

Aquifer characterization, artificial recharge and reuse of suddenly available water in South Bihar



Key details

Location

India

Duration

Start Feb 2019

End Mar 2021

Budget

AUD 153,200

Commissioned organisation

Nalanda University

Partners

Nalanda University

Project Leader

Dr Prabhakar Sharma

Program

Water

Project code

WAC/2018/211

A model for implementation, including awareness, local capacity and chain of facilities, was made available in a manual to ensure sustainability of the technology and wider adoption in the region in areas with similar hydrological characteristics. Specific add-ons, such as solar pumps, filtration devices, flow meters, etc. may be integrated as per need.

This project is part of the DFAT/ACIAR-funded [Sustainable Development Investment Portfolio \(SDIP\)](#) program.

Project outcomes

- Greater understanding of the rate of infiltration, quantity of storage/recovery and transmissivity processes of contamination associated with aquifer storage and recovery (ASR)
- Assessed the effectiveness of the Bhungroo® (as part of ASR) technologies for conjunctive use in the agriculture sector in South Bihar.
- Delivered a comprehensive aquifer map for recharge and estimation of the potential injection of surface water into the selected aquifer.
- Addressed the irrigation needs of an agrarian community but can also provide drinking water security with appropriate safeguards.
- Provided a model for implementation, including awareness, local capacity and chain of facilities, in the form of a manual, to ensure sustainability of the technology and wider adoption in the region in areas with similar hydrological characteristics.

Overview

This pilot project aimed to deliver a demand-driven convergent water solution for suddenly available water.

An indigenous aquifer storage and recovery (ASR) technology, such as the Bhungroo®, was optimised for use in the context of South Bihar. The convergent water solution primarily addressed the irrigation needs of an agrarian community but also provided drinking water security with appropriate safeguards.

