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Drought monitoring in Slovakia

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Slovakia is located in the Central Europe, and its complex surface consists of mountains, valleys, but also lowlands, which are crucial for agricultural production. In the context of climate change, the occurrence of drought seems to be important limitation factor in many regions. Therefore, national institutions responsible for air and/or water monitoring have established different forms of drought monitoring. The complexity of this phenomenon resulting in no general definition of drought caused that each drought monitoring is focused on one sector. In Slovakia, we established three types of the drought monitoring: meteorological, soil and hydrological. The first type has been running since March 2015 and it is based on the SPI, SPEI and Palmer's CMI. The information is updated weekly and general public can see the development of the indices in the last 60 days as well as the seven days forecast based on the ECMWF outputs. The soil drought has been monitored since September 2015, when the Slovak Hydrometeorological Institute joined the project Intersucho. This monitor uses the integrated soil model to assess the soil drought intensity, relative soil humidity, deficit of soil moisture, cumulative stress (the percentage of time, when the relative soil humidity is under 50 %) and vegetation condition. The integral part of this monitoring is also the monitoring of drought impacts on agriculture and forestry, which will also be integrated into the Drought User Service developed by the DriDanube project (Interreg DTP). The last monitoring type is the hydrological drought monitoring, which observe the situation in the surface and underground water resources. In the near future, the DriDanube's Drought User Service will be presented to the public. This service will provide the information about drought from satellite products.