

How the term 'Anthropocene' jumped from geoscience to hashtags

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Disastrous fires, [ongoing drought](#), and heat extremes have refocused Australians' attention on the human contribution to climate change.

For decades experts have known (and warned) of the consequences for Australia, but for many, there is a realization that our environment has shifted beyond "normal" boundaries, and that humans have played some part in this. This is fertile ground for the idea we occupy a new human-dominated phase of planetary history: the Anthropocene.

Use of the term Anthropocene (the root "anthropo" means human, the suffix "-cene" signals a [geologic time](#) epoch) has been growing for more than a decade. No longer the exclusive domain of geoscientists, it has jumped from academic journals to pop culture while many are still asking "the *what* now?"

A very short history

It has been 20 years since Dutch Nobel Laureate Paul Crutzen and colleagues used the term to describe the human modification of the planet since the industrial revolution. However, the concept dates back to at least the [mid- to late-19th century](#) when Italian Catholic priest, geologist and paleontologist Antonio Stoppani proposed an "anthropozoic era."

There has been a push in the last decade to have the Anthropocene formally recognized as the current piece of Earth history.

Last year, the Anthropocene Working Group of the International Union of Geological Sciences (IUGS) [agreed to a proposal](#) for a formal Anthropocene period with an onset marked by the distinct chemical signatures of mid-20th century atomic bomb fallout that we can detect worldwide.

Some scholars have questioned the need for an Anthropocene epoch at all. Others recognize its usefulness but debate when between the [mid-18th and mid-20th century AD](#) the period started.

While there are [good arguments](#) for such a recent start date, it potentially excludes the impact of thousands of years of human deforestation, agriculture, and building that are the environmental antecedents of the world we see today (a so-called [Early Anthropocene](#), or a [Palaeoanthropocene model](#)).

Re-writing the past

One issue here is that our knowledge of human impacts in the distant past is being rapidly re-written. Take the [Maya lowlands of Central America](#), where our research team used the term [Mayacene](#) to describe early Anthropocene deforestation, agriculture and urbanization. [In a new paper](#), my colleagues have shown Pre-Columbian Maya wetland agricultural systems in present-day Belize were five times larger (and older) than previously thought.

We are only now beginning to understand the long history of human modification, in tropical forests and elsewhere, that may have increased greenhouse gas emissions and altered climate [long before the industrial revolution](#).

History tells us trying to pin down when (and where) major human disturbance first occurred is a great challenge. The stratigraphic (and historical and archaeological) evidence suggests an Anthropocene that is time-transgressive, with many different beginnings (and some declines) globally. We can say it had transformed much of the planet by [3,000 years ago](#).



Though there is argument about its starting point, the Anthropocene concept of human geological impact has taken hold. Credit: Unsplash, CC BY

Escape from academia

An undecided start date has not prevented the Anthropocene idea

spreading rapidly through many academic disciplines.

Highly regarded journals, such as [Anthropocene](#) and [Anthropocene Review](#), publish an expanding body of human-impacts research.

Across the humanities and social sciences, the Anthropocene has become an important frame for re-examining human-environment relationships. Historian Dipesh Chakrabarty's [2009 essay](#), for example.

Offshoot Anthropocene ideas have sprouted, including the Technoscene (the influence of technology), the Capitalocene (the influence of economies), and (my favorite) the [Chthulucene](#) that imagines a future re-worlding where multispecies groups learn to live in harmony with nature.

Despite the viral spread and mutation of the term, what remains is the recognition of the enormity and permanence of human environmental modification, and the (usually) negative consequences.

The 2010s were marked by important Anthropocene books, [documentaries](#) and movies, marking the spread of the term into the public discourse.

In 2014, Anthropocene was [added](#) to the Oxford English Dictionary; six years later, Google's search engine shows some 6.4 million internet hits on the term. In The Atlantic last year, science writer Peter Brannen [wondered](#) whether the concept was an arrogant human folly: "The idea of the Anthropocene inflates our own importance by promising eternal geological life to our creations."

The cultural impact of the Anthropocene is seen in major [art projects](#) and museum exhibitions, and you can now find the word (and the ideas) in [many songs and albums](#). Canadian musician Grimes' [announced](#) her upcoming release [Miss Anthropocene](#) is a "concept album about the

anthropomorphic Goddess of climate change."

On social media, Anthropocene has become a byword for the severe human impacts on the environment we see around us—in posts about [bushfire smoke](#), [plastic beach flotsam](#), and [expanding farmlands](#).

Lasting impact

It's not often ideas and terminology from the geosciences escape and find a home in society, so the journey of the Anthropocene, from neologism to global catch phrase and environmental rallying point is fascinating.

The Anthropocene is not (yet) a formally defined geological unit, and so for now, we continue to live in the [Meghalayan Age](#) of the Holocene epoch.

The Anthropocene has arguably become a "[charismatic mega-concept](#)". It brings together the sciences, humanities, and the public realm, stimulating ongoing debate and new research.

Perhaps this is the "global awareness" ANU's [Will Steffen](#) and colleagues anticipated in their 2007 [Anthropocene model](#)?

Time will tell if this shared terminology and understanding can translate into action, to repair (or at least slow) millennia of human impacts on the Earth.

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