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Citizen science for better water quality management in the Brantas catchment, Indonesia? Preliminary results

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Water quality in the rivers and tributaries of the Brantas catchment (about 12.000 km²) is deteriorating due to various reasons, including rapid economic development, insufficient domestic water treatment and waste management, and industrial pollution. Various water quality parameters are at least measured on monthly basis by agencies involved in water resource development and management. However, measurements consistently demonstrate exceedance of the local water quality standards. Recent claims presented by the local Environmental Protection Agency indicate that the water quality is much more affected by the domestic sources compared to the others. In an attempt to examine this, we proposed a citizen science campaign by involving people from seven communities living close to the river, a network organisation that works on water quality monitoring, three government agencies, and students from a local university. Beginning in 2022, we kicked off our campaign by measuring with test strips for nitrate, nitrite, and phosphate on weekly basis at twelve different locations from upstream to downstream of the catchment. In the effort to provide education on water stewardship and empower citizens to participate in water quality management, preliminary results – the test strips, strategies, and challenges - will be shown.