Lead Author e-mail: *sara.lehmann8@gmail.com*

Title: *Environmental conditions of differentiation of anthropogenic pollutants concentrations present in the water bodies of small catchments of the Svalbard*

Sara Lehmann[1], Waldemar Kociuba[2], Grzegorz Gajek[2], Łukasz Fronczak[2], Leszek Łęczyński[3], Żaneta Polkowska[1]

[1]***Department of Analytical Chemistry, Chemical Faculty, Gdansk University of Technology, Poland***

[2]*Faculty of Earth Sciences and Spatial Management, Maria Curie-Skłodowska University in Lublin, Poland*

[3]*Institute of Oceanography, University of Gdansk, Poland*

The research area was localized in SW part of the Svalbard (NW part of the Wedel Jarslberg Land). The streams functioning in the foreland of Scott and Renard glaciers were selected for studies on the anthropogenic pollutants concentration levels in the cold climate environment, namely no glaciated catchments of the Reindeer Stream and Wydrzyca Stream of snow-permafrost.

Both springs of the Reindeer Stream (1.5 km long and catchment area of 1.10 km^2), the biggest tributary of the proglacial Scott River, and Wydrzyca Stream are located in the fore field of the Bohlinryggen massif. The Wydrzyca Stream (with catchment of 1.3 km^2) from the Renard Glacier side is also loaded with bifurcating stream. Both streams create deep (5-25 m) gorge in their estuary parts cutting the edge of the lifted marine terraces of Calypsostranda. Due to dry and wet deposition the wide range of substances considered to be pollutants reach the waters of both streams - presenting differentiated ways of provisioning.

Pollutants reach the waters of Reindeer Stream due to surface flows from the seaside plane of the Calypsostranda. The Wydrzyca Stream is provisioned initially with waters of the snow cover and subsequently with precipitation and thawing permafrost waters. The Scott River, to which the Reindeer Stream inflows, reaches the Recherche Fiord like the Wydrzyca Stream, and transfers its pollutants load from significant area of the Calypsostranda and the Scott Glacier.

The research topic was determining the concentration levels of organic pollutants of anthropogenic origin present in both streams and assessing to what extend the catchment environment may impact the xenobiotics concentration levels in their waters. The following parameters were determined: sum of phenols, formaldehyde, TOC, pH and conductivity. Spectrophotometer (Spectroquant PHARO 100, MERCK), TOC analyzer (TOC-VCSH/CSN, SHIMADZU), pH-meter/oxygen meter microcomputer (CX-401 by ELMETRON) as well as OK.-102/1 conductometer (by RADELIKS) were used at final determination steps.

Based on the results of initial studies it can be stated that there is a significant difference in the concentration levels of pollutants being present in both streams

what may be a result of differentiated characteristics of these two catchment areas.

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