

Anthropocene Geology

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The Anthropocene Working Group (AWG) of the Subcommission on Quaternary Stratigraphy (SQS) of the International Commission on Stratigraphy (ICS) was founded in 2009 to investigate the potential of the Anthropocene as a chronostratigraphic unit of the Geological Time Scale. After more than 14 years of work, many key publications and hot discussions both within and outside the AWG, and several rounds of voting, the AWG concluded by great majority that the Anthropocene concept has stratigraphic reality and that a formal GSSP definition is pragmatic and suitable at the mid-twentieth century. This coincides with the Great Acceleration of Earth System Sciences that resulted in a dominance of human influence on the Earth System. The resulting GSSP proposal is located in Crawford Lake (Canada) sediment core with the base of the Anthropocene marked by an upturn in plutonium coincident with autumn 1952. However, during the years of AWG investigations, criticisms from outside and a minority group within the AWG opposed to the AWG majority consensus and published results of the AWG (see Zalasiewicz et al., 2024) and have undermined the significance, importance and usefulness of the Anthropocene as a (chrono)stratigraphic unit. Finally, the SQS rejected the proposal of an Anthropocene epoch/series and a Crawfordian age/stage, supported by the ICS and an IUGS official statement (IUGS, 2024), not without noting that the Anthropocene "remains an invaluable descriptor in human-environment interactions" and "will continue to be widely used not only by Earth and environmental scientists" (IUGS extended statement, March 20, 2024, <https://www.iugs.org/>). Beyond its debated geological implications, the term has evolved into a symbol emblematic of global change, and the current climate and ecological crises. An argument of prominent critics is that the AWG is politically and not scientifically motivated when dealing with the Anthropocene. However, a political dimension is implicitly imposed on both, the Anthropocene supporters but also at the Anthropocene sceptics. Rejection of the Anthropocene proposal by the geological community was partly interpreted outside of the geosciences as a rejection of the scale of the current global crises. Research into the Anthropocene has resulted in awareness and engagement of the discipline in a crisis for which geology has some liability. Hence, one may interpret geological research in the Anthropocene sedimentology and stratigraphy as a timely societal and interdisciplinary mission for the geosciences.

Zalasiewicz, J. et al., in press. *The Anthropocene within the Geological Time Scale: a response to fundamental questions*. *Episodes* 2024; 47(1), 65-83. <https://doi.org/10.18814/epiugs/2023/023025>

Session: DEUQUA Session: Anthropogenic impact on the development of landscapes

Keywords: Anthropocene, stratigraphy, environment, epoch, bomb spike