

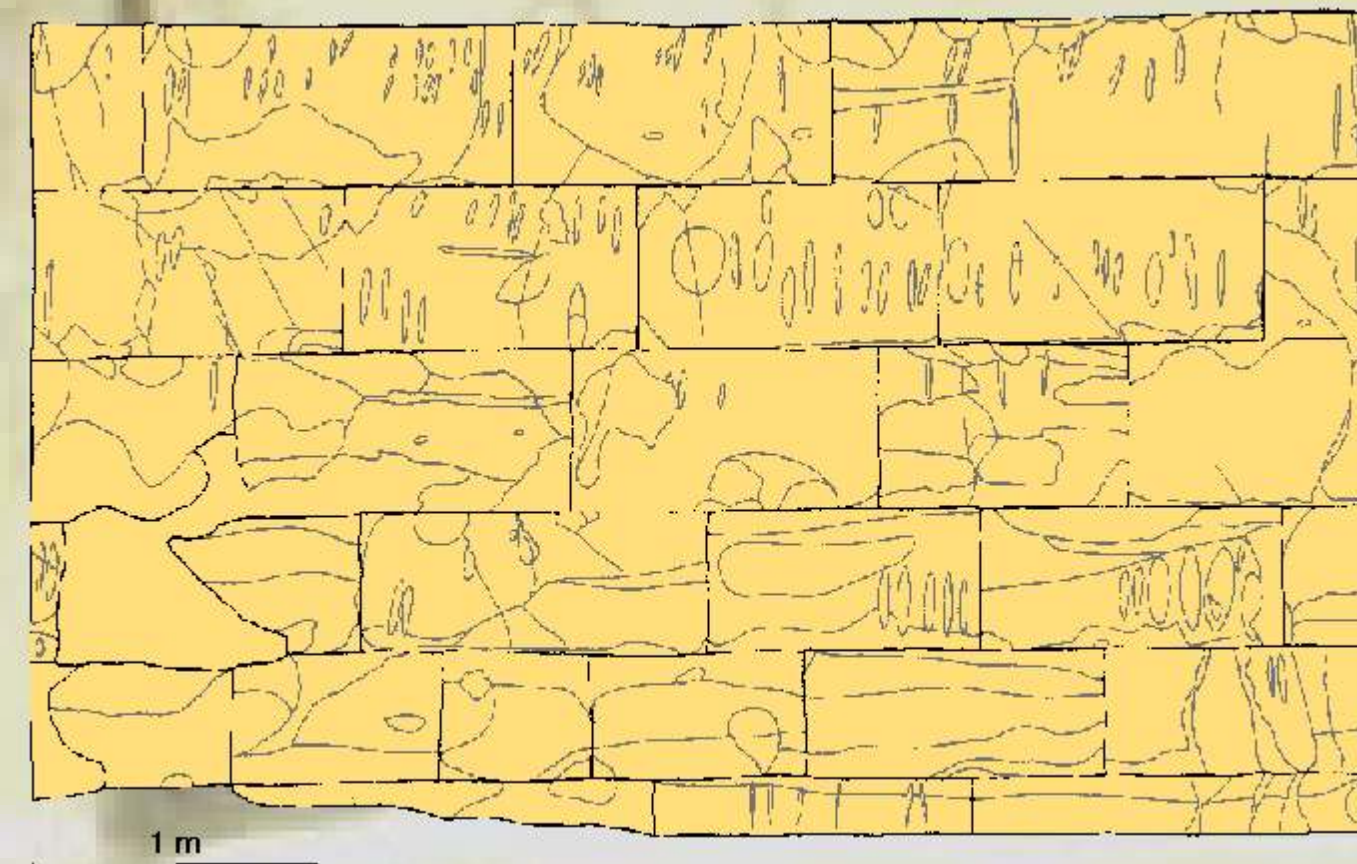
Weathering damage on Pharaonic sandstone monuments in Upper Egypt

Rating of damage

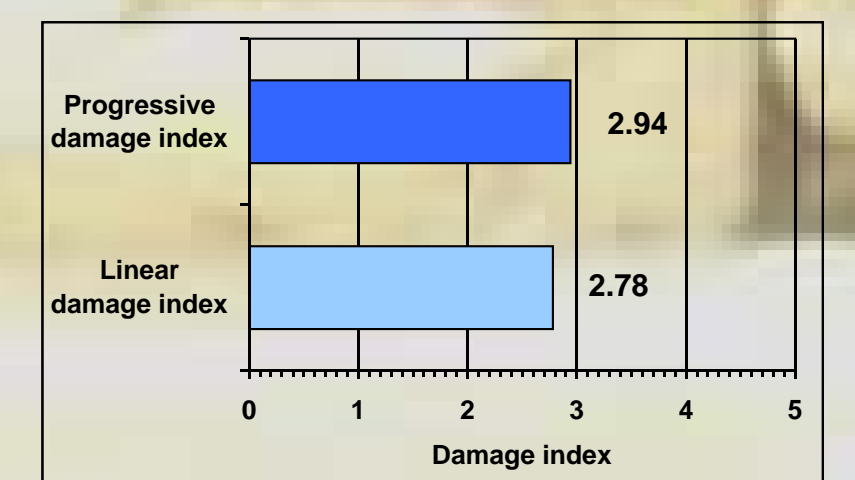
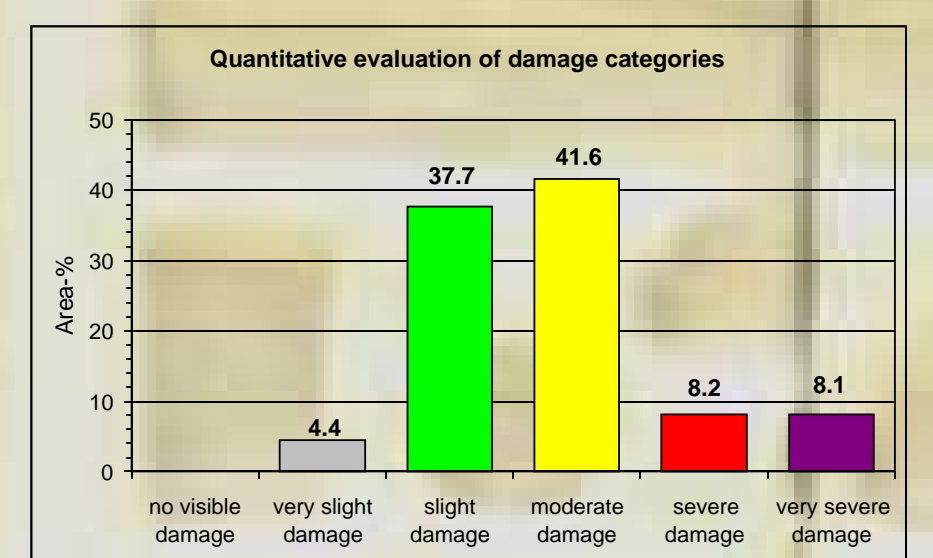
Bernd Fitzner, Kurt Heinrichs & Dennis La Bouchardiere

Based on the detailed mapping of weathering forms and the correlation scheme "weathering forms - damage categories", weathering damage was rated by means of damage categories and damage indices. The damage categories were illustrated in maps and were evaluated quantitatively. Considerable proportions of moderate, severe or even very severe damage were noted for parts of the investigation areas, while other parts have remained in good condition. It was found that the degree of damage - quantified by the damage indices - in most cases does not correlate with the age of the investigation areas. It appears much more dependent on the lithotypes and, especially, on exposure characteristics of the investigation areas and the local environmental conditions, especially as related to salt weathering processes. The damage categories and damage indices are very suitable indicators for the need and urgency of preservation measures. The maps of damage categories locate those parts of a monument which interventions have to focus on.

