Periurban Water Security

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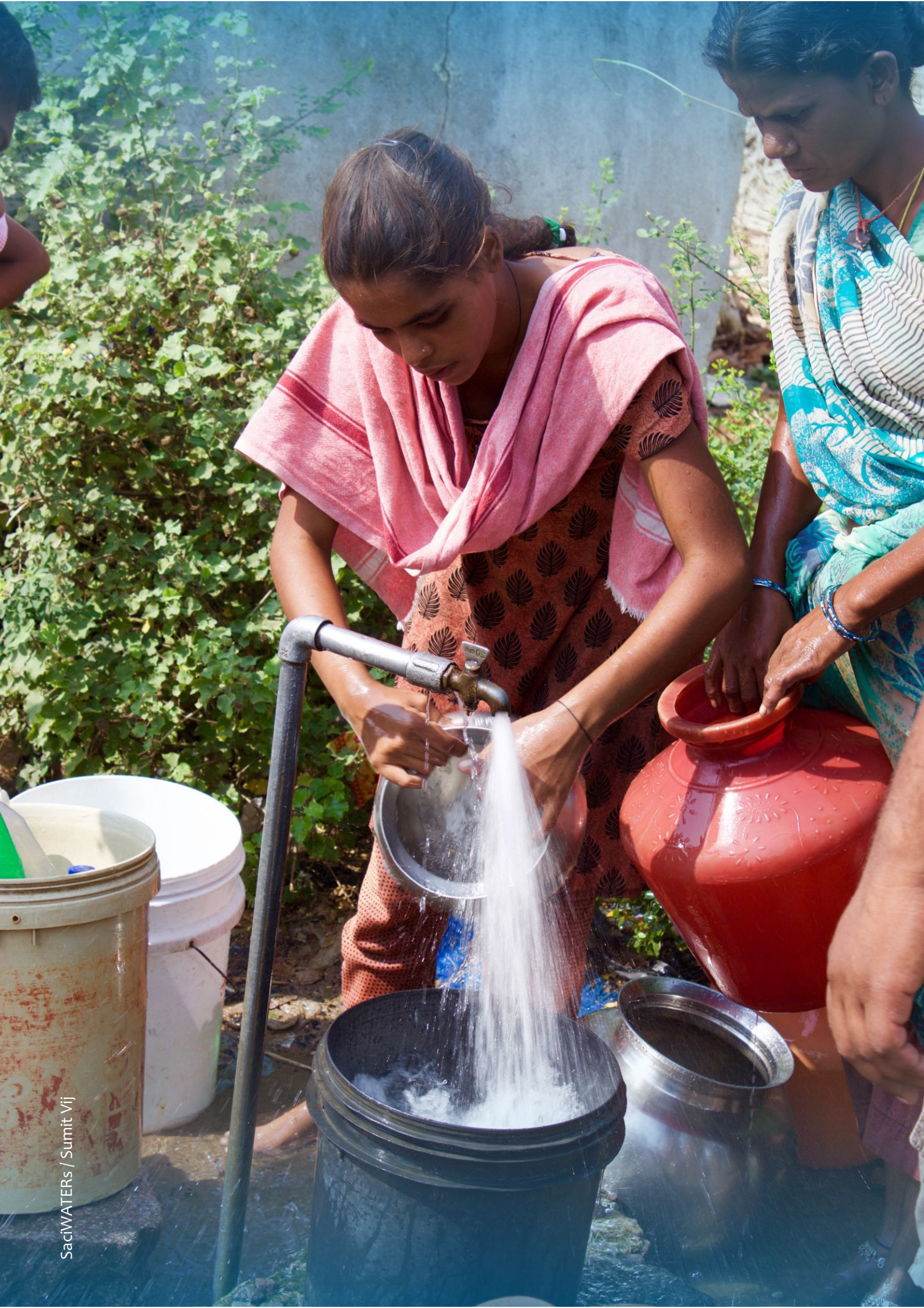
## Conflict and Cooperation over Natural Resources in Developing Countries (CoCooN)

