Review of: "Ancient Trails of the Surigao Gold District: A Preliminary Baseline Predictive Model"

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Potential competing interests: No potential competing interests to declare.

Reviewing the manuscript titled "Ancient Trails of the Surigao Gold District: A Preliminary Baseline Predictive Model" has indeed been a pleasurable experience.

The text adeptly unfolds a comprehensive research endeavor, centering on the development of a macro-scale reference model for potential ancient trails connecting Jabonga-Kitcharao and Placer to the Butuan Balangay sites. The chosen methodology involves the application of Geographic Information Systems (GIS) for the analysis of digital elevation models (DEMs). Additionally, the paper enhances the mesoscale context of the sites by incorporating a combination of natural and infrared band imagery. The subsequent survey intends to employ a multi-scalar approach, integrating macroscale satellite data, mesoscale, and microscale data obtained from remotely piloted aerial systems (RPAS), along with ground-verified data.

Overall, the research reflects a sophisticated, interdisciplinary approach, seamlessly weaving together various data sources and technologies to provide a nuanced understanding of the ancient trails and their contextual significance.

The authors skillfully present a well-structured introduction that offers a clear and generalized background of the topic, providing readers with an appreciation of the research experience. The motivations behind the study are transparent, and the objectives are well-defined.

The section on Methodology is particularly commendable for its clear and concise description. The results are exhaustively presented and effectively support the objectives of the study.

Discussions within the manuscript are robustly supported by appropriate evidence, addressing the aims of the study comprehensively. The references cited are recent, relevant, and correctly organized, offering strong support to the conclusions drawn.

The "Secondary Analysis" section stands out, where the authors successfully introduce a foundational computer-generated model, marking the initial stage of the research. They emphasize the logical next step of rigorous testing across diverse datasets to ensure the model's robustness. The outlined future trajectory, incorporating more extensive macroscale data through satellite technology and generating mesoscale to microscale data using RPAS, reflects a strategic and forward-looking plan.

The holistic approach presented in this research paper is noteworthy, underscoring the importance of researching oral

histories and traditions of ethnolinguistic groups to complement technological aspects. This comprehensive approach ensures a well-rounded investigation, blending technological advancements with cultural and historical perspectives for a more nuanced understanding.

In conclusion, this manuscript is well-presented and rational. Based on my assessment, I recommend its acceptance for publication.