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Actual evapotranspiration changes under land-use and land-cover types in the Volta Basin

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The experimental site of Navrongo-Ghana was selected to study the actual evapotranspiration (ET_a) under the effect of different land-use and land-cover and soil moisture spatial distribution during the dry season. Satellite data acquired at the beginning and end of the dry season were used to produce the land-use and land-cover and the moisture maps, while the ET_a spatial distribution was computed using the Surface energy balance algorithm for land (SEBAL) model. Relationships have been established to obtain ET_a by land-use and land-cover types and moisture classes. Rapid land-use and land-cover change associated with climatic factors have been found to be potential threats of the hydrological role of savannah vegetation in the area.