



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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FRESHWATER under THREAT SOUTH ASIA

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Vulnerability Assessment of Freshwater Resources to Environmental Change



United Nations Environment Programme

Asian Institute of Technology

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FRESHWATER under THREAT

S O U T H A S I A

Vulnerability Assessment of Freshwater Resources to Environmental Change

Ganges-Brahmaputra-Meghna River Basin

Helmand River Basin

Indus River Basin

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AIT

Asian Institute of Technology

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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
km ²	Square kilometres
kWh	Kilowatt hours
MCM	Million cubic metres
mg/L	Milligram. litre ⁻¹
mm	Millimetres
MW	Megawatts
m ³	Cubic metres
Sq.km.	Square kilometres

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