

WATER FOR SUSTAINABLE DEVELOPMENT IN THE EUPHRATES-TIGRIS RIVER BASIN

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INTRODUCTION

Being one of the vital water resources in southwest Asia, Euphrates and the Tigris rivers constitute a single transboundary watercourse system. They are linked not only by their natural course when merging at the Shatt-al-Arab, but also as a result of a man-made Thartar Canal connection between the two rivers in Iraq.

Turkey, Syria and Iraq are the three major riparians of the Euphrates-Tigris river system. Annual mean flow of the Euphrates is 32 billion cubic meters per year (bcm/year). Approximately 90 percent of the mean flow of the Euphrates is drained from Turkey, whereas the remaining amount of 10 percent originates from Syria. As for the Tigris and its tributaries, the average total discharge is determined as 52 bcm/year. Turkey contributes approximately 40 percent of the total annual flow, whereas Iraq and Iran contribute 51 percent, and 9 percent, respectively [1] [2].

The water question emerged on the regional agenda when the three riparians initiated major development projects. It is only since the 1960s that Turkey and Syria have put forward ambitious plans to develop the waters of the Euphrates-Tigris river system for energy and irrigation purposes. At the same time, Iraq also announced new schemes for an extension of its irrigated area. The uncoordinated nature of these supply-led developments as well as inefficient and ineffective demand management practices within the framework of national water policy and management of the co-riparians continue to be the principal causes of water imbalance in the Euphrates-Tigris river basin.

Adequate solutions to this problem are often premised on coordinated regional action. The paper is largely devoted to discussions of the origins and the evolution of the water dispute in the Euphrates-Tigris river basin. There are analyses on the merits of the principle of "equitable utilization" and "the needs-based approach" with a specific reference to the Three Stage Plan of Turkey.

After showing the limitations and shortcomings of existing water allocation mechanisms; more workable solution of "sharing the benefits rather than sharing the water itself" is put forward. The Joint Technical Committee meetings are reviewed, suggesting the broadening of its agenda.

The paper incorporates analyses of the recent developments and prospects for cooperation in the Euphrates-Tigris river basin. Here, the idea is to tackle water resources management as part of larger framework of overall socio-economic development of the region by drawing attention to the role model of Southeastern Anatolia Project (GAP) and to the recent rapprochement between GAP Regional Development Administration (GAP RDA) and the General Organization for Land Development (GOLD) of the Irrigation Ministry of Syria.

ENDURED NEGOTIATIONS

Since the early 1960s there were attempts to foster dialogue and information exchange in the region through a series of technical water negotiations. One could observe that the riparians had adhered to stringent positions, which did hardly change during the course of the negotiations in three decades' time until the suspension of the negotiations in the early 1990s. Thus, Iraq as the downstream riparian was keen to preserve into perpetuity its senior in time uses and showed great anxiety towards the progress of the water development projects in Turkey and Syria. Iraq, later joined by Syria in the early 1980s kept insisting on concluding immediate sharing agreements. Yet, Turkey as the new user had presented the exigency of its planned measures and offered a joint study to find out the irrigation needs of the riparians before any basin wide allocation agreed in the river basin. Below the reader may find highlights from these endured negotiation processes.

The three riparians entered a new phase of their relationship over water upon the decision by Turkey to construct the Keban dam on the Euphrates. The downstream riparians, particularly Iraq, insisted on guaranteed flows to be released by Turkey during the impounding of the dam. Hence, a first meeting was held in June 1964 with the participation of Turkish and Iraqi experts. The Turkish delegation asserted that it was impossible to reach a single and final formula for the pattern of water to be released from the Keban dam reservoir before impounding by the dam. This pattern, according to the Turkish delegation, depended upon the natural conditions that would prevail during the filling, and on the exact evaluation of the concerned countries' needs. At the end of the negotiations, Turkey guaranteed to undertake all necessary measures to maintain a discharge of 350 m³/sec immediately downstream from the dam, provided that the natural flow of the river was adequate to supply the above discharge. This was confirmed to Syria and Iraq the same year. Moreover, during this meeting, Turkey proposed to establish a Joint Technical Committee (JTC), which would inspect each river at its source to determine its average yearly discharge. The JTC would determine the irrigation needs of the three countries through joint field studies and would be authorized, by calculating the needs of the riparians for present and future projects, to prepare a statement of main principles and procedures in order to facilitate an agreement on water rights [3].

