The ripple effect

Sanvi & Advaith

Why Now

These tiny particles, resulting from the breakdown of larger plastic items are found in various marine habitats, from coastal areas to remote oceanic regions. Their small size and mobility enable them to permeate ecosystems, posing challenges for effective mitigation and cleanup efforts. As a result, there is a growing recognition of the need for comprehensive strategies to address the sources, pathways, and impacts of microplastics on aquatic environments and beyond.

Discover the power of natural filtering abilities combined with an eco-friendly approach. Dive into our innovative strategy to combat plastics in water bodies using mussel aquaculture and biofilters.

Our solution

Biofilter

Inside of the Biofilter, the bacteria Ideonella sakaiensis from the genus Ideonella and family Comamonadaceae would be present with its capabilities of breaking down and consuming microplastics, ex. plastic polyethylene terephthalate.

Mussels

Both freshwater and salt water mussels have the special ability of filter feeding. During this process, the mussels are able to filter out the microplastics from the water.

Target

By starting of with the estuaries of India, we hope to first create a local impact before creating a global impact. This would be for creating a change in our own communities first.

Impact of the solution

The method helps preserve the quality of the aquatic food chain by preventing marine species from absorbing microplastics, lowering the possible health hazards to humans connected to eating tainted seafood.