

Historical Legacies and Future Responsibilities

Now that the collaboration draws to a close, the crucial project question is being revisited in a new light: What can the Earth's recent archives teach us about the latent legacies of humanity and its temporal agency for a future that has already begun? Since the start of the project in 2012, the world has become quite a different place. The contours of the dawning Anthropocene are emerging ever more clearly from the background noise of Earth's natural variability, upheavals that already contribute towards societal conflicts and continuous efforts of crisis management. We can see a serious discrepancy between the highly dynamic changes of the Earth system and the inert responses of traditional institutions, knowledge systems, and legal and political structures and tools.



03 "What damage can be repaired?" Questions like these were discussed in experimental settings during the event "Where is the Planetary?" at HKW in October 2022. Photo: Katy Otto/HKW.

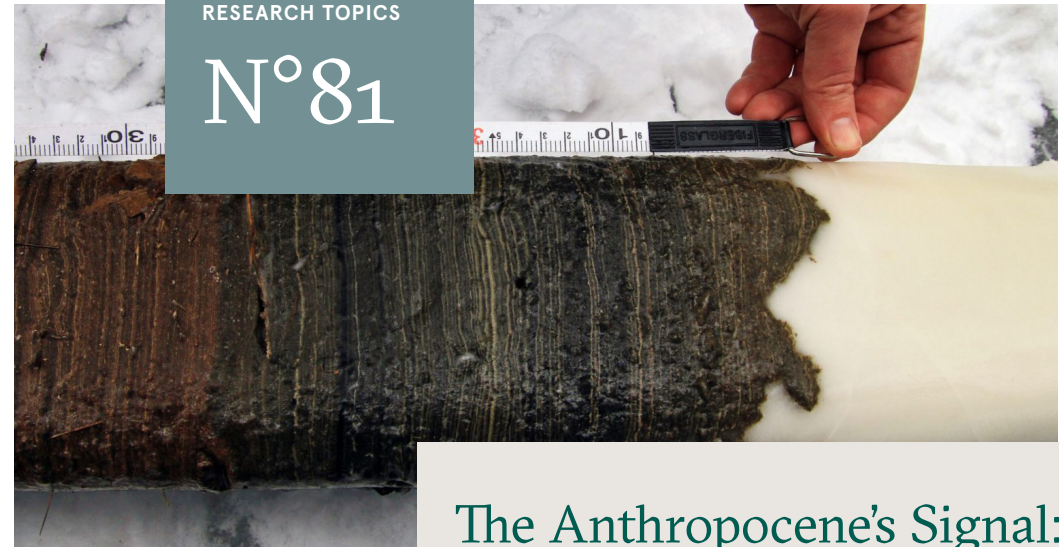
Consequently, attention must now be focused on the societal necessities and possible actions appropriate to the dynamic nature of the Anthropocene's signals. Do we comprehend the legacy of the twentieth century and the Great Acceleration so meticulously studied by the AWG, to halt this ominous development and keep crisis dynamics at bay in the twenty-first century? As the transdisciplinary cooperation between the AWG, HKW, and MPIWG has shown, research engagements that cross formerly separate domains of knowledge and daily routines might be well suited to actively respond to these challenges ahead.

Researchers from the AWG, the MPIWG, and the new MPIGEA, as well as the global Anthropocene Commons network, which includes former team members from the HKW, will continue to engage in Anthropocene-apt transdisciplinary research.

Front page: On-site measuring of a sediment core at the GSSP candidate site Crawford Lake, Canada. Photo: Tim Patterson © All Rights Reserved.

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The Anthropocene's Signal: What the Geology of the Present Beckons for the Future of Research

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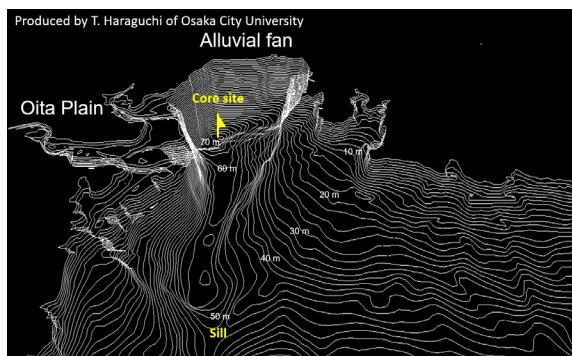
Which fingerprints of global human activities appear in the geological archive? And how do geologists investigate such an earthly present? This reciprocal pair of questions has been the point of departure for a pioneering transdisciplinary collaboration that, over the last few years, has tightly interwoven the very different research backgrounds and daily routines of the Anthropocene Working Group (AWG), the Haus der Kulturen der Welt (HKW), and MPIWG's research cluster "Anthropocene Formations."

