GLOBALIZATION OF WATER GOVERNANCE IN SOUTH ASIA

EDITORS
Vishal Narain
Chanda Gurung Goodrich
Jayati Chourey
Anjal Prakash



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This volume is part of the four-volume box set Water Resource Management in South Asia.

List of Abbreviations

ADB Asian Development Bank AGM Additional General Manager

AMC Ahmedabad Municipal Corporation

BIWTA Bangladesh Inland Water Transport Authority

BOD Biochemical Oxygen Demand BOT Build, Operate, and Transfer

BWDB Bangladesh Water Development Board

CBINRM Community Based Integrated Natural Resource

Management

CBOs Community Based Organizations
CBRs Conduct of Business Regulations

CCCIM Central Co-ordination Committee in Irrigation

Management

CDO Chief District Officer

CFUG Community Forest User Group

CRC Convention on the Rights of the Child

CWRM Comprehensive Water Resources Management CWSSP Community Water Supply and Sanitation Project

DAC District Agricultural Committees

DANIDA Danish International Developmental Agency

DAO District Administration Office

DC Distributary Canal
DCC Dhaka City Corporation

DCC District Co-ordinating Committee
DDC District Development Committee
DEC District Environmental Committees
DLRS Directorate of Land Records and Survey

DoE Department of Environment

DOH Department of Health

DvCC Divisional Co-ordinating Committee
DWRC District Water Resources Committee

ETP Effluent Treatment Plant FCGs Field Canal Groups FOs Farmers Organizations FUG Forest User Group

GBWSSB Greater Bangalore Water Supply and Sewerage

Project

GDP Gross Domestic Product
GNH Gross National Happiness
GNP Gross National Product
GR Government Resolution
GTZ German Technical Assistance
GWP Global Water Partnership
HP High Power Committee

IDRC International Development Research Center

IFIs International Financial Institutions
IMD Irrigation Management Division

INMAS Integrated Management of Irrigation Agricultural

Settlements

IPS Intermediate Pumping Station
IRA Independent Regulatory Authority
ISWP Integrated State Water Plan

ITDG Intermediate Technology Development Group
IWMI International Water Management Institute
IWRM Integrated Water Resources Management
JBIC Japan Bank for International Co-operation

JE Junior Engineer

JVP Janatha Vimukthi Peramuna

KCWSAEIP Kandy City Water Supply Augmentation and

Environmental Improvement Project

KMC Kandy Municipal Corporation
KNNL Karnataka Neerawari Nigam Limited
KUKL Kathmandu Upatyaka Khanepani Limited
KUWSDB Karnataka Urban Water Supply and Drainage

Board

KUWSSC Karnataka Urban Water Supply and Sanitation

Council

KWRA Karnataka Water Resources Authority

LA Local Authorities
LIG Low Income Group

MARI Modern Architects of Rural India MASL Mahaweli Authority of Sri Lanka

MC Management Committee

MDGs Millennium Development Goals

MGDP Mahaweli Ganga Development Project MKVDC Maharashtra Krishna Valley Development

Corporation

MLD Million Liters Per Day

Ministry of Environment and Forests MoEF

Multi-Stakeholders' Processes MSPs

MWRRA Maharashtra Water Resources Regulatory

Authority

Ministry of Water Supply and Drainage MWSD

MWSS Mini Water Supply Schemes

National Commission for Women and Children NCWC ND-BOT Nira Deoghar Project on Build Operate and

Transfer

NEC National Environment Commission NGO Non Governmental Organization

NGOFUS Non Governmental Organizations Forum for

Urban Sanitation

NSSC Neighborhood Society Service Center National Women's Association of Bhutan NWAB

National Water Plan NWP

Nepal Water Suply Corporation NWSC

NWSDB National Water Supply and Drainage Board National Water Supply and Sanitation Steering NWSSSC

Committee

O&M Operation and Maintenance OBC Other Backward Caste

PCC Provincial Cooordination Committee PIM Participatory Irrigation Management PMC Project Management Committee

PO Partner Organization PPP Public-Private Partnership PUP Public-Public Partnership

RAJUK Rajdhani Unnayan Kartripakkha

Regional Support Centers RSCs

RSPN Royal Society for Protection of Nature

RTI Right to Information RWH Rainwater Harvesting

Rural Water Supply and Sanitation RWS&S

South Asia Consortium for Interdisciplinary Water SaciWATERs

Resources Studies

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SEI Stockholm Environment Institute

SLR Sri Lankan Rupees

SSCWSS Small Scale Community Water Supply System
STWSSS Small Town Water Supply and Sanitation Scheme
TAP Transparency, Accountability, and Participation

