

**Can Reflexive Governance deliver Integrated Water Resources Management outcomes  
in Bangladesh?**

Md. Nazrul Islam  
Masters of Social Sciences in Economics, University of Dhaka

Australian Centre for Agriculture and Law  
University of New England, Armidale, New South Wales Australia

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## **ABSTRACT**

The Integrated Water Resources Management (IWRM) is a continuous process which has emerged as an international policy discourse to address the issue of sustainable water development and management. There is also criticism over the excessive emphasis on the usage of the terminology 'IWRM'. Despite criticism, it is argued by many that IWRM could be a way forward to tackle the crisis of water management. The objective of this thesis is to find a 'reflexive solution' to overcome the obstacles in implementing the Integrated Water Resources Management (IWRM) principles in Bangladesh using a multi-disciplinary management approach. The findings of the study may be useful for Bangladesh as well other countries to progress implementation of IWRM principles.

The practical implementation of IWRM espoused by the Global Water Partnership (GWP) and many others would be difficult in many countries including Bangladesh with the existing structure of the governance of the water resource management. IWRM concepts encompass social, political, economic, environmental and cultural aspects of water, land and the community. Implementation of the principles of IWRM in countries like Bangladesh needs a 'reflexive approach' and would face political and resource constraint challenges. It is widely perceived that integration of IWRM principles is possible through reflexive and adaptive water institutions with a multi-disciplinary approach. It is difficult to implement IWRM based on the foundation of 'less integrated' and certainly less 'reflexive' structure for water resources policy planning and management.

The research question has been put forward as 'Can 'reflexive governance' help deliver IWRM outcomes in Bangladesh?' Few hypotheses are tested surrounding the research question. To find out the answers, a 'water governance approach' is proposed with integration of all necessary elements such as sustainability, institutions, critical factors and international dimensions that affect IWRM in the context of Bangladesh to implement IWRM. A literature survey on IWRM is done; thereafter a short research survey has been carried out using case study, focus group and semi-structured interview methods in Bangladesh which is presented in the thesis. A comparative analysis is made between Australia and India in the area of water policy and governance. Bangladesh water sector analysis is also presented. All these have been done to test the 'water governance approach' proposed in the thesis and finally a revised 'water governance approach' is presented in the thesis.

The research has been designed and implemented with a focus on an applied outcome to provide specific advice on the institutional or governance arrangements with the potential to underpin IWRM implementations in countries, such as Bangladesh. This study finds that the proposed 'water governance approach' would be an appropriate 'reflexive water governance structure' for Bangladesh. This study also suggests that a few additional elements need to be incorporated which are 'Political Will', 'Integrated River Basin Management (IRBM)' and 'Local Government Institutions'.

## **CERTIFICATION**

I certify that the substance of this thesis has not already been submitted for any degree and is not currently being submitted for any other degree or qualification.

I certify that any help received in preparing this thesis, and all sources used, have been acknowledged in this thesis.



Md. Nazrūl Islam

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## *DEDICATION*

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## **ABBREVIATIONS AND ACRONYMS**

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AgLaw- Australian Centre for Agriculture and Law  
BADC-Bangladesh Agricultural Development Corporation  
BIWTA-Bangladesh Inland Water Transport Authority  
BMDA-Bangladesh Maritime Development Authority  
BRDB-Bangladesh Rural Development Board  
BWDB-Bangladesh Water Development Board  
CAZRI-Central Arid Zone Research Institute  
CEEWPR – Centre for Ecological Economics and Water policy Research  
CEGIS-Centre for Environmental and Geographic Information Services  
CRIDA-Central Research Institute for Dryland Agriculture  
CSWSRTI-Central Soil and Water Conservation Research and Training Institute  
DPAP-Drought Prone Area Programme  
DDP-Desert Development Programme  
DOC-Department of Communication  
DOE-Department of Environment  
DOF-Department of Fisheries  
DLS-Department of Livestock Services  
EE – Ecological Economics  
FD-Forest Department  
GDP – Gross Domestic Product  
GOB-Government of Bangladesh  
GWP – Global Water Partnership  
ICM – Integrated Catchment Management  
IRBM – Integrated River Basin Management  
IWM-Institute of Water Modeling  
IWRA – International Water Resources Association  
IWRM – Integrated Water Resources Management  
LGED-Local Government Engineering Department  
LGI-Local Government Institute  
MDG – Millennium Development Goals  
MOL-Ministry of Labour  
MoWR-Ministry of Water Resources  
NGO – Non-Governmental Organizations  
NWDPRA-National Watershed Development Project for Rainfed Areas  
RBM – River Basin Management  
TEC - Technical Committee  
UN – United Nations  
WMA-Water Management Association  
WMG-Water Management Groups  
WMO-Water Management Organisations  
WSSD – World Summit on Sustainable Development  
WWC – World Water Council

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