## Conflict and Cooperation in the Management of Climate Change (CCMCC)

2014 – 2018

Funded by:

NWO
Netherlands Organisation for Scientific Research



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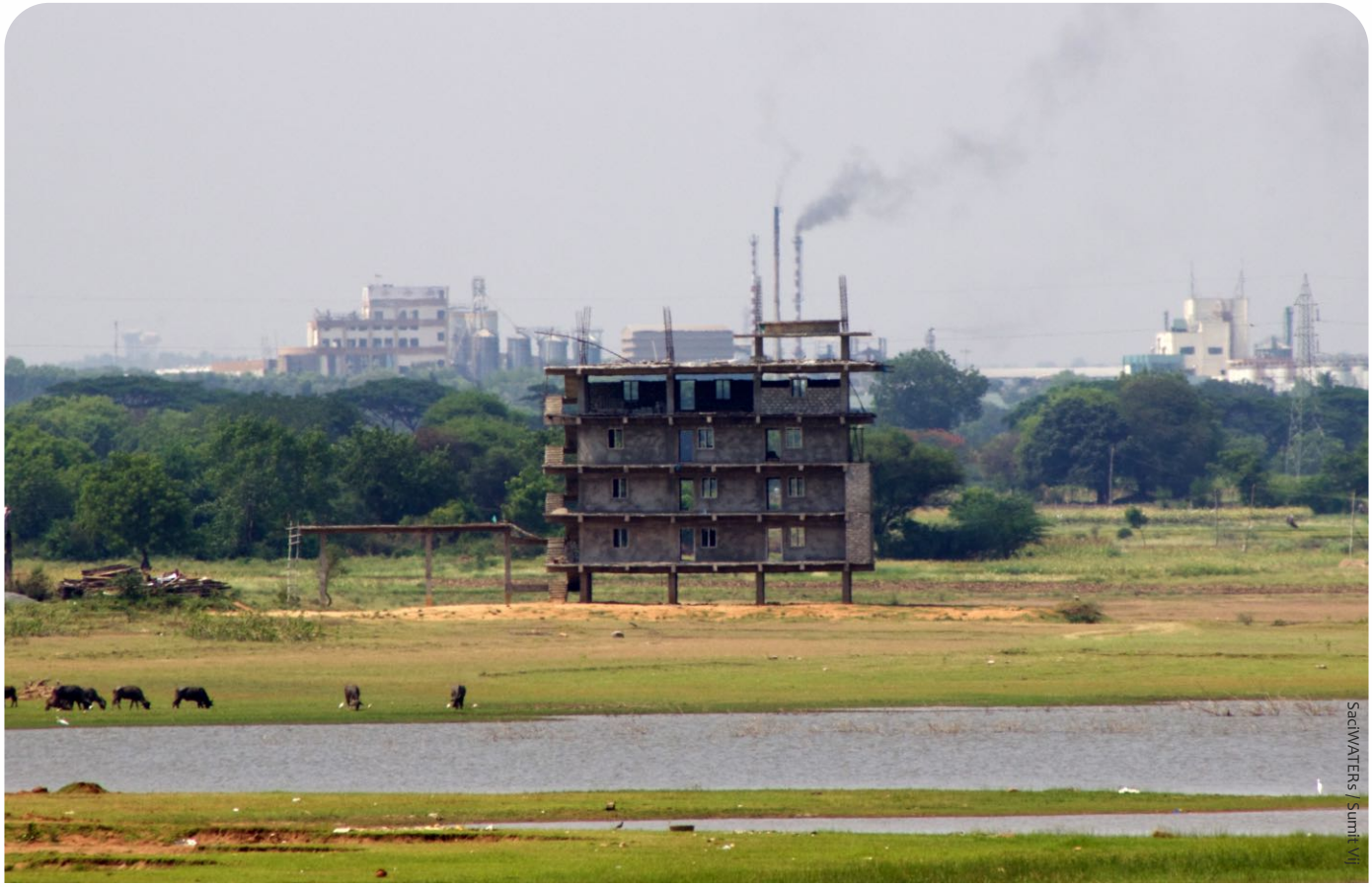



