The Ganges Basin

Status and Challenges in Water, Environment and Livelihoods Dr. Luna Bharati Principal Scientist International Water Management Institute (IWMI)



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Ganges: Introduction

- The Ganges with over 500 million inhabitants is the most populous river basin in the world.
- It's total area is 1,086,000 square km and is shared between China, Nepal, India and Bangladesh
- The Ganga river is most known for it's cultural and spiritual significance





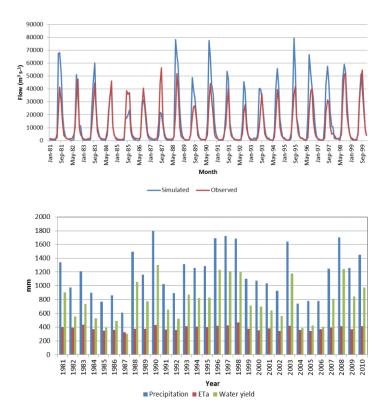


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Resource Assessment

- 1,200 billion cubic meters of precipitation fall in the basin and 600 billion cubic meters becomes stream flow.
- Water availability is highly seasonal (monsoon vs. dry season)
- Inter-annual variability is also high



 High spatial variability in water availability

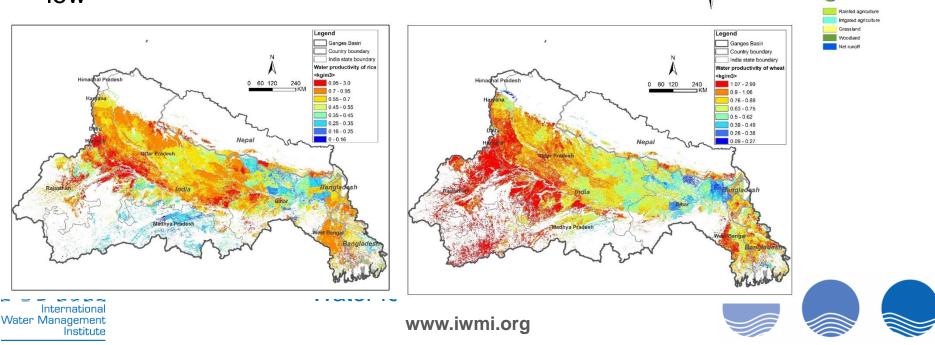


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Agriculture

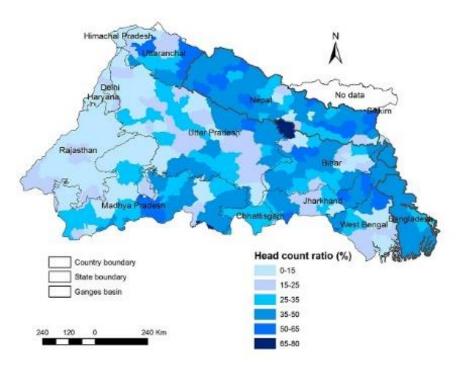
- Approx. 80% of water is used in agriculture
- Ag. systems vary in the highland, plains and Delta regions
- Crop and water productivity of most crops i.e rice, wheat, maize millets, pulses, oilseeds are low



Vater distribution. MCM/vi

Poverty

Income poverty in the Ganges River basin (GRB) has reduced considerably in the last two decades. However the basin is still one of the largest contiguous hotspot of poverty; 26% of the 600 million basin population is income poor, but 75% are multidimensional poor, depriving the basic human requirements of education, health and assets required for decent living.





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Institutions and Governance

- The way water policies and institutions are currently set up following a **fragmented and sectoral approach**, has resulted in poor coordination of planning and management at all levels, from local to transboundary.
- There is currently little cooperation both at regional and national levels. This in turn hinders attempts to develop water resources cooperatively across the Basin.
- Decisions concerning water allocation from major sources are often based on political interests, which do not take into account different types of water use. This can lead to ineffective water development strategy and inefficient resource use.



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Pollution

- Despite previous efforts to clean the river the main Ganga stream still directly receives at least 2.7 billion m³ of sewage from medium and big cities every day, of which at least 74% is untreated.
- Industrial effluents are in the range of 10-20% of the total volume of wastewater directly reaching the Ganga.
- The river is also impacted by non-point source pollution resulting from uncontrolled fecal sludge disposal, open defecation and agricultural pollution including livestock.







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Thank you



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