

## ABSTRACT

RINA MARINA MASRI. **The Study of Environmental Change in The Bad Zone for Residential (Case Study in North Bandung Area)** under supervision of SANTUN R.P.SITORUS, KOOSWARDHONO MUDIKDJO, LILIK BUDI PRASETYO and HARTRISARI HARDJOMIDJOJO.

Area in North Bandung have high value of economy as comfortable for living and suitable for plantation activity, so that phenomena of land conversion to be important issues to environmental change. The goal of the research is designing a model and policy for the sustainable house development in bad zone residential lands. The objectives of research are: to evaluate existing residential based on land use for housing; to find the causing factors why community choose to stay in the house development; to find the environmental changes; to design dynamic model for environmental changes and to propose the policy on the sustainable housing development in bad zone related to the environmental changes at North Bandung. The research has been done for 1 year since January 2006 to January 2007 in Lembang, Cilengkrang, Cimenyan subdistrict North Bandung. Spatial analysis for residential lands using Arcview 3.3 of GIS software, factors analysis using SPSS 11.5 for Principal Component Analysis (PCA), traffic analysis and physical-chemical-biological analysis for environmental changes, dynamic system analysis and sensitivity analysis using Powersim versi 2.5C to achieve all the objectives above mention. Respondents in this methods who lives in this house development at bad zone are 126 house holds. The result of research as follows: 28.11%, 56.08%, 100% house development at bad zone residential lands each for Lembang, Cilengkrang and Cimenyan. The wide area, environmental convenient, road accessibility, accessibility have positive correlation to the community choose stay in the house development at bad zone. Traffic jam, water and air pollution, land degradation, flora and fauna loses so that decreasing environmental quality. The system analysis for environmental changes toward bad zone house development are: the increasing the flood frequency, land slide, the decreasing health community due to the water and air pollution, increasing mortality, decreasing the environmental convenient and decreasing comfortable living, due to environmental changes on mention the government funding for development increasing, funding for education and health for community decreasing. Result of sensitivity analysis giving alternatives policies as limited immigration, set up the standardization the building coverage ratio, limited the conservation area to residential lands and others, increasing the conservation funding for decreasing natural accident as flood, lands slides etc.

Key words: *North Bandung, the bad zone for residential land, GIS, environmental change, dynamic system.*