*A Peri-urban village in Hyderabad*

**While the dual impact of climate change and urbanization is increasingly felt in periurban areas across South Asia, a critical knowledge gap persists in understanding the processes that intensify water and land insecurity, and inequitable distribution of scarce natural resources in periurban spaces.**

## Overview:

A consortium of north-south institutions brings together experience, skills and know-how in research, capacity-building and knowledge generation in its project Climate Policy, Conflicts and Cooperation in Peri-Urban South Asia: Towards Resilient and Water Secure Communities. This four-year collaborative endeavor will cover four cities:

- Khulna, Bangladesh
- Kathmandu, Nepal
- Gurgaon and Hyderabad, India

The project will seek to fill two major knowledge gaps by researching:

- How urbanization and climate change interact in inducing water insecurity in specific settings, creating potential for conflict or even cooperation

- How current water, climate change and other relevant policies influence the potential for water-related cooperation and conflict

The research project aims to improve mutual learning, strengthen institutional and community capacities to optimally manage water insecurity, and bolster resilience. It also endeavors to support and empower communities to effectively use, manage and govern their water resources against a backdrop of water insecurity caused by climate change and urbanization.

## Objectives:

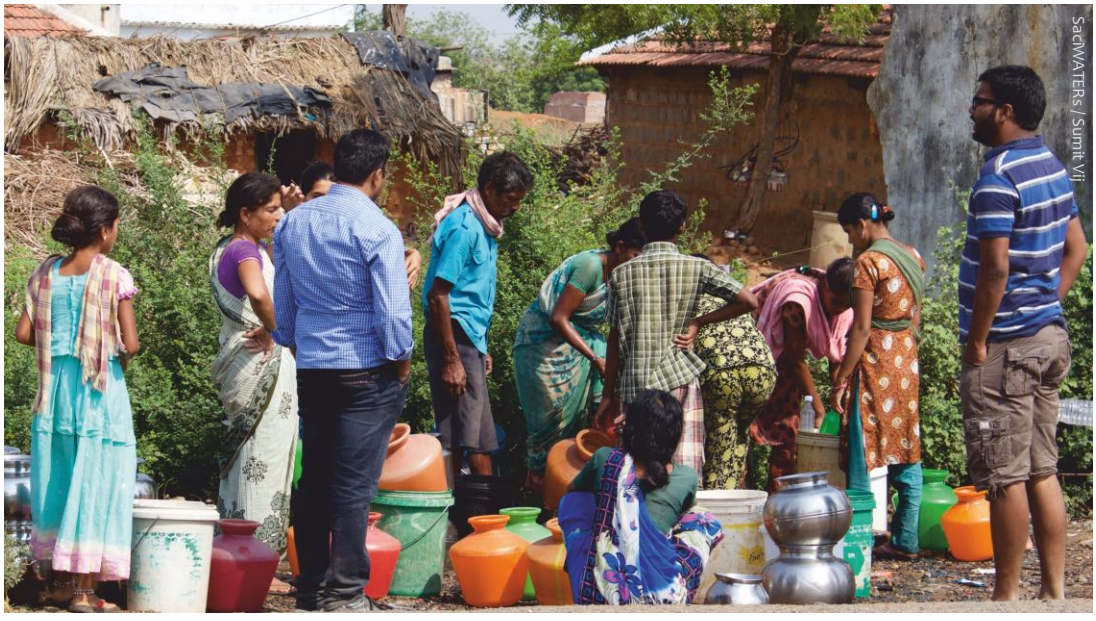
The project aims to produce and share innovative knowledge on periurban water security in South Asia, with the twin objective to influence climate change policies and enhance the resilience of periurban communities through improved cooperation and decreased conflicts around periurban water security. The overall aim is to create opportunities for improved livelihoods for the poor and marginalized, women and ethnic groups, and to craft climate smart strategies and actions at the local, national and regional levels.

