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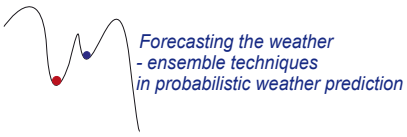

Attempts of regional agricultural drought monitoring and forecasting in South-eastern Europe

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To detect temporal and spatial variability of drought and especially to forecast drought events is one of most challenging issues of drought management. First problem arrives from the fact that there is no standard definition of severity and duration of different types of drought. Moving from local to regional scale important constraint represents data availability. Global data sources (such as GPCC precipitation analyses) are used in our case. Standardized precipitation index (SPI) is used as preliminary tool to assess drought onset and duration.
SPI calculation based on gridded precipitation analysis is also used to calibrate ensemble forecasts of precipitation anomaly. Monthly ensemble forecasts provided by ECMWF were estimated as most appropriate source according to typical duration of drought events. Potential to forecast more specific drought impacts in agriculture are also discussed. Main goal of drought early warning in agriculture is to estimate and forecast crop water requirements and water deficit. Crop water requirements were simulated by water balance model supplemented with some in-situ soil water measurements. Attempts to forecast crop water requirements with selected outputs from monthly ensemble forecasts will be presented.