

## Application of environmental carrying capacity analysis and land cover change scenarios in collaborative spatial planning process: The Jakarta Megacity Case

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In the National Spatial Plan, the Jabodetabekpunjur area (Jakarta Megacity) is designated as a national strategic area. Due to the increasing environmental problems, the Indonesian government carried out a revision process of spatial plan based on an environmental carrying capacity assessment. This research is intended to explain how the study of land-based carrying capacity assessment was applied to the spatial planning process. First, this research is carried out by developing scenarios for land cover changes. Projections of land use change are carried out by extrapolating 20-year time series data on land cover change backward to forecast 20 years of future land use. The study of environmental carrying capacity against current and future conditions is based on the concept of land capability, land suitability, and multi-criteria analysis. The results of the study of carrying capacity were then used to revise existing spatial plans. The decision-making process on revising spatial plan was carried out by a collaborative process involving relevant stakeholders in serial workshop processes by considering the results of the carrying capacity study.

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