The research project has three important objectives:

- **Knowledge, Research and Innovation:** The project seeks to identify and analyse the dynamics that give rise to conflict or promote cooperation around periurban water insecurity, as shaped by urbanization and climate change. It critically examines water and climate change policies and strategies at local, provincial, national and regional levels, determining how they shape water use in periurban contexts and also evaluate their influence on the potential for conflict and cooperation.

- **Development:** The project strives to inform climate-, water- and urban policy implementation processes that affect the management of water resources, and promote periurban water security through technological and institutional innovations, as well as social learning, cross-country learning and international collaboration, in order to create opportunities for increased cooperation and reduced conflict.

- **Capacity Building:** The project aims to increase the consortium partners' collective ability in studying the dynamics of periurban water security concerns – shaped by climate change and urbanization – through south-south and north-south collaboration and exchanges. It will use research outcomes and lessons to sensitize state actors, professionals and communities; embed knowledge in academic curricula; and, thereby, build a critical mass of people who will cooperate in the formulation and implementation of climate- and socially sensitive policies and actions for periurban water security.




*Long waiting for erratic water supply in peri-urban village, Hyderabad*

**The four cities chosen – Khulna, Hyderabad, Gurgaon, and Kathmandu – represent different contexts and driving forces shaping urbanization in South Asia. While they are very dissimilar in terms of geography and growth dynamics, they are, nevertheless, similar in the periurban issues they face.**

# *Project will expand policy research capacities by involving policy makers and policy influencing communities...*

## Embedding and Outreach:

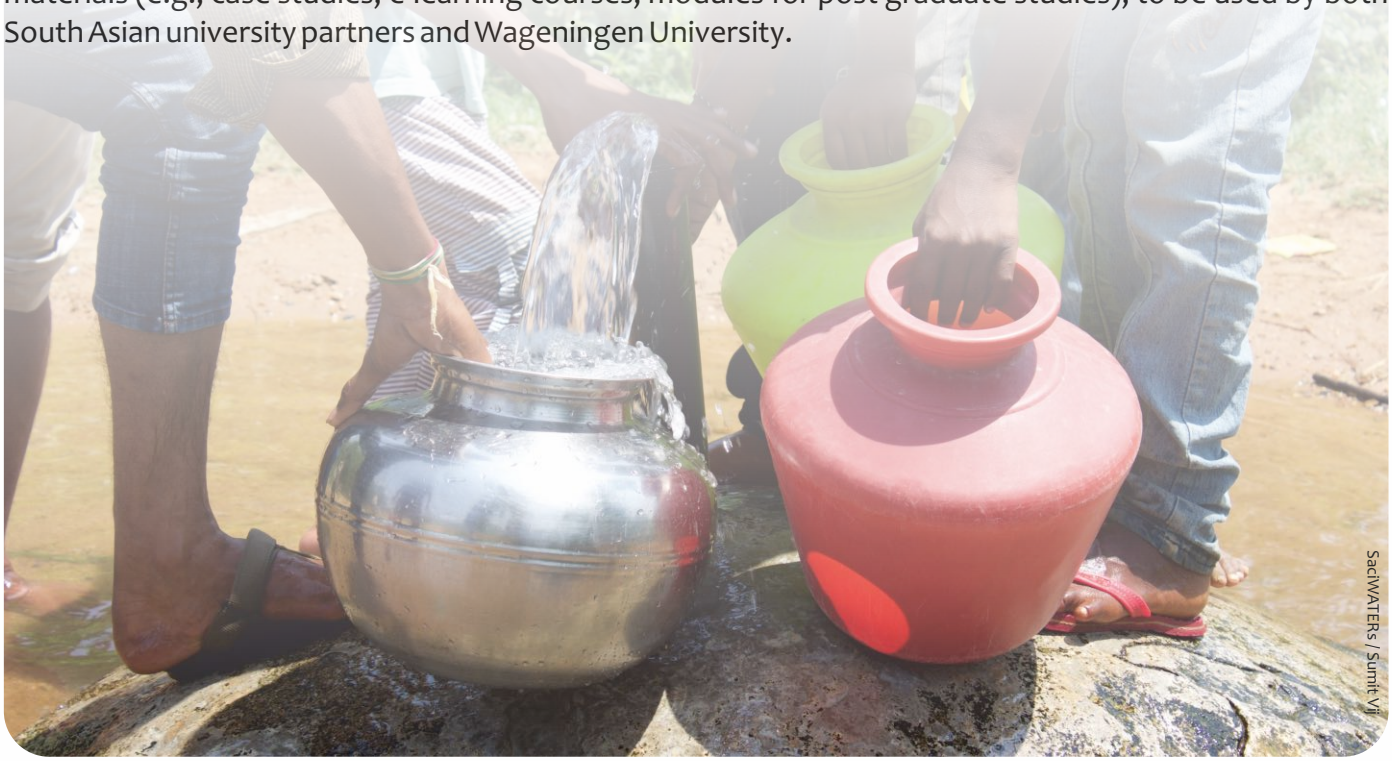
- A primary intention of the research is to provide decision-makers with robust and first-hand evidence for pro-poor, climate-smart policy-making. In this context, this project defines linkages, embedding and outreach in three ways
- Expanding policy research capacities
- Broadening policy horizons by engaging with policy-making or policy-influencing communities, and thereby affecting policy regimes
- Building new knowledge regimes that are fed into curricula for learning materials

