



Assessment of land use change effects on drought characteristics using hydrological model HYPE

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Land use or land cover change can be considered as one of the adaptation measures for mitigating the effects of drought. The land use change can be examined either in experimental fields or by hydrological model simulation. Different land use type provides a different hydrologic response to various meteorological forcing. In addition, same land use type can produce a different hydrologic response when placed on orographically different sites. Quantifying those differences and quantifying the additional volume of water that can be stored in the catchment when land use change is considered as an adaptation measure to reduce drought occurrence is crucial information for stakeholder's negotiation. Using drought characteristics we assess the effects of land use change on discharge properties in various catchments with different orographic settings in the Czech Republic. The findings of this study can be used as a source of information in context with drought occurrence for decision-making process when it comes to, for example, afforestation, deforestation, the transition from forest to agricultural land and vice versa.