

# Land-Cover Disturbance Increase due to Urban Development

## Authors

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## Abstract

Urban development disturbs the environment, ecosystem, climate and water cycle. By monitoring land-cover disturbance throughout the process of land development we were able to quantify the gradual interference to a watershed's physiography over a year. This was accomplished by utilizing drone images captured months apart and digitizing, in a mapping software, the varied levels of disturbance present, then calculating and comparing the images' areas of disturbance. The progression of the urban development was positively correlated with land-cover disturbance. These findings give clarity to understand the impacts of urban development on the water cycle and can be used to plan for hydrologic events, like flooding, influenced by landcover change, as input for urban planning process or modeling tools, and validate the motivation behind urban development practices that incorporate the preservation of natural land.

*Keywords:* land-cover change, disturbance due to urban development, interference to a watershed's physiography