Recent advances in spatial data, methods of data integration, and methods of analysis allows for new insight on the patterns and underpinnings of poverty in the developing world. This paper will compare two analyses that are similar in their efforts to understand the spatial patterns of poverty and their biophysical correlates but which differ in their scales (coarse-moderate to moderate-high) and extents (regional to global) of analysis. Several implications of the scale and extent differences will be addressed: data quality issues; methods for data integration and use of spatial methods to generate tabular data for statistical analysis; models of spatial analysis including accommodation of real and artifactual spatial dependence; and computation limitations and solutions to overcome these. In addition, the analytic results will be compared with recommendations for future spatial demographic analysis.