Is the sinking of the Mekong Delta inevitable?

With a surface area of 55,000 km² and a population of 17 million, the Mekong Delta is the equivalent of the Netherlands, in terms of both size and population density... for now. Because the delta is sinking.

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Seawater filtration for nutrient analysis, Vietnam.

By 2100, 85% of the Mekong Delta could be swallowed up by the sea. Some of this is due to rising sea levels, but much of it results from human activity in the area. To explain in more detail, from a geomorphological point of view, the Mekong Delta resembles a mille-feuille of alternating layers of mud and waterlogged sand. This geological structure is subsiding and becoming denser, especially because local residents are drawing too much water from it.

The more groundwater is extracted via wells, the higher the rate of subsidence. This phenomenon is further exacerbated by the sometimes-illegal extraction of sand for use in construction and reduced supply of alluvial deposits, stored upstream by numerous dams.

••• Studies have outlined adaptation strategies to ensure that most of the Vietnamese delta does not end up under water •••

For some years now, the Mekong Delta has been one of the most vulnerable areas in the world, sinking by 2 cm per year while sea levels rise by only 3 to 4 mm. However, as the predicted submersion

"The Mekong Delta is a vital region for Vietnam, home to 17.4 million people. While groundwater extraction is the main cause of sinking ground (subsidence) in this area, local communities believe that other factors are also key. Studies carried out in the field of hydrology and hydrogeology by the Asian Centre for Water Research are very useful for identifying and prioritising these factors, as well as developing optimal paths for adaptation, thus ensuring the delta's long-term resilience."

Ha Quang Khai, Ho Chi Minh University of Technology, Vietnam

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Ho Chi Minh City, on the banks of the Saigon River, Vietnam.

is mainly caused by urbanisation and other human activities, it can be counteracted. Because what humans do, they can also sometimes undo.

Research shows that controlling or reducing the amount of water pumped from the aquifers could lessen or even halt the sinking of the delta, which is currently shrinking by 12 m every year. All that remains now is to identify and remove the social, technical and political obstacles to resilience, adaptation and even survival. The stakes are high, because this phenomenon is affecting other cities located on deltas - such as Jakarta, which is sinking so fast that the Indonesians have already decided to move their capital 2,000 km to the island of Borneo, destroying part of the forest in the process.

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