

Research Article

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Land use land cover and slope interaction mapping of Ribhoi district of Meghalaya using geospatial technique

■ Kabir Debbarma, Naorem Janaki Singh, B.K. Handique, Chandan Goswami and Abdul Q. Khan

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MEMBERS OF RESEARCH FORUM:

Corresponding author :

Kabir Debbarma, College of Post Graduate Studies (Central Agricultural University), Umiam (Meghalaya) India

Email: kabirdb90@gmail.com

Co-authors :

Naorem Janaki Singh and Chandan Goswami, College of Post Graduate Studies (Central Agricultural University), Umiam (Meghalaya) India

B.K. Handique and Abdul Q. Khan, North Eastern Space Applications Centre, Umiam (Meghalaya) India

Summary

The aim of the study is to generate the land use/ land cover and slope interaction acreage map using modern geospatial techniques of remote sensing and GIS. The seasonal data of Resourcesat-2 LISS-III images and data were used to analyze the dynamics of land use / land cover and slope interaction map of Ri-Bhoi district. Erdas and Arc-GIS softwares were used for classification of land use/land cover. The experiment was conducted in Ri-Bhoi district, Meghalaya which lies between 91°20'30" - 92°17'00" E longitude and 25°40' - 26°20' N latitude covering geographical area of 2448 km², forest area 869.07 km², net sown area 222.6 km² and the total cropped area 251.7 km². The area has been classified into 21 classes at Level II. Among 21 classes 5 land use classes were selected for land use and slope interaction map. Land use and slope interaction map was generated by intersecting slope and land use land cover map in Arc-Gis10.2. and Erdas software. The highest area observed in abandoned jhum slope 5 (AJS5) (6323.71 ha) followed by abandoned jhum slope 4 (AJS4) (4937.49 ha). The minimum area observed in *Rabi* crop slope 7 (RCS7) (0.003 ha). However, in case of land use land planning the maximum area found in tree clad area closed area (80247.21 ha) followed by abandoned jhum (16096.20 ha).

Key words : Land cover, Slope, Ri-Bhoi, Remote Sensing, LISS-III, Erdas, Arc-GIS

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