

Waltina Scheumann
Oliver Hensengerth *Editors*

Evolution of Dam Policies

Evidence from the Big
Hydropower States

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Entwicklungspolitik



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Preface

Following a rise in civil society protests and a reorientation of development paradigms towards environmental sustainability, large dams fell out of favour in the developed North in the 1990s. At the same time, international organisations started to codify a range of international norms pertaining to good environmental and social practices for the construction and operation of dams, including the World Bank's Operational Policies, the Equator Principles, the OECD Common Approaches and the International Finance Corporation's Performance Standards. Their aim is to mitigate the negative impacts of large dams on the environment and local communities.

However, the critical debates in the North have not prevented emerging and developing countries from pursuing large-scale hydropower programmes. Moreover, many of the emerging economies have also questioned the relevance of the above-mentioned international norms. China in particular has rejected the universal applicability of norms that contradict its system of governance. Brazil, China, India and Turkey have all argued that these norms might impede their economic and social development.

This raises the question about the status that international environmental and social norms have in emerging economies that have large dam-building programmes and that support dam construction in third countries. The studies on Brazil, China, India and Turkey in this volume seek to understand the extent to which these norms are relevant in emerging countries, how local norms in these countries interact with international norms and what the results of this interaction are. Furthermore, studies on China's involvement in Ghana and Cambodia investigate the interaction between Chinese actors and the respective host governments.

The cases show that each country has relevant laws in place, and that the development of these laws is a result of both domestic policy-learning and international influences. However, the studies also find that the political system in each country determines the way in which norms are interpreted and applied. As such, this book offers important clues as to the future of international environmental and social norms for large dams.

In the meantime, after decades of abstinence, multilateral development banks and donors are re-engaging in hydropower development as a step towards promoting low-carbon strategies. The studies collected in this book show that the

environmental and social downsides of hydropower are yet to be adequately addressed and managed. And they show that there is some evidence of policy-learning in dam-related policies that might offer important hints for future dam projects.

We are grateful to the German Federal Ministry for Economic Cooperation and Development for financing the research project and sharing their expertise with us. We also thank the staff of Sektorvorhaben Sustainable Hydropower, with whom it has been a pleasure to cooperate.

Bonn

Ines Dombrowsky

Acknowledgments

Narmada, Belo Monte, Atatürk, Three Gorges, to mention but a few names, have brought us—the editors and authors of this book—together. They are the names of large hydroelectric and multipurpose dams—constructions that, like no others, have led to heated debates. In times of climate change, hydropower and reservoir storage have become a dominant discourse in many developing and emerging countries. However, for their opponents, large dams symbolise the wrongs of modernisation. The World Commission on Dams was unable to bridge these differences. It was perhaps naive to believe that this might be possible. However, the WCD has had a lasting effect on the international debate about hydropower and has set high standards for future projects. Yet, again, it would be naive to believe that these standards would simply diffuse and be unequivocally accepted by decision-makers around the world.

Trying to understand the political complexities of—and complex processes in—our countries, and the factors and actors that drive change towards environmentally and socially friendly dams, was a profound and lively learning process for all of us. It allowed us to draw from the many years of experience and knowledge we had gained through field studies and scholarships in the countries concerned and elsewhere.

However, in developing the overall research framework and in realising the studies, we were not only supported financially and logistically by our own institutions—the German Development Institute in Bonn and the University of Northumbria, UK—but by the German Federal Ministry for Economic Cooperation and Development, namely Christoph Merdes, whom we thank for his enormous commitment and active involvement. The staff of the Sektorvorhaben “Policy Advice for Sustainable Hydropower” always provided kind and efficient assistance (Kirsten Nyman, Ana Bucharova, Cathleen Seeger, Michael Fink, Alejandro Garcia). We are grateful to our academic colleagues and appreciate very much their contributions to finding solutions for methodological challenges: Volkmar Hartje (Technische Universität Berlin), Imme Scholz (German Development Institute), Klaus Dingwerth (University of Bremen), Christoph Humrich (Peace Research Institute Frankfurt/Main), Peter P. Mollinga (School of Oriental and African Studies, London, and Centre for Development Research, Bonn), Esther Doehrendahl (Wuppertal Institute for Climate, Environment and Energy), Aysegül Kibaroglu (Okan University Istanbul), Vakur Sümer (Selçuk University

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Last, but not least, we would like to thank all those—not listed here but in the respective chapters—who helped in realising our studies and in editing the book.