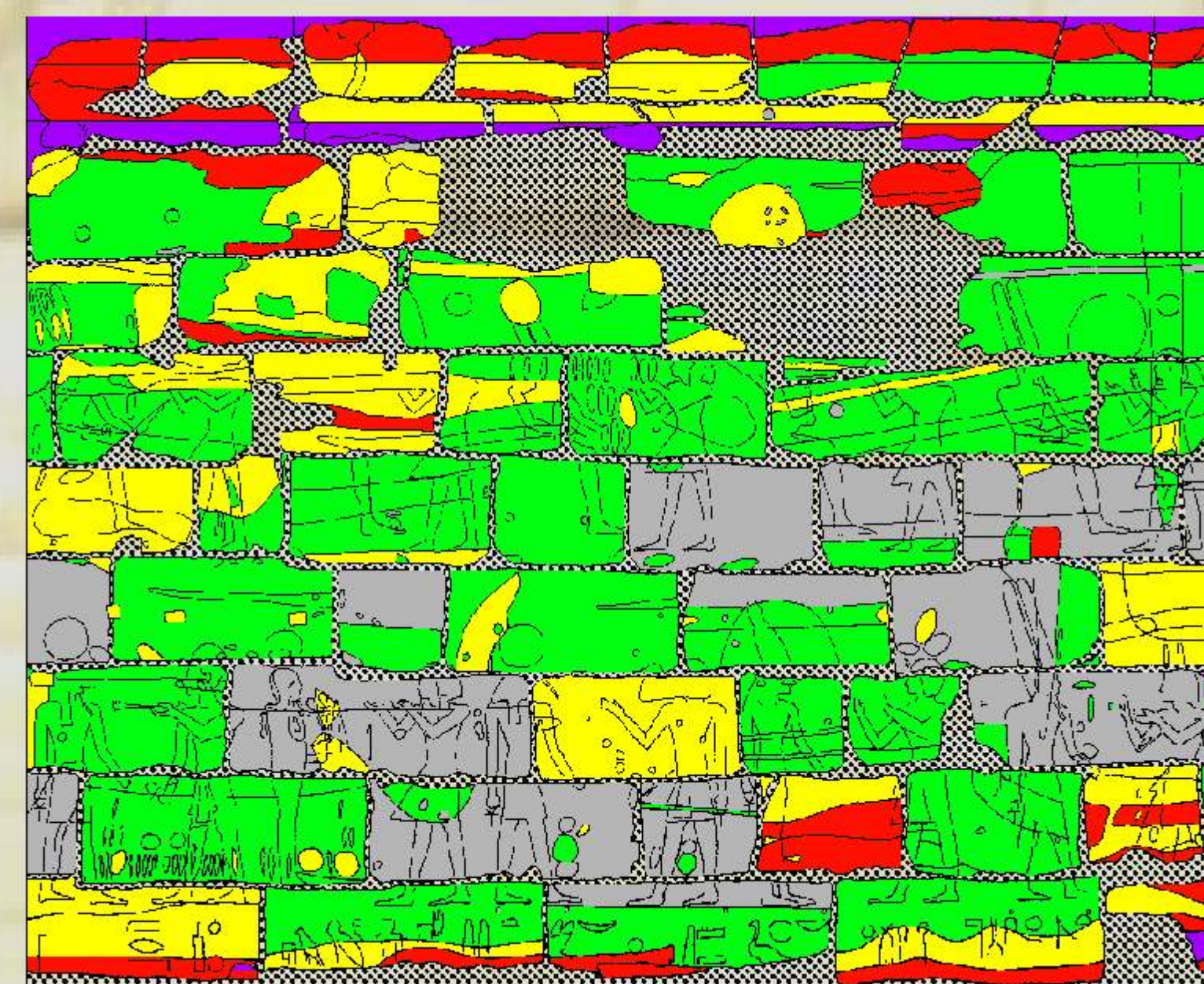
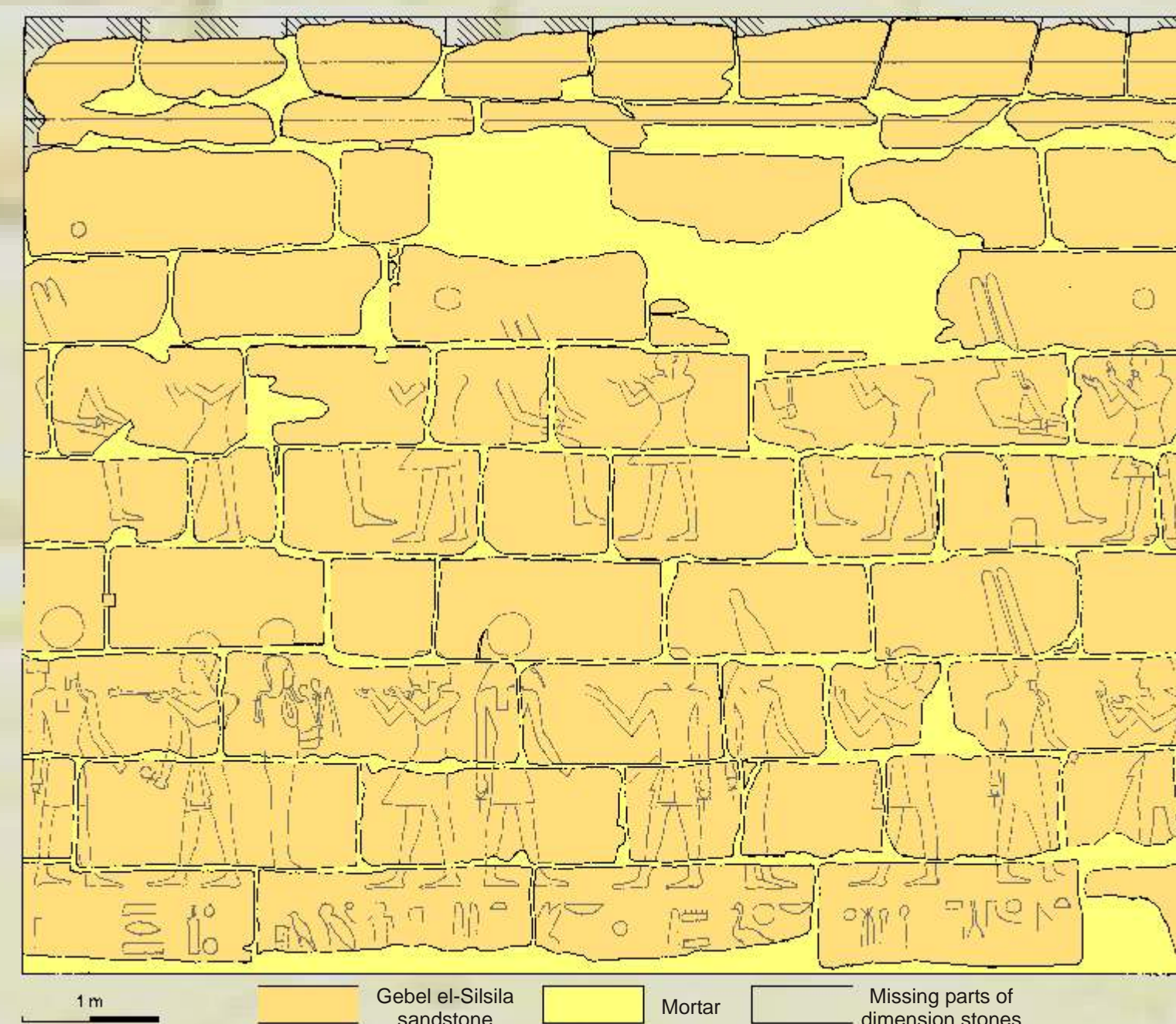
Karnak Temple, Great Court, part of the NNE - facade



