

Man-made changes bring about new epoch in Earth's history

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Geologists from the University of Leicester propose that humankind has so altered the Earth that it has brought about an end to one epoch of Earth's history and marked the start of a new epoch.

Jan Zalasiewicz and Mark Williams at the University of Leicester and their colleagues on the Stratigraphy Commission of the Geological Society of London have presented their research in the journal *GSA Today*.

In it, they suggest humans have so changed the Earth that on the planet the Holocene epoch has ended and we have entered a new epoch - the Anthropocene.

They have identified human impact through phenomena such as:

- Transformed patterns of sediment erosion and deposition worldwide
- Major disturbances to the carbon cycle and global temperature
- Wholesale changes to the world's plants and animals
- Ocean acidification

The scientists analysed a proposal made by Nobel Prize-winning chemist Paul Crutzen in 2002. He suggested the Earth had left the Holocene and started the Anthropocene era because of the global environmental effects of increased human population and economic development.

The researchers argue that the dominance of humans has so physically

changed Earth that there is increasingly less justification for linking pre- and post-industrialized Earth within the same epoch - the Holocene.

The scientists said their findings present the scholarly groundwork for consideration by the International Commission on Stratigraphy for formal adoption of the Anthropocene as the youngest epoch of, and most recent addition to, the Earth's geological timescale.

They state: “Sufficient evidence has emerged of stratigraphically significant change (both elapsed and imminent) for recognition of the Anthropocene—currently a vivid yet informal metaphor of global environmental change—as a new geological epoch to be considered for formalization by international discussion.”

Source: University of Leicester

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