Irrigation, Baghdad, Iraq, 1999 and information supplied by Syrian officials.

The Duty to Notify

As mentioned above (see p.28), the duty to notify involves the duty to inform downstream states of any projects that could have significant effects on their use of waters. Notification should be at an early stage, and should include sufficient technical information to ensure that the affected states are able to determine the potential harm to their interests.

Turkey argues that, from the very beginning, it has informed Syria and Iraq of its plans regarding every project under the GAP aegis.[154] However, both Syrian and Iraqi officials categorically deny that this is the case. "Turkey simply announces its projects, without consulting us," the Syrian Deputy Minister of Foreign Affairs told the Mission.[155] Iraqi water experts told the Mission that they have gathered from a variety of other sources such data as they have been able to put together on the GAP projects. They stated clearly that they have not received feasibility studies or other detailed documentation regarding GAP projects from the Turkish government. As regards plans for the Ilisu Dam, in August 2000, Dr. Fahmy Al-Qaysi, Director of the legal department of the Ministry of Foreign Affairs, stated: "*The State of Iraq did not receive any official notification from the State of Turkey concerning its plans to construct the Ilisu Dam and learned about the Turkish side's intentions through media reports*."[156] The Mission was granted interviews with Their Excellencies the Deputy Minister of Foreign Affairs of Syria and the Minister of Irrigation of Syria. Both stated categorically that no exchange of information had taken place within the technical committees or other inter-governmental committees on Ilisu or any other planned dams: "*The Turkish government only announces its dams when the decision had been made. We hear through the press*." Syria's Minister of

[154] Turan, I., "International Aspects of Water Issues", in Turkish Embassy, op.cit., p.41.
[155] Interview with Waleed Mu'alim, Deputy Minister of Foreign Affairs, 31 February 2002.
[156] Dr. Fahmy Al-Qaysi, Director of Legal Department, Ministry of Foreign Affairs, Letter to Friends of the Earth, 18 August 2000.

Irrigation told the Mission, "*Turkey's way is to announce a project by asking for international financing, and saying it has consulted when it has not. It does not inform us about individual projects*."

The Duty to Consult

The second aspect of Turkey's duties under international law is the duty to consult. According to the legal opinion commissioned by Friends of the Earth, if after notification, the downstream states consider that the proposed project does have potential for causing significant harm and informs the upstream state of this position, the upstream state is required to enter into consultations with them. In conducting such consultations, the upstream state must examine the concerns of the downstream states and propose a solution that may give preference to its own scheme, but takes into account in a reasonable manner the interests of the downstream states.

It was clear to the Mission that both Syria and Iraq had made their positions abundantly clear to the Turkish government, informing Turkey on many occasions that they believed Turkey's dam building projects would cause them significant harm. One Syrian official told the Mission, "*I have files stuffed full of copies of letters sent by my government both to Turkey and to other governments over the years, raising our strong objects to Turkey's dam building projects*."[157] Syria in particular has also sent many communications to governments and international financial institutions, such as the World Bank, asking them not to provide financial backing to Turkey for its projects in the absence of an agreement with the downstream states.[158]

Iraqi officials also confirmed that Iraq had sent many official notes over the years to Turkey, complaining that its interests were being harmed by Turkey's projects. The Iraqi Deputy Minister for Irrigation told the Mission, "Turkey does not even reply to our letters, and when they come to meetings they appear to do so only to be able to say they have 'consulted'. Turkey want to prolong any process until the projects are completed."[159]

Syrian government sources informed the Mission that in general, Turkey has not consulted Syria concerning specific planned projects, other than when it is forced to do so for pragmatic reasons, such as the obtaining of international financial backing for projects which are conditional on obtaining agreement with downstream states. Syrian officials believe that behind Turkey's decision to begin talks in the 1960s, and to bind itself to the Protocol on water sharing of 1987, was the desire to demonstrate to potential funders, such as the World Bank, that it was willing to negotiate with its downstream neighbours. Iraqi officials also said it had been their impression that in participating in the technical committees, Turkey had merely been talking so as to satisfy international funders and not with a view to achieving a result.[160]

