

# Coastal anthropo-ecological system dynamics in response to the occurrence of the 2011 Tohoku earthquake and subsequent tsunami

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On 11 March 2011, a catastrophic earthquake and subsequent tsunami hit the Pacific coast of northern Japan, devastating many of the towns, villages and coastal ecosystems located along the shoreline. In order to measure the extent of the damage caused by the disaster and monitor the subsequent change in the state of the marine environment, we launched the “Tohoku Ecosystem-Associated Marine Sciences” (TEAMS) in March 2012. As part of this project, we initiated a coordinated monitoring program to obtain a holistic view on the spatio-temporal dynamics of the marine ecosystem of Onagawa Bay located at the southernmost part of a ria coastline, known locally as the “Sanriku Coast”. We monitored a range of environmental variables including biogeochemistry, oceanographic measurements, sediment properties, anthropogenic activities and community dynamics of benthic and pelagic components potentially impacted by the disaster. In this talk, I will present an overview of the results obtained from the Onagawa Bay studies and discuss the course of post-disaster recovery and dynamics of the coastal ecosystems which could have potentially been driven by how human society responded to the physical impacts of the tsunami catastrophe.

