

# NAMING OF THE ANTHROPOCENE EPOCH: MOVE IS A CAUTION TO HUMANITY

Relevant for: Geography | Topic: The Earth, its Evolution and Origin of Life on Earth

The pervasive and persistent signatures of modern human activity on the earth have been so striking that they are set to be officially recognised and named as a new geologic epoch. On May 21, the Anthropocene Working Group (AWG) overwhelmingly [voted to recognise Anthropocene as an epoch](#). The vote gives form to the efforts of scientists, notably the Nobel Laureate Paul Crutzen and Eugene F. Stoermer, who coined the term in 2000 to highlight how human activity had changed many facets of the earth. So overwhelming is the concept of the Anthropocene that it got mainstreamed in scientific and general literature years ago. The AWG vote is a sobering reminder to humanity that failure to end destructive activities will irrevocably change the face of the earth and make it uninhabitable. Officially, humans will continue to live in the Holocene epoch for a couple of years more before the Anthropocene epoch is finally ratified by the International Union of Geological Sciences. The vote by the working group will contribute to the formalisation of the Anthropocene as a stratigraphic entity on a par with other geologic epochs. But unlike the others, it will be the first time that the beginning of an epoch would be based on human activity and not the consequences of changes brought about by nature. For instance, the start of the Holocene epoch 11,700 years ago marks the end of the transition from the last glacial phase to a period of warming and a rise in sea level. Human activity has been drastically changing the earth, with the greatest impacts coming from agriculture, large-scale deforestation, the industrial revolution and increase in atmospheric carbon dioxide, besides the creation of materials such as concrete and plastic. However, the working group voted to look for unique signatures around the 1950s to define the start of the Anthropocene.

A decrease in deuterium excess, a proxy for climate change, owing to the reorganisation of North Atlantic Ocean-atmosphere circulation was a definitive geologic marker, or golden spike, to signify the base of Holocene. Now, radionuclides from atomic bomb tests from the early 1950s are emerging as a favourite golden spike candidate to define the base of the Anthropocene. To be chosen as a geologic marker, the golden spike must be present globally across most environments and must be a part of deposits for a geologically significant length of time. Thus, plutonium isotope Pu-239 with a half-life of 24,110 years will remain detectable for more than 1,00,000 years and continue to exist as uranium 235 when Pu-239 decays. The next task is to find a single site from among the 10 sites chosen across the world for inclusion in the formal proposal. Here, coral reefs and Antarctic glacial ice located far from nuclear detonation test sites might be more suitable as they would not reflect any local spike but a global distribution pattern.

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