

## **The Anthropocene serves science better as an event, rather than an epoch**

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Can the Anthropocene be defined as a chronostratigraphic series with its corresponding Anthropocene epoch as a formal entry on the Geological Time Scale? Since 2009, the Anthropocene Working Group (of the Subcommittee on Quaternary Stratigraphy of the International Commission on Stratigraphy of the International Union of Geological Sciences) has argued that it is possible. In our view, however, this Working Group is not asking the appropriate question, which is: *should* such a series and epoch be so defined? We think not.

As Head et al. (2022) note, two complementary concepts are at play here. One is a strictly defined body of rock/sediment and its corresponding time interval. The other encompasses an

interdisciplinary and broadly defined range of phenomena with spatially and temporally variable physical expression unified by being of anthropogenic origin and concern (Gibbard et al. 2022). We posit that the latter is by far the more common usage, to which the word “Anthropocene” should continue to be applied. This usage better serves collaborative interdisciplinary science and society.

Most users of the word “Anthropocene” will agree that it means a time in which human activities play a significant part in Earth systems. It may come as an unwelcome surprise, and cause considerable confusion, to many scientists, social scientists, humanists, and the public who use the word “Anthropocene” if geologists vote to define the word to mean rock/sediment deposited or time elapsed since the 1950s.

Geologists, and particularly stratigraphers, do not “own” the Anthropocene. Our concept of an event acknowledges deep roots of the Anthropocene in the past and intensifying effects of human activities through time. Considering the Anthropocene as an ongoing event of global significance allows, and indeed encourages, scholars across the sciences and beyond to work together more productively using a common language.

## References

Gibbard, P, Walker, M, Bauer, A *et al.* 2022. The Anthropocene as an event, not an epoch. *Journal of Quaternary Science*, **37**: 395–399.

Head, MH, Zalasiewicz, JL., Waters, CN *et al.* 2022 (accepted). The proposed Anthropocene Epoch/Series is underpinned by an extensive array of mid-20th century stratigraphic event signals. *Journal of Quaternary Science*.