

## **Develop a New Type of Concrete for Improving Creatures Living Environment**

Sakurai, Nobuo.1), Boon Keng Lim.1), Koshikawa, Yoshinori.1), Uchikawa, Takao.2),  
Karaki, Yushi.2)

1)Kajima Technical Research Institute, Hayama Marine Science Laboratory , Japan

2)GEOSTR Corporation

We considered that decreasing of the coastal area resources was due to steel sheet pile and concrete coastal structures that are unable to provide a sustainable habitat for living creatures.

To overcome this problem, a new type of concrete so called 'wet concrete', which is capable of absorbing and retaining 10 times the moisture of the conventional concrete. Plant fiber is mixed into the cement for increasing water absorption rates to 200/0-400/0. It is lighter than the conventional product, but the compressive and bending strength tests indicate it is as strong as or stronger than the conventional concrete.

A bank panel of the wet concrete having a coarse surface path way and hole which are important habitat parameters of crabs was manufactured. Through a year model experiment, we confirmed that this bank panel could provide a sustainable living space for crabs and eel, which are key-animals in food chain of coastal area.

We convinced that the wet concrete has superior application as a structural material near water, such as in revetment blocks along seafronts and waterways.