Abbreviations

AAI	Avaliação Ambiental Integrada (Integrated Environmental Evaluation, Brazil)
AASU	All Assam Students Union, India
ADB	Asian Development Bank
AIMSU	All Idu Mishmi Student Union, India
AKP	Adalet ve Kalkinma Partisi (Justice and Development Party, Turkey)
ANA	Agência Nacional das Águas (Regulatory Water Agency, Brazil)
ANEEL	Agência Nacional de Energia Elétrica (Electricity Regulatory Agency, Brazil)
BCM	Billion cubic metre
BMU	Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (Ministry for Environment, Nature Conservation and Nuclear Safety, Germany)
BMZ	Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (Federal Ministry for Economic Cooperation and Development, Germany)
BNDES	Banco Nacional de Desenvolvimento Econômico e Social (National Bank for Economic and Social Development, Brazil)
BOO	Build-Own-Operate
BOT	Build-Operate-Transfer
CAO	Compliance Advisor Ombudsman
CCPY	Comissão Pró-Yanomami (Pro-Yanomami Commission, Brazil)
CDM	Clean Development Mechanism
CDU	Christlich Demokratische Union Deutschland (Christian Democratic Union, Germany)
CEA	Central Electricity Authority
CEIA	Cumulative Environmental Impact Assessment
CEO	Chief Executive Officer
CETIC	China Electric Power Technology Import and Export Corporation
CF/88	Constituição Federal de 1988 (Federal Constitution of 1988, Brazil)
CIDA	Canadian International Development Agency

CIMI	Conselho Indigenista Missionário (Indigenous Missionary Council, Brazil)
CIRR	Commercial Interest Reference Rate
CNPE	Conselho Nacional de Política Energética (National Council for Energy Policy, Brazil)
COIAB	Coordenação das Organizações Indígenas da Amazônia Brasileira (Coordination of Indigenous Organisations of the Brazilian Amazon, Brazil)
CONAMA	Conselho Nacional do Meio Ambiente (National Council on the Environment, Brazil)
CPFL	Companhia Paulista de Força e Luz (name of a company, Brazil)
CPPCC	Chinese People's Political Consultative Conference
CPPT	Centro de Pesquisas de Populações Tradicionais Cuniã (Research Center for the Cuniã Traditional Populations, Brazil)
CTF	Clean Technology Fund
DDP	Dams and Development Project
DEG	Deutsche Investitions- und Entwicklungsgesellschaft (German Investment and Development Company)
DIE	Deutsches Institut für Entwicklungspolitik (German Development Institute)
DSI	Devlet Su Isleri (Turkish State Hydraulic Works)
DUP	Declaração de Utilidade Pública (Declaration of Public Utility, Brazil)
ECA	Export Credit Agency
ECHR	European Convention on Human Rights
EFT	Environment Foundation of Turkey
EIA	Environmental Impact Assessment
EIE	Elektrik Isleri Etut Idaresi (Electrical Power Resources Survey and Development Administration, Turkey)
EMRA	Energy Market Regulatory Authority
Eneram	Comitê Coordenador dos Estudos Energéticos da Amazônia (Committee of Power Studies of the Amazon Region, Brazil)
EPC	Engineering, Procurement and Construction
EPE	Empresa de Pesquisa Energética (Energy Research Company, Brazil)
EPFI	Equator Principles Financial Institutions
ERM	Environmental Resources Management
ESI	Electricity Supply Industry
ESIA	Environmental and Social Impact Assessment
ESMAP	Energy Sector Management Assistance Program
EU WFD	European Union Water Framework Directive
EU	European Union
FoE	Friends of the Earth
FUNAI	Fundação Nacional do Índio (National Indian Foundation, Brazil)

GAP	Guneydogu Anadolu Projesi (South-Eastern Anatolia Project, Turkey)
GAP RDA	GAP Regional Development Administration
GDP	Gross Domestic Product
GDRS	General Directorate for Rural Services
GfbV	Gesellschaft für bedrohte Völker (Society for Threatened Peoples, Germany)
GH¢	Ghana Cedis
GIZ	Gesellschaft für Internationale Zusammenarbeit (German Society for International Cooperation)
GoI	Government of India
GTI	Grupo de Trabalho Interministerial (interministerial working group, Brazil)
GW	Gigawatt
GWh	Gigawatt hour
HPP	Hydroelectric Power Plant
HSAP	Hydropower Sustainability Assessment Forum
HSAP	Hydropower Sustainability Assessment Protocol
IADB	Inter-American Development Bank
IBAMA	Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (Brazilian Institute for the Environment and Natural Renewable Resources)
IBRD	International Bank for Reconstruction and Development
ICLS	Idu Cultural Literary Society, India
ICOLD	International Commission of Large Dams
IFC	International Finance Corporation
IHA	International Hydropower Association
IHA-HSAP	IHA-Hydropower Sustainability Assessment Forum
IIRSA	Iniciativa para la Integración de la Infraestructura Regional Suramericana (South American Regional Infrastructure Integration Initiative)
INPA	Instituto Nacional de Pesquisas da Amazônia (Amazonian National Research Institute, Brazil)
IPHAN	Instituto do Patrimônio Histórico e Artístico Nacional (National Institute of Historical and Artistic Heritage, Brazil)
IPK	Information Point Kurdistan
IPPNW	International Physicians for the Prevention of Nuclear War
IR	International Rivers
ISO	International Organization for Standardization
IUCN	International Union for Conservation of Nature
IWMI	International Water Management Institute
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)
KHRP	Kurdish Human Rights Project
km ²	Square kilometre
kV	Kilovolt

