

LAND USE CHANGES IN THE URBAN AREAS OF VAVUNIYA DISTRICT

N. Thamayanthi

*Department of Geography, University of Jaffna, Sri Lanka
n.d.thamu@gmail.com*

Land use is an important phenomenon to understand the interactions of human activities with its environment. Process of urbanization and urban development create many changes in land of a city area. There is vast land use changes were identified in the urban areas of Vavuniya due to the civil war. Unplanned physical developments have made many changes in the urban areas of Vavuniya. There is an urgent need to study the land use changes of the urban areas of Vavuniya district, for the future planning and management activities of the lands.

The main objective of this study is to identify the major land use changes in the urban areas of Vavuniya district from 1982 to 2012. Satellite images for the study area for the different period such as 1982, 1992, 2002 and 2012 were collected to study the land use changes of the study area. The land use changes of Vavuniya urban areas were analyzed using Remote Sensing and Geographical Information System. Multi date satellite imageries of Landsat Multi Spectral Scanner (MSS) images of 1982, Thematic Mapper (TM) of 1992 and Enhanced Thematic Mapper (ETM+) image of 2002 and 2012 were employed in to supervised image classification method using ERDAS imagine 9.1. Mainly land use changes have been classified into built up area, cultivated land, forest cover and water body.

According to the image analysis of different period of Vavuniya district, land uses have been changed in every year. The result shows that the built-up area has been grown rapidly for the duration of 1982-2012. Also, cultivation land and forest land areas decreased by 51.7 square kilometer, while the total area of built-up land developed as 51.9 square from 1982 to 2012. The urban built up land use was identified as 22% in 1982 and it has become as 75% in 2012. Migration from Jaffna, Killiochchi, Mullaitivu, Mannar and Vavuniya North is the major reasons to the much extent of urban land uses in Vavuniya district. Unplanned urbanization process will affect to the actual urban growth of Vavuniya. Proper land management systems will help to the suitable land use. Consequences of the study could help city planners and policy makers to attain and sustain future urban development of Vavuniya.