BOOK REVIEWS

The Future of Large Dams: Dealing with Social, Environmental, Institutional and Political Costs. By Thayer Scudder, London: Earthscan, 2005. Pp. 408. $82.50 cloth; $39.95 paper.

This thorough analysis of the social impacts of large dams in developing countries serves as an extension of the report of the World Commission on Dams (*Dams and Development,* Earthscan, 2000). Professor Scudder was one of the twelve World Commission on Dams (WCD) commissioners but brought to that study and to his new book the insights of 50 years of observation, analysis, and advising in this field. He is recognized as the leading authority on the successes and failures of dams as major instruments of economic and social development. The book was written primarily for policy makers responsible for global water and energy planning but is also a rich source for researchers.

As background for the new book, the WCD's mission was "to conduct a rigorous, independent review of the development effectiveness of large dams, to assess alternatives and to propose practical guidelines for future decision-making," and "to heal the deep and self-inflicted wounds torn open wherever and whenever far too few determine for far too many how best to develop or use water and energy resources" (WCD Chairman Kader Asmal, iii, viii). That review found that dams have made significant contributions to economic development and will continue to be needed in the future but have imposed unnecessary and inequitable costs on large numbers of underrepresented people while benefits have accrued mostly to the (relatively) well-to-do.

Professor Scudder's dedication is "to the tens of millions of river basin residents who have been unfairly impoverished by large dams," an assertion buttressed by extensive data and case studies. While criticizing past and current practices, Professor Scudder has positive practical recommendations centering on adherence to the WCD's "seven strategic priorities" for those cases where dam construction emerges as the option: (1) gaining broad public acceptance through transparent, participatory decision processes; (2) consideration of a broad range of alternatives to meet perceived needs; (3) better management of existing structures before constructing new; (4) giving weight to design features that will protect the river while assuring sustainable livelihoods for basin occupants; (5) sharing the benefits from dam operation in equitable ways among all segments of the affected population; (6) ensuring compliance with commitments made at the initiation of projects; and (7) sharing rivers equitably among riparian nations.

Chapter 1 is dedicated to the history of disputes over large dams with many examples from the post-WWII period. Dams have served as

symbols of progress and prestige in developing countries ("new pyramids for the living" [Nasser]; "the temples of modern India" [Nehru]), providing reliable water supplies, power, flood control, and fisheries. Unfortunately, the social and hydrological consequences of dams have not been given adequate consideration while the uses of funds have frequently been inefficiently tied to purchases from donors' countries. The WCD process is described in this chapter as are the major favorable and unfavorable reactions to the Report. The resettlement process and its accompanying human stresses are shown to be the focus of the book.

Chapter 2 provides a clear exposition of Professor Scudder's theory of the successful resettlement process, utilizing a four-stage time framework: the lengthy pre-settlement period; the initiation of physical removal when living standards are likely to drop with people becoming quite risk-averse; the post-settlement period of community formation, greater risk-taking, and economic development; and the handing over to the second generation of settlers with full integration of the population into the political economy of the region. The importance of the "host" population among whom the displaced must settle is emphasized. These phases are later illustrated in several detailed case studies.

Chapter 3 provides a statistical survey of 50 resettlement cases for which accompanying data on social and economic conditions could be found. This analysis provides a major extension of available data and analysis of resettlement successes (few) and failures (many). The major causes of failure of resettlement are found to be (a) failure to involve those to be displaced in the planning process, (b) failure to provide real opportunities for improvements in living standards for the displaced populations, (c) insufficient funding, (d) lack of resettlement staff expertise and experience, and (e) lack of political will by government and the project authorities to follow through on resettlement plans and promises. In a few cases, even well implemented resettlement has become the largest component of project cost. While monetary compensation to the settlers has often been used, much more in the way of logistical support is needed. There is often competition between the intended settlers and more aggressive immigrants who are attracted to the new reservoir and settlement facilities.

Chapter 4 turns to the ways in which river basin communities can benefit from resettlement. In some settings, irrigated agriculture can be profitable enough that savings can be invested in surrounding service businesses. Development of the reservoir fishery is important, although it can be snatched away from the settlers by immigrant groups. Provision of "common property resources" such as grazing land, firewood from common wood lots, and water supply often support families as they are

getting settled. The resettlement of rural youth in urban areas as well as the resettlement of large urban populations (such as currently found on the Yangtze) pose special problems.

Chapters 5 and 6 provide detailed assessments of specific cases: the Mahaweli Project in Sri Lanka, Kariba in Zambia, Sardar Sarovar in India, the South Okavango Integrated Water Development in Botswana, and Quebec's Grande Baleine Project. Chapter 7 illustrates the need for sophisticated reservoir management to balance the multiple objectives of projects while minimizing irreversible environmental impacts on the river itself. Common shortcomings that emerge from these cases are elucidated in chapters 8 and 9 and include the failure of donor organizations to intervene when project intents and promises go wrong, failure to provide for independent project monitoring and evaluation as the project progresses, failure to include major groups of stakeholders, the inadequacy of guidelines currently followed by the major bilateral and multilateral agencies, and the absence of ex-post analyses of projects. Risk analyses concerning flood risk, risks to health, impacts on drawdown agriculture, and the failure of irrigation supplies during drought are seldom carried out.

Chapter 9 recommends an international Board for Arbitration and Compliance to which affected populations and cooperating NGOs can appeal when bad results start turning up (though such an institution unhappily seems unlikely in today's international political environment). Strong criticisms are aimed at the World Bank, the U.S. Corps of Engineers, and other international organizations in connection with the shortcomings noted above.

In sum, will more large dams be built? The answer seems to be "yes but" only in limited numbers and, hopefully, within an institutional framework that assures compliance with the lessons and recommendations cited above. Large dams are seen by Professor Scudder as "flawed yet still necessary development options," flawed for the oft-ignored negative social and environmental impacts but perhaps necessary to meet short- and medium-term human needs. This constitutes "a tragic dilemma of our times."

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