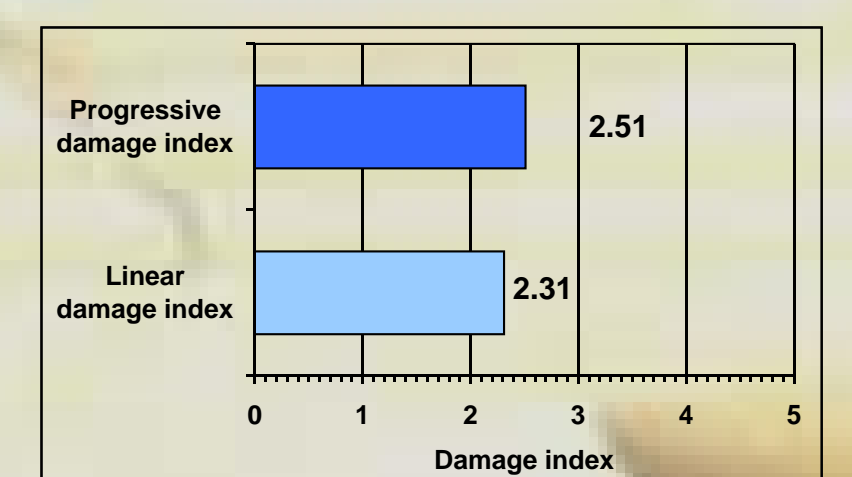
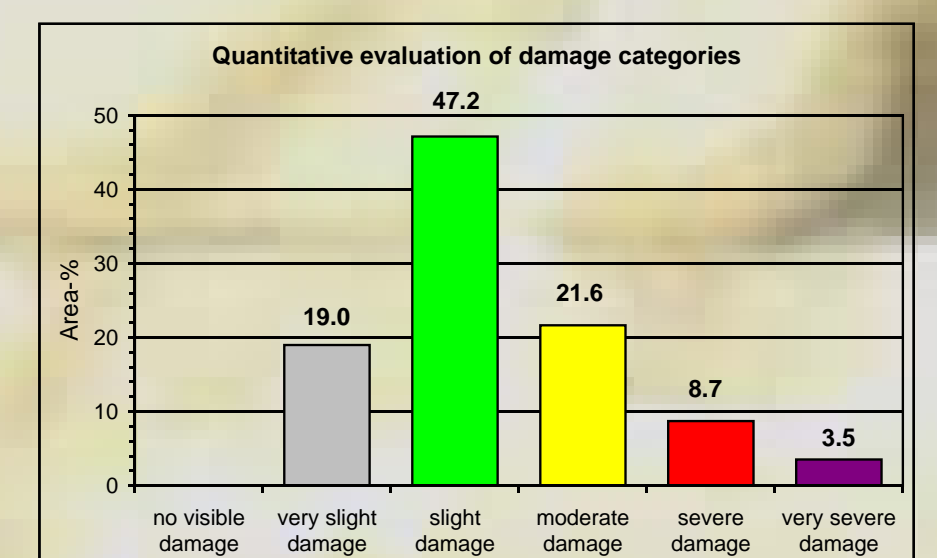
Map of damage categories considering all groups of weathering forms