Following this first technical meeting between Turkey and Iraq, a few more ad hoc meetings were held in the region. Yet, among these meetings the most notable one: the first tri-partite negotiation was held in Baghdad in 1965. In that meeting, the three delegations exchanged technical data with regard to the Haditha (Iraq), Tabqa (Syria) and Keban (Turkey) dams. The delegations then moved to discuss the question of setting up a JTC. The Iraqi delegation submitted a draft agreement, which covered, among others, the issue of forming a permanent JTC to be entrusted with supervising the implementation of the agreement. The Turkish delegation strongly rejected the Iraqi draft agreement, and expressed that the JTC could only be authorized to maintain coordination of the current and future projects in the river basin [4].

In line with the Turkish proposal, Syria suggested it would be convenient to include among the functions of the JTC a study of the water requirements of the irrigable lands in the three countries, and subsequently to examine the possibility of covering possible shortages of water supplied by the Euphrates through diverting a part of the Tigris River's water to the Euphrates. Iraq strongly opposed this proposal and insisted on negotiating only the waters of the Euphrates.

During the course of the 1970s, delegations from the three countries gathered on several occasions to exchange information about the technical issues pertaining to the Keban, Tabqa and the Habbaniye reservoirs. No agreement was achieved at the end of numerous technical meetings, and Turkey and Syria went their own ways in determining impounding programs for the two reservoirs [5].

JOINT TECHNICAL COMMITTEE MEETINGS

In the early 1980s, the imminent use of the Euphrates and Tigris by Turkey created new demands for cooperation. Because the issues involved in water development schemes along the Tigris and Euphrates are so complex and far-reaching, the three riparians had to find ways of structuring the dialogue among them. Hence, this time Iraq took the initiative for the formation of a permanent Joint Technical Committee. At the end of the first meeting of the Joint Economic Commission between Turkey and Iraq in 1980, a new JTC was established to discuss and finalize the water issue among the riparians. Syria joined the JTC in 1983 whereupon Turkey, Syria, and Iraq held sixteen meetings up to 1993.

The essential mandate given to the JTC was defined as to determining the methods and procedures, which would lead to a definition of the reasonable and appropriate amount of water that each country would need from both rivers. The major items on the agenda of the JTC were the exchange of hydrological and meteorological data and information on the Euphrates-Tigris Basin, the sharing of information on progress achieved in the construction of dams and irrigation schemes in the three riparian countries, and the discussion of initial plans for filling the Karakaya and Atatürk Reservoirs.

However, after sixteen meetings, the JTC could not fulfill its objectives and the talks became deadlocked, and failed to produce even outlines of its meetings. The major issues that led to the deadlock were related to both the subject and the object of negotiations: whether the Euphrates and the Tigris be considered a single system or whether the discussions could be exclusively limited to the Euphrates. The wording of the final objective of the JTC, i.e. reaching a common terminology, was also problematic; whether to formulate a proposal for the '*sharing*' of '*international rivers*', or to achieve a trilateral regime for determining the '*utilization of transboundary watercourses*'. Iraq and Syria consider the Euphrates an *international* river and insist on an immediate sharing agreement under which the waters of the Euphrates would be shared on the basis of each country stating its water needs. On the other hand, Turkey has regarded the Euphrates and Tigris as forming a single *transboundary* river basin where the waters should be *allocated* according to the objective needs [6].

Rethinking the mandate of the JTC

The role of the Joint Technical Committee should not be underestimated. Although its meetings were infrequent and appear to have made little substantive progress on the question of water allocation, it was a useful channel for communication. However, The JTC meetings could not sustain and produce fruitful outcomes to foster broader cooperation in the region. Even though the JTC originated from the Joint Economic Commission, it had focused solely on water issues whereas its ultimate aim of ensuring cooperation and coordinated management of water resources in the region could not be

fulfilled with such a limiting approach where the riparians had been persistent in their water rights. The mandate of the JTC could be expanded and diversified in a way that it could act with a broader agenda where the parties could tackle water resources management as part of larger framework of overall socio-economic development of the river basin, thereby showing a new potential framework for water based cooperation.

