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ABSTRACT:

Background: Clean, safe fresh water is one of the most important natural resources. Thus, safely managed drinking water (DW) services are one the WHO’s Sustainable Development Goals (SDG 6.1). Water is not, however, evenly available for all human settlements. The aim of the study was to collect and assess information about water services in the Arctic region.

Methods: The survey study included interviews of water hygiene experts and review of the literature available.

Results: The existing legislation in the Arctic nations should in principle ensure equal rights to safe DW and sanitation. However, national statistics about the access to improved DW and sanitation are dominated by the results of the large settlements. Centralized DW and sanitation systems are not yet available for all people in the Arctic region. Cold climate reduces the disposable time of fresh surface waters and permafrost may prevent the usage of ground waters. Furthermore, running water systems will get frozen if the pipelines are not properly insulated. Alternative drinking water sources and transport options including usage of self-hauling water sources and DW tanks need to be applied.

Conclusions: Hard climate conditions in the Arctic region may reduce the amount of usable household water jeopardizing every-day hygiene to prevent water-washed diseases. Difficulties in maintaining sufficient amount of safe DW may also result waterborne outbreaks. At Arctic the cost of household water can also be a remarkable economic burden.