Earth Science-2013

OMICS Group Conferences
Accelerating Scientific Discovery

2nd International Conference on
Earth Science & Climate Change

July 22-24, 2013 Embassy Suites Las Vegas, USA

Application and relevance of indigenous knowledge for flood management under climate change

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Abstract

Floods are becoming increasingly common in Nepal resulting in a huge loss of life and damage to settlements, agriculture land and infrastructures in various parts of the country. Most recent research findings suggest that climate change has accelerated the intensity and frequency of flood hazards in most parts of the country. Communities are however, making use of options that increase their preparedness for these flood hazards. The random sampling (for household survey), focus group discussion, key informant interviews and field observations were employed for data collection. Based on field data, this paper intends to assess the indigenous knowledge on flood forecasting and flood management practices at the community level those are being in practiced in the plain region of West Rapti River Basin of Nepal and its relevance under climate change induced flood disaster. The research findings indicate that there are some very effective local flood forecasting practices such as identifying the position of clouds; monitoring the extent of rainfall in upper catchments; analyzing the mobility of ants; analyzing the magnitude of thunderstorms and wind blows; analyzing the magnitude of hotness; and hearing strange sounds from river/torrents. Synthesis and analysis of these indicators helps communities to prepare for potential flood events. These include preparation of search and rescue related materials; the creation of small drainage structures in each plot of land and storage of the valuable material at a safer location; and being psychologically prepared for floods. This paper argues that these indigenous flood forecasting and management practices could be particularly useful for migrants, who are in flood prone areas but are not familiar with those practices.

Biography

[1]He is perusing his PhD on 'Perceived Impacts and Flood Adaptation Strategies under Climate Change in Nepal' at University of Southern Queensland (USQ), Toowoomba, Australia. Prior to this, he served as a lecturer at Tribhuvan University, Nepal where he involved for supervising Master level research students and delivering classes of climate change and water resources. Previously, he was an Environmental Officer at under the Ministry of Local Development, Government of Nepal where he prepared the environmental planning for all municipalities of Nepal and he involved in research work at government level. Moreover, he was involved for research work at UNDP-Nepal for two years. He has published more than three dozen articles in national and international journals and magazines. His Masters research was about estimation of greenhouse gases emission from the eco-technological wastewater treatment system from UNESCO-IHE Institute for Water Education, Delft, the Netherlands.