

## Soil erosion event during the Late Devonian mass extinction recorded at the GSSP section

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The Late Devonian mass extinction occurred in a stepwise manner and culminated close to the Frasnian-Famennian (F-F) boundary (372 million years ago). Organic-molecular indices from marine sedimentary rocks at the GSSP section at Coumiac, France, indicate that the sequence of soil erosion and euxinia occurred close to this boundary. The increased concentrations of organic molecules indicating combustion and soil erosion measured in the Coumiac section suggest that terrigenous organic matter flowed into the ocean at this time, leading to reduction of the ocean that caused marine extinctions. Since this soil erosion event simultaneously occurred at the Sinsin section in Belgium (Kaiho et al., 2013), expansion of the reducing environment of the ocean due to soil inflow is thought to have occurred in a wide area. The study of sedimentary organic molecules presents several lines of evidence to link reduction of the ocean due to soil erosion to the Late Devonian mass extinction.

Kaiho, K., Yatsu, S., Oba, M., Gorjan, P., Casier, J.-G., Ikeda, M., 2013. A forest fire and soil erosion event during the Late Devonian mass extinction. *Palaeogeogr. Palaeoclimatol. Palaeoecol.* 392, 272-280.

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