SUMMARY

LILI SURYANI. Land Use Prediction Using Markov Chain and Land Allocation Implementation Study in Bungo Regency. Under Supervision of Dyah Retno Panuju and Bambang Hendro Trisasongko

Land use change commonly occurs as a logical consequence of regional development. Widely known drivers include government policies, as well as physical, social and economic causes. The research sets its goals to (1) identify land use change in Bungo Regency between 1993, 2001, 2006 and 2011; (2) analyze its determining factors; (3) predict 2011 and 2020 land use based on Markov Chain and measure their accuracies; (4) evaluate the regency’s 2001-2011 land allocation.

This research found that land use in Bungo was substantially altered during the 1993-2011 period. Forest declined about 87,754 Ha or about 18.84% of the test site. Three biggest raises were oil palm plantation (8.84%), rubber plantation (5.89%) and upland agriculture (2.23%).

Using multinomial logit, it was found that major causes of land use change (forest to other uses) were distance to government central location and plantation permit, at 95% confidence level. At lower confidence level (70%), additional factors were found important. These included distance to regency-managed road, slope, soil type, and land allocation in spatial planning. In general, this research suggested that about 44.1% of 2011 land use was in agreement to respective land allocation. It was discovered that Markov Chain was able to predict 2011 land use in high precision (about 98.5%).