PATTERNS IN THE MULTIVARIATE ANALYSIS OF THE IMPACTS OF ARMED CONFLICT USING LANDSAT IMAGERY

Fernando Arturo Mendez Garzón[1], István Valánszki[2]

[1]famendezg@yahoo.com.mx [2]valanszki.istvan@uni-mate.hu

[1-2] Hungarian University of Agriculture and Life Sciences (MATE), Department of Landscape Protection and Reclamation

Hungary, 1118 Budapest, Villányi út 29-43

The analysis of satellite imagery has been used widely to study warfare consequences on the environment; these studies have increased significantly in the last 15 years, becoming an indispensable and accurate tool to understand the reasons behind the conflicts, their consequences and that may support the restoration plans of the affected landscapes.

This article assesses this growing topic to present which is the correlation between conflict-related impacts, geographical location, type of conflict and remote sensing features. Thus, we present a structured approach focused on the assessment of the existing datasets and the analysis of the connection between geographical conditions, causes and the assessment using remote sensing methods in areas affected by warfare. We found; trends, convergence and divergence patterns. Then we consider variables such as biome, forest cover affectation, scale, and satellite imagery sensors to identify the link between conflict drivers with geographical location assessed by remote sensing methods. We collected data from 57 studies from international peer-reviewed journals from 1994 to 2020 that are indexed using scientific search engines. Reviews similar to those presented here can be used to assess the environmental impact of warfare in future conflict affectations on the environment.