In July 2023 the AWG, in a joint press conference with the MPIWG, will announce its final recommendation for the formal geological reference point for the onset of the Anthropocene. The completion of this effectively “epoch-making” research work coincides with the end of the HKW’s ten-year long focus on the Anthropocene and the establishment of the Max Planck Institute of Geoanthropology (MPIGEA), now firmly anchoring Anthropocene research within the Max Planck Society. We would like to use this conclusion of a decade-long phase of institutional reorientation to take a look back at the research on the geological signals of the Anthropocene, and ahead to what these themselves signal for the future of engaged research.

The Examination of Geological Evidence

The task of the AWG was to evaluate the actual reality of the Anthropocene as a distinctive geological time unit. The group was formed in 2009 by the International Commission on Stratigraphy (ICS). In order to place a new, human-made epoch at the current end of that timescale—encompassing 4.5 billion years of geological evolution—the working group had to consider the Anthropocene according to the formal criteria of chronostratigraphy and the stringent and rigorous benchmarks laid out by the ICS. This meant, foremost, to carefully document, analyze, and date a variety of geological sections to identify the potential reference point for the lower stratigraphic boundary of the Anthropocene epoch, the so-called Global boundary Stratotype Section and Point (GSSP, or “Golden Spike”).

After intensive deliberations within the AWG, it became apparent that it would be most promising to focus investigations on the mid-twentieth century, a period when human industrial activities became so pronounced and global that it is now commonly referred to as the “Great Acceleration.” After the HKW organized funds for the necessary stratigraphic research, the project became concrete around 2018, when the AWG assembled several research teams from around the world to search for the definitive anthropogenic signal. For this purpose, samples from a range of environmental archives—polar ice, tropical corals, mountainous peat bogs, lacustrine sediments, and so on—were analyzed for specific human-



01 Topographic map of the Beppu Bay basin in Southern Japan with the location of one of the GSSP-candidate cores marked. Photo: Tsuyoshi Haraguchi © All Rights Reserved.

made markers such as artificial radionuclides, combustion particles, neobiota, and organic pollutants. These measurements were then weighed to establish how far they might meet the criteria for a GSSP, and were published in a special issue of *The Anthropocene Review*.

There exists hardly any example in the history of geology where empirical research of this kind has been conducted under such immense professional and public scrutiny. Chronostratigraphy, by its own definition, is about the (more or less) deep past. It had therefore always excluded human activities. Yet what the AWG conducted was a geological analysis of the human fingerprint in the Earth’s archive, barely 70 years old: an unheard-of “geology of the present.”

Beyond Stratigraphy: Scientists, Activists, and Artists

Moreover, as a conceptual intervention and chosen keyword of the present moment in Earth and human history, the Anthropocene encompasses more than the confirmation of an epoch by the traditional standards of chronostratigraphy. With its widespread popularization in academic, artistic, and media circles, the Anthropocene has long become a point of attraction for far-ranging intellectual and political debates. At the bottom of this lies a fundamental change of perception of human agency, demanding new ways to cross-connect and integrate different forms of knowledge.

Since 2012, the MPIWG and HKW have been teaming up with members of the AWG and hundreds of other researchers, artists, and activists from around the world to explore the origins, implications, and cross-connections of Anthropocene knowledge in exploratory ways. The legacy of that unusual collaboration is represented by the multitude of projects, voices, and results gathered on the joint platform anthropocene-curriculum.org, a co-learning space where the pairing of geological evidence with cultural experimentation has resulted in multiple forms and formats. The website is now maintained by the MPIWG as a public repository, while the international network continues its activities via a decentralized, self-organized approach as the Anthropocene Commons.



02 AWG members Francine McCarthy and Mark Williams discuss a GSSP-candidate core from Crawford Lake with historian of science Michelle Murphy at HKW in May 2022. Photo: Katy Otto/HKW.