

Monitoring on natural environment along the Pacific coastal area in Tohoku region

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Biodiversity Center of Japan has carried out an integrated ecological survey along the coastal area from Aomori Prefecture to Chiba Prefecture to collect the data concerning the effect on the natural environment caused by the Great East Japan Earthquake occurred in 11 March 2011.

As a part of the survey results, substantial disappearance of coastal forests (*Pinus thunbergii* community) and appearance of wetlands were clarified by vegetation alteration maps, which express vegetation change before and after the disaster by means of reading aerial photographs and field study in the Tsunami invasion area of approx. 570 km².

Remarkable declines of sand dune vegetation in Sendai Bay and coastal area of Fukushima Prefecture were confirmed by the survey on approx. 510 km natural coastline targeting changes of sandy and muddy beaches.

Changes of species composition caused by topographic disturbance were observed by survey on sea grass beds, seaweed beds, tidal flats and shorebird breeding sites. The alteration was evaluated by comparison between before and after the disaster.

In addition, it was confirmed that the present land area where covered with water in the past era turned to wetlands again by the effect of the Tsunami. The new knowledge was found by reading present coastline and vegetation status in the latest maps compared with sand dunes and wetlands status in old edition maps of 100 years ago.