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# Leaf loss and wildfires in the central Hungarian forests during the July 2007 heat wave in MODIS satellite images

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During the July 2007 extreme heat wave in the Central Europe and the Balkans, several forest fires have been recorded. Most of them ravaged in southern Greece and in the western Balkans and also in the Adriatic coast of Italy. The forest fire record in Hungary was also extent but the fires were much smaller than in the above listed area.

In earlier works, the forest fire frequency was often correlated with indices of fire danger or aridity, like the one of Angström. In statistical point of view, however, the mostly random outbreak of the fires is always an ambiguity factor. In the present work, we correlate the Angström index with the leaf loss of the Hungarian forests, deduced from subsequent MODIS satellite images. Satellite imagery is corrected with respect to the sensor and Sun angles and greenness factor is computed for the forest area. Results show remarkable co-incidence of the greenness decrease and the Angström index and also the tree species distribution (native mixtures vs. planted monocultures).