TDF Town Development Fund
TNC Transnational Corporation

TWSSP Third Water Supply and Sanitation Project

ULBs Urban Local Bodies

UNDP United Nations Development Programme
UPWMRC Uttar Pradesh Water Management Regulatory

Commission

VDC Village Development Committee VWSC Village Water & Sanitation Committee

WB World Bank

WRC Water Resources Council

WRDO Water Resources Development Organisation

WRS Water Resources Secretariat WRS Water Resources Strategy

WSSD World Summit on Sustainable Development

WUAs Water Users Associations YDF Youth Development Fund

Foreword

This book is part of the "crossing boundaries" project, an effort by the South Asian Consortium for Interdisciplinary Water Resources Studies (SaciWATERs) to contribute to the on-going paradigm shift in water resources management in South Asia. The "wicked problem" of water, which does not allow an easy definition let alone subsequent trouble-free, linear resolution, has also been described as an enigmatic messy problem in its and/and nature as opposed to either/or of most other substances of importance to human societies (Moss 2009). It is solid and liquid and gas; life-giving and death-delivering; a natural good and a social good and an economic good, often all of that at the same time and place, while being a cause of both co-operation and strife. This complex nature means that water issues cannot be solved by the binary either/or rock logic of bureaucratic proceduralism alone but demand more flexible fuzzy logic accommodating contradictory certitudes.

Recent decades have seen several shifts in the previously unchallenged "hydraulic missions" of government agencies (or hydrocracies) tasked with harnessing rivers and "developing" water resources within their boundaries. First, the gap between government and governance has widened with actors other than state agency hydrocrats, such as environmentalists and social activists, demanding that they be both heard and responded to. These actors are bringing into the discourse issues important to holistic and healthy water management that had been conveniently filtered out or swept under the carpet by single-mission, constructionfocused hydrocracies. Second, governments are discovering that they are neither capable of mobilizing the massive capital required for water projects nor, if they do manage the capital, does their procedural fetishism leave much room for high efficiency demanded by the inexorable logic of such capital. This has opened the space for the private sector's entry into the water realm and the political acceptability of "public-private partnership." Third, the increasingly significant role played by multilateral development agencies, transnational corporations and non-government organizations has served to challenge the hegemonic sway of hydrocracies.

Until quite recently, water management was seen as the exclusive domain of technical experts working under the auspices of the state. Currently, however, participatory management with multiple stakeholders has gained increasing importance. Indeed, a World Commission on Dams was constituted (in 1998) by major players in the field to see what common ground could be found in the controversy surround the building of large dams around the world. Ten years after the Commission presented its report, the issues of controversy have not gone away, but the understanding of their complexities has been deepened (Moore et al. 2010). The notion of government as the only decision-making authority has been replaced by multi-scale, polycentric governance: it recognizes a large number of stakeholders coming from different styles of organizing with varied perceptions of what the problem itself is, what the risks are and who should bear them, as well as what solutions might be acceptable. Thus, collaborative governance with constructive engagement between divergent views is considered to be more appropriate for integrated and adaptive management regimes needed to cope with the complexity of social-ecological systems (Gyawali 2009).

At many levels, these trends have been interpreted as eroding the dominance of hydrocracies in their monochrome and unchallenged policy space. It has constricted the room for government agencies to maneuver in several areas of public policy formulation that impinge on water management. The WEHAB agenda and the urge to accomplish the MDGs have led to the creation, at the highest level of global governance, of new partnerships across the countries involving a wide range of different actors. The spread of democracy across the globe, on the one hand, and the growth of private enterprise, on the other, both pose new challenges for governance processes. In the water sector, the global environmental crisis, growing poverty in urban and rural areas, continued gender inequalities, and transboundary impasse in collaboration (among other issues) all point to the need for a different governance approach to water use and management. Multi-stakeholder platforms, wherever they have been established and practiced, while not providing magic bullet solutions, have, however, helped in the process of constructive engagement-"negotiations" in shortby providing the forum where the views of the "other side" can both be heard and responded to (Dore et al. 2010). As a result of such

developments, water (and other natural resources) management has been undergoing major paradigm shifts that may be the harbinger of more healthy and less conflict-ridden developments in the future.

All these developments and challenges have led academicians and practitioners all over the world to express increasing concerns over the inadequacy of current measures of universal economic performance, in particular those based on GDP figures. The concern is about the relevance of these indicators as measures of societal and human well-being and equity as well as measures of economic, environmental, and social sustainability. Current well-being has to do with both economic resources, such as income, and with noneconomic aspects of peoples' life-what they can do, what they should do, and how they feel and value the natural environment they live in. Whether these levels of well-being can be sustained over time depends on whether stocks of capital that matter for our lives (natural, physical, human, social) are passed on to future generations in as good a shape, if not better, than how we ourselves have inherited them.2 The big question is-will South Asia make seminal contributions to this debate through indigenous approaches or will it simply follow and parrot concepts developed elsewhere?

