

Abstract

Human-environment interactions: Mindsets, methods and models

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We have recently moved into a phase of human history where the global climate community claim that irreversible climate change is imminent. This situation demands a clearer understanding of interactions between human activities and natural environment processes, especially with a view to making informed and well-judged environmental management decisions. Arguments for accelerated climate change have utilised long timescales of past climate to provide perspective to modern conditions. This paper argues for long temporal perspectives as essential prerequisites for understanding many other types of environmental process, particularly those operating at local and regional scales that have been strongly impacted by human activities. It reviews the methods by which we can obtain long timescales of past environmental and ecological change and looks forwards to the types of modelling approaches that can integrate socio-economic and natural environmental processes. These themes now constitute the international Focus 5 programme of Past Global Changes (PAGES), a key component of the International Geosphere-Biosphere Programme.