Erosion hazard mapping in the fire affected area of Neapolis (Laconia) with the RUSLE method

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Περίληψη

The spatial and quantitative assessment of soil loss in the fire affected area of Neapolis, Laconia, was implemented using the Revised Universal Soil Loss Equation (RUSLE) and Geographic Information Systems (GIS). In this research the used data were rainfall, morphology, lithology, land use and anti-corrosion measures of the study area. According to the RUSLE, the factors which were used are rainfall erositivity (R), soil erodibility (K), slope length and steepness (LS), cropping management (C) and conservation supporting practice (P). Each factor was quantified and rated according to the influence in the erosion processes. The parameter of vegetation calculated twice, before and after the wildfire, taking into consideration the land uses of CORINE 2012 (before) and processing of multispectral satellite image 'Worldview2' for the calculation index NDVI (after) through the vegetation residue. The final result of the applied methodology was the creation of average annual soil erosion maps of the study area before and after the fire. The soil loss assessment, depicting erosion hazard, is significantly higher after the fire. The anti-erosion measures evidently contribute significantly to the reduction of erosion hazard and the maintentance or restoration wherever it's necessary, is particularly important, especially after the wildfire.

Λέξεις κλειδιά*: erosion hazard, RUSLE, wildfire, Neapolis.*