The issue of consultation came to the fore most recently with the Ilisu Dam. As a result of pressure from NGOs, consultation between Turkey and its downstream neighbours was made a condition of any export credit being awarded by the UK government. In response to concerns over consultation, Turkey argued that both Syria and Iraq had been fully informed as to its intentions over Ilisu. The Syrian and Iraqi governments vigorously disputed this view on a number of occasions (see above). Turkey also claimed during the Ilisu controversy that discussions had been held on Ilisu within a series of technical committees, which met between 1972 and 1991. The Mission put this to government officials within Syria, who were adamant that Ilisu had not been subject of discussions within the technical committees.

A detailed account of the meetings dating back to 1962, including a summary of the topics discussed, was provided to the Mission. This account reveals that two sets of negotiations took place between Syria and Turkey; one bilaterally (4 meetings from 1962 to 1971[161]) and the other trilaterally, also involving Iraq (5

[157] For example, the mission was shown letters dated 18 July 1993 expressing opposition to the Birecek Dam and complaining at not having been consulted, and 2 December 1995, stating that the building of dams on the Euphrates and the irrigation of lands would seriously affect Syria's rights and complaining of polluted water that was arriving in Syria as a result of drainage.
[158] For instance, the mission saw a letter sent on 15 February 1999 to the Swiss government regarding the Ilisu Dam project.
[159] Deputy Minister for Irrigation, Dr. Ali Farhan, interview of 2 February 2002.
[160] Seminar held in Baghdad with officials of the Iraqi Ministries of Irrigation and Foreign Affairs, 2 February 2002.
[161] These meetings took place in December 1962, September 1964, December 1969 and June 1971, all in Ankara.

meetings between May 1972 and May 1974,[162] and a further 16 meetings between 1982 and 1992[163]). In the bilateral negotiations, the substance of the discussions focused on the setting up of the technical committee, the necessity of reaching an agreement on a fair share of the Euphrates waters and on exchanging hydrological and climatic data. Although the first meeting in 1962 involved an exchange of information on existing projects, these did not include any of the GAP dams, which in many instances had yet to be even conceived, let alone constructed. The 1971 meeting discussed, "ways and means for filling Keban and Assad reservoirs," but apart from these two projects no consultation took place on any other GAP-era dams.

Individual dams were discussed in the tripartite negotiations on two occasions only: at the first meeting in Baghdad in May 1972, when the filling of the Keban, Assad and Habanye reservoirs was discussed; and at the seventh meeting (second session) in January 1986, again held in Baghdad, when the issue of the filling of the Karakaya dam was raised. Again, the main focus of the discussions was on the general need to establish means of dialogue and negotiation; the setting up of a technical committee; exchanging information on areas that could be irrigated in the Euphrates Basin; exchange of information on dry season flows; soil standards; proposals for joint monitoring; and time schedules for the work of the technical committee.

Syrian officials stressed that in the government's view, consultation should not be restricted to discussions at formal inter-governmental meetings. What was required if Syria was to have adequate downstream flow was a relationship of trust, in which information on flows were supplied on a daily or weekly basis and actual flow negotiated on a needs basis.

Syrian officials pointed out that such a system was now in place between Syria and Iraq: "*We send them weekly and monthly reports on the flows we receive. If the flows are lower or higher than anticipated or if either country has a particular need for water at a given time, we negotiate then and there. Openness is the key to improved relationships*."

It seemed to the Mission that a system of consultations between Syria and Iraq regarding the two rivers was well established and operated well. The agreement to share the waters of the Euphrates 58-42% works smoothly, even during times when political relations are difficult. The same cannot be said for consultation between Turkey and its co-riparians. The Mission found Turkey's claim that its downstream co-riparians had been consulted on GAP projects within the tripartite technical committees that met between 1972 and 1991 to be without substance. It notes with grave concern that consultations have still to take place on a number of dams for which European and US companies are currently seeking contracts and possibly export credit support; for example, the Hakkari Dam on the Zap river, which flows into the Tigris, and an extensive series of dams on the Munzur River. The Mission repeats its view that no credits should be even considered in the absence of an agreement between Turkey, Syria and Iraq on use of their shared watercourses.