Aware that sustained cooperation in the region requires a development focus, a permanent institution, and a forum for a process of legal and institutional dialogue, JTC could be designed to provide a platform for discussions on water related multisectoral development issues along with the establishment of the principles of the equitable usage of waters.

WATER USE RULES IN THE EUPHRATES-TIGRIS RIVER BASIN

The Protocol of 1987 between Turkey and Syria

The Turkish-Syrian Joint Economic Commission meeting on 17 July 1987 had an important outcome regarding the negotiations on the water issue. The Protocol of Economic Cooperation signed by Turkey and Syria at the end of the meeting included provisions for water. It is important to note that the Protocol was regarded as a temporary arrangement. It embodies several articles pertaining to the water issue. The text of Article 6 of the Protocol reads as follows: 'During the filling up period of the Atatürk dam reservoir and until the final allocation of the waters of Euphrates among the three riparian countries the Turkish side undertakes to release a yearly average of more than 500 m³/sec at the Turkish-Syrian border and in cases where monthly flow falls below the level of 500 m³/sec, the Turkish side agrees to make up the difference during the following month'. As a basis for comparison, the long-term average flow of the Euphrates is approximately 1000 m³/sec at the Turkish-Syrian border.

Water allocation agreement between Syria and Iraq: The Protocol of 1990

Syria and Iraq perceived the interruption to the flow of the Euphrates, due to the impounding of the Atatürk dam, as the beginning of many such interruptions that would be the consequences of envisaged projects within the framework of GAP. Hence, the 13th meeting of the Joint Technical Committee held in Baghdad on 16 April 1990, provided the occasion for a bilateral accord between Syria and Iraq, that is the second arrangement in mention here, according to which 58 percent of the Euphrates waters coming from Turkey would be released to Iraq by Syria.

These bilateral accords were interim measures, which were largely products of the then-prevailing political atmosphere in the basin and they have not served the goal, which was meant to achieve efficient and equitable allocation and management of the water resources in the Euphrates-Tigris river basin.

THE THREE-STAGE PLAN OF TURKEY

As a product of his empirical research on water negotiations that have taken place in various transboundary river basins, A. T. Wolf concludes that in almost all of the disputes that have been resolved, particularly on arid or exotic streams, the paradigms used for negotiations have not been 'rights-based' at all – neither on relative hydrography nor specifically on chronology of use – but rather "needs-based." "Needs" can be defined by

one or a combination of the following: irrigable land, population, or the requirements of a specific project, or a sector [7].

The Three Stage Plan was drafted with a *needs-based* approach. The Plan encompasses joint inventory studies of land and water resources of the region and the estimation of the water needs for the competing sectors in the region, agriculture in particular. This, then, will provide the basis for an optimum allocation of the available water to the determined needs.

During the negotiations there emerged the fact that the water potential was unable to meet declared demands of the three riparians. And, more importantly, there have been rooted uncertainties and inadequacy relating to the data on water and land resources. In response to Syrian and Iraqi demands for the formulation of urgent 'sharing arrangements' depending on the criteria that they put forward, Turkey proposed the 'Three Stage Plan for Optimum, Equitable and Reasonable Utilization of the Transboundary Watercourses of the Tigris-Euphrates Basin.'

The creators of the Plan asserted that by quantifying the needs, the water issue will become more manageable. With the Plan, Turkey calls for the establishment of a joint body for collecting, handling and exchanging data regarding water and land resources so that annual and seasonal variations can be incorporated in the estimations made to determine the allocations. In this respect, data sharing would facilitate the negotiation process and foster the creation of many cooperative structures. Hence, data gathering through joint efforts would enable the riparians to become accustomed to cooperation and to proceed with discussions over water allocations. Along with reaching a set of agreed upon criteria in data-sharing, negotiations could move on to talks on coordination of projects and the creation of joint projects.

The Plan is evolutionary and forward-looking in nature, it could be revised according to prevailing conditions and developed further through an interdisciplinary dialogue with the inclusion of the relevant stakeholders.

