Review of: "A Methods Note on Remote Sensing Platforms and Large-Scale Archeological Impact Assessments (AIA) in the Philippines"

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Potential competing interests: No potential competing interests to declare.

[Summary] The article describes a series of remote sensing methods to study a range of hypothetical archaeological sites in the Philippines. It attempts to provide an outline of different methodologies for approaching archaeological projects on a macro, meso, and micro scale. Different sensing applications are described, such as satellite or drone information, followed by a predictive study of where ruins or archaeological sites are most likely to be found that may pose problems for civil works. [Entity] I believe the article is original, but it does not provide any new insights or solid data to the state of the art. I think there is a need for further study of the state of the art, with more references categorized by the type of technology used in archaeological contexts, as well as similar studies of this type that address predictive models in archaeological sites. If not conducted in the Philippines, at least similar studies carried out in similar contexts.

I think the article mixes too many concepts without providing concrete data and attempting to reach conclusions without providing a clear work methodology that works with the different cases at the different scales that can be found from the archaeological point of view. I also see it as having very limited utility, since it does not present any specific case studies but is rather too general.

[Presentation] The images do not provide relevant information for the study. Figure 1 could be more useful if it used a grid structure that, for example, showed the differences and magnitude of errors when working at the three different scales, as well as the technologies used in the state of the art at these three scales. Figure 2 relies too much on drawings that do not provide much information, in addition to having evident problems of font size changes that make the image difficult to read. It is not a clear image. Instead, I would have worked with a BPMN-type diagram that clearly showed the key steps of the workflow and whether there are steps that are interrelated with each other. Instead of using color images, I would have used icons, which are much clearer. I think the figures from Figure 5 onwards do not provide useful information for the study, beyond being diagrams of the movement and displacement of drones. For example, there are no images of the differences between the different sensors proposed to be used with respect to the scale of the archaeological spaces to be studied and what their scope might be. I think Figure 9, which refers to targets, could be much richer if it specified the distribution of targets and how many targets are needed to georeference an archaeological site depending on its scale (macro, meso, micro).

I think there is a significant lack of bibliography, as well as recent bibliography that refers to sensor fusion and especially

its application in archaeology. I also miss more recent bibliography on the state of the art of archaeology in the Philippines.

[Strengths] I think this article could be greatly improved if a clear classification were made of the different methods of sensor fusion used so far in archaeological sites, with emphasis on the different scales mentioned at the beginning of the article and clearly defining the pros and cons of working with each different type of technology and what each type of sensor contributes and how they can complement each other. It is necessary to provide qualitative and quantitative data. Additionally, I think the article could be enriched by emphasizing these methodologies applied to such a localized area in the Philippines, as it would probably be one of the first studies of its kind. I think it is interesting to use the proposed predictive model, but I need more specific data about how it works, under what algorithms it works, if it works with any, or what training data it is based on to work as such.

[Weaknesses] I think the article is too unspecific, and mentions too many concepts that have no greater cohesion among themselves than the fact of being different generalist technologies employed in the cataloging and study of archaeological, architectural, or cultural heritage zones. I don't see any novel concepts developed in this study. Nor do I see concrete numerical data, there is no mention of the amount of errors or precision between different technologies or different scales, nor is there any discussion of the scope, field of view of the different payloads or cameras that are intended to be employed in the methodology... I think it is necessary to reformulate this study to arrive at relevant conclusions.