Bhutan, where a conference was organized by SaciWATERs in May 2010, which has led to the chapters in this book, stands out by its introducing the concept of "Gross National Happiness" (GNH) into the global discourse. It may have many operational difficulties, but it certainly is a paradigm challenge that has to be engaged with constructively, especially by those in South Asia. As far as water is concerned, South Asia's civic movements are rich in new explorations, which have crossed many boundaries, not just the political and administrative but also conceptual and disciplinary. They have allowed us to see the "social construction" of water by different social solidarities or stakeholders, the implications they have for the choice of variegated water technologies ranging from age-old traditional to modern industrial, and the plural perceptions of risk and equity that have guided their invention as well as use and adaptation.

The Arun and Mahakali debates in Nepal, those of Tehri and Narmada in India, Eppawala in Sri Lanka, flood action plan in Bangladesh or the Kalabagh in Pakistan have all deepened our understanding of the perils of the unbridled hydraulic mission paradigm and the reflexive discourse on modernity demanded by our times (Gyawali et al. 2006). And it is not that there are no success stories in our neighborhood to build on. Alternative thinking on water management in Calcutta has shown how urban wastewater can be cleaned and the nutrients harvested through algae and fisheries before they are lost to the sea. Water harvesting and restoration of traditional tanks in the dry parts of western India have been inspirational measures. Those who worked to restore ponds in the mid-hills of the Nepal Himalayas found, to their surprise, that these measures also prevented landslides from growing, increased maize production with the increase in soil moisture, and gave extra weeks of life to mountain springs, thus reducing water stress for people and livestock alike.

This book is both a marker and a continuing journey by the collegiums of South Asia and beyond engaged with SaciWATERs. The Thimpu conference in May 2010 focused on the implications of the trends and shifts in water management of this region under the globalization process and asked the question: how are these trends changing water management practices, ownership and access? How are water management policies being reformulated? What roles have international and multilateral institutions played in influencing the direction and content of water sector reform processes? What room do governments have to maneuver vis-a-vis the international political and economic order in the management of their reform processes? How is the growth of private enterprise influencing access to water? And finally, what are the implications of these trends for human and societal well-being? The workshop was attended by about 50 researchers, academicians, practitioners and students from South Asian countries. Of the 25 papers presented at the conference, seventeen appear in this volume following a rigorous peer review process and the incorporation of the debates at the workshop.

I am confident that this book will provide a new searchlight on the path ahead and contribute to the public debate around the democratization of water governance in South Asia.

> Dipak Gyawali Academician, Nepal Academy of Science and Technology Former Minister of Water Resources Kathmandu

Notes

- UN Secretary-General Kofi Annan proposed at the Johannesburg World Summit on Sustainable Development (WSSD) in 2002 five key areas for particular focus—Water, Energy, Health, Agriculture and Biodiversity (WEHAB). Available at http://esl.jrc.ec.europa.eu/dc/ wehab/WEHAB_Indicators.htm (accessed May 2, 2013).
- Report by the Commission on the Measurement of Economic Performance and Social Progress. Available at http://www.stiglitz-senfitoussi.fr/en/index.htm (accessed May 2, 2013).

References

- Dore, J., J. Robinson and M. Smith. 2010. "Negotiate: Reaching Agreements over Water," Gland: IUCN, Water and Nature Initiative. Available at http://data.iucn.org/dbtw-wpd/edocs/2010-006.pdf (accessed May 2, 2013).
- Gyawali, D. 2009. "Pluralized Water Policy Terrain = Sustainability and Integration," SAWAS, 1(2): 193–199. Available at http://www. sawasjournal.org/templates/sawas/images/PluralizedWaterPolicy Terrain.pdf (accessed May 2, 2013).
- Gyawali, D., Allan, J.A. et al. 2006. "EU-INCO Water Research from FP4 to FP6 (1994-2006): A Critical Review." Luxembourg: Office for Official Publications of the European Communities. Available at http://ec.europa.eu/research/water-initiative/pdf/incowater_fp4fp6_rapport_technique_en.pdf (accessed May 2, 2013).
- Moore, D., J. Dore and D. Gyawali. 2010. "The World Commission on Dams + 10: Revisiting the Large Dam Controversy," *Water Alternatives*, 3(2): 3–13. Available at http://www.water-alternatives.org/index.php?option=com_content&task=view&id=139&Itemid=1 (accessed May 2, 2013).
- Moss, J. 2009. "Water Ethics and Business," in M.R, Llamas, L. Martinez-Cortina and A. Mukherji (eds) *Water Ethics*. London: CRC Press, Taylor and Francis Group.

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