Geoarchaeological records of landscape change as lessons for the Anthropocene

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"Collapse" is a trendy theme in studies of ancient civilizations. The cross-disciplinary field of geoarchaeology aims to better understand the human society in context of culture and the hydroclimate-environment nexus over time. Documenting the diversity of human responses and adaptations to climate, landscapes, ecosystems, disasters and changing natural resources availability in different regions of our planet provides valuable opportunities to learn from the past. In the modern, climate change poses profound ecological, social and political crises, but also opportunities to re-imagine our responsibilities to one another and the natural world. How can strategies of human resilience and innovation in the deeper past inform our current strategies for addressing the challenges of the emerging Anthropocene, a time frame dominated by human modulation of surface geomorphological processes and hydroclimate?

Although textbooks still teach patterns of the demise of civilizations, empires and dynasties that once prospered, various emerging records indicate the antiquity is not simplistic. Culture is best viewed through a lens of complexity, resilience, adaptability, and transformation. Societies are not static constructs that fail and eradicated. Instead, complex societies are dynamic, and have naturally reorganized, revitalized, and changed. Within this paradigm of continuum, cycles of collapse and rebuilt are essential. We present examples from the literature and papers in this session, including insights about how people have coped with environmental disasters or abrupt changes in the past; defining sustainability thresholds for farming or resource exploitation; and baseline natural v. human contributions to environmental changes (e.g., soil quality, erosion, landscape degradation, hydrological setting).