South Asia supports a quarter of the world population with one twentieth of the world's annual renewable water resources. Disparities in water availability and use are made worse by widespread poverty: one in three South Asians lives on less than one US Dollar a day. These 500 million people, or half of the world's poor, eke out a living on the region's land and water resources. Region's major river basins are already under considerable pressure from human numbers and economic activities. The big challenge is to manage water resources for maximum benefits - including providing safe drinking water and adequate sanitation, growing food, and producing electricity - while minimizing the risks of floods and water shortages, water logging, water pollution, and ecosystem degradation. As human numbers rise, and the volume of water per person goes down, tensions over water allocation among use sectors and between human and nature would increase. This is especially critical for several key South Asian rivers that cross political borders. Climate change is set to make South Asian water challenges even more complicated. The results can be devastating to the people and nations of South Asia especially the poor already living on the edge of survival.

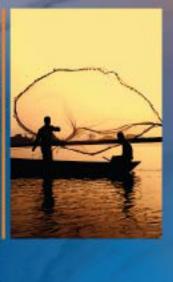
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Vulnerability Assessment of Freshwater Resources to Environmental Change







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United Nations Environment Programme

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ISBN: 978-92-807-2949-8 JOB No.: DEW/1102/BA

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Vulnerability Assessment of Freshwater Resources to Environmental Change

Ganges-Brahmaputra-Meghna River Basin Helmand River Basin Indus River Basin

Mukand S. Babel Shahriar M. Wahid





Acknowledgements

This study was supported by the United Nations Environment Programme (UNEP), with funding from the Belgian Government through the Belgian Development Cooperation. Special thanks are due to Jinhua Zhang, Salif Diop and Patrick M'mayi from UNEP, for their valuable assistance and guidance in the overall formulation and implementation of the study. We appreciate the thoughtfulness and active input of these individuals.

The contributions of the following individuals from the Asian Institute of Technology are gratefully acknowledged: Ashim Das Gupta, Aldrin A. Rivas, Dominica del Mundo Dacera, Devesh Sharma, Noor M. Khan, Md. Reaz Akter Mullick, Shahzad M. Khan Khattak, Leena Divakar and Siriporn Tunsrinukun.

Thanks are due to the following experts who reviewed the report, and provided invaluable information and feedback: Prof. Mohammad Hassan Hamid (Afghanistan), Dr. Atiq Rahman (Bangladesh), Prof. M. Fazlul Bari (Bangladesh), Dr. B. S. Choudri (India), Prof. P. P. Mujumdar (India), Prof. Umamahesh V. Nanduri (India), Dr. Mehdi Sabzevari (Iran), Mr. Ajaya Dixit (Nepal), Ms. Meera Joshi (Nepal), Mr. Sardar Muhammad Tariq (Pakistan), Dr. Muhammad Siddique (Pakistan), Dr. Yi Huang (China), and Ms. Saikhanjargal Davag-Ochir (Mongolia).

We are also indebted to numerous organizations that provided data and information used in this report. These include the Bangladesh Centre for Advanced Studies; Ministry of Water Resources, India; The Energy and Resources Institute, India; Tehran Regional Water Quality, Iran; Nepal Water Conservation Foundation; Ministry of Environment, Science and Technology, Nepal; Water and Power Development Authority, Pakistan; other universities, and public and private organizations in the region.

This report also utilizes data and information published by many other organizations. These sources are specified where appropriate in the text, as well as in the Reference.

Acronyms

ADB Asian Development Bank

AISDW Access to improved source of drinking water

AISF Access to improved sanitation facility

AIT Asian Institute of Technology

AQUASTAT FAO Information System on Water and

Agriculture

CIA Central Intelligence Agency

CV Coefficient of variation

DP Development pressures

DPSIR Driver, pressure, state, impact and response

EH Ecological health

FAO Food and Agriculture Organization

GBM Ganges-Brahmaputra-Meghna

GDP Gross Domestic Product

HDI Human Development Index

HDR Human Development Report

IWRM Integrated water resources management

MC Management challenges

MDG Millennium Development Goals

ODA Official Development Assistance

PPP Purchasing power parity

RS Resource stresses

SAARC South Asian Association for Regional

Cooperation

TDS Total dissolved solids

UN United Nations

UNDP United Nations Development Programme

UNEP United Nations Environment Programme

VI Vulnerability Index

WB World Bank

WR Water resources

WWDRII World Water Development Report II

Abbreviations and Symbols

BCM Billion cubic metres

ha Hectare

km² Square kilometres

kWh Kilowatt hours

MCM Million cubic metres

mg/L Milligram. litre⁻¹

mm Millimetres

MW Megawatts

m³ Cubic metres

Sq.km. Square kilometres

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