

Geoarchaeology in Malaysia

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Abstract: Geoarchaeology represents the interface of the geosciences with archaeology, where geological approaches and techniques are used to answer anthropological questions about the human pasts. Therefore, geoarchaeology is the application of concepts and method of the geology, especially geomorphology, geophysics, geochemistry, petrology, sedimentology and pedology. The geoarchaeological research approach is truly multidisciplinary, and can be a subfield of geology, earth sciences or anthropology. It is focus on the use of palaeoenvironmental reconstructions, the analysis of sediments and stratigraphy, raw material sourcing, geochronology, geography and mapping, geophysical and geochemical techniques, paleontology and geomorphology. These applications are important to archaeologists because they provide information about human interactions with their prehistoric environments and allows geoarchaeologists to locate archaeological sites and artifacts, and estimate by the quality of soil how “prehistoric” they really are. Also, it will provides evidence for the development, preservation and destruction of archaeological sites, and for regional scale environmental change and the evolution of the physical landscape, including the impact of human groups.

Beside all of the contributions of geology to archeology in “geoarchaeology”, we cannot deny the facts that archaeology contribute directly to the geological Quaternary knowledge. World archaeological evidence shows human only present began at early Pleistocene period. Therefore, the more archaeological researches done in one country the more we knows about the Quaternary record of that country. In short, the collaboration of archaeology and geology was a natural step in the common goal of research documenting the antiquity of man and the earth history. The popularity and diciplines of geoarchaeology has expanded exponentially to understanding the human past.

In Malaysia, scientific archaeological research was done by CGAR since 1987. After more than 30 years, our prehistory and civilization chronological sequence much more complete compared to before 1987 (Figure 1). We have an evidence since 1.83 Ma, from time to time until today. Beside chronology that covered Pleistocene and Holocene in Malaysia, Figure 1 also shows that we have an evidence from open and cave sites that covered from Palaeolithic, Neolithic, Metal Age and Civilization. Each sites showed their stratigraphy that represent their own

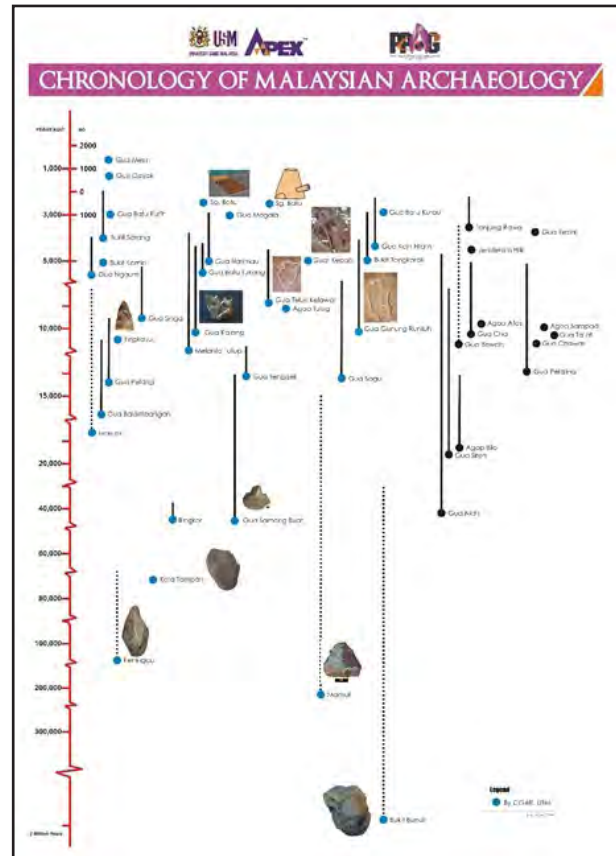


Figure 1: Chronological Sequence of Malaysian Archaeology.

environment. The material cultures found in every sites revealed the surrounding “geology” of the sites. All of these geoarchaeological data contributes to the knowledge of Quaternary period of Malaysia.

References

- Cannell, R.J.S., 2012. On the definition and practice of geoarchaeology. *Primitive Tider*, 14, 31-45.
- Canti, M., 2001. What is geoarchaeology? Re-Examining the relationship between archaeology and earth science. IN Albarella U. (eds) *Environmental Archaeology: Meaning and Purpose*. Environmental Science and Technology Library 17. Springer, Dordrecht.
- Mokhtar Saidin, 2012. *From Stone Age to Early Civilization in Malaysia: Empowering Identity of Race*. USM Penang.
- Pollard, A. M., 1999. *Geoarchaeology: exploration, environments, resources*. Geological Society, London Special Publications, 165, 7-14.