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SUNATE THAVEETHAVORNSAWAT: DEFORESTATION AND DISTRIBUTION
OF SALT PATCHES IN NORTHEASTERN THAILAND: A CASE STUDY AMPHOE
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The purpose of this research was to study the relationship between deforestation and the distribution of salt patches. The change of land use and the distribution of salt patches in Amphoe Phrayun Changwat Khon Khaen, Northeastern Thailand were studied by using aerial photographs (scale 1:15,000 - 1: 50,000) of 1954, 1974, 1984 and 1994. Multiple regression and SPSS for windows were used for statistical analysis.

The result of this research indicated that the land use in Amphoe Phrayun had changed between 1954 and 1994. The area of rice field, upland crops, community area and water bodies had increased but the area of forest had decreased at 1204.71 rai/yr, or 2.14 % per year on average. During 1954-1974, 1974-1984 and 1984-1994, the forest area decreased 2007.17, 1087.06 and 529.89 rai/yr, respectively. Meanwhile, the average increase in the distribution of salt patches was 104.60 rai/yr, or 3.2 % on average or 12.88, 48.58 and 252.33 rai/yr during 1954-1974, 1974-1984 and 1984-1994 respectively.

The forest area and the area of salt patches, rice field, upland crops, community area and water bodies were changing in the opposite direction. The forest area was decreasing while the area of salt patches rice field, upland crops, community area and water bodies were increasing, The increase of salt patch areas was significantly related to the increase of rice field, upland crops, community area and water bodies. But salt patch area and rainfall were not significantly related.

The expansion of community and agricultural areas was causing the decrease of forest area in the discharge areas and the increase of salt patches in the recharge areas continuously. Deforestation in the discharge area, however had greater effect on salt patches distribution than deforestation in the recharge area. Appropriate land use planning and proper management of cropping systems in discharge and recharge areas are necessary for protection of salt distribution.