



The Anthropocene and Global Environmental Governance

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Anthropocene denotes a new geological epoch characterized by the unprecedented impact of human activities on the Earth's ecosystems. While the natural sciences have advanced our understanding of the drivers and processes of global change, the social sciences address the fundamental challenge of governance and politics in the Anthropocene.

On Monday 29 August 2016, the official *Working Group on the Anthropocene* reported to the *International Geological Congress* underway in Cape Town and recommended to adopt the Anthropocene as the official term for our contemporary geological epoch. The suggested term Anthropocene denotes the all-encompassing influence of the human species on our planetary systems. The 35 scientists currently serving on the working group have voted 30 to three in favor of formally designating the Anthropocene, with two abstentions. While this suggestion will be reviewed by further commissions – first by the *Subcommission on Quaternary Stratigraphy*, then *International Commission on Stratigraphy* and finally the *Executive Committee of the International Union of Geological Sciences* – it is a strong signal that something extraordinary is going on.

When did the Anthropocene begin?

Geologists of the future might well remember 16 July 1945 as the beginning of the Anthropocene. This day witnessed the explosion of the first nuclear bomb at the White Sands Proving Ground, New Mexico, under the code name 'Trinity'. The debris from more than 500 above-ground nuclear tests conducted between

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1945 and 1963, when the [Test Ban Treaty](#) took effect, has created a detectable layer of radioactive elements in sediments all around the planet. However, other potential start dates have been suggested. In their original proposal of the Anthropocene, Crutzen and Stoermer argue for the beginning of the Industrial Revolution in 1750 as an appropriate start date, while others have suggested an earlier start date around 3000 BC, when agriculture and livestock cultivation intensified and the first centralized political authorities emerged. An intermediary position also exists, for example [Lewis and Maslin](#), who propose the noticeable decline in atmospheric CO₂ concentrations between 1570 and 1620 as a good marker for the start of the Anthropocene.

Beyond its symbolic and metaphoric value, these discussions illustrate the radically different nature of current global environmental change. System Earth is rapidly changing, potentially shifting to life-threatening modes of operation. Climate change, biodiversity loss, disruption of the nitrogen and phosphorous cycles, plastic soup in the oceans and men-made chemicals found in (human) embryos, these are the symptoms and most visible signs of the great acceleration and earth system transformation underway. In other words: space ship earth is on a collision course, and the autopilot has been set by its own crew. The Anthropocene hypothesis has become a rallying call for action in the light of scientific evidence that warns against dangerous global environmental change and the ensuing environmental insecurities produced by systemic tipping-points, feedback-loops and emergent properties of complex systems. The Anthropocene hypothesis also highlights specific challenges for governance: how to deal with the apparent urgency of global change while taking into account scientific and normative uncertainties; how to distribute responsibility in a fair and equitable manner; and finally how to embrace complexity as an ontological category of the Anthropocene.

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Global governance scholars and the Anthropocene

But how will the field of global governance studies react to the Anthropocene hypothesis? Will scholarship continue down a business-as-usual path, with a disciplinary focus and a narrowly conceived ethical and normative agenda? Or will the field of global governance studies engage in a more radical epistemological and ontological debate? I argue that global environmental governance research is fruitfully challenged by the Anthropocene hypothesis, potentially leading to a reorientation of theory and practice. I see three reasons for this.

First, the Anthropocene hypothesis calls into question long-held assumptions about the human-nature dualism and has therefore been associated with the end-of-nature discourse. At the heart of most environmental activism over the last five decades lies the conviction that nature exists independent of human agency and that (supposedly) ‘natural’ states of our planet, such as a stable climate system, should be protected. However, if the nature-human dualism is questioned by the advent of the Anthropocene, what does this mean for popular conceptions of conservation, wilderness and sustainability and for environmental politics more generally? In the words of Paul Wapner: “Nature, then, is not a separate realm, as many environmentalists assume but, because it is always interpreted through cultural lenses, is part and parcel of human affairs.” The challenge for global environmental governance scholarship is to scrutinize human agency as part of a broader ‘earth-system’ perspective.

Second, the notion of the Anthropocene, and the related idea of a unified human force that exerts unprecedented influence on the earth system, challenges governance scholarship in two ways. First, it urges scholars to take a more system-theoretical perspective in order to identify the system-wide

drivers of anthropogenic global change and the systemic reactions produced by various social sub-systems. And second, global governance scholarship is urgently needed as a corrective to accounts of the Anthropocene that neglect the fact that human agency is not uniform across the planet, and that contributions to the problem and the distribution of risks and opportunities arising from global environmental change are highly uneven.

Third, the Anthropocene hypothesis propels governance research to the center of attention, as the question becomes: how can we steer towards socio-natural co-evolution and a resulting safe operating space for human development? As a result, this position opens up opportunities for genuine interdisciplinarity, in which the social sciences in general and global governance scholarship more specifically are not just a 'junior partner' of the sciences, but contribute fundamental insights into drivers, solutions and complex feedbacks between agency, unintended consequences and reactions to these.

From scholarship to policies

However, while there are good arguments for adopting the Anthropocene as an official geological epoch and for fruitful engagement from a social sciences and governance perspective, what is less evident is how we will address the challenges associated with the Anthropocene in broader political terms. Governance strategies for the Anthropocene fall roughly into two broad camps: first, a global elitist managerial approach, underpinned by a sense of human ingenuity and epitomized by ever-more vocal calls for geoengineering, an approach that puts some people's interests before others. Advocates of this vision of the future Anthropocene see potentials rather than threats. On this account, a new glorious epoch is dawning, one of men-made unprecedented progress towards a post-human evolution and eternal future.

The second vision is more humble and less secure about its eventual success: a bottom-up approach based on cultural and political diversity, equity, fairness and a broader eco-centric ethos. A political vision that favors deliberation over efficiency and fairness over effectiveness and is enshrined already (in broad terms) in the internationally agreed Sustainable Development Goals as part of the global development agenda until 2030.

While the Anthropocene as a term might be almost universally accepted, the contestations about its political and normative contours have only just begun. The election of the climate change-denier Donald Trump as the 45th President of the United States of America does not leave much room for optimism in this respect. In particular his announcement to withdraw from the international climate change negotiations (in one or another form) calls into question some of the modest signs of progress that we could witness recently. This should motivate everyone interested in shaping the Anthropocene to get involved in the necessary and difficult debates about how we want to shape our common future.

Image by [Asian Development Bank/Flickr](#).

Philipp Pattberg is professor of transnational environmental governance and policy at VU Amsterdam, The Netherlands. He specializes in the study of global environmental politics, with a focus on climate change governance, biodiversity, forest and fisheries governance, transnational relations, public-private partnerships, network theory and institutional analysis. Pattberg's current research scrutinizes institutional complexity, functional overlaps and fragmentation across environmental domains (<http://fragmentation.eu/>). At VU Amsterdam, Pattberg heads the Department of Environmental Policy Analysis, a team of more than 25

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