

# Completed Projects

## 1. Narayani Project

**Time Frame:** October 2020- January 2021

### Summary

This specific project aims to conduct River Health Assessment of Lower Narayani River (downstream of Devghat) and understand the ecological status of the river which is expected to be baseline for future Narayani River restoration work.

**Investigators:** Prof. Dr. Subodh Sharma, Dr. Ram Devi Tachamo Shah, Dr. Deep Narayan Shah

**Researchers:** Er. Hari Paudel, Mr. Prayon Joshi and Ms. Junu Maharjan

**Collaborating Partners:** Kathmandu University

**Funding Agency:** WWF Nepal



[Photo for Narayani Project]

## 2. The Fate of Organic Carbon in Small Mountain Rivers in Nepal: Implications for Soil Erosion and Climate Change (FOCOS)

**Time Frame:** 2017-2020

**Summary:** Water and food security are vital for sustainable growth and poverty reduction. Enormous investments are made worldwide to provide long-term security for clean water supply, storage, hydroelectric generation, and reducing flooding impacts. In particular, loss of topsoil degrades land use for generations, but also accelerates CO<sub>2</sub> release.

Hence, proper development of water infrastructure can be an asset for growth and poverty reduction, and at the same time play a vital role in climate adaptation and mitigation. Our target study sites in Nepal are located in regions affected by growing competition for water resources because of the development of new hydroelectric plants, climate variability, and increasing urban and agricultural demands. Finally, the data generated through this project will be shared with development agencies and policy makers to ensure that adequate measures could be undertaken to promote economic development and well-being of local communities.

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**Investigators:** Prof. Dr. Subodh Sharma, Mr. Rajendra Joshi, Dr. Joyanto Routh (Linköping University), Dr. Åsa Danielsson (Linköping University), and Nikolai Pedentchouk (Linköping University)

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**Researchers:** Mr. Rajendra Bhandari

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**Collaborating Partners:** Kathmandu University and Linköping University

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**Funding Agency:** Swedish Research Foundation

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**Research Outputs:** Article published on Geoscience Frontier  
<https://www.sciencedirect.com/science/article/pii/S1674987121000955>

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### 3. How Tough is WASH (TOUGH WASH)

**Time Frame:** November 2019- July 2021

**Summary:**

TOUGH WASH is a project funded by Universities of Bristol. The project aims to develop indicators to measure the resilience of WASH to climate change in Low Middle Income Countries (LMIC). The project area includes Chitwan District and Annapurna Conservation Area Project (ACAP).

**Investigators:** Prof. Guy Howard, Prof. Dr. Subodh Sharma, and Dr. Manish Baidya

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**Researchers:** Mr. Moti Poudel

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**Collaborating Partners:** University of Bristol and Kathmandu University

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**Funding Agency:** University of Bristol

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**Research Outputs:** Article published on Clean Water <https://www.nature.com/articles/s41545-021-00130-5>

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### 4. River Health and Biodiversity Profiling in the Karnali and West Rapti Watersheds: Implications to Basin Planning and Sustainable Water Resource Management in the Western Nepal (PAANI)

**Investigators:** Prof. Dr. Subodh Sharma, Dr. Ram Devi Tachamo Shah, and Dr. Deep Narayan Shah (Tribhuvan University)

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**Funding Agency:** USAID-Paani Program

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### 5. Sustainable, Just and Productive Water Resources Development in Western Nepal Under Current and Future Conditions

**Investigators:** Prof. Dr. Subodh Sharma and Dr. Ram Devi Tachamo Shah

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**Collaborating Partners:** Kathmandu University and IWMI-Nepal

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**Funding Agency:** USAID-Nepal

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**Project Outputs:** Structure of Benthic Macroinvertebrate Communities in the Rivers of Western Himalaya, Nepal. <https://www.mdpi.com/2076-3263/10/4/150>

## **6. Longitudinal Observation Study on Effectiveness of Existing Household and Community Level Water Sanitation and Hygiene (WASH) Interventions on Health Vulnerability to Climate in Jiri, Nepal**

**Investigators:** Prof. Dr. Subodh Sharma (PI), Dr. Dhiraj Giri (Statistician), Dr. Timothy O'Brien (Statistician), and Dr. GP Bhandari (Epidemiologist)

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**Collaborating Partners:** WHO-Nepal, Ministry of Urban Development, and Ministry of Water Supply and Sanitation

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**Funding Agency:** DFID through WHO

## **7. Sustainable Natural Resource Management for Climate Change Adaptation in the Himalayan region: A Collaborative Project Among Norway, Nepal, Pakistan and Bhutan**

**Investigators:** Prof. Dr. Roshan Man Bajracharya, Prof. Dr. Subodh Sharma, and Prof. Dr. B.K. Sitaula

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**Collaborating Partners:** University of Life Sciences, Norway, Institute of Forestry, Tribhuvan University, Karakoram International University, Pakistan, and Royal University of Bhutan

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**Funding Agency:** NORAD