

First assessment of groundwater quality status in Jhikhu Khola Watershed, Nepal

Bhawani S. Dongol¹, Pradeep M. Dangol¹, Madhav P. Dhakal¹, Pravakar B. Shah¹,
Smita K. Shrestha¹
Dilli R. Bajracharya²
Juerg Merz³

¹*International Center for Integrated Mountain Development, Kathmandu, Nepal*

²*Nepal Water Supply Corporation, Kathmandu, Nepal*

³*University of Berne, Switzerland*

ABSTRACT:

Certain areas of the Middle Mountains in Nepal are intensively cultivated with up to three crops per year. This increases the demand on water resources for irrigation and intensive use of chemical fertilizers and pesticides is of concern in terms of surface as well as groundwater quality. Water scarcity during the dry period is critical and to find options for water conservation and management is challenging. Rapid population growth and poor management of the available resources is adding to the above concerns.

Shree Ram Pati area in the Jhikhu Khola watershed, a Middle Mountain watershed of the Hindu-Kush Himalayan region, is one of the intensively cultivated agricultural pockets, where there is a high demand of water for agricultural as well as domestic purpose. Lately a number of open wells were dug by the local residents to meet their household water requirements. In collaboration with the local farmers, a program of assessing groundwater availability and quality was initiated. The main aim of the program was to study the variation of water table and assessment of the groundwater quality in different seasons. The expected outputs of the program will be recommendations for conservation measures on water quality, quantity and simple domestic low cost water treatment for the local farmers. This paper aims at presenting the results of the program and the discussion of the study findings.