

## Beach litter monitoring in the Arctic using remote sensing and artificial intelligence



BioConsult SH conducts the project **Beach litter monitoring in the Arctic using remote sensing and Artificial Intelligence** in cooperation with AquaEcology and the German Research Centre for Artificial Intelligence on behalf of the German Environment Agency.

The project aims to develop a method for detecting and categorizing plastic litter in the Arctic using remote sensing platforms and Artificial Intelligence (AI). It builds on insights from a pilot study conducted by BioConsult SH and AquaEcology. The developed method should align with OSPAR beach litter monitoring standards to ensure that the results are comparable and meet the acceptance criteria of national and international authorities.

The project focuses on drone applications and AI-based image analysis to develop a comprehensive guideline for Arctic drone operations. Drone systems and sensors are tested in Germany, followed by field validation in Greenland in 2025 and 2026, combining drone-based and conventional survey methods. The overall aim of the project is to develop a method that can later be used a wide range of local stakeholders. Therefore, stakeholders will be engaged to gain insights into specific needs (e.g. time efficiency, coverage) and challenges (e.g. costs, regulations) related to a future implementation. These insights will be considered in the development of the method. The drone guideline and the AI platform will be presented to stakeholders on a workshop in Sisimiut, Greenland.

<https://www.bioconsult-sh.de/en/projects/beach-litter-monitoring-in-the-arctic-using-remote-sensin>