



The added value of generic remote-sensing data for assessing the Sustainable Development Goal's indicator related to water stress: A case study for the Medjerda catchment in Tunisia

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The different targets and indicators of the water-related Sustainable Development Goal (SDG-6) are related to the different water related functions and services, considered to be important for sustaining life on Earth. Target 6.4 deals with water scarcity and availability. This target is evaluated by means of two indicators. Indicator 6.4.1 is related to water use efficiency, while indicator 6.4.2 measures the level of water stress.

In this work, we focus on the water stress indicator for the Medjerda catchment in Tunisia. The Medjerda catchment is expected to be heavily impacted by climate change and it is considered as the most important river basin in the country from an economical point of view. We assess the value and the quality of the water stress indicator for this catchment. The quality of the indicator is evaluated by quantifying the uncertainty associated with the indicator. Monte-Carlo methods are used to assess indicator uncertainty. We process the indicator using two data flows. First, we process the indicator using data provided by official governmental institutions. Subsequently, we add generic remote-sensed data derived from the cloud-based analysis platform "Google Earth Engine". Differences in quantified uncertainty on the water stress indicator for both procedures demonstrates the added value of remote-sensed data on the calculation of the water stress indicator SDG 6.4.2 for this case study.