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## Agroclimatological Classification for Iran Land for Earth Observation Purposes

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Modeling climatic conditions and knowing about them helps us to improve ecosystem management. Climate classifications generally have been produced using stations' data, and because satellite data did not have a proper temporal period, they could not be applied as a tool for climate classification. The aim of this study was a qualitative assessment of the fitness of satellite data as covariates of an agro-climate classification. To define agroclimate classes in Iran land, temperature and precipitation were selected as the main climatological parameters in agriculture. Using data collected from 3825 synoptic, climatological, rain gauge, and evaporation stations from 2002 to 2016, an agroclimatic map was produced with a resolution of 5 km which is divided into 24 agroclimatic classes. Comparison between resulted agroclimatic classes and some remote sensed agricultural related variables including mean\_yearly\_NDVI-TVDI, average actual evapotranspiration (m/yr), evapotranspiration (m/yr) and average soil moisture ( $m^3/m^3$ ), showed a very sharp visual accordance. The accordance was very clear specially in the case of TVDI which had a greater resolution of 1 km x 1 km. The results showed that satellite data can be a useful candidate (as meaningful auxiliary variables) for agroclimate classifiers. moreover, in situ based classifications can be beneficial as a tool of satellite data classification and interpretation. Another point is that, the greater the similarity between satellite data and agroclimate classified raster resolutions, the better the conditions for comparing and evaluating performance.