kW	Kilowatt
kWh	Kilowatt hour
LSP	Lower Subansiri Project, India
m	Metre
MAB	Movimento dos Atingidos por Barragens (Movement of Dam Affected People, Brazil)
MCM	Million cubic metre
MEF	Ministry of Environment and Forestry, Turkey
MMA	Ministério do Meio Ambiente (Ministry of Environment, Brazil)
MME	Ministério de Minas e Energia (Ministry of Mines and Energy, Brazil)
MoEF	Ministry of Environment and Forestry, India
MoU	Memorandum of Understanding
MPWS	Ministry of Public Works and Settlement
MRC-GTZ	Office of the German Development Cooperation in the Mekong River Commission (GTZ, since January 2011 GIZ)
MST	Movimento dos Trabalhadores Rurais Sem Terra (Landless Workers Movement, Brazil)
MW	Megawatt
NABU	Naturschutzbund Deutschland (the German section of Birdlife International)
NCIWRD	National Commission for Integrated Water Resource Development, India
NDRC	National Development and Reform Commission, China
NGO	Non-governmental organisation
NHPC	National Hydroelectric Power Corporation
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
OMS	Operational Manual Statement
PBA	Plano Básico Ambiental (Basic Environmental Plan, Brazil)
PDEE	Plano Decenal de Expansão de Energia (10-Year Energy Expansion Plan, Brazil)
PMSBV	People's Movement for Subansiri Brahmaputra Valley, India
PND	Programa Nacional de Desestatização (National Privatisation Programme, Brazil)
PNE	Plano Nacional de Energia (National Energy Plan, Brazil)
PNMA	Política Nacional de Meio Ambiente (Brazilian Environmental Policy)
PPA	Power Purchase Agreements
R\$	Brazilian Real
RAP	Resettlement Action Plan
RBC	Review Board of Consultants
RESEB	Reestruturação do Setor Elétrico Brasileiro (Restructuring the Brazilian Electricity Supply Industry)
RETA	Regional Technical Assistance

RIMA	Relatório de Impacto Ambiental (Environmental Impact Report, Brazil)
RPF	Resettlement Planning Framework
RVC	Rural Volunteers Centre, India
SEA	Strategic Environmental Assessment
SISNAMA	Sistema Nacional de Meio Ambiente (National Environmental System, Brazil)
SPD	Sozialdemokratische Partei Deutschland (Social Democratic Party, Germany)
SPO	State Planning Organisation, Turkey
TA	Technical Assistance
TAC	Termo de Ajuste de Conduta (Protocol for Adjustment of Public Conduct)
TAN	Transnational Advocacy Network
TEMA	Türkiye Erozyonla Mücadele, Ağaçlandırmaya ve Doğal Varlıkları Koruma Vakfı (Turkish Foundation for Erosion Control, Afforestation and Nature Protection)
TICO	Takoradi International Company
TMMOB—	Türk Mühendis ve Mimar Odaları Birliği—Çevre Mühendisliği
CMO	Odası (Union of Chambers of Turkish Engineers and Architects—Chamber of Environment Engineers)
TNC	The Nature Conservancy
TOOR	Transfer of Operating Rights
ToR	Terms of Reference
TSKB	Türkiye İsmail Kalkınma Bankası (Industrial Development Bank of Turkey)
TUSEV	Türkiye Üçüncü Sektör Vakfı (Third Sector Foundation of Turkey)
UHE	Usina Hidrelétrica (Hydropower plant)
UN	United Nations
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
US\$	United States Dollar
VBDF	Volta Basin Development Foundation
VMT	Verba de Manutenção Temporária (Temporary Maintenance Allowance, Brazil)
WCD	World Commission on Dams
WEED	World Economy, Ecology and Development
WFD	Water Framework Directive
WWC	World Water Council
WWF	World Wide Fund for Nature
YXK	Yekîtiya Xwendekarên Kurdistan (Kurdish Students Association)
ZKB	Züricher Kantonalbank (Cantonal Bank of Zurich)

About the Editors

Waltina Scheumann holds her master's in Political Science and a Ph.D. in engineering. She has been a faculty member of the Environmental and Land Economics chair at Technical University of Berlin, and later worked as senior researcher at the Helmholtz Centre for Environmental Research (UFZ), Leipzig. She is presently employed with the German Development Institute (DIE) in Bonn. Her work on water-related topics includes cooperation on transboundary waters and cross-sectoral coordination of the water and energy sectors; governance issues in irrigated agriculture, including drainage; and the water rights implications of large-scale land acquisitions.

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