Cold Region Hydrology in a Changing Climate (Proceedings of symposium H02 held during IUGG2011 in Melbourne, Australia, July 2011) (IAHS Publ. 346, 2011). 39-43

Streamflow analysis for the Yana basin in eastern Siberia

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Abstract We analyse Yana River streamflow and climate data in order to understand climate change and its impact on basin hydrology. Basin temperature and precipitation records show little change during 1977–1999. Discharge data near the basin mouth suggest changes (increase and decrease) over the summer months. Basin precipitation has a positive correlation with discharge during June, July and August. The relationship between snow water equivalent and discharge follows an inverse relation; maximum snow water equivalent and discharge have a linear relation, with inconsistencies in some years. Further examination is needed to improve this relationship. The results of this study are useful for a better understanding of the hydrological regime and changes over the northern regions.

Key words Yana River, Siberia; discharge; snow cover