ABSTRACT

DWI NOWO MARTONO. Spatial Study of Housing Physical Environment Quality, a case study of Bekasi Regency, supervised by SURJONO HADI, UUP SIAFEI WIRADISAstra, ERNAN RUSTIADI and MUHAMMAD ARDIANSYAH.

In general, analysis on housing environment quality still relies on statistic data and it does not involve spatial aspects. Spatial aspects do not obtain portion of main attention as the basis instruments to design, stipulate and apply guidelines on housing physical environment quality. Other side, relation between spatial characteristics, housing area types and housing physical environment quality which each other influencing.

This research study role and influence of spacial aspect to assessing housing physical environment quality. On this research to assessment, it was used high spatial resolution remote sensing data, namely Ikonos as the basis of spatial data. Spatial analysis was used to obtain information on the housing spatial characteristic. While, the level of housing physical environment quality was evaluated based on the guidelines from the Ministry of Health of the Republic of Indonesia No.: 29/VII/1999 about the requirements for housing environment quality.

The research objective are to (1) test capability on high spatial resolution remote sensing data (Ikonos) as the basis spatial data of housing area, (2) analyze spatial characteristic of housing area types, (3) analyze level of housing physical environment quality and (4) analyze model of estimation approach at level of housing physical environment quality based on spatial characteristics.

The result of research showed that high spatial resolution remote sensing data having sufficient feasibility as the basis spatial data of housing area. Based on the spatial characteristic of housing type, in the research area can be grouped into six types namely type of luxurious, medium, moderate, natural housings with types swadaya 1, swadaya 2 and swadaya 3.

Level of housing physical environment quality is classified into 3 classes namely poor housing physical environment quality (6%), sufficiently housing physical environment quality (53%) and good housing physical environment quality (41%). All areas of formal housing to have level of good physical environment quality, while informal housing area for level of its physical environment quality varies.

Based on the of multiple regression analysis, building density of formal housing having an significant effect on the housing physical environment quality while road network connectivity (index β) and average distance house towards road of informal housing type having an significant effect on the housing physical environment quality. Therefore, the application of spatial approach is expected to facilitate in determining priority scale to handle poor environment quality.

Key word: housing environmental physical quality, spatial characteristic, remote sensing data with high spatial resolution, formal housing, informal housing