### Accepted Manuscript

#### Research papers

Changes in the mountain river discharge in the northern Tien Shan since the mid-20<sup>th</sup> Century: Results from the analysis of a homogeneous daily streamflow data set from seven catchments

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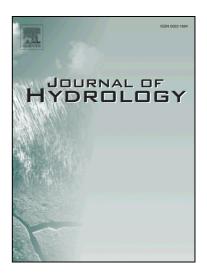
PII: S0022-1694(18)30597-3

DOI: https://doi.org/10.1016/j.jhydrol.2018.08.001

Reference: HYDROL 23015

To appear in: Journal of Hydrology

Received Date: 31 May 2018 Revised Date: 30 July 2018 Accepted Date: 1 August 2018



Please cite this article as: Shahgedanova, M., Afzal, M., Severskiy, I., Usmanova, Z., Saidaliyeva, Z., Kapitsa, V., Kasatkin, N., Dolgikh, S., Changes in the mountain river discharge in the northern Tien Shan since the mid-20<sup>th</sup> Century: Results from the analysis of a homogeneous daily streamflow data set from seven catchments, *Journal of Hydrology* (2018), doi: https://doi.org/10.1016/j.jhydrol.2018.08.001

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## **ACCEPTED MANUSCRIPT**

Changes in the mountain river discharge in the northern Tien Shan since the mid-20<sup>th</sup>

Century: Results from the analysis of a homogeneous daily streamflow data set from seven catchments

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#### **Abstract**

This study is an assessment of the changes in seasonal and monthly flow in seven catchments draining the northern Tien Shan Mountains in Central Asia over a period from the 1950s to the present day. The purpose is to provide a first assessment of the flow response to climate change in regionally important catchments given their contribution to the water resource. All the catchments have a natural flow regime, and are therefore sensitive to climate change, but differ in area, elevation and glacial extent. Trends in flow were characterised using the Mann-Kendall test for standard meteorological seasons and individual months for mean flow, five flow quantiles and peak-over-threshold series for the period 1974-2013 at all sites and from the 1950s where data were available. The results were related to trends in seasonal temperature and precipitation from the

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