

Project information

Project title

Does aquaculture act as a source of micro- and macro plastic in the Arctic? – A pilotstudy (AquaPlast)

Year

2018

Project leader

Dorte Herzke

Geographical localization of the research project in decimal degrees (max 5 per project, ex. 70,662°N and 23,707°E)

69°39'07"N 018°57'12"E

Participants

- **Project leader(s)/institutions: Dorte Herzke, NILU and Claudia Halsband, APN**
 - Jan Sundet, HI; Guttorm Christensen, APN
 - International partners: consortia of EU projects BASEMAN and PLASTOX
 - **Administrative responsible for lead institution: Eva Beate Andresen, (NILU); (Eva.Beate.Andresen@nilu.no)**

Flagship

MIKON

Funding Source

flagship MIKON pilotstudie

Summary of Results

According to findings of plastic litter on local beaches, one significant source of plastic litter and microplastic may be the large amounts of plastic materials used in aquaculture. Due to the harsh climate in Nordic regions, these installations undergo considerable physical challenges, with potentially large emissions of micro- and macro plastic. Arctic conditions, such as very low temperatures and little light, will delay the slow processes of degradation. We aimed to study for the first time the occurrence and composition of macro- and micro plastics in abiota and biota close to aquaculture installations .

In May and September 2018 we collected samples of seawater, sediment, mussels and plankton for occurrence of macro- and microplastic in close vicinity of a aquaculture facility and reference area in case for the mussels. All samples were transported to the NILU laboratory and prepared for microplastic analyses. A masterstudent processed all mussel samples under particle controlled environment (cleanroom) and is in the process of dataevaluation now in Spring 2019. As part of the master thesis, we will also compare our data with existing field data from pristine sites around Svalbard to assess the industrial footprint on plastic emissions and suggest preventive actions and remediation to stakeholders

A proposal to FHF was funded in spring 2018 to follow up on plastic particle uptake by fish in fishfarms.

Master and PhD-students involved in the project

Ingunn S. Johnssen, UiT, Biologi

For the Management

will be supplied after the finalisation of the master thesis, spring 2019

Published Results/Planned Publications

planned presentation at international conferences

Budget in accordance to results

yes

Could results from the project be subject for any commercial utilization

No

Conclusions

will be supplied after the finalisation of the master thesis, spring 2019