Human Ecodynamics & Integrating Humanity into Environmental Science

The Role of Archaeology

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Photo: Tom Dawson, Weather Beaten Archaeology, Noel Meehan

Human Ecodynamics

'Refers to the processes of **stability**, **resilience**, and **change** in socio-ecological relationships/systems.'

'Interdisciplinary study of the human condition as it affects and is affected by the rest of the non-human world.'

(Fitzhugh et al. 2019)

Completed Experiments of the Past

Archaeological sites as 'distributed observing networks' that reveal the results of past human decision-making.

Evidence of both **human behavior** and **environmental conditions** are captured in archaeological sites – allowing us to explore the *lived experience* of environmental change and policies.

(Hambrecht et al. 2020)

Completed Experiments of the Past

Identifies recurring and rare patterns, assessing outcomes of **adaptive pathways**, identifying long-term vs. short-term sustainability.

Provides empirical data to develop and test models of socio-ecological systems that showcase **sustainable management of natural resources** and **human communities**.

But, adaptability in the short- and medium-term is no guarantee of long-term survival.

(Hambrecht et al. 2020)

Local & Traditional Knowledge

Locally-based knowledge systems can represent sophisticated understanding of the dynamics of local environmental conditions.

Identifying effective common resource management structures, understanding **community-level responses to threats** and opportunities, understanding unanticipated outcomes, and limits to adaptation.