

# Effect of Land Use Change to the Road Network Performance and Environmental Degradation

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## ABSTRACT

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A change in land use or transport facilities is commonly known to be the factors behind the poor of urban transportation system quality. However, the result of field observation shown that the inadequate road performance as well as an environmental degradation due to the presence of Widya Mandira and Nusa Cencada universities and their supporting facilities and/or derived socio-economics' daily activities surrounding strongly indicate that there is a problem in the transportation system management quality. Therefore, the aim of this study is to evaluate the effect of daily large scale of activities of the two main campus to the road network performance and environmental quality surrounding, particularly around the Dusun I Village, Sub District of Penfui Timur, Kupang Regency, East Nusa Tenggara Province, Indonesia. It is hoped that the result could be used to increase the local authority capacity, especially in determining the priority program based on the functional condition of road infrastructure, and waste water and/or drainage system as well as trash management.

**Keywords:** accessibility and mobility index; environment degradation; road capacity; traffic accident risk; transportation and land use integration