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Abstract : Remote sensing and geographic information systems are very effective when studying land cover evolution and detecting changes. This research has been carried out in the Medjerda watershed. It is aimed to study the dynamism of land cover from multiple satellite images from 1994 to 2017 as well as the evolution of the C factor and its relationship to water erosion. The classification has been supervised by the use of the maximum likelihood method, the multi-date comparison along with masks technique. Results have shown that the classification accuracy varies from 76 to 91% and the Medjerda landscape largely contains soils without vegetation. During the period of the study, both vegetation classes and bare soil go through considerable changes following an undulating tendency. During the period from 2004 to 2010, an annual vegetation regression rate of around 55% was observed. However, an increase of 66% was observed during the period 2010–2017. The estimation of the factor C has shown that the use of the exponential regression model is effective and the vegetation in the study area is insufficient to protect the basin against possible erosion.

KEYWORDS : Medjerda ; Catchment ; Normalized difference vegetation index ; Remote sensing ; Revised universal soil loss equation ; Kappa coefficient

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1-<https://link.springer.com/article/10.1007/s12524-021-01472-w>

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