

Proportionality assessment of rice mills distribution against paddy production in Bangladesh: A GIS spatial analysis

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Abstract

Bangladesh is a populous country whose people mostly depend on rice for their food intake. Paddy is cultivated all over the country and different types of rice mills are established for processing paddy into rice. GIS is a useful tool for data analysis, visualization in maps and selecting sites for various purposes. This study analysed the spatial distribution of paddy production and location of rice mills in Bangladesh, and took a closer look at the proportionality of rice mill distribution against paddy production in the country's different regions. The distributions were shown simply in maps and also with auto-correlation like Moran's I or cluster & outlier analysis and hotspot analysis in both district wise and division wise. The findings revealed that paddy production density was concentrated in the northern areas, especially in north-western areas of the country. Rice mills were also established densely in those areas but the milling capacity against paddy production was much more in those areas. In southern areas there were very few number of rice mills although significant amount of paddy was produced there. Rice mills had not established in the whole country rationally with the paddy production volume.

Keywords: Bangladesh, GIS, paddy production, rice milling capacity, rice mills distribution, spatial analysis