



Conference Report
International Workshop on Impacts of Large Dams
Istanbul, Turkey, 25-27 October 2004

One of the most controversial issues of the water sector in recent years has been the impacts of large dams. Proponents of large dams have claimed that such structures are essential to meet the increasing water demands of the world, and that their overall societal benefits far outweigh the costs. In contrast, the critics claim that social and environmental costs of large dams far exceed their benefits, and that the era of construction of large dams is over. The World Commission on Dams was expected to give definitive answers to many of these complex issues, but its report did not satisfy many countries and water professionals.

A major reason as to why there is no consensus on the overall benefits of large dams is because objective, authoritative and comprehensive evaluations of their impacts, especially ten or more years after their construction, are conspicuous by their absence. Because such reliable assessments are not available, controversy over their appropriateness has continued.

Because of this unacceptable situation, the Third World Centre for Water Management, the International Hydropower Association, and the Nippon Foundation, in collaboration with the International Water Resources Association, the International Commission of Irrigation and Drainage, and the International Commission on Large Dams, organised a workshop in Istanbul, Turkey, 25-27 October 2004, where 25 of the leading experts were invited to very specifically assess the impacts of large dams.

Participation at this workshop was by invitation only, and the experts were very carefully selected. They represented different sectors, disciplines and institutions (national governments, academic and research institutions, international organisation, private sector and NGOs). A very unusual participant was President Suleyman Demirel of Turkey, a water expert, who presented his overall view on large dams, and also a case study of the Seyhan Dam in Turkey.

The main objective of the meeting was to debate impartially, comprehensively and objectively, the positive and negative impacts of large dams based on facts,

figures and authoritative analyses. These in-depth case studies are expected to promote a healthy and balanced debate on the needs, impacts and relevance of large dams. The impacts of the following large dams were analysed: Aswan High Dam, Egypt; Shahid Rajee (Tajan) Dam, Iran; Sobradinho Dam and Salto Caxias Hydropower Project, Brazil; Sierre-Poncon Dam, France; and all large dams in Switzerland. The Bhakra Nangal Project and Koyna and Kangsabati dams from India were analysed, as were Ataturk, Altinkaya, Gezende and Hasan Ugurlu dams from Turkey. The indirect economic impacts of dams, with examples of different parts of the world, were assessed. There was also a most thought-provoking and comprehensive discussion of the global experiences on resettlement.

Right from the beginning of the workshop, the participants took a scientific approach by:

- reviewing critically the impacts (positive, negative or neutral) of the large dams that were evaluated;
- identifying their positive and the negative impacts, and by considering policy options which would maximize the positive impacts and minimize the negative impacts; and
- lessons that could be learnt from the case studies which could be used for planning, operation and management of these large structures in the future;

It was agreed that large dams, when planned and operated properly, are essential, especially in developing countries, to meet the water, energy and food needs of an increasingly larger population, and also to promote regional development and employment generation. Water development must not be considered to be an end by itself: it should be seen as a means to an “end,” the end being improving the lifestyle and standard of living of the people through factors like regional development, poverty alleviation and environmental conservation.

It was further agreed that social and environmental impacts of all large dams should receive adequate emphasis at all stages of planning, construction and operation. In addition to reliably assessing the benefits and costs of large dams, it is essential to analyse the nature of beneficiaries as well as to identify the people who may have to pay some costs, for example in terms of involuntary resettlement due to the creation of the reservoirs. These people must be explicitly made beneficiaries of the project. Resettlement should be viewed as a development opportunity and not as a price some people may have to pay in the name of progress. While resettlement practices have improved significantly during the past decade, these should be improved even further in the future.

It was noted that indirect impacts of the large dams were mostly ignored in the past. Ex-post analyses of the Bhakra Nangal project in India and the Ataturk Dam

in Turkey indicated that their indirect impacts have been very significant, and thus these impacts should be included in the benefit-cost calculations of such projects in the future. A methodological study by the World Bank on estimation of indirect impacts of several large dams from different parts of the world also came to the identical conclusion.

It was agreed that it is important to increase the existing knowledge base on the impacts of large dams through reliable collection of social, economic, environmental and technical data from different projects. Only through collection of reliable data and their objective analyses, can the extent and magnitudes of different impacts be reliably estimated. Methodological studies are also needed to determine which impacts, or what percentages of specific impacts, should be attributed to large dams, and/or to other development factors

Overall, the governments have become increasingly sensitive to the importance of the social and environmental impacts (both positive and negative) of the large dams, and these issues, very appropriately, are receiving more and more attention. There is still considerable room for improvement, and the proponents of large dams should ensure that these improvements take place within as short a timeframe as possible.

A different type of commitment is necessary from the opponents of the large dams in terms of reconsidering their views on the basis of observed facts and figures, and rigorous scientific analyses. Dogmatic and emotional debates on the contributions of existing large dams, and the needs for such structures in the future, between the proponents and opponents, are likely to be counterproductive. The future discussions should be based on what are the specific water needs of a region in question, and how can these societal needs be met within a reasonable timeframe, in a cost-effective, socially-acceptable and environmentally-friendly way. Such a logical approach will invariably conclude that large dams are necessary for some regions, and equally in other places alternatives like rainwater harvesting or small dams may be appropriate. These are not necessarily “either-or” issues.

When construction of large dams are warranted, all direct and indirect benefits and costs should be considered in technical, economic, social and environmental terms. Analyses should be carried out on the nature of the beneficiaries, which is at the heart of any decision-making process in all democratic societies. The people who are likely to pay the cost must be explicitly made beneficiaries of the project.

It is essential that authoritative studies are urgently carried out on the impacts of large dams from different parts of the world so that the existing knowledge-base can be vastly improved. The case studies that were specially prepared for the Istanbul workshop are a right step in this direction, but many more such studies

are needed. The case studies presented at the Istanbul Workshop will shortly be published as a book by Springer Verlag.

A noteworthy feature of this workshop was that major water institutions like the Third World Centre for Water Management, International Hydropower Association, International Commission on Irrigation and Drainage, International Commission on Large Dams, and International Water Resources Association, as well as several private sector organisations, worked as a team to sponsor this workshop, with the support of the Nippon Foundation. Such a teamwork bodes well for the future of the water and development professions.

Cecilia Tortajada
Vice-President, Third World Centre for Water Management
Vice-President, International Water Resources Association
Atizapan, Mexico