

Appendix 2:

ISCORD 2023 Symposium report information (can be copied)

Name of the presenter	Olga Makarieva	Position	Leading research scientist
Gender	female	Nationality	Russian
Organization	St. Petersburg State University, St. Petersburg, Russia		
Sub-topic	Cold region hydrology and ecology		
Report Title	Natural and anthropogenic factors of water exchange processes transformation in the mountain permafrost zone of the North-East of Russia		
Abstract			
<p>In 2020-2022 complex assessment of hydrological and geocryological conditions of the mountainous cryosphere of the North-East of Russia (by the example of the Magadan region) was accomplished. It included the analysis of standard hydrometeorological data, acquisition of own field data on hydrological, geocryological and landscape conditions at newly-found research field station, assessment of remote sensing data and other activities. It was revealed that since 1960s air temperature in the region has in average increased by +2.2°. Additionally, in the last 20 years a significant increase of disturbed territories due to gold mining is observed, however, the restoration of permafrost landscapes practically does not occur. Due to those climate change and anthropogenic impact significant transformation of water exchange processes have been occurred, the following changes have been observed: increase in soil temperature, decrease of freezing period and the thickness of river ice, changes of precipitation patterns, transformation of hydrological and hydrogeological regime, reduction of aufeis phenomena, etc. Giant spring aufeis (with area of several km²) are the unique feature of the studied region, their dynamic reflects the interaction between permafrost, surface and ground runoff. Compared to historical period increased number and decreased total area revealed which may indicate active development of taliks and the changes of permafrost conditions. The study has also shown the urgent need of development of ground monitoring network and special complex investigations which may allow for verification of remote sensing data and large-scale regionalization. The results are in demand for the development of sound strategies for adapting cold regions to adverse climate change and its consequences.</p> <p>The project is funded by St. Petersburg State University (95413735).</p>			

Please send it via email before May 20, 2023: hss_hanshuihuiyi@126.com or on the conference website: <http://www.iscord2022-harbin.cn/> Submit