

Microplastic Removal Water Purification System Using Microalgae

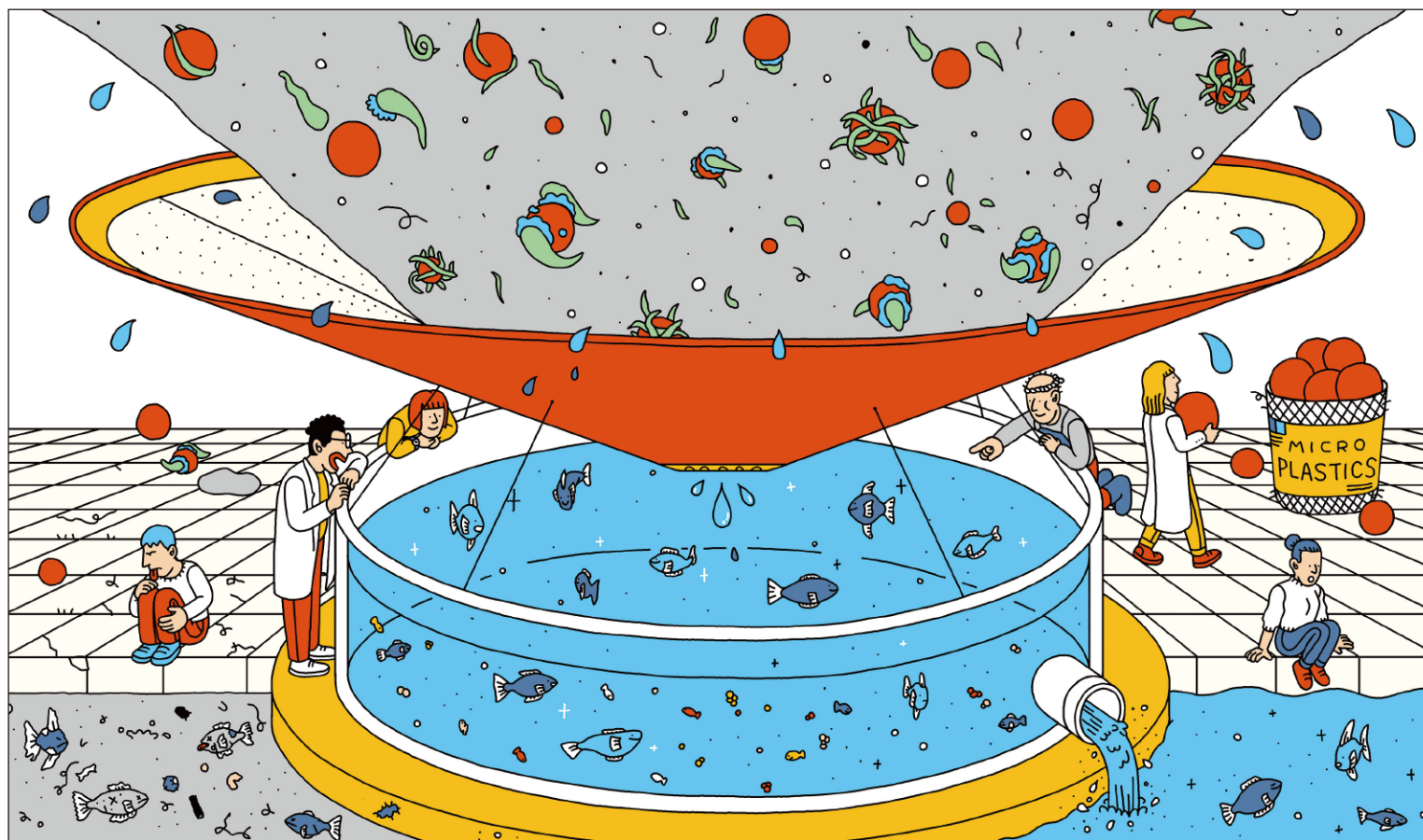
TEAM

Novelgen Co.,Ltd.

