# Final comments: looking to the future

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We thank Sarah Parcak *et al.* for their response to our paper, for engaging in this important debate and for clarifying a number of points regarding Parcak *et al.* (2016), and for raising some important questions concerning the methods and objectives of the EAMENA project. We can, however, only comment on what was presented in their original article and address, in these brief final remarks, a few of the points raised in their response.

We do not deny that looting is a significant problem, nor are we seeking to downplay the importance of both the data collected by Parcak *et al.* and their subsequent findings with regard to how the threat of looting has developed in the last ten years. Rather, our response critically examined some of the claims made by Parcak *et al.* that were based on questionable methods, and which, as a result, detracted from their other valid and important findings.

In particular, and even with caveats, their presentation of figures and projection of looting patterns to 2040 failed to take into account the complexities of the problem and the many unpredictable, human variables that affect looting and the illicit trade in antiquities. As illustrated in Parcak *et al.*'s example of climate modelling, analyses of these types benefit significantly from the presentation of multiple projections. These are made stronger when coupled with explicit reasoning as to why specific models have been used and the factors influencing their probability. Our own paper offered a few examples simply to illustrate some other possible outcomes, although as Parcak *et al.* suggest, all of these analyses will need further refining in the future to be of use.

Parcak correctly highlights that in the Nile and Delta regions, where their data collection was focused, looting and encroachment (as they define it) are the most significant problems. The logic of the assertion, however, that the comparative number of projects working in the Nile and Delta regions *vs* the Eastern Desert "should demonstrate where most archaeological sites in Egypt exist and are threatened" (Parcak *et al.* above) in general, is flawed. That most projects work on sites in the Nile and Delta regions only demonstrates where the highest concentration of known sites in the country is, and where academic interest has traditionally been focused. It is for this very reason that EAMENA chose to undertake an investigation of the Eastern Desert. The area was used as a case study to invest in, and bring attention to, a region that has received comparatively limited attention by the heritage community, and, as we demonstrated, that is also in urgent need of protection.

Identifying new sites using satellite imagery requires caution, and as with most archaeological projects that employ remote-sensing techniques, we use well-established methodologies of comparing known sites to new ones, to assess their probability of archaeological significance. In addition, our database employs certainty levels that allow us

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to indicate our level of confidence in the records that we create. Nevertheless, even had we conducted our analyses only taking into account previously published sites, our conclusions would have remained the same: that in the Eastern Desert, the most common and urgent threat is mining.

It is clear that our projects have taken different approaches to recording and combating damage to Egyptian heritage sites. Our criticisms concerning Parcak *et al.*'s paper and the presentation of our Eastern Desert case study offer an alternative view of the threats facing Egypt's heritage that addresses an imbalance in the work of Parcak *et al*. This should not detract from the very serious issue of looting and the on-going work to prevent it. It is our view that exploring different perspectives and considering alternative interpretations of all our data can only benefit efforts to understand how and why all types of damage to heritage occur. What this debate makes clear is the future scope for vibrant discussions on these subjects among the wider archaeological community. Ultimately, we all aim for the same thing: to help, in whatever way possible, to preserve, manage and protect heritage.

## Reference

Parcak, S., D. Gathings, C. Childs, G. Mumford & E. Cline. 2016. Satellite evidence of archaeological site looting in Egypt: 2002–2013. *Antiquity* 90: 188–205. https://doi.org/10.15184/aqy.2016.1



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