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A Stakeholder Assisted Dynamic Model to Facilitate Groundwater Management on a Watershed Scale

Azhar Baig

McGill University
Muhammad.baig@mail.mcgill.ca

Shiv O. Prasher

McGill University
Shiv.prasher@mcgill.ca

Adamowski Jan

McGill University
Jan.adamowski@mcgill.ca

Qamar Zaman

Dalhousie University
QZAMAN@nsac.ca

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Sustainable management of groundwater has become a significant problem in arid regions of the world. Low rainfall potentials coupled with the limited availability of surface water compel farmers to rely on easily extractable source of groundwater. This situation not only causes a decline in water table level but also deteriorate its quality. Research studies have highlighted that physical modeling alone is not sufficient tool for sustainable management. We proposed an approach that is based on developing a modeling tool with the assistance of local stakeholders in Rechna Doab watershed of Pakistan. Casual loop models of stake holder preferences were developed to capture the individual perceptions about the problem. System dynamic model was created based on experts and local knowledge. Preliminary results of the research will be discussed in this paper.

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