



Numerical Studies of Radioactive Sediment Deposition on Reservoirs in Fukushima Coastal Area

Susumu YAMADA, Mitsuhiro ITAKURA, Masahiko OKUMURA, Masahiko MACHIDA, and Akihiro KITAMURA

Japan Atomic Energy Agency, Japan (yamada.susumu@jaea.go.jp)

The transportation of radioactive Cs is mainly brought about by movement of silt- and clay-sized particles in rivers. Therefore, predicting such a fine sediment flow and deposition in rivers has been one of central issues toward environmental recovery after the Fukushima Dai-ichi nuclear power plant (FDNPP) accident. For the purpose of the Cs transport prediction, we concentrate on a few reservoirs in Fukushima coastal area, since they are temporal destinations for contaminated silt and clay transported by rivers. We numerically study how the river water together with floating silt and clays penetrate into the reservoirs and where the sediments settle on the bottom surface of the reservoirs by using 2D river simulation framework named iRIC developed by Shimizu et al. In this presentation, we reveal the typical deposition pattern in the target reservoirs and compare the results with direct sampling data for the sediments on the reservoir bottom surfaces. We believe that the obtained information is useful in planning the water supply and treatment for highly-contaminated districts in Fukushima coastal area.