SERVICE VISION

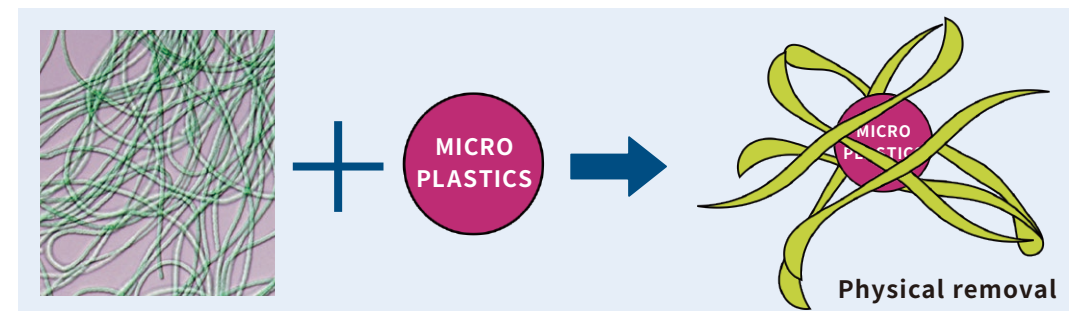
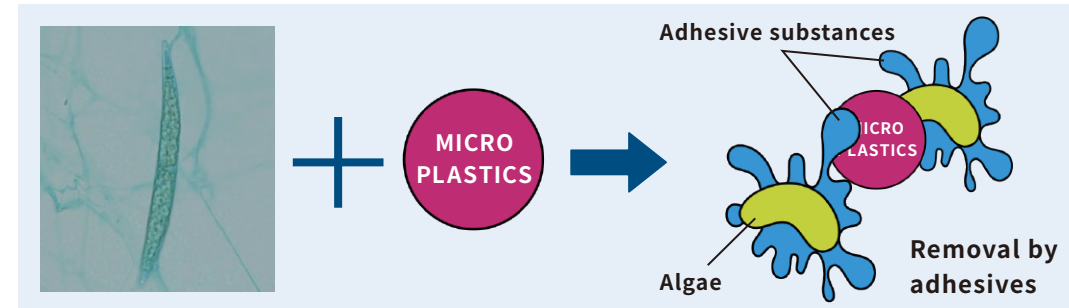
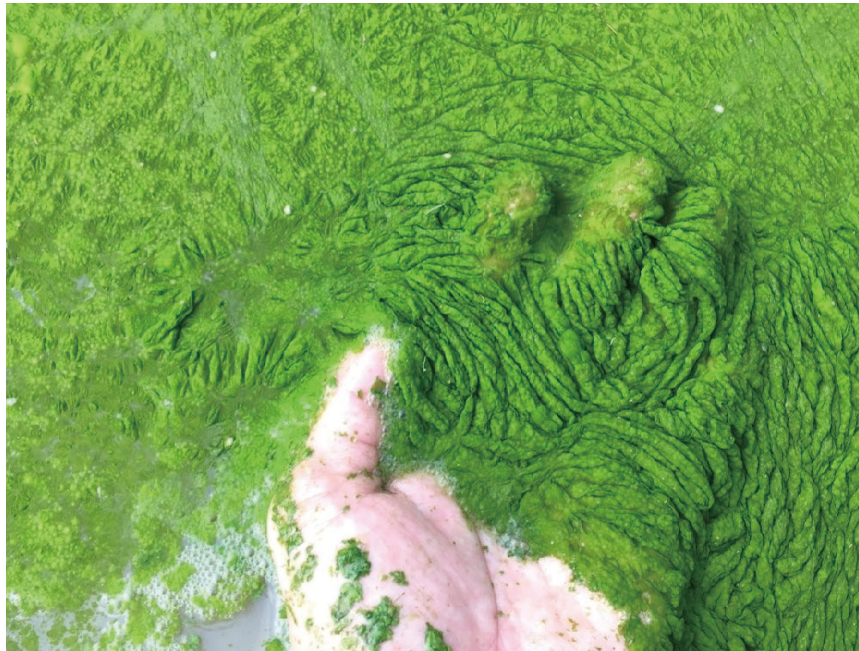
Microplastics, which are 5 mm or smaller pieces of large plastic debris that have been broken down, adsorb and concentrate toxic substances such as heavy metals and persistent organic pollutants (POPs) in the ocean, and are feared to have a negative impact on the ecosystem.

This service enables land-based aquaculture of fish and shellfish with microplastic-free water using a new microalgae-based microplastic removal water purification system, contributing to the production of safe, secure, and high-value-added marine products.

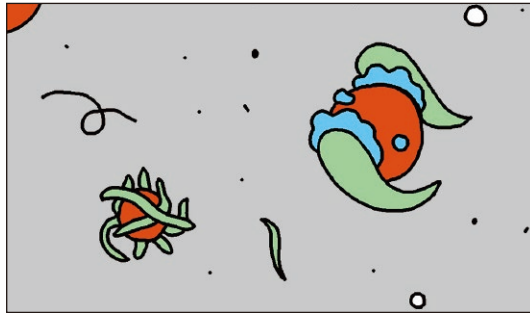


SERVICE FEATURES

Microplastics are collected from the water using microalgae with characteristics such as those with the ability to secrete adhesive substances, and the purified water is used for aquaculture.



