

BioAq structurers: Improved ecology in the Vaxholm guest harbour

BACKGROUND

One of the aims of the guest harbour in Vaxholm is to create an environmentally developed harbour. One problem has been an extensive amount of algae on ropes and poles. The water transparency has often been less 50 cm because of algae and cyanobacteria.

EVALUATION

The evaluation started in July 2016 when the algae had started to bloom. A BioAq-5500 structurer was placed in the harbour. At the same time, new ropes were placed in the water as control. The intention was to evaluate potential effects of the BioAq structurer's frequencies on algae and cyanobacteria formation. After approx. one month the BioAq-5500 structurer was changed to a BioAq-200 structurer.

RESULTS

Two weeks after placing the BioAq structurer in the harbour, the water transparency was reported to have increased from approx. 30 cm to 150 cm. Subsequently, there was an increase to approx. 200 cm.

When old and new ropes were studied in September 2016, it was noted that the coating of green algae was considerably reduced on all ropes. Much of the older green algae had darkened. On the new ropes there was only a small amount of algae deposits, much less than the usual amount expected in the harbour.

The water content of the pelagic algae and cyanobacteria was reduced, which was important for the increase of water transparency.

Fish has been observed in the harbour after introducing the BioAq structurer. The water transparency may be a factor, however, it has elsewhere been noted that fish are drawn to areas where the water is BioAq structured. The captain of the harbour noted that he had not previously seen fish in the harbour.

Another observation is that the ropes are more pleasant to handle and easier to clean. Boat owners find the cleaner ropes to be a positive experience.

The various improvements in the harbour environment can be attributed to placing a the BioAq structurer in the harbour.



Rope in Vaxholm harbour with **considerable algae deposition.**



Rope in Vaxholm harbour with **minimal amount of algae deposition.** The BioAq structurer kept the harbour ropes relatively clean during the testing period.