[Online supplementary material]

Satellite evidence of archaeological site looting in Egypt: 2002–2013

Sarah Parcak¹, David Gathings¹, Chase Childs¹, Greg Mumford¹ & Eric Cline²

The following represents the formulae we used:

- a. AreaPITS [Date] / AreaPRMTR [Site] = % of site looted in [Date].
- i. AreaPITS [Total] / AreaPRMTR [Site] = % of site looted.
- b. AreaENCR [Date] / AreaPRMTR [Site] = % of site encroached in [Date].
- i. AreaENCR [Total] / AreaPRMTR [Site] = % of site encroached.
- c. AreaPITS [Date]+ AreaENCR [Date] / AreaPRMTR [Site] = % of site affected in [Date].
- i. AreaPITS + AreaENCR / AreaPRMTR [Site] = % of site affected.

The average pit size can be calculated yearly or in bulk totals as a ratio between the number of pits and the area of the pits to ascertain the volume of moved earth and estimate the amount of time spent at each site.

- a. Pits [Date] / AreaPITS [Date] = average pit size [Date] (m²).
- i. Pits [Total] / AreaPITS [Total] = average pit size (m²).

To determine the yearly trends in total damage, we calculated the ratio between the total damage for all years in the study to each individual yearly amount of damage.

b. AreaPITS [Total] + AreaENCR [Total] / AreaPITS [Date] + AreaENCR [Date] = yearly % of total damage.

To ascertain the progression in total site damage over time, we calculated the ratio of yearly damage (adding each year consecutively) to total damage.

- c. Yearly total damage by date1 / total sites area = % damage to total sites area by date1.
- d. Yearly total damage by date $1+2 \dots /$ total sites area = % damage to total sites area by date $1+2 \dots /$

¹ Department of Anthropology, University of Alabama at Birmingham, 1401 University Boulevard, Birmingham AL 35205, USA (Email: sparcak@uab.edu)

² Department of Classical and Near Eastern Languages and Civilizations, George Washington University, 801 22nd Street NW, Washington, D.C. 20052, USA

Figure captions

- Figure S1. Adjusted vs unadjusted total % damage to archaeological sites in Egypt.
- Figure S2. Unadjusted pit count per year.
- Figure S3. Unadjusted pit area per year.
- Figure S4. Unadjusted encroachment area per year.
- Figure S5. Total affected site count per year (unadjusted).
- Figure S6. Projected damage to archaeological sites (unadjusted) to 2039, when all of the 1100 study sites will be affected; it differs from the adjusted projection by one year.
- Figure S7. Flowchart of imagery analysis.