

Suggested master's thesis project at Environmental Systems Analysis

Design and testing of constructed reefs for positive impacts on marine biodiversity

Constructions that are placed in the sea, such as piers, quays, breakwaters, wrecks or artificial beaches, all have an impact on marine biodiversity by offering new or other environments than the natural ones. Depending on the characteristics of these constructions they are more or less attractive surfaces for marine animals and algae. This kind of impact on biodiversity from constructions placed in the marine environment is unavoidable, but it is desirable that it is positive rather than negative.

In this project we aim to design and test various kinds of constructions that could serve as components in piers etc, and which simultaneously benefit biodiversity. We will test whether materials with varying levels of coarseness and presence of cavities are better than the smooth materials that are commonly used in underwater constructions today.

The initial phase of the project will include an inventory of potential materials and constructions and detailed planning of the practical work allowing for a scientifically correct analysis. The practical work consists of placing test and control materials and constructions on suitable places in the mouth of Gullmarsfjorden in Lysekil. The investigation of animals and algae on the surfaces will be made by use of GoPro cameras while the constructions are still under water, and through a final inventory once they've been removed from the water.

The master's thesis is part of the activities in the Gothenburg Global Biodiversity Centre.

For more information, please contact the supervisors:

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