

Identifying the original source of megalithic stones in Tambunan using spectral Signature technique

ABSTRACT

Megalithic stones are a remnant of the ancient people. An intriguing megalithic stone legacy ought to emphasize the context in which it fits. Consequently, it is necessary to ascertain each megalithic stone's historical context. This is significant for the archaeologist to obtain true and valid information. In Tambunan, there are numerous myths about megalithic stones. As a result, it is impossible to verify the story's validity. These days, remote sensing has emerged as a crucial technical instrument for archaeologists to gather spatial data in both broad and localized locations. Prior research has demonstrated the efficacy of remote sensing in identifying archaeological site remnants. Nevertheless, there have never been any investigations utilizing remote sensing in relation to small-sized megalithic stones. Thus, this study employs spectral signature techniques and remote sensing to identify the original source of the megalithic stones discovered in Tambunan. This study carries out the spectral signature of megalithic stones in Tambunan using Sentinel-2A satellite image data with a 5-meter resolution using the SNAP application. Before that, the coordinates and measurements for each megalithic stone were obtained from the ground. The spectral signature of all the megalithic stones was then compared with the spectral signature of the stones near the river or near the hill. The study's findings demonstrate that the spectral signature of the megalithic stones in question is identical to the stone found in the river near its location. As a result, this study was successful in providing scientific evidence that the river is the source of the megalithic stones in Tambunan, despite the stones' considerable distance from their site.