

Jakarta sinking fast in wake of construction boom

A recent study concluded that land subsidence in Jakarta accelerated at an alarming pace in the past four decades, and if no remedial measures were taken, the northern part of the city could sink below sea level in the next decade.

Bandung Institute of Technology (ITB) researcher Heri Andreas said the persistent inundation of North Jakarta would only get worse in the future.

"Several areas in the northern coastal region of Jakarta will subside by 60 centimeters by 2020. In 2050, the area could sit 2.2 meters lower than in 2008," said Heri, who is also a member of the Jakarta Coast Defense Strategy (JCDS).

Heri predicted that if no action was taken to mitigate land subsidence, flooding and high tides would contribute to 5,100 hectares of land in North Jakarta being submerged in 2020 and another 6,000 hectares in 2050.

A worst-case scenario, however, put the figures at 16,200 hectares in 2020 and 18,100 hectares in 2050. "In this scenario, the northern coast of Jakarta could be 2 meters under water by 2020 and 6.9 meters under water by 2050," Heri said.

Global sea levels have risen at a rate of about 1 to 2 millimeters per year on average, and this rate is expected to increase to 5 millimeters per year by 2050.

A recent study by ITB showed that the sea level in the Jakarta northern coastal region rose at a rate of 5.7 millimeters per year. The most recent finding by the JCDS showed that around 40 percent of land in Jakarta was already below sea level.

Given the finding, the JCDS predicted that within between the next 10 to 20 years, 50 percent of the city would lie below sea level. The JCDS data also showed that between 1974 and 2010, the Muara Karang area in North Jakarta had sunk 4.1 meters. West Cengkareng in Tangerang had sunk 2.5 meters in the same period.

The Daan Mogot area in West Jakarta and Ancol in North Jakarta sank 1.97 meters and 1.88 meters respectively in the same period. Between 1974 and 1982, land subsidence rates were not as significant as today. The problem became worse after the region saw a construction boom in property and industry.

A number of dikes constructed by the city, including in Muara Angke, Muara Karang, Pluit, Cilincing and Marunda, are no longer capable of holding back the water that has increased rates of land subsidence.

Jakarta Governor Fauzi Bowo recently admitted that the city was sinking at an alarming rate.

"We have no other choice but to construct a new embankment in Jakarta Bay," Fauzi said.

He said the city needed a giant seawall to protect the capital from flooding, but added that construction could only begin in 2025. The construction of the seawall is a joint project run by the city administration and the JCDS, which is funded by the Dutch government.