

## **Interaction between river and groundwater in Jakarta megacity, coastal alluvial plain, Indonesia**

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**Abstract** Jakarta megacity is located on the coastal alluvial plain. Groundwater abstraction has been extremely large for the last 20 years; consequently groundwater levels have dramatically declined. In this research, we examined river and groundwater interaction under these conditions of serious groundwater decline. Research was carried on the catchment of the Ciliwung River, which flows from high volcanic mountains to the Java Sea through central Jakarta. The <sup>222</sup>Rn concentrations were measured at 20 sites from mid-stream to the river mouth. Results show that there are different interactions in upstream, midstream and downstream sections due to the expansion of groundwater depression resulting from huge abstractions.

**Key words** river-groundwater interactions; Jakarta megacities, Indonesia