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SPATIO-TEMPORAL ANALYSIS OF DEFORESTATION IN AREAS OF THE PERUVIAN AMAZON

Abstract

Deforestation in the Amazon is a critical issue. However, the population, authorities and decision makers do not perform the corresponding actions. According to the situation described before, the present work proposes the use of satellite images for identification and mapping of areas affected by deforestation. With the maps resulting from the proposed analysis, it is expected to make the decision makers aware so that they can act and implement the corresponding measures against the high degree of pollution. The Peruvian Amazon lost more than 23,000 hectares of forests during the first half of the year, according to the National Program of Forest Conservation for the Mitigation of Climate Change of the Peruvian Ministry of the Environment. 71• Loreto: 5,500 • Madre de Dios: 4,300 • Ucayali: 3,700 • San Martín: 3,000 The methodology that one follows in this work is based on calculating different indexes. The idea is to use environmental indicators extracted from satellite images such as: • Surface temperature (TS). • Normalized vegetation indexes (NDVI). • Leaf moisture (LWCI). • Normalized soil indexes (NSI). • Vegetation adjusted to the ground (SAVI). This type of analysis and mapping identifying levels of deforestation and their increase over the years. This analysis can help raise awareness among people and authorities about the adverse effects of deforestation and its relationship with climate change. The deforestation may be due to several factors, but mainly to illegal mining and the indiscriminate felling of trees for illicit traffic wood.