The Duty to Negotiate

As regards the duty to negotiate, international law provides that if consultations do not resolve the issue to the satisfaction of all parties, negotiations should be entered into. Such negotiations must be meaningful, and should lead to an equitable solution derived from the applicable law of international watercourses.

Since the breaking off of tripartite talks in 1992, and the unfulfilled ministerial statement of intention to enter negotiations in January 1993, no talks have taken place between Turkey and either Syria or Iraq. **The Mission formed the strong impression that Turkey was the party that had been unwilling to sit down to talks.** Although the Mission repeatedly requested a meeting with the Turkish Ministry of Foreign Affairs to seek clarification on this and other issues relating to Turkey's position, the Turkish government

[162] These meetings took place in May 1972, August-September 1972, November 1972 and May 1974.
[163] These meetings took place in May 1982, November-December 1982, September 1983, June 1984, November 1984, June 1985, November 1985, January 1986, June 1986, January-February 1987, January 1988, November 1988, March 1989, April 1989, November-December 1989, March 1990 and September-October 1992.

failed to respond to the Mission's requests. Syrian and Iraqi officials informed the Mission that invitations to restart talks had been sent regularly to the Turkish government.

Compliance with Bilateral Agreements

In addition to Turkey's obligations under international law to inform, consult and negotiate, there is also the question of how far Turkey has complied with the bilateral and tripartite agreements that it has concluded over the years with Syria and Iraq. The Mission notes that its 1987 Protocol with Syria, in which Turkey agreed to release an average of 500 million cubic metres per second (m3/s), appears to have been breached on a number of occasions, most notably during the filling of the Ataturk Dam.

THE PROSPECT FOR A SETTLEMENT

The Mission was impressed by the level of collaboration between Syria and Iraq on the use of the Tigris and Euphrates. In recent years, both countries have proved themselves able to resolve issues between them through regular dialogue and consultation. There are ongoing negotiations regarding the Tigris, which forms the border between the two countries. Syria is now developing its position, but has agreed in principle that it will use the new dams it plans to construct (the Eufrid and two others) for the benefit of Iraq as well as for its own benefit. Syrian officials sources told the Mission that meetings are planned in the spring of 2002 to further the negotiations.

The Mission understands that Syrian and Iraqi Ministers have already reached agreement bilaterally as to the basis of a trilateral agreement with Turkey that would be acceptable to the two downstream states. The Mission was reliably informed that Syria and Iraq would wish to see the Euphrates flow apportioned "in accordance with international principles."

Ministers in both Iraq and Syria also expressed optimism that an agreement could be reached with Turkey soon. For instance, His Excellency Mr Mohammed Radwan Martini, Syrian Minister of Irrigation, told the Mission, "*Last August my predecessor went to Turkey and a joint minute was signed as a result. Now Turkey wants to come here to meet us. Relations with Turkey are good in other areas, and I believe that we will be able to reach an agreement with Turkey*."

The failure of Turkey to gain financial support for the Ilisu project was cited as one reason for such optimism. "Turkish officials have been told by the export credit agencies that no dams will be supported unless Turkey reaches an agreement with Iraq and Syria," the Mission was told. "Ilisu has forced Turkey back to the negotiating table. At a technical level, agreement could be reached without difficulty. The problem remains political."

The Syrian Minister for Foreign Affairs also stressed that it would be in Turkey's business interest to reach an agreement. Syria and Iraq represent large markets to which Turkey would have increased access, were political differences over the water issue to be resolved. "We are helping Turkey to help itself," the Minister said.

Despite the new mood, the Mission is of the view that the parties are still a long way from an agreement. No terms of reference for negotiation have been agreed or even put on the table, and both Syria and Iraq complained that Turkey persists in insisting on linking any agreement with other issues. While at the technical level considerable work had clearly been done that could form a basis for discussions,[164] the Mission found little sign of convergence at the political level. As Syria's Deputy Minister for Foreign Affairs put it, "*Time is not on our side. Each year that passes, Turkey is completing projects. We have to face Turkey alone, because of Turkey's close relations with the US and the sanctions against Iraq*."

