COMPARISON OF AUTOMATIC AND MANUAL PRECIPITATION: A CASE STUDY ON NEPALGUNJ STATION

Rocky TALCHABHADEL[1,2]*, Ramchandra KARKI[1,3] and Binod PARAJULI[1]

[1]*Department of Hydrology and Meteorology, Government of Nepal, P.O. Box 406, Naxal, Kathmandu, Nepal*

[2]*Dept. of Civil and Earth Resources Engineering, Kyoto University, Shimomisu, Yoko-oji, Fushimi-ku, Kyoto 612-8235, Japan*

[3]*Institute of Geography, University Hamburg, Bundesstraße 55, 20146 Hamburg, Germany*

*Corresponding Author: rocky.ioe@gmail.com

ABSTRACT

A comparison of data was carried out in Nepalgunj station for 2011-2014 periods and manual recorded precipitation is used as reference. This study has attempted to quantify and understand the differences in precipitation amounts between manual and automatic. In addition, the possible causes behind the disparity of automatic and manual observational data are also discussed. Automatic measurement with high temporal resolution is very important for study of short-duration extremes, now-casting and, increasingly, for real time weather monitoring whereas there is need to continue manual network for climate monitoring purpose and checking the reliability of automatic network. This study has just taken Nepalgunj station as representative station and limited to precipitation data.In case of Nepalgunj station, the data quality is fairly satisfactory. In normal operation the precipitation measured by tipping bucket is underestimated by around 10-15%. The importance of meteorological data usage needs to be in high priority.

KEYWORDS: precipitation, manual station, automatic station, comparison