ABSTRACT

THAMRIN. 2008. Model of Sustainable Agropolitan Region Development at West Kalimantan-Malaysia Border (Case Study The Border Bengkayang Regency-Sarawak). Under the supervision of SURJONO H. SUTJAHJO as committee chairman, CATUR HERISON and SUPANDI SABIHAM as committee members.

Border area of Bengkayang Regency is a great potency for agropolitan development region in terms of rural-urban developmental equity in the border area. The purposes of this research were (1) to identify the potency, development level, and sustainability of the border areas at Bengkayang Regency; (2) to develop a model of sustainable agropolitan region; and (3) to formulate policy direction and strategy of agropolitan development. Types of data analysis applied in this study including Analysis of Area Tipology, Principle Component Analysis (PCA), Cluster Analysis, Spatial Analysis, Analysis of Land Suitability, Analysis of Agricultural Business, Scalogram Analysis, Centrality Analysis, Analytical Hierarkhy Process (AHP), Interpretative Structural Modeling (ISM), Multidimensional Scaling (MDS), Prospective Analysis, and dynamic system analysis. Research findings showed that the border areas at Bengkayang Regency were the basis for agricultural commodities, namely corn, rainfed paddy field, oil palm, rubber, beef cattle, goat, and chicken. The actual land suitability belonged to S2 and S3 class having constraint factors of water availability, nutrient retention, and erosion threat. The border areas of Bengkayang Regency was in the stratum of Pre-Agropolitan Region II, consisting of two more advance developed village, 11 moderate village, and 16 less developed village (relatively left behind). The alternative model for agropolitan region was an integration of plantation, crop plant, and animal husbandry agropolitan region. Dimension of ecology status were low sustainable; economy, social, culture, and law dimension were moderate sustainable; while infrastructure was unsustainable. Among the 47 attributes analyzed, 22 were sensitive to have an effect on the value of regional sustainability index. To increase the sustainability status in the future, a scenario that could be chosen was an upgrading to all sensitive attributes. It was found out through a dynamic system analysis that up to the year of 2035 population tended to grow positively and exponentially. It was also similar to land use needed, agropolitan production, and farming profit, although at one moment it would move to an equilibrium point (stable equilibrium) because of the “Limit to Growth” process. It means, the model developed follows the basic pattern (archetype) of “Limit to Growth.” The direction of regional development policy of the border areas of Bengkayang Regency was a development of agropolitan region. To improve the model performance, optimistic scenario is required to be taken through bigger intervention to the influenced key variables in the model.

Key words: border areas, agropolitan region, status of sustainability, and dynamic system.