RECENT DEVELOPMENTS AND PROSPECTS FOR COOPERATION IN THE EUPHRATES-TIGRIS RIVER BASIN

The Three Stage Plan was coolly received by Iraq and Syria. Nonetheless, it is asserted in this study that with its needs based approach conducive to cooperation and its particular emphasis on a legal settlement the Plan will retain its innovative status in transboundary water coordination. Indeed, establishing a coordinated regional action in the Euphrates-Tigris river basin presents a great challenge. However, there remain many opportunities in the region for initiating innovative actions in transboundary water management coordination.

Hence, the GAP RDA took some useful steps in 2001 to initiate contacts with Syria by sending a delegation to that country following the invitation of the General Organization for Land Development (GOLD), Ministry of Irrigation, Syria. Following this mission, a Syrian delegation headed by the Minister of Irrigation paid a visit to Turkey. As a result of these bilateral relations, a Joint Communiqué was signed between the GOLD and the GAP RDA on 23 August 2001. This agreement envisions the cooperation of the two sides in such areas as training, study missions, technology exchange and conduct of joint projects. The agreement intends to improve the relations between the two countries further, through training of staff from both countries, by

hosting specialists from Syria in Turkey specific training activities. Once such training is institutionalized, courses are planned either in Syria or in Turkey for other Arab speaking countries as well. In fact, further steps have already been taken, and a technical team from Syria has been invited to the region to discuss the principles of implementation. This agreement between GAP and GOLD also includes provisions about ‘twin protection areas’-one from each country to be studied, planned and implemented as a Twin Development Project that can be implemented in both countries. In June 2002 the GAP Minister, with a delegation from GAP RDA visited Syria. Talks were held regarding the GAP-GOLD cooperation and an implementation document was signed that defines the principles of implementation of the cooperation envisioned in the Joint Communiqué. This document identifies the projects, training programs, and activities to be conducted between the parties. A Syrian delegation headed by the Syrian Irrigation Minister later reciprocated this visit, attending the inauguration of the wastewater treatment plant built by GAP RDA at the Turkish side of the border, and visiting the project-related sites in GAP.

The GAP-GOLD Protocol comprises a limited range of essential but effective activities to create a coordination mechanism between these two government agencies. The overall goal of this agreement and its subsequent implementation protocol (2002) is to provide sustainable utilization of the region’s land and water resources, and to deal with water management within a larger picture of overall socio-economic development and integration of the under developed regions in Turkey and Syria.

The agreement is mainly drafted with a basic objective of establishing a dialogue between the two countries and strengthening inter-riparian engagement by building ‘intergovernmental networks’ which would serve to open up new opportunities for realizing *win-win* solutions.

Under this recent promising developments between Turkey and Syria, GAP, which once constituted a bone of contention in the regional politics, is becoming a source of gradual cooperation for development related activities. Thus, the following section briefly presents the GAP as unique water based development endeavor in the region. This section is intended to provide insights for future cooperative initiatives which are to be geared to specific goals of development, and poverty reduction related to wider socioeconomic development.

GAP: A PARADIGM SHIFT IN WATER RESOURCES DEVELOPMENT

GAP has been conceived and implemented as a means of integrating water resources development with overall human development in one of the backward regions of Turkey. The Project area lies in Southeastern Turkey, covering nine provinces corresponding to approximately 10 percent of Turkey’s total population and an equivalent surface area. The Project area includes the watersheds of the lower Euphrates and Tigris rivers and the upper Mesopotamian plains. The water resources development program of GAP includes 13 groups of irrigation and energy projects, seven of which are on the Euphrates river and six on the Tigris. The Project includes 22 dams, 19 hydropower plants, and irrigation networks, on the Euphrates and Tigris river basins, to irrigate 1.7 million hectares of land. The total cost of the project is estimated as USD 32 billion, 16 billions of which have already been invested.

As an integrated regional development project based upon the concept of sustainability, GAP covers investments in such fields as urban and rural infrastructure, agriculture, transportation, industry, education, health, housing and tourism, as well as dams, power plants and irrigation schemes on the Euphrates and Tigris rivers. This massive launch for development has special emphasis on and priority for the economic, social and cultural advancement and well being of the whole country in general, and of the people of the region in particular. The basic objectives of the GAP are: to remove interregional disparities in the country by alleviating conditions of abject poverty and raising the income levels and living standards in the region; to enhance productivity and employment opportunities in rural areas and to improve the population absorbing capacity of larger cities.

