

Impact of civil war on land use pattern of the Jaffna Peninsula, Sri Lanka.

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Analysis of changes in spatial and temporal land use patterns in a region, including assessment of war damage to land, provides a valuable framework for the allocation of resources for any agricultural planning, regional development and rehabilitation activities. The Jaffna Peninsula was the focal point of the armed conflict between the government of Sri Lanka and the Liberation Tigers of Tamil Eelam (LTTE) for more than two decades. The destructive results of war are noticeable everywhere in the Peninsula. Continued civil war has caused massive destruction to the society, to the economy, to public and private properties, and to the social and economic infrastructure. Eventually, more than 700,000 people have migrated permanently or temporarily from the Jaffna Peninsula in different periods since 1983. Significant changes to the spatial pattern of the land use of the Jaffna Peninsula have ensued. In this study object-oriented image classification of multi-temporal satellite data was used to measure and spatially characterize land use changes in the Jaffna peninsula, from 1984 to 2004. Geographic Information Systems (GIS) was used to analyze the spatial pattern of land use changes over the time period.

Results indicate that the land use pattern has been very dynamic since 1984 and shows a marked decrease of agricultural land use and concomitant increase of non-agricultural land use. This study links these land use changes to the civil war and its consequences.