

Greening on the seawall: challenge to conversion from gray to green infrastructure.

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After the Tsunami disaster in March 11th, 2011 at east Japan area, especially on the pacific side of Tohoku region, our government built huge seawalls along the coastline about 400 km long to protect inland area from Tsunami disaster. We aimed to regenerate the ecotone of coastal ecosystem using the dune plants by greening the seawall. We were planting the seven species of dune plants on the seawall in 2017. On this presentation we report the survival rate for a year of planted dune plants on the seawall.

As a result, most dune plants were survived around 80% or more on the seaside seawall. But the survival rates were decreased around 70% on the landside seawall because of dried out by soil loss. Comparison between natural recovered seaside seawall and planted seaside seawall, the dominant species *Ischaemum antheploroides* were similar. But *Ixeris repens* were less survived on the planted seaside seawall, in spite of one of the dominant species on the natural recovered seaside seawall. On the other hand, species of landside seawall were completely different with natural recovered landside seawall. This results shows that the greening on the seawall, especially on the landside seawall, were important for regeneration of coastal dune ecotone.

Keywords: Green infrastructure, Ecotone, Coastal dune system, Dune plants, Seawall



Fig.1 Planting of dune plants on the seawall with citizens