



Is there a link between the strength of the weathering feedback and the delay in biological recovery for two major extinctions events in the Earth history?

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Two major extinctions since the evolution of multicellular life occurred at the end of the Permian and at the end of the Cretaceous. If the causes of the extinctions remain controversial, one aspect of these crises has been clearly established. Indeed, new dates constrain the Early Triassic interval characterized by delayed biotic recovery and carbon-cycle instability to 5 m.y. The same kind of works on the K/T boundary has demonstrated that the biotic recovery occurred after less than 1 m.y. Using a coupled climate-carbon model, we want to investigate the continental weathering feedback at the end of the Permian and at the end of the Cretaceous. A different carbonate factory as well as a contrasting paleogeography may help in explaining why the Earth takes so much time to recover at the PT boundary compared to the KT boundary. A more fundamental issue we intend to address may concern the possibility or not for modellers carefully comparing their model outputs to data to establish robust links between global environmental pressure resulting from such perturbation and biologic evolution.