

WORKSHOP ON

**BENEFITS OF AND
CONCERNS ABOUT DAMS
CASE STUDIES**

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**On the Occasion of the 67th
Annual Meeting of International
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PREFACE

I want to thank to Turkish National Committee on Large Dams (TRCOLD), who on very short notice agreed to change the original programme prepared for the ICOLD Annual Meeting in Antalya to be able to organize this special Workshop on "Benefits of and concerns about dams" with emphasis on case studies.

The same topic will also be covered by Question 76 during the ICOLD Congress in Beijing, September 2000. However, I felt it very important, in view of the recent focus on these issues in media and the work of the 2 - year World Commission on Dams (June 1998 – June 2000), that ICOLD members got even more actively involved in the debate.

In addition to the papers submitted to the Workshop, there will be a special presentation by invited speakers from different parts of the world. I am looking forward to an interesting series of contributions on the many benefits of dams, which often receive little attention, as well as on the handling of potentially negative social and environmental aspects sometimes associated with such important projects.

Kaare Høeg
President of ICOLD

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**A. THE BENEFITS OF AND
CONCERNS ABOUT DAMS-
EXPERIENCES OF THE COUNTRIES**

Solving the problem of protecting the shoreline background was performed by introducing corresponding technical measures, based on the following principles:

- constructing and operating drainage system of different types, controlling in this way the underground water levels and deepening them to necessary depth:

1 m for agricultural surfaces, 2 m for settlements and 3,0 m in cities.

- constructing or rehabilitating protective dikes and shore protection against erosion, to prevent flooding and wave erosion, against floods with 1% of occurrence probability.

- constructing and operating pumping stations and installations for purification of polluted waters

- adapting the fluvial ports to the modified regime of levels, by corresponding reconstruction

- monitoring the effects of protective systems

The protective system was introduced as several complete units, according to topographical conditions. About 150.000 ha of agricultural surfaces were protected in this way along with several settlements and cities gravitating towards shorelines.

Yugoslav and Romanian side, irrespective of the territorial location of protective works support all the construction expenses in equal parts.

10) SUMMARY

The construction of large hydropower plants in the common Yugoslav – Romanian sector of the Danube created large and unquestionable benefits by providing large quantities of reliable and cheap electric energy and by ensuring conditions for safe and quick navigation of large capacity over a stretch 400 km long. The benefits of power production are equally divided between Yugoslavia and Romania while the benefit derived from much improved navigation are significant for all countries which have ships on the Danube.

Important intangible benefits are realized by regulating and putting in order the Danube shores along the sector from Novi Sad to Djerdap II linked to protection against flooding and erosion, dewatering of agricultural lands, modernization of the road network, of communal systems, and to upholding the historic and cultural patrimony etc.

Experience shows that conditions for protection against ice agglomerations and related flooding are considerably improved and that the probability of such phenomena is significantly decreased. Notwithstanding, protection measures during winter period are mandatory.

Sedimentation as a consequence of changed flow conditions can not be prevented. Considering the slowness of the process and the huge size of the storage, and also the industrial exploitation of the deposited sediments, the mean yearly quantity of deposited sediments is not casting doubts on the conceptual correctness of this project. The quality of water and of the suspended sediments is not influenced only by Yugoslavia and Romania, but also by the upstream countries of Europe. Therefore, constant and systematic monitoring of related changes is strictly mandatory.

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