## International Linkages:

The data as well as cases of conflicts collected through this study will be uploaded in the website of 'Forum of Policy Dialogue on Water Conflicts in India', a web network, which documents water conflicts under the aegis of the India Water Portal, for larger outreach.

Local linkages in Kathmandu have been established with the UN Habitat's Water for Asian cities programme. Project partner International Centre for Integrated Mountain Development (ICIMOD) will drive broader interactions with high-level officials in South Asia on the twin issues of climate change and water insecurity.

Canada's International Development Research Center (IDRC), have provided support to the partners of this project, through its Climate Change and Water programme, in disseminating research findings and networking with policy makers at an international level. Finally, the research will be embedded through a feedback mechanism that translates research knowledge into curriculum development and learning materials (e.g., case studies, e-learning courses, modules for post graduate studies), to be used by both South Asian university partners and Wageningen University.



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## Conflict & Innovation:

Ongoing research by the consortium has shown emerging evidence of conflicts as well as institutional innovation to deal with the water insecurity induced by urbanization and climate change.

Alutola, one of the project sites in Khulna, reported conflicts caused by urban users polluting the Mayur River, the main livelihood source for periurban fishermen. The acute water crisis in periurban Hyderabad has given rise to a new economy of water trucks (so-called water tankers), whose owners pump groundwater outside the city and truck it to city residents, depriving some rural inhabitants of access to the resource. The project investigates both manifest and latent conflicts of such kinds, at various levels.