SERVICE OVERVIEW



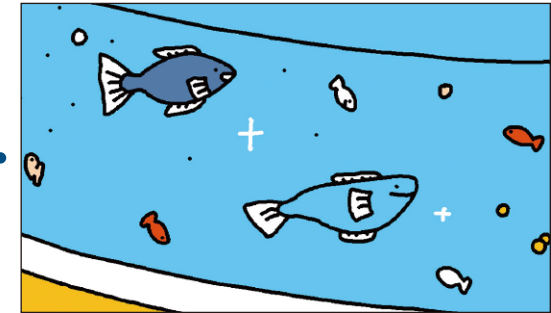
Adsorption by Microalgae

We have developed an innovative technology using microalgae (that secrete adhesive substances and entangle microscopic substances due to their thread-like shape) which are suitable for adsorption of microplastics.



Various Water Purification Methods

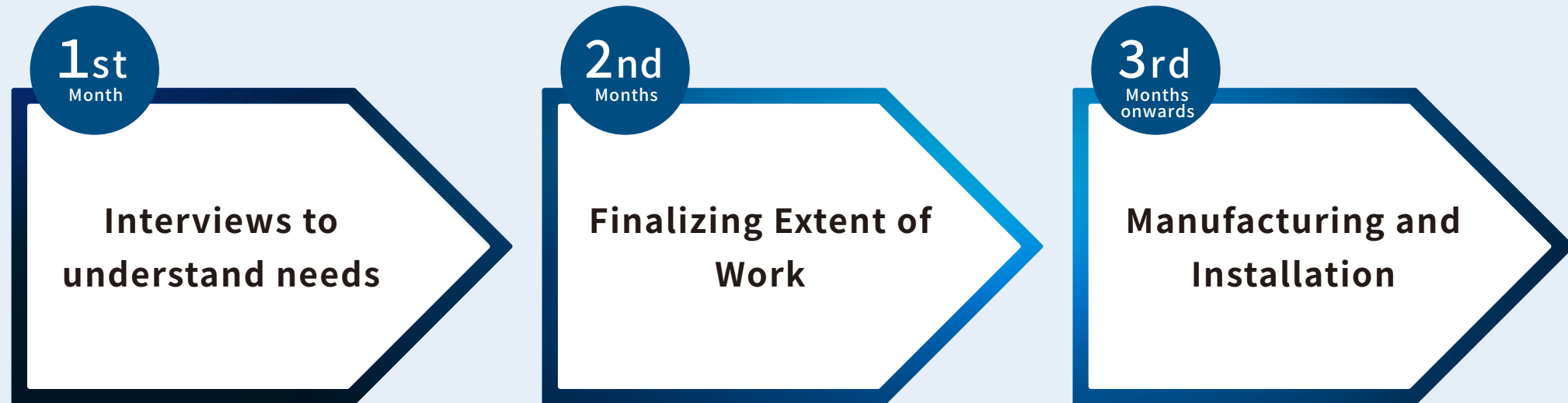
In addition to adsorption of microplastics, the system simultaneously purifies water by removing organic phosphorus and nitrogen in the form of ammonia and nitrates as microalgae grow and proliferate.



Realization of highvalue-added land-based aquaculture

Microplastic-free water enables aquaculture of high-value aquatic products. The cost is the same as the old septic tanks, and there are also advantages such as easier maintenance.

PROCESS and SCHEDULE



Septic Tank for 1-ton aquarium ▶ 4,500,000 JPY

TEAM



NOVELGEN

NOVELGEN Co., Ltd,

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Business Description

● Life Science & Medical Science Related Business.

Inquiries about this service

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Web site is here.



<https://ikkaku.lne.st/>



ABOUT PROJECT IKKAKU

Project Ikkaku was launched in 2019 by the Nippon Foundation, JASTO, and Leave a Nest with the goal of realizing businesses that reduce marine waste in society.

The project adopts a process that promotes the development and commercialization of innovative technologies through the collaboration of "hyper-interdisciplinary teams" including venture companies with new technologies and unconventional ideas, as well as academic institutions, town factories, large corporations, and small and medium-sized businesses. With support from the Nippon Foundation, a number of services have been developed over a three-year period through 2021.

From April 2022, we will continue to work with the participating teams as a stand-alone project to promote the social implementation of businesses that reduce marine waste.

