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## APPLICATION OF DGT PASSIVE SAMPLERS AND KEY MONITORING SPECIES FOR MEASURING BIOAVAILABLE METAL LOADING IN MINING-POLLUTED GREENLANDIC FJORDS

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### ABSTRACT

Measuring loads of bioavailable metals in the environment is important for environmental assessment near mines and other industrial sources. DCE have acted as advisors to the Greenlandic authorities on mining-related issues for a number of years and an important part of the advisory is based on monitoring results and experiences from former mine sites. Traditionally, environmental monitoring near mines in Greenland have been based on sampling of key monitoring species such as mussels, seaweed, sculpins and lichens in addition to water and sediment sampling. In recent years, a number of projects at DCE have been focused on further development of the use of monitoring species as well as introducing alternative analytical techniques for measuring bioavailable metal loading. This includes application of diffusive gradients in thin films (DGT) samplers for measuring time-integrated 'bioavailable' metal concentration in seawater. The main part of the research have been conducted near the former 'Black Angel lead-zinc mine' in Maarmorilik, West Greenland, an area which is still significant polluted more than two decades after mine closure. The presentation will include the most important results of this work.



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