

Project information

Keywords

Outreach, citizen science

Project title

Outreach activities: combining classic approaches and innovative outreach program integrating research, outreach and education

Year

2018

Project leader

Perrine Geraudie

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

69.56544° N, 19.41143° E

Participants

APN (C. Halsband, claudia.halsband@akvaplan.niva.no)

Arctic Frontiers/The Arctic University of Norway (M. Mathisen; martin@arcticfrontiers.com)

Norsk institutt for luftforskning (NILU: Dr D. Herzke, dorte.herzke@nilu.no)

Other institute Partners:

Polaria (R. Hogseth; rigmor.hogseth@polaria.no)

Vitensenteret (A. Wara; astrid@nordnorsk.vitensenter.no)

Friluft senter (C. Ballantine, carl.ballantine@akvaplan.niva.no)

Flagship

Fjord and Coast

Funding Source

100 000 nok fundings from Fram Centre, Kyst og fjord program.

Highlights:

- Outreach activities on microplastic specially established for young kids have been successfully conducted at several key places in Tromsø, and will take place in Longyearbyen this winter.
- Large participation and positive feedback for the new established program Arctic Frontiers science for kids with 92 kids registered from 7 local kindergarden.
- Strong interactions and smart links have been created between research activities and education program, i.e. AT833/333 course at UNIS, on plastic litter in marine environment and related impacts on organisms.

Summary of the main results.

The project aimed to conduct the several outreach activities in relation with environmental issues, e.g. microplastic with a special focus on young audience. The project has been conducted successfully with a strong participation and positive feedback from public who participated in the different outreach activities. First the outreach activities with kids, "kul forskning for Barn" was conducted at Polaria during the Forskningsdagene in September and was highly successful with 1700 persons visiting the museum during the 2 days of the events in October. Among them a large proportion of kids visited participated in Kul Forskning for Barn. The outreach activities were oriented toward microplastic issues in marine ecosystem: based on ludic and simple experiments, the kids learned how to identify plastic, how large plastic items become microplastic pieces and what are the impacts on marine ecosystem (long term biodegradation and uptake by organisms).

The new established program (Arctic Frontiers science for kids) was conducted at Vitensenteret and attracted 7 local kindergardens, with a total of 92 kids (from 3 to 6 year old). After the success of the pilot study last year (just on 2 kindergarden), we decided to follow the same format. The kids and some employees from the kindergarden were invited to Vitensenteret in October 2018 for an inspiration day where they participated in outreach activities on plastic litter, i.e. "Kul Forskning for barn" and get an introduction to research

activities. The researcher job was presented to both adults and kids, i.e., how to conduct experimental research to answer a question (from hypothesis to dissemination), some example of ongoing research activities involving high school, as well as how to use research based methodology as a learning tool for kids. A short workshop was also done, in order to provide basic skills to kindergarden employees about how to make a poster to communicate and present the main findings of the research project. During the second phase of the project, a simple and ludic research project has been conducted at each kindergarden, under the supervision of the researcher and Vitensenteret, which has been visiting the kindergarden during November/December to follow up the research project. The kids have been findings a topic they wanted to learn more about and identify a question. Then the teachers developed a methodology to conduct simple experiments with the kids to answer the original questions.

Finally, to increase the visibility of the program, by reaching more people, a second phase of outreach activities will be run using the poster session presenting the main program and the different projects conducted by the kindergarden. This will be done during the Arctic Frontier conference in January in Tromsø and will have high visibility since mainly key actors in research, politic sectors will be there. Kul Forskning for Barn, and a seminar on the impacts of human activities in Arctic and consequences on human and wildlife reproduction will be run during the Polaria jubilee (<https://www.facebook.com/events/1932905746797300/>). Kul Forskning for Barn will also be conducted in Longyearbyen with the local kindergarden in January/February. Dr. Dorte Herzke, environmental chemist and head of section Arctic environment at NILU will give a seminar to students during the course AT833/333 next summer talking about microplastics in the environment and present some of her main findings.

Due to the limited amount of budget received, the citizen science activities could not happened this year but a pilot study will be conducted with Friluft senter in Tromsø to test out the concept of providing an ecotourism tour with a focus on Arctic ecosystem functioning and specific environmental pressure related to intensification of human activities in the North.

Outreach activities are crucial to inform public and communicate about research results and state of the art, especially when it comes to environmental issues. In addition to inform people about the main environmental threats, there is an urgent need for taking actions to protect marine ecosystem and reduce the risk to human health. Kul forsning for Barn is an innovative program specially designed to conduct outreach activities with and for kids, using science based experiments where the kids can be a researcher and learn about microplastics and plastic litter issues. These activities will be then presented and reported to the local politics. Young kids will be tomorrow decision makers and involving them as early as possible in contributing to less human impacts on ecosystem might have a strong positive impact on long-term ecosystem sustainability.

Published Results/Planned Publications

A child book on marine litter is in final process of writing (final illustration and editing), as a collaboration work with another writer Kriss Rokkan Iversen and the illustrator Ida Larmo.

Communicated Results

All outreach events have been shared on social media

<https://www.facebook.com/events/1932905746797300/>

<https://www.facebook.com/Akvaplan/photos/a.1659461237455141/1952533058147956/?type=3&theater>

<https://www.facebook.com/photo.php?fbid=10217074300799818&set=pcb.10217074302239854&type=3&theater>

<https://www.facebook.com/photo.php?fbid=10217096809682526&set=pcb.10217096810242540&type=3&theater>

Interdisciplinary Cooperation

The project is based on strong and active interactions between education, research and outreach.

Budget in accordance to results

Yes.

Could results from the project be subject for any commercial utilization

No

Conclusions

- a. As all the outreach activities conducted were highly successful in term of participation and positive feedback, we would like to continue and extend these activities. The perspectives are thus to develop more links between research, education and outreach, and especially to run citizen science for fieldwork campaign in order to create new set of data while reducing the general negative impacts of shipping (both research and tourism vessels). The participation of school into real and existing research project is also one of our future goal and can bring a new dimension into education and citizen science by involving kids into simple fieldwork (collection of blue mussels, or sea urchin near the shore for baseline study). The aim in the near future is to try to recruit kindergarden, school, or university which can be relevant for such collaboration and to try out.

b. The new educative and multidisciplinary program established together with Vitensenteret and based on research, outreach and education is innovative, as no such program existed before. This can be used as a new methodology for teaching at school, but also to conduct outreach or research. This could have a strong and long term positive impacts on ecosystem as teaching new habits to the kids about how to reduce our daily consumption of plastic.