

Editorial



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what man calls civilization
always results in deserts
man is never on the square
he uses up the fat and the greenery of the earth
each generation wastes a little more
of the future with greed and lust for riches. (Donald Robert Perry Marquis,
"What the Ants Are Saying", in *The Lives and Times of Archy & Mehitabel*, 1950)

The very many different aspects involved in the water resources development sector have been elaborated by researchers, academicians and professionals, with increasing emphasis over the past decade on integration with other sectors/issues in general and on their sustainable development in particular. The latter has gone through an evolutionary process and its importance as well as basics have been well documented, both in the scientific literature and through numerous international gatherings, and it has gained universal recognition and very wide acceptance.

Although the recognition is universal, the definition of sustainability, for operational purposes, is bound to be local and its application project-specific. This has led to a situation where, while the need and general concepts remain agreed, the scope, definition and hence the application have spread over a large spectrum.

We probably need to question and challenge, on the one hand, *sustainability*

and its fundamentals, as science and history tell us to for almost everything—especially the reason why it has not resulted in a higher profile of water issues on the international agenda. On the other hand, we welcome its real-world implementation, be it environment-related, socially oriented etc., and this is the only way the soundness of the concept can be field-tested.

The papers in this special issue cover general/broad topics such as national water policies, plans and sustainability in development as well as topics of specific concern such as innovations in the water sector, water export projects, farmers' participation, hydropolitics and so on. The reader will also find papers in this issue covering topics less typical of water resources journals, such as women's status and social structures as related to development.

The reader will, after perusing the papers, have a general feeling of the way in which water development is handled within a macro framework, the specific and often very complex operational aspects and issues involved, and how the approach evolved in its technical, managerial and political dimensions, as exemplified by a colossal project entitled the GAP, the Turkish Acronym for Southeastern Anatolia Project.

The Southeastern Anatolia Project of Turkey has its roots in the 1930s in its conceptual form as river development suggested by the founder of the Republic, Mustafa Kemal Atatürk; in technical reconnaissance studies, plans and individual projects for the Tigris and Euphrates Rivers in the 1950s and 1960s; and as an integrated water resources development package in the 1970s. The 1980s witnessed the transformation of the water package to an integrated regional development project and then to a comprehensive sustainable human development programme.

The transformation process reflects upon most aspects of the programme: the planning, coordination and management duties were handed from the state water authority to the state planning office and then to a regional development administration specifically established for GAP. Budgeting, in addition to a substantial increase, evolved from funding dams and irrigation schemes to an integrated financial package, which covers all development-related sectors and involves innovative schemes such as build-operate-transfer and internal borrowing put into a pool to finance large-scale projects. The responsibility for all irrigation projects has now been transferred to the water users; special programmes are implemented for women and for population strata apt to be negatively affected by development activities. The latter covers people whose lands are inundated by dam reservoirs, farmers living in unirrigated areas and the landless. Exemplary implementations of these are the Multi-Purpose Community Centers for Women, initiated jointly with UNICEF; Participatory Urban Development Projects including those to be resettled, and the comprehensive Sustainable Human Development in GAP programme with the UNDP. The latter, now operational as Project TUR/95/004/B/01/99, is a good example of localization of the general principles of sustainability for a socioeconomic development programme and the operationalization in the form of some 30 projects covering the economy, environment, social issues, agriculture and private sector development as a comprehensive package.

Urban planning and zoning in specific and land-use planning in general represent unique authorities held by the project administration thus providing it with extremely valuable tools to ensure water-land resources integration,

environmental conservation and protection of agricultural lands from invasion by residential and industrial development. A participatory approach that aims at catalyzing different interests and parties has been adapted for zoning.

State investments and programmes for public participation and empowerment are two facets of sustainable development, which has to be complemented by a third, *private sector involvement*, with the eventual aim that the private sector takes over the economy when investments are completed. This is supported by a local, regionwide network of entrepreneur guidance centres, incentives given to the private sector investing in the project area, in the form of tax breaks, more liberal credits and the like as well as the provision by the government of industrial parks and a free trade zone with basic infrastructure built free of charge.

The catalytic role of the project administration is materialized in pilot projects such as the reuse of recycled urban sewage, drip and sprinkler irrigation, downstream canal regulation, formation of water user groups, and preparation and distribution of feasibility reports on promising industries.

Integration capability is not limited to land-use planning; the transportation and infrastructure spectrum is covered from regional plans to the designs of individual projects, ranging from the macro scale of 1/250 000 to the application scale of 1/1000 consisting of maps, city plans, water supply, sewerage, treatment, electrical supply and solid waste facilities as well as a regional airport, an intra-regional highway, state roads and railroads.

It is these characteristics of the development programme that led the magazines *Time* in January 1994 and *Infrastructure and Finance* in summer 1993 to name GAP as one of the wonders of the modern world.

Turkey had already begun its plans and studies that would later lead to GAP as a holistic development programme, and the world was implementing massive development projects, when Marquis published the quoted poem almost half a century ago. These projects contributed to the progress of technology and management, and a better understanding of many development-related issues, serving with their different aspects, as positive as well as negative examples; coupled with determination and conscience, they enabled GAP not only to cover but also to integrate many of the principles of *Agenda 21* long before the Rio meeting.

An old Turkish saying states “a disaster is better than a thousand pieces of advice”, and as wise as we have become, I hope the reader will appreciate how past *mistakes* were put to good use during the process in which a project originally consisting of building dams, hydropower plants and irrigation schemes was transformed into a sustainable human development programme where water resources development is, however essential, only a component of a larger whole.

A quote from Henry David Thoreau (*Walden*, 1854) would be the best substitute for any final remark:

If you have built castles in the air, your work need not be lost; that is where they should be. Now put the foundations under them.

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