

# Increased vulnerability of the flood risk caused by the artificial landform change of the river bank dune in the Wakamiyado, Joso City, Ibaraki Prefecture

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Kanto-Tohoku heavy rainfall in September 2015 caused the overflow of Kinu River in Wakamiyado, Joso City, Ibaraki Prefecture. This overflow occurred due to the artificial landform change of river bank dune caused by the sand mining and the build of the solar power plants. The area reduction of the river bank dune caused by the sand mining during the 1960's and 1970's. Since the 2014, the build of the solar power plants caused the lowering and area reduction of the river bank dune, and the risk of flood disaster was increased.

Keywords: Kanto-Tohoku torrential rain in September 2015, River bank dune, sand mining, artificial landform change