Review of: "New Method to Identify Potential Illegal Water Use Location by Using Remote Sensing and Neural Networks in Laguna de Aculeo, Chile"

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Potential competing interests: No potential competing interests to declare.

Document reading in an easy way and clear.

In 3.3 and 3.4, m2 is not superscripted (m^2).

Inside 3.3, MSI is not written as an acronym.

See, for example, the attached below.

In summary, the methodology is good but is lacking in-situ data (for example, the water used by Chile open data or something like that could be available) to establish a correlation between water use and vegetation trend indexes. Without in situ data, it is not possible to assess a real judgment about a possible water thievery.

3.3. *Trend analysis*

Various soil indices such as NDVI, EVI, GNDVI, SAVI, NDMI, MSI, and BSI were estimated at a spatial resolution of 10 m2 to identify areas with high vegetation coverage over time. The entire study area was evaluated, and it was found that all soil indices decreased from October to April in 171 days, which had no rain events. The decline in vegetation health was observed globally in the basin, regardless of the mathematical calculation made on each pixel using GIS tools. This could be due to the high temperatures in summer and limited water access for the vegetation. An analysis of only NDVI values showed that certain areas within the watershed had abnormal values compared to the mean, with some areas having values as high as 0.99. The Moisture Stress Index values supported these results, indicating values above 2.5 in certain areas, which could be attributed to maintaining or improving the