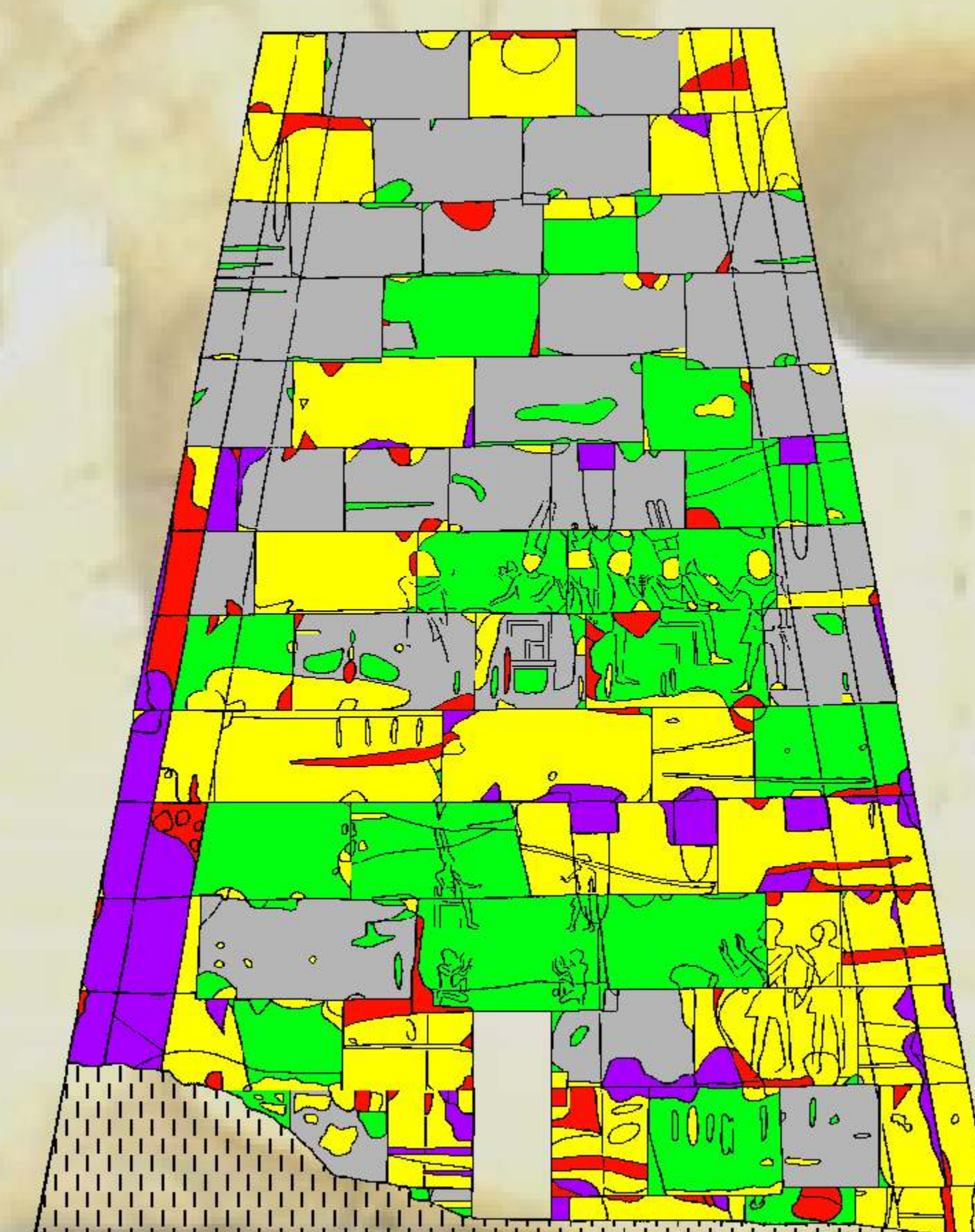
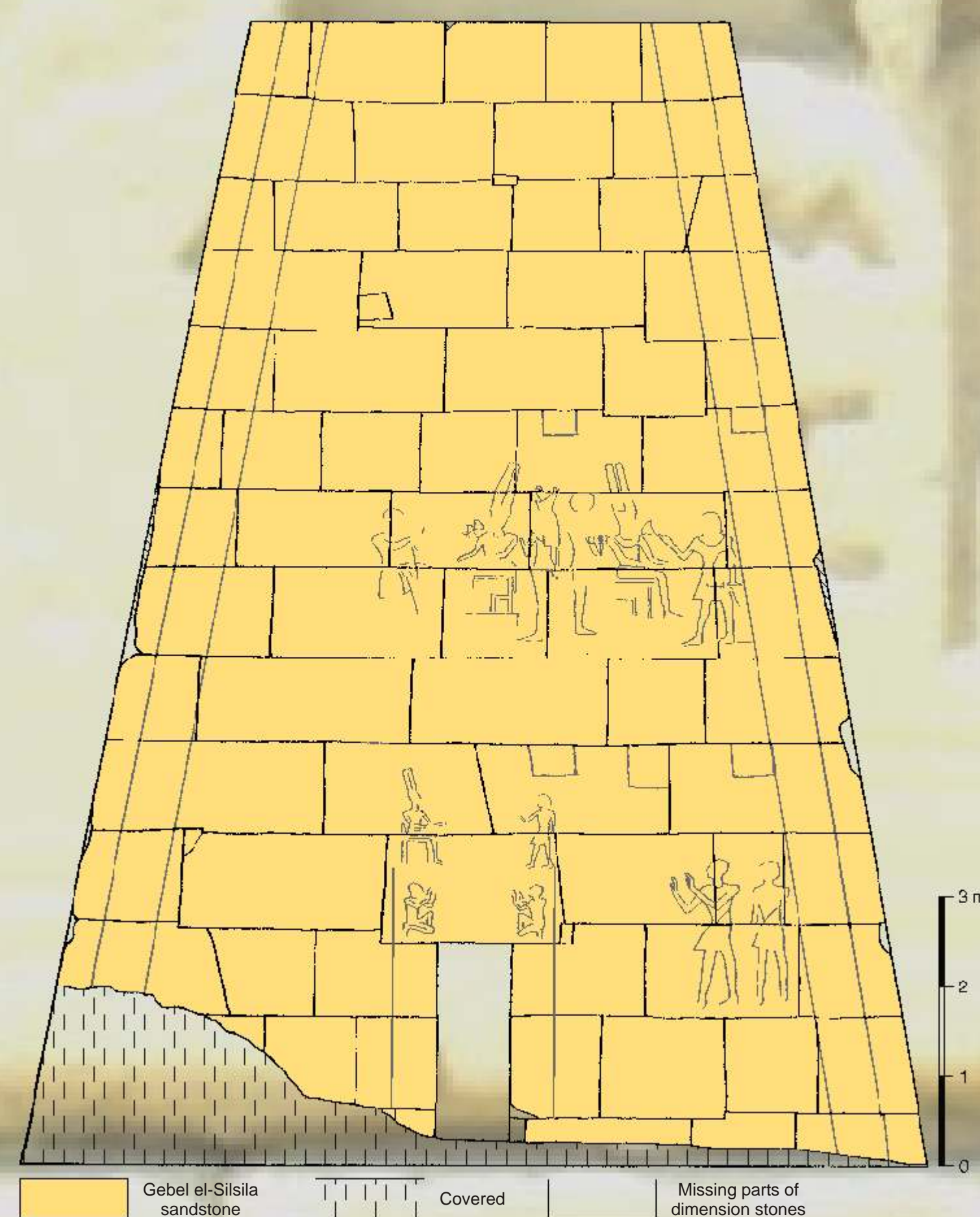
Karnak Temple, Ramesses III Temple, part of the ESE - facade



