SHORT COMMUNICATION

Mapping of physiognomic changes in steppe vegetation using geomatic tool: case of the Naâma region (South West Algeria)

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ABSTRACT

For several decades, the steppe region has been undergoing advanced degradation due to the combined effects of climatic and anthropogenic factors. This study was conducted to monitor the dynamics of the different steppe plant formations and to demonstrate the value of geomatics for spatial management and decision-making. Mapping and processing of Landsat-8 satellite images from 2018 made it possible to map and assess this evolution between 1978 and 2018. The results show a decline in the area occupied by the paraclimax steppe from 391240 ha (83.51%) in 1978 to 304056 ha (65%) in 2018. The psammophilous steppes also experienced a very significant increase, from 26410 ha in 1978 to 128838 ha in 2018. The regressive dynamics of the vegetation cover is accompanied by significant dune movements and a considerable reduction in the area of the matorrals of Juniperus phoenicea L and Stipa tenacissima L.

Keywords: Anthropogenic factors, dynamics, Landsat-8 satellite, matorrals, psammophilous steppes, steppe region,