

Mapping the Spatial Distribution of Poverty using GIS: A Case of Bicol Region, Philippines

Brandon Vista[1]; Yuji Murayama[2]

[1] Division of SIS, Univ. of Tsukuba; [2] Univ. Tsukuba

Recent studies have stressed the importance of spatial dimension in studying poverty but other researches still failed to take this into consideration. Even in the practical field, most information on poverty especially in developing countries, such as the Philippines, is based on national indicators and aggregated statistics, which serve as guideposts for decision makers in crafting policies and programs to combat poverty. However, such information failed to take into account the location of the poor, and as a result, the poverty alleviation programs are not effectively implemented because of geographic mismatch. But with the advent of GIS, a deeper understanding on the spatial dimensions of poverty, such as its spatial distribution could be acquired. This is because GIS is capable of portraying various thematic maps for visual comparison and analysis that could possibly aid policy makers in geographic targeting of poverty alleviation activities.

On this regard, this study attempts to present the spatial distribution of poverty in the Philippines with the aid of GIS. The case study focuses on the Bicol Region, one of the poorest regions in the country during the last 15 years (1985-2000). The study utilizes the Census 2000 by municipality/city and villages a.k.a. barangays and the recently published CY 2000 official local poverty estimates: poverty incidence, poverty gap and poverty severity. A geospatial database using Arc GIS 9.1 was constructed to link the administrative boundaries in shapefile format with poverty datasets and thousands of population data, all of which are stored in MS Access. Poverty incidence, gap and severity map were generated based on sextile distribution for the 114 cities/municipalities. Results show that incidence, gap and severity are highest in almost all of the island municipalities while these are lowest though seems to exacerbate farther away from provincial capitals and cities. This implies that as a percentage of municipal population, there are more people living below the poverty line in these islands; most of them are