WIRELESS SENSOR NETWORK APPLICATIONS IN COLD ALPINE AREA OF WEST CHINA: EXPERIENCES AND CHANLLENGES

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Abstract- Wireless sensor network (WSN) shows unique advantages in cold alpine area comparing with traditional in-situ monitoring approaches. This paper presents two WSN applications in cold alpine area, one in the Hulugou watershed and the other in the Babaohe watershed, both of which are situated in the upper mountainous reach of the Heihe River Basin of West China. Apart from introductions to the two WSN applications and experimental results, experiences learned and challenges met during designing, testing and deployment of WSN are discussed. The paper concludes a promising future of WSN in environment monitoring in cold alpine areas.

Index terms*:* Wireless sensor network (WSN), cold alpine area, environment monitoring, eco-hydrology, Heihe River Basin.