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# Identification of catchment functional units by time series of multi-spectral and thermal remote sensing images

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In order to represent the functioning of hydrological catchments in a most efficient way, it will be necessary to group catchment units based on their hydrological response given driving boundary conditions and internal states.

While for rainfall driven conditions geophysical methods, giving inside into subsurface structures and states, are most promising, time series of remote sensing images characterizing the temporal dynamics of land surface conditions will allow to define similary und energy driven conditions.

ASTER and MODIS data for the years 2009-11 will be used to analyse the temporal dynamics of LAI/NDVI and land surface temperature. Differences in the absolute value as well as in temporal derivatives are expected to indicate different functional behaviour with respect to evaporative (and thereby photosynthetic and biomass production) processes. Also, the spatio-temporal persistency of functional patterns will be analysed in order to evaluate the usefullness of functional grouping.