

# **SOIL MOISTURE ANALYSIS AND ITS EFFECT ON LAND SURFACE TEMPERATURE USING A REMOTE SENSING APPROACH AND GEOGRAPHIC INFORMATION SYSTEM APPROACH**

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## **ABSTRACT**

Soil moisture is the amount of water stored between soil pores. Soil moisture information is included in very important land information, because it can be used as a reference for land policies, such as regional development, water resource management and handling potential disasters. Remote sensing and GIS methods are one of the most reliable methods because they can cover a large area and require a short time. Surface temperature is one of the important indicators often used in estimating soil moisture. Soil moisture processing on digital images is done using soil moisture index (SMI) and normalized difference index vegetation (NDVI) analysis. The targeted outputs in this research include mandatory outputs, namely accepted articles in scopus indexed proceedings and additional outputs, namely copyright. In terms of technological readiness, this research is included in TKT 2 with a target achievement of TKT 3.

Kata Kunci: *Soil moisture, SMI, NDVI, Remote Sensing, Geographic Information System*