



# Defining the Holocene

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## Highlights

- Last month, India received the happy news that that one of the three newly designated geological ages of the Holocene Epoch was named after Meghalaya.
- The International Commission on Stratigraphy (ICS), a body of geological timekeepers, had divided the Holocene Epoch, which began 11,700 years ago, at the 8,200-year and 4,200-year points, thereby creating the Greenlandian, the Northgrippian and the Meghalayan Ages.
- Primary among critics were geologists for whom the new Holocene subdivisions had undercut a proposal for a more important geological stratification: the Anthropocene Epoch.
- The idea that human influence on earth has heralded the beginning of the new geological epoch, bringing the Holocene to a close, was first proposed in the late 20th century.
- Later, Nobel laureate Paul Crutzen argued that the “Anthropocene Epoch” ought to begin at the start of the industrial revolution (1800 AD).
- This point in time could be marked, as geological epochs often are, by rising carbon dioxide levels in polar ice.
- But although the idea of an Anthropocene was widely accepted, their proposed start date was not.
- Other researchers said that 8,000 years ago was a better starting point, when agriculture first began in Eurasia.
- Yet another group suggested 1610 AD, when the European colonisation of the Americas led to an unprecedented mixing of new-world and old-world species.
- A third contender was the mid-20th century, known as the Great Acceleration, when concrete, aluminium and plastic were disseminated across the planet.
- Given these disagreements over the Anthropocene start date, the epoch hasn’t been formalised yet.

The reason was convenience: the Holocene was already being divided by researchers, informally, into the early, middle and late Holocene, but the lack of a formal definition was leading to confusion.

- Ultimately, they settled on a division based on two climatic events.
- The first, 8,200 years ago, was a catastrophic melting of glacial lakes resulting in a global drop in temperatures.
- The second, 4,200 years ago, was a massive drought around the planet’s mid-latitudes, which is thought to have triggered the decline of civilisations such as the Akkadian and the Indus Valley.
- The controversy began when the 8,200-years-ago start date of the Northgrippian now coincides broadly with one of the Anthropocene start dates.

- Second, some researchers argue that the drought 4,200 years ago wasn't global.
- This has riled researchers who were awaiting clarity on the Anthropocene debate.
- Even though the ICS's stratification is now official, this debate is likely to continue for a while.

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