



Meteorological contribution to the mitigation and adaptation of the 'extreme water events' of Hungarian Great Plain

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The lack of water is a traditional problem of Hungarian agriculture. Two big rivers cross the territory of Hungary and times to times they produce huge floods. In the Carpathian basin a flood and a drought can occur in the same year. The general problem of Hungarian agriculture is the 'water' in two contexts, in lack of water and in surplus. Not only of the next year but of the next decades the basic question of the Hungarian planning is how the national economy can handle the increasing numbers of unexpected negative events of climate change because the growing numbers of sometimes catastrophic floods and droughts seems to be connected with global warming. Beside the 'normal floods' in the last few years the numbers of so called flash floods show increasing tendency too. The presentation summarises the 'extreme water events' of Hungarian Great Plain, and the forecast problems of Hungarian meteorology together with the National strategy in mitigation and adaptation in connection with climate change. From meteorological point of view the handling of flood and drought problem is totally different. In case of flood the stress is on the forecast, in case of drought mainly of the evaluation of the historical data mainly the short and long term evaluation of drought indices. Drought indices seem to be the simplest tools in drought analysis. The more or less well known and popular indices have been collected and compared not only with the well known simple but more complicated water balance and so called 'recursive' indices beside few ones use remotely sensed data, mainly satellite born information. The indices are classified into five groups, namely 'precipitation', 'water balance', 'soil moisture', 'recursive' and 'remote sensing' indices. For every group typical expressions are given and the possible use in the decision making and hazard risk evaluation and compensation of the farmers after the events. The meteorological elements of new Hungarian agricultural risk strategy will be shown.