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Solution Suggestion

Hyper – eutrophic water bodies are the main increasing problems of today's world. Eutrophication causes oxygen depletion, Sulphur releasing, organic blooms and so many ecological life cycle problems for water bodies. Our suggestion is not only sustainable but also easily applicable benthic barrier and sediment remediation systems. Benthic barrier is a special sheet which is inert for water deterioration and UV resistant material. The basic role of benthic barriers are to prevent the sunlight exposure on the sediment. By this way the first need of the photosynthesis is blocking (light barrier) and the growing of algae can be repressed. The other main resource of eutrophication is the stored nutrient in the sediment. If lakes don't have enough water and air rotation, the deposition rate increases and triggering vegetation blooms. On the other hand the eutrophic lake sediments have capacity for usage renewable energy source such as biogas or as fertilizer such as compost or turf material according to their mineral and organic material ingredients. From this point, with our technologies, extending the life span of natural lakes is also applicable, sustainable, reusable and efficient.

Costumers

We are targeting also the mainly governmental and private corporate customers. The Ministry of Forestry and Water Affairs is our first customer which we applied the first benthic barrier systems. Especially the regional departments of Ministry of Forestry and Water Affairs and Municipalities are our main customer groups. Secondly, private corporates such as harbor managements, holiday hotel or villages are other targeting customer groups.

Technology

Biyans have 3 products for now under Ekolake Brand for applying benthic barrier system;
1. Weedgator ; to remove macrophytes easily from the sediment. We have special design for also shallow and deep lakes. We applied for licensing our design.

2. Benthic barrier is another specially designed, inert and UV resistant textiles which is applicable for different lake structures.

3. Skimmer: For taking filamentous algae wastes Our additional services for sediment remediation Again we have special design for easy usage and we applied for licensing.

4. For natural lake sediment remediation, we are suggesting sediment drawing and also additional usage of sediment as fertilizer or biogas resource according to the microbial capacity.

We are using aquatic plant management and water quality determination techniques for all our studies and applications. Our main difference from our competitors, our team is composed of hydro-biologists and material engineers. We are designing and producing our products according to the water system needs. Generally geology, environment engineering or construction companies are doing these kind of applications but their biggest lack is looking the systems except view of ecological sustainability. They generally ignore the biologic life cycle in the lake, they are trying to produce solutions in more construction based.

Team

Zeynep Çeterez, MSc. – Team Leader

Hydro-biologist. Determination of pollutants on water bodies and producing remediation techniques in sustainable way is the main specialist field. Also Project management and entrepreneurship are other abilities. She has 6 year experience on her own company Biyans.

Alican Öztapak, - Hydrobiology Master Candidate – Team Member

He continues master studies on aquatic plant management and monitoring. His main specialist is field applications of benthic barrier systems.

Duygu Tolunay, Hydrobiology Master Candidate – Team Member

Although she is newly graduate and she will start master studies on hydrobiology section, she has experience on water quality monitoring studies.

Gökhan Çeterez, Material and Metallurgy Engineer – Advisor Team Member

Gökhan Çeterez has 7 year experience on product design and production. He is designing and producing benthic barrier, weedgator and skimmer products. He is one of the main team member with this ability for applicable solutions.