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Regional vegetation water effects on satellite soil moisture estimations for West Africa

Soil moisture is a vital parameter for water resources planning. In West Africa, where the economy largely depends on rainfed agriculture, information on the temporal and spatial distribution of available soil water is required for further agricultural development. Microwave satellites have the potential to supply reliable soil moisture estimates over large areas. Satellite data used to derive such soil moisture estimates are not yet fully understood. In this study, the effect of vegetation on soil moisture estimates is investigated. Main conclusion is that satellite data are affected by plants but that the overall signal still contains accurate soil moisture information.