
Archaeological and paleo-environmental reconstructions in the tropical Maya area: the Case Of Naachtun (Guatemala)

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Résumé

The city of Naachtun (Guatemala) is an important Maya regional capital located between the two superpowers, Tikal and Calakmul that subdued alternatively most of the main cities of the classic Maya lowlands. Naachtun, as every big city, seems to have dominated a vast territory occupied by a dense population, as shown by the first LiDAR images of its hinterland. This city is located near a large and deep wetland called *bajo* (a karst polje). The regional climate is a tropical wet and dry one, and the end of the dry season is a critical period for water availability. This study zone -covered by a sub-perennial tropical forest- is a sensitive environment area to climate change and anthropogenic impacts.

Since 2013 a joined team of archaeologists and paleoenvironmentalists (geomorphology, geoarchaeology, archaeobotany, zooarchaeology) has been conducting a pluridisciplinary program on this site, in order to reconstruct the city history and to understand local resources evolution and management by the Mayas (mainly water, soils, fauna and woods). In parallel, intensive archaeological excavations conducted since 2010, and environmental works both in the site epicenter and in its surroundings areas, allowed us to draw a sequence of intra-site occupation during roughly a millennium (150 AD – 950 AD). The comparison between the

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archaeological and environmental reconstructions differs greatly as the latter cover the last four millennia. The sedimentary archives studied are spatially continuous and characterized by lateral and vertical gradients of anthropisation (between settlements, reservoirs, marsh and fields).

In this contribution, we aim to present the focal points and the divergences between the two sequences in progress (archaeological and environmental), one mainly based on chronoceramic sequence and radiocarbon dating of refuse middens and abandonment deposits, and the other on absolute dating of charcoal and organic matter in soils within prehispanic agrarian fields or within flooded and colluviated sedimentary environments (anthropogenic reservoirs and wetlands) both in intra-site and in off-site. On the one hand, the interdisciplinary dialogue allows us to identify and date the main societal changes (during emergence, growth and decline of the city) and environmental changes (fluctuations in local water supplies, episodes of soil erosion, forest dynamics and farming practices). On the other hand, it allows us to characterize the nature and timescales of environment-societies interactions or to identify discrepancies between the two sequences (deforestation, hydraulic works and agrarian practices attested during the Preclassic period vs absence of clear archaeological evidence of a simultaneous occupation).

Mots-Clés: ecosystem, sociosystem, maya agrarian practices, archaeological/environmental sequence