

Debris Management and Contamination in the aftermath of March 11, 2011; Impacts and Restoration. Miyagi Prefecture.

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The massive destruction by the tsunami along the coastline in March 2011 created a gargantuan amount of debris. Between 15.5 million to 18 million tons resulted alone in Miyagi equaling 23 years of waste production by the entire Miyagi prefecture. 10.44 million tons (67%) before the end of 2012. An enormous financial and managerial challenge for the purpose required more than 1,000 employees to clean-up, gather and separate debris.

Once collected they were piled-up in to temporary storage separated in burnable materials (lumber and other organic materials), non-burnable (metals and household appliances) hazardous materials (asbestos, PCBs, gas cylinders, etc.) as well as damaged boats and cars. A second separation process included five holding blocks along the coastline in cities, towns and villages such as Kesenuma, Ishinomaki, Miyagi-Tobu, Sendai and Watari-Natori.

Wide spread contamination from chemicals and other materials in the soil, surface, ground as coastal waters from the accumulated debris most likely occurred through leached, storm and rain-run-off, which most likely impacted ecosystems and animals and plant species with different degrees.

Since no insulation measures were provided in many sites potential short, medium and long-term environmental impacts and the consequences may occur which may in turn likely affect the degree and quality of restoring some of the tsunami-affected areas if proper measures are not undertaken.

Keywords: debris, contamination, impact, restoration, coastal waters, soil and freshwater

