



Time-spatial variations of the water balance components for Croatia

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Following water balance components are considered: *precipitation amounts, potential and real evapotranspiration, surface runoff, recharge* of water into the soil, *loss* of water from the soil, *soil moisture content and measured river discharge*. The monthly air temperature and monthly values of all water balance components have been considered for 24 weather stations in Croatia for the period 1951-2000, and for the Zagreb-Grič station for a much longer period, 1862-2000. The Sava River discharge from two hydrological stations (Zagreb and Županja) for the period 1931-2000 has also been used. Twenty-five-year moving averages have been calculated from annual mean values and – only for air temperature – a principal component analysis has been performed. A long-term positive trend in air temperature, potential and real evapotranspiration, a negative trend in runoff (discharge) over almost the whole territory of Croatia, while the moving-average precipitation amounts show rather a cyclic variation. Although for the recharge of water into the soil and its losses from the soil there is not any obvious trend, a negative trend in soil moisture content has been observed. The positive trends in air temperature and potential (real) evapotranspiration and the negative trends in soil moisture content and runoff (discharge) are consistent (to some degree) with the recent global climate warming.