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Wildfires Assessed By Remote Sensed Images And Burned Land Monitoring

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Abstract : This case study implements the evaluation of burned areas that suffered successive wildfires in Portugal mainland during the summer of 2017, killing more than 60 people. It's intended to show that this evaluation can be done with remote sensing data free of charges in a simple laptop, with open-source software, describing the not-so-simple methodology step by step, to make it available for county workers in city halls of the areas attained, where the availability of information is essential for the immediate planning of mitigation measures, such as restoring road access, allocate funds for the recovery of human dwellings and assess further restoration of the ecological system. Wildfires also devastate forest ecosystems having a direct impact on vegetation cover and killing or driving away from the animal population. The economic interest is also attained, as the pinewood burned becomes useless for the noblest applications, so its value decreases, and resin extraction ends for several years. The tools described in this paper enable the location of the areas where took place the annihilation of natural habitats and establish a baseline for major changes in forest ecosystems recovery. Moreover, the result allows the follow up of the surface fuel loading, enabling the targeting and evaluation of restoration measures in a time basis planning.

Keywords : image processing, remote sensing, wildfires, burned areas evaluation, sentinel-2
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