

GAME 2014: Impact of microplastics on sea organisms

GAME is an international training and research program, as part of which studies are carried out each year on a set ecological issue. The studies take place at the same time in up to nine coastal locations in both the northern and southern hemispheres, with our participants' practical work being performed under the instruction of local scientists.



2014 in brief

/ January & February: Follow-up and preparation - the second GAME project on microplastics in the sea takes shape.

/ March: The project begins - the city of Kiel and GEOMAR greet the participants. The new GAME project opens with an introductory course, followed by media training with Sarah Zierul and video and methods training on the Pilot Island.

/ April: Departure - the teams travel to the partner stations, experiment preparations begin.

/ May: GAME makes an appearance at the European Maritime Day in the OZEANEUM in Stralsund.

/ June: A new GAME flyer provides information on microplastic waste in the sea. GAME is repre-

sented at Kiel Week in the climate protection tent and at the FS Alkor Open Ship.

/ July: : A GAME exhibition is held in celebration of the birthday of the Multimar Wattforum-

/ July & August: The main experiments are now running at all stations

/ September: All summer long, the teams report on their work via www.oceanblogs.org: more than 18 reports are uploaded by the end of the year. GAME also makes an appearance in book form - „Biofouling Methods“.

/ October: GAME at the Frankfurt Book Fair. The teams return to Kiel - evaluation begins. There's a visit to the Wadden Sea, a natural World Heritage site, and a visit to the Kiel waste incineration plant.

/ November: Presentation of the results begins at northern German universities. In addition, this month sees a ‚Scientific Writing‘ workshop with Dr. Avan Antia, a monitoring trip on the FS Alkor and a GAME information stand for European Waste Prevention Week.

/ December: GAME on Facebook, 75 posts this year, and a meeting with sponsors in the maritime museum.

/ 2015 outlook: GAME looks at the tolerance of invertebrates to rising ocean temperatures. The 13th GAME project will be carried out at eight locations.

Communication

Communication has changed over the course of the last 12 years. The main communication tools currently used are email and Skype, with the latter also used for teleconferences. In addition, Dropbox is playing an increasingly important role.

In the spring, this year’s GAME participants received training in the area of media skills, provided by Sarah Zierul in collaboration with the northern German broadcaster NDR. As far as we know, this course is the only one of its kind in Germany to date in the context of training for scientists. A digital video camera was purchased using GAME funds so that the GAME teams can document their work using film in the future. To this end, the participants completed a special training program in March (Producing a video), which was led by two employees from the Kiel-based production firm Real TV. The resulting material will be used for an image film, which will be available in both German and English.

Since autumn of last year, regular reports on GAME’s activities and events have been uploaded to the internet platform www.oceanblogs.org, including contributions from the GAME participants themselves. Oceanblogs is the blog portal of Kiel Marine Sciences and is supported by the „The Future Ocean“ Cluster of Excellence and the GEMOAR Helmholtz Center for Ocean Research in Kiel. All entries are linked to the GAME homepage and also appear there. 18 articles

were published in 2014, making the GAME blog one of the most active on Oceanblogs.

GAME on Facebook: a total of 75 posts were uploaded in 2014. In December 2014 the page had 230 likes and was visited by an average of 250 users a week over the course of the year.

Conventional PR work isn’t lacking either: from April 2015 GAME is to be represented in the permanent exhibition at the Multimar Wattforum information centre in Tönning, with its very own module. The preparations for this begin in February 2015.

Only one publication was released in 2014: the GAME approach is outlined in the book „Biofouling Methods“ as a new method in the field of ecological oceanography. A synopsis is complete, one manuscript was submitted for appraisal in August and two further manuscripts are currently under preparation. One of the reasons for the lack of publications is the declining involvement of local supervisors, who are clearly under the impression that GAME is going well and that they don’t need to contribute further as a result. However, it is impossible to release a satisfactory number of publications without outside help, which is particularly unfortunate in light of the large quantity of extremely interesting research results that has been collected in previous years.

A new GAME flyer was printed this year, and the insert page for the brochure was also updated to reflect the changes in the structure of the board of trustees.

Microplastics is a good topic in terms of drawing people’s attention to the marine ecosystem and oceanography. However, plastic waste in the sea is not actually the most pressing environmental problem we face, and yet it currently has a strong presence in the media. The way the funding system works for sciences in Germany means that academics try to get money for their research by seizing on politically desirable topics; the consequence of this is that science is guided by politics. The microplastics issue is a good example of this. When it comes to subject matter,

universities have to go wherever the money takes them - which, in turn, changes every 3 years.

From November to December 2014 the GAME students gave their presentations at a number of northern German universities. Some talks were well attended, others less so, and it is unclear as to why attendance levels varied so greatly.

In the next GAME project in 2014, participants will focus on the topic „The tolerance of invertebrates to rising ocean temperatures“. The test organisms selected (sea anemones) are well suited to this experiment due to their quick asexual reproduction. The work is to be supplemented by experiments in the field of epigenetics (trait variations not caused by changes in DNA).

Our new GAME partner country Greece will be involved for the first time, with a station in Piraeus. In the pipeline as additional potential partners for subsequent years are Ecuador (Galapagos) and the Cape Verde islands.

Student recruitment

Brief review: where are previous GAME participants now? There were originally a large number of German applicants (19) for the 2014 cycle; however, many of them pulled out. We now have a total of 8 German participants for the 8 planned stations for 2015: of those from Germany, three students from Kiel are taking place, one student from Kiel/Odense, one student from Bremen, one from Tübingen and two from Munich.

On the whole, the fact that relatively few students apply is still unsatisfactory. The number is still too small for a proper, quality-based selection process to be implemented. There is a concern that the quality of GAME could suffer in the future as a result. In order to increase application numbers it may be helpful to announce the upcoming GAME topic at an earlier stage. Another option would be to offer two topics on an alternating basis, and work on them in parallel over several years.

Methods that could be used to recruit students in the future include monitoring Internet

platforms/forums on which master dissertation topics are announced, contacting the „Media“ department at Kiel University of Applied Sciences to have a concept developed - possibly in the form of a bachelor dissertation - for advertising among students, and making use of news from the German Society for Marine Research (DGM).

GAME participant presentations

Laura Nogueira Mazaira from Spain (located in Madeira for GAME) and Sinja Rist from Germany (based in Indonesia) presented the findings of the 2014 GAME project. In contrast to the previous year, the experiments produced diverse and often statistically significant results. A new topic for 2016 could be devised on the basis of this.

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seit 2010

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37.000 EUR

Project partner:
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