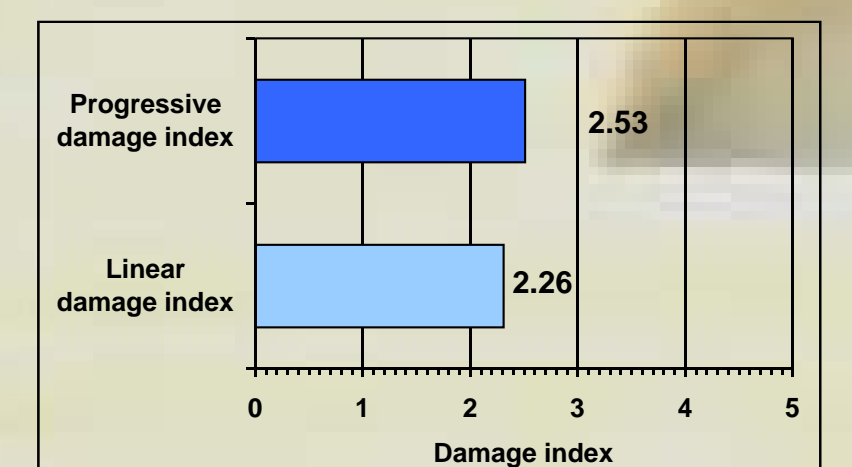
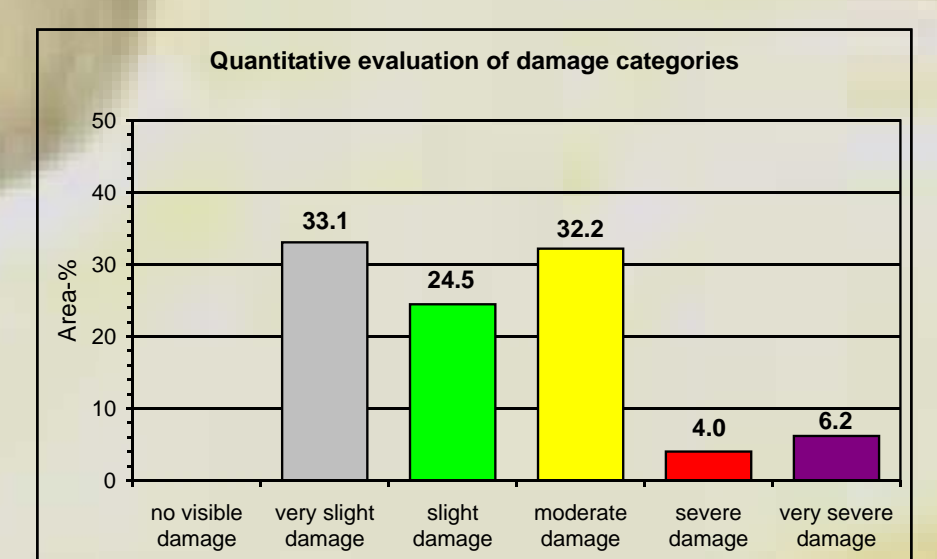
Map of damage categories considering all groups of weathering forms



Karnak Temple, Eighth Pylon, ESE - facade



Map of damage categories considering all groups of weathering forms



DAMAGE CATEGORIES