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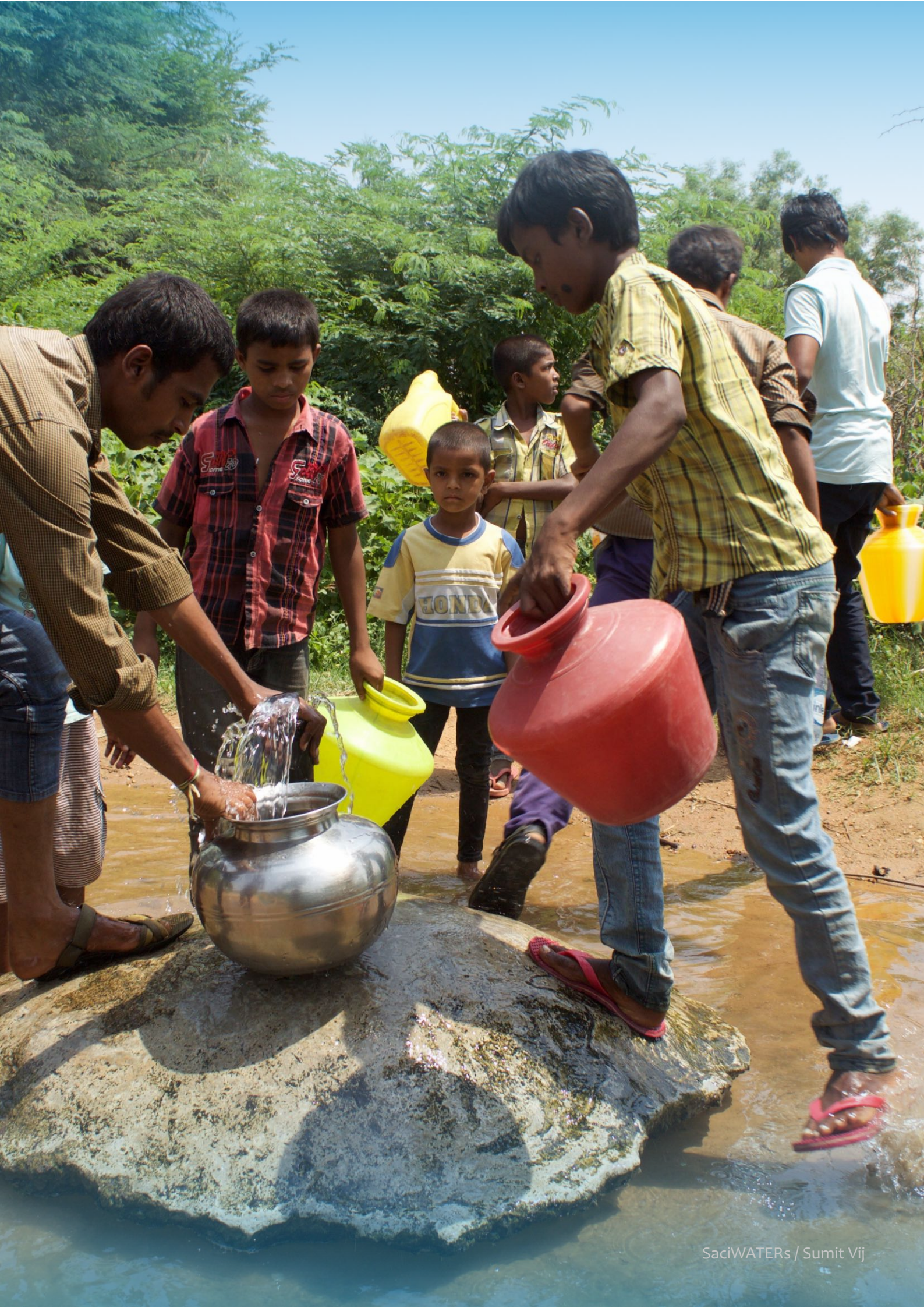
*Rural women carrying water from the urban drinking water source*

## Level of Conflicts:

Village-level conflicts may take the form of petty fights among women fetching water, further magnified along lines of caste and class. Interestingly, research in Kathmandu suggests that water users also innovate institutionally to avoid conflict. For instance, women decide on the number and size of buckets to fetch water depending on available supply. Water users also pool resources to dig collective tube wells (in Hyderabad) or to collectively transport water over long distances (in Kathmandu). This sets the stage for research about the specific conditions under which conflict and cooperation arise in periurban water management. While some governments have responded to the challenges of building climate resilient infrastructure, its impact on improving periurban water security, preventing conflicts and promoting cooperation merits further investigation. The research project seeks to advance this knowledge while endeavoring to promote cooperation and avert potential conflict, thereby building water secure communities in the face of climate change.



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# Partners

**Wageningen University (WUR),** The Netherlands

**South Asian Consortium for Interdisciplinary Water Resources Studies,** India

**International Centre for Integrated Mountain Development,** Nepal

**Bangladesh University of Engineering & Technology (BUET),** Bangladesh

**Jagrata Juba Shangha,** Bangladesh

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