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The benthic foraminiferal response to the mid-Maastrichtian event in the Maastrichtian-type area

Iris Vancoppenolle¹, Johan Vellekoop^{1,2}, Monika Doubrawa¹, Pim Kaskes², Matthias Sinnesael^{2,3}, John Jagt⁴, Philippe Claeys², and Robert P. Speijer¹

¹Division of Geology, KU Leuven, Heverlee, Belgium

²Analytical and Environmental Geochemistry, VUB, Brussels, Belgium

³Department of Earth Sciences, Durham University, Durham, United Kingdom

⁴Natural History Museum Maastricht, Maastricht, Netherlands

The mid-Maastrichtian event (MME), ~69 Ma, represents a global negative $\delta^{13}\text{C}$ excursion which is linked to the extinction of inoceramid bivalves and latitudinal migration of planktonic foraminifera. While the actual extinction of inoceramids was diachronous across the globe, the decline of this important fossil group is generally linked to environmental changes across the mid-Maastrichtian interval. The MME is potentially related to changes in oceanic circulation. While the MME, and associated decline of inoceramids, has been recorded from a variety of deep-sea sites, little is known about the MME signature in shallow epicontinental environments.

Recently, the MME has been recorded for the first time from the type-Maastrichtian, in the Maastricht-Liège region (The Netherlands and Belgium), in newly generated bulk carbonate carbon isotope records from the Hallembaye quarry (NE Belgium) and former ENCI quarry (SE Netherlands). These quarries are approximately 8 km apart. The type-Maastrichtian succession was deposited in a shallow subtropical sea during the Late Cretaceous. As the stratigraphic position of the MME is now constrained in the type-Maastrichtian record, this succession presents an interesting opportunity for studying the signature of this event in a relatively shallow epicontinental basin. Therefore, we are generating high-resolution benthic foraminiferal assemblage data and species-specific carbon and oxygen stable isotope records across the MME interval at these two quarries, in order to unravel biotic and environmental expressions of the MME in the Maastrichtian type area. This is done using the high-resolution sample set acquired in the context of the Maastrichtian Geoheritage Project. Our preliminary data show a distinctive acme of the benthic foraminifer *Cuneus trigona* in the interval that roughly corresponds to the MME, potentially caused by a change in quality of the organic matter that reached the sea bottom, highlighting local environmental and oceanographic perturbations across this event.