[164] Interview with Minister of Irrigation, Mohammed Radwan Martini, 30 January 2001. The Minister told the Mission: " We could have an agreement within a month if we could only agree a political framework."

ARBITRATION

The Mission was informed that neither Syria nor Iraq are willing to resort to measures such as arbitration or adjudication by the International Court of Justice. Syria's Deputy Minister for Foreign Affairs told the Mission, "*We decided to build our relations with Turkey on patience, because we do not want conflict. We believe that through improving our economic ties, we will come to an agreement to use water as a factor for cooperation*."

Whilst the Mission respects the decision to pursue an agreement via continued negotiation rather than the courts, it notes that, so long as an agreement remains unconcluded, those on the ground continue to suffer. **The Mission therefore urges the international community to join with Syria and Iraq in pressing Turkey to reach an agreement.**

REDRESS

The Mission believes that those communities that have suffered the adverse downstream consequences of GAP – in the form of reduced flows and deteriorating water quality – should be adequately compensated. So far as the Mission is aware, no compensation has yet been sought by the Governments of Iraq and Syria from Turkey and the Mission gained the impression that no such claims were contemplated.

The Mission notes that where GAP dams were supported by ECAs of countries that are party to the European Convention on Human Rights (ECHR), there may be grounds for bringing actions against those countries before the European Court of Human Rights. In instances where an ECA decides to grant an export credit guarantee for a project that would facilitate breaches of the human rights of those who would be affected, say by the construction of a dam, such a decision would be open to challenge. The main rights likely to be breached would be the right to respect for home under Article 8 of the ECHR, and the right to peaceful enjoyment of possessions under Article 1 of Protocol 1.

BROADENING THE NEGOTIATIONS

The weight attached by international institutions to the principle of participation of stakeholders has already been noted.[165] In its report of 2000, *A Water Secure World: Vision for Water, Life and the Environment,*[166] the World Water Council's World Commission on Water for the 21st Century emphasised the need for a participatory, "holistic" approach to the use of shared rivers. The report recommended, *inter alia*, participatory institutional mechanisms that ensure that stakeholders, through mechanisms such as community groups, user associations and water user parliaments, can participate in decision-making at all levels. The report stresses: "Experience shows that this participation must be real and not symbolic, and it shows that these users associations and parliaments must have a decisive role in deciding what is done, how it is done, and who pays for it. Experience also shows that what works are partnerships between governments and stakeholders, with governments playing a vital role in creating the enabling environment and in providing technical and enforcement support."[167]

Many communities use the waters of the Tigris and Euphrates basins or are affected by water projects on those rivers, but one of the communities most affected are the Kurds. Some of the key rivers arise either in

[165] See Section Three, pp.34-5 above

[166] World Commission on Water for the 21st Century, *Water Secure World, Vision for Water, Life and the Environment*, World Water Council, 2000, available from www.worldwatercouncil.org.

[167] World Commission on Water for the 21st Century, *Water Secure World, Vision for Water, Life and the Environment*, World Water Council, 2000, p.12, available from www.worldwatercouncil.org.

the areas of Turkey where the population is predominantly Kurdish,[168] or in the Kurd-controlled safe haven area of northern Iraq.[169] As key stakeholders, these Kurdish communities are entitled to participate in a meaningful way in decision-making that affects them. **The Mission therefore urges all the relevant states – Turkey, Iraq and Syria - to establish effective mechanisms designed to ensure the participation of key stakeholders, including minority communities such as the Kurds, affected community groups and water users, in any negotiations regarding water in the region.**

[168] There are an estimated 20 million Kurds in Turkey, most of them living in the Southeast.

[169] In March 1991, following the Gulf War, safe havens were established in Northern Iraq by the international community, invoking UN Security Council Resolution 688. A few months later, the Iraqi Government withdrew its military forces and its civilian administration from the area. The Kurds held elections and established the legislative and administrative structures of self-government.