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Thematic Review 3.1 : (Work in Progress)

July 2000

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Foreword

The World Commission on Dams has a mandate to develop a knowledge base that contributes to three outputs:

- a global review of the development effectiveness of dams;
- a framework for options assessment and decisions making processes for the development and management of water and energy services; and
- a set of criteria, guidelines, and standards where appropriate for the planning, appraisal, design, construction, operation, monitoring, and decommissioning of dams.

The original WCD Scoping Paper for the Thematic Review on Financial, Economic and Distributional Analysis stated that the review was intended to "provide a knowledge base that will assist the WCD in formulating relevant criteria, guidelines and standards in this area. The tools, methods and best practices will contribute directly to the framework for options assessment and decision-making processes." The full text of the scoping paper is found in Appendix A of this paper.

Two previous versions of this thematic paper have been prepared by different consultant teams.

The first paper was prepared by Industrial Economic, Inc. This paper follows the instructions in the scoping paper and states its objectives in the following manner:

This review paper addresses the gap between current practices for evaluating dam projects and what available economic methods have to offer, including discussion of key limitation of economic methods and the proper role of economic analysis in decision-making. It should not be viewed as an all-inclusive treatment of dam project evaluation issues; the focus is on important controversies surrounding the economic analysis of dam projects, as identified in the paper's scope of work (McKenney et al. 1999).

The paper highlights the five topical areas identified in the scoping paper: (1) valuation of externalities (2) discounting (3) risk and uncertainty (4) macroeconomic effects and (5) equity and distribution issues and provides initial ideas on improving current practice.

A circulation draft of this paper was sent out for review to the WCD Review Panel for this thematic and to interested WCD Forum members. Comments from these reviewers, as well as the assessment by the WCD Secretariat, led to the suggestion that further work was necessary to better understand: (1) current practices in financial analysis, (2) the relationship (in practice) between economic and financial analysis (3) the role and use of economic analysis in multi-criteria approaches and (4) the unique aspects of the valuation of water-related goods and services provided by dams.

Based on this input the Secretariat commissioned an additional, yet complementary piece of work intended to ensure that the thematic covered not only the "good practice toolchest" but also provided details on

- existing guidelines of multilateral agencies;
- existing practice; and
- the way forward, i.e. suggestions for improving guidelines, practice and the assessment process.

The second paper was prepared by Alec Penman. The objectives of the second paper were as follows:

- to review and synthesise the requirements currently espoused for project appraisal in the operational guidelines of the major multilateral funding agencies;
- to summarise the range of current practice that exists in the assessment of dams and their impacts, and to document how this range of practice is determined by key contextual/causal variables; and
- to provide specific recommendations on how guidelines may be strengthened and how actual practice may be improved, particularly with regard to the structure of the appraisal process.

This paper was also sent out for reviews (to the Review Panel, Forum Members and a set of Peer Reviewers) and an additional series of reviews were received. Many of these comments highlighted the continued lack of specific detail on existing practice and the need for further reflection on the adequacy of methods employed in accurately projecting the costs and benefits of dam projects. Comments from peer reviewers indicated that the paper, while making substantial headway in terms of providing a suitable set of recommendations for the future, still did not accurately portray the potential of current economic methods for improving project assessment (within a multi-criteria framework). Further, the criticism - one voiced by NGO stakeholders from early on in the thematic process - that the paper did not examine the evidence with respect to the economic costs and benefits of large dams was also repeated.

In response to this feedback the Secretariat designed a set of follow-up activities to counter continued gaps and weaknesses in the two existing papers. Principally these consist of drawing in more examples and experiences in actual practice and extending the coverage of the paper to more fully accommodate the issues surrounding valuation of direct project impacts and costs.

While recognising the potential contribution of the WCD case studies in this regard, the Secretariat acknowledges the absence of a thematic activity aimed at documenting the wider experience with the economic costs and benefits of dams. As a response, the Secretariat has undertaken a literature review on this topic. Where germane to the objectives of this Thematic Review - as with the evaluation literature from multilateral agencies - this material is incorporated in this version of the paper. Otherwise the literature review will feed directly into the global review and synthesis of the WCD knowledge base.

Recognising that no single consultant is likely to be able to fully cover the range of topics, experiences and perspectives raised through the process of writing and review to date, the Secretariat has chosen to respond by providing a third version of the thematic paper. This is accomplished by integrating the two previous papers, with the addition of the following inputs as relevant:

- results from the WCD Case Studies (as finalised at the time of writing);
- results from the WCD Survey of Multilateral Development Bank Practice on Financial and Economic Analysis of Large Dams (as reproduced in Technical Annex 2 of this paper);

- submissions and literature received by the Secretariat; and
- a series of contributions from specialists in particular fields (as acknowledged above).

The current paper has now returned to the original structure (from the first paper) of following an issues paper approach, i.e. presenting the topics one-by-one. However, within each topic the approach taken in the second paper is followed in terms of covering the full range of experience (i.e. actual practice, performance of methods, guidelines, good practice toolchest) as relevant to each topic.

While this paper provides a basis for deriving principles, criteria and guidelines in the area of financial, economic and distributional analysis the paper must be regarded as a work in progress. At this time the paper can only provide a partial integration of the WCD Knowledge Base activities that bear on this topic and a number of follow-up activities will continue to add depth to the discussion. The full integration of the WCD Knowledge Base in terms of the application of the derived recommendations to the full set of stages involved in options assessment, project appraisal, project monitoring and re-evaluation will emerge as the knowledge base is synthesised into the Final Report and Global Review. Given the multidisciplinary nature of this integration process it must be realised that the recommendations for the operationalisation of the principles and criteria as presented here are only a first cut at this task, based only on the findings from one discipline and one perspective of project assessment. Readers interested in obtaining a holistic view on these matters will want to also read the following WCD Thematics to obtain a more complete picture of the range of findings and recommendations on methodological and process issues emerging from the WCD Knowledge Base:

- I.1 Social Impacts of Large Dams: Equity and Distributional Issues
- I.2 Dams, Indigenous Peoples and Vulnerable Ethnic Minorities
- I.3 Displacement, Resettlement, Rehabilitation, Reparation and Development
- II.1 Dams, Ecosystem functions and Environmental Restoration
- II.2 Dams and Global Change
- III.2 International Trends in Project Financing
- IV.5 Operation, Monitoring and Decommissioning of Dams
- V.1 Planning Approaches
- V.2 Environmental and Social Assessment for Large Dams
- V.5 Participation, Negotiation and Conflict Management

As they are finalised the WCD Case Studies and Crosscheck Survey will yield additional observations on the performance of *ex-ante* studies as well as lessons learned across the stages of the project cycle.

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The Secretariat team of Bruce Aylward, Sarah Porter and Anneli Lagman has been responsible for writing and compiling this version of the paper and bear responsibility for any errors and omissions.

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