As the GAP has shifted over the years from an infrastructure development project, into a project that coordinates social, cultural, economic and environmental efforts, its changes have followed the changes in global thinking about development. In recent years there has been an increased focus on reducing poverty as a key responsibility of government for development. International conferences such as the 1992 United Nations Conference on Environment and Development in Rio de Janeiro and the 1995 World Summit for Social Development in Copenhagen have put forward ideas about sustainability, gender equity, encouraging grassroots involvement, protecting the environment, and so on. These initiatives were reinforced at the UN Millennium General Assembly when the Millennium Development Goal of halving the proportion of the world's population living in extreme poverty by 2015 was agreed by all member countries of the United Nations. Other goals and targets specific to water and poverty were agreed at the Millennium Assembly and at the World Summit on Sustainable Development (2002).

These international attempts have generated some consensus about the priorities for development – reaching the poorest, targeting marginalized groups, involving target groups at all stages in the project cycle – that has led to the adoption of policies in support of sustainable development in countries in both North and South. GAP has attempted to incorporate these ideas into its activities, and has learned first hand about the tension between how development should look, and how it is actually carried out.

Water based development is a catalyst for economic, social and environmental changes. In the GAP, water resources development has enabled human-centered development in the shape of agricultural and other rural development, economic development and entrepreneur support projects, gender equality projects, participatory resettlement, and other activities that are based on the concepts of participation, equity, and environmental and social sustainability. GAP, as such, is defined as a sustainable human development project, where water resources development is not an end in itself; it is, indeed, a means to an end. The end is to alleviate poverty, improve quality of life, and to maintain the integrity of environment and the ecosystems [8].

The concept of sustainability is very relevant to any analysis of water policy. Hence, in the case of GAP, the notion of sustainability is captured in the larger context of the sustainability of society, the economy as well as the environmental services provided by water in the region. Sustainable human development, as applied by the GAP for Southeastern Anatolia, encompasses such goals as reaching the poorest, gender equity, capacity building for local institutions, and environmental protection. It is from this philosophy that GAP derives its human centered focus, using the momentum gained from

hydropower and irrigation infrastructure projects to bring opportunities for more sustainable livelihoods to as many in the GAP region as possible.

The main components of sustainability for GAP are: social sustainability, physical and spatial sustainability, environmental sustainability, economic and agricultural sustainability. In accordance with the sustainable development approach of GAP, special programs and projects have been initiated to emphasize the human dimension of development through project implementations concerned with basic social services (education, health, housing), gender equity, urban management, irrigation facilities, agricultural and environmental sustainability, institutional and community capacity-building, and public participation.

GAP case illustrates that in the field of water development and management the three countries in mention can exploit the potential areas for cooperation by benefiting from the experience and practices of one another, and develop these into common practice.

CONCLUSION: BROADENING THE COOPERATION AGENDAS

Futile negotiation processes over water allocation and related disputes over water rights in the Euphrates-Tigris river basin demonstrate that there is a need to create new cooperative frameworks that enable links between cooperation and development. Water dispute in the region clearly stem from the mismatch between demand and supply coupled with the uncoordinated nature of water development projects. Adequate solutions to this problem are often premised on coordinated regional action. Hence, it is a high time to scrutinize the factors that prevent conflict from occurring, even when stakes are high concerning water allocations. As recommended in this study, reconsidering a revised version of the Three Stage Plan would enable the parties to determine the objective needs. Discussions concerning water needs would better take place within the Joint Technical Committee with its broadened agenda whereby equitable usage could be determined along with the handling of water related multisectoral development issues such as infrastructure (energy, telecommunication, transport), agriculture, trade, industry, and health and environmental issues.

Based on the status of the relations between the riparians of the Euphrates-Tigris system and the recent political developments in Syria, along with projections with respect to Iraq in the new era, one can predict better cooperation and more productive conditions that would make use of the existing mechanisms and modalities, namely the recent collaboration between GAP and GOLD. Transboundary water coordination in the region should depend on sustainability captured in a larger context just as it has been implemented in the GAP. Hence, the authors suggest that cooperation in the region needs to be based on wider development concepts; cooperative processes need to be geared to specific goals of development, and poverty reduction related to wider socioeconomic development.

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