

Workshop Summary Report

Session Organisers:

Peter Jordan and Sean Desjardins (Netherlands / IASC / SHWG)

Travel Funds from: SHWG and IASC cross-cutting

Session: Long-Term Perspectives on Arctic Change: Implications for Archaeology, Palaeoenvironments and Cultural Heritage

Arctic Science Summit Week 2017

Background

The recent ICARPIII process concluded that more research is needed into 'Cultural Responses to Long-Term Arctic Change'. In light of this, the SHWG launched a new cross-cutting initiative in 2016 which is entitled 'Long-term impacts, vulnerability and resilience in Arctic social-ecological systems (SEs)'. The aim is to examine the dynamics of Arctic Social-Ecological Systems (SEs) from three complimentary perspectives: (i) palaeo; (ii) contemporary, and (iii), future. The goal is to understand what contributes to fragility and resilience in Arctic SEs, and to create an improved knowledge base that can be used to plan for sustainable Arctic futures.

This session at ASSW 2017 focused on the 'palaeo perspectives' and was supported by travel funds from the SHWG and also by IASC cross-cutting funds. It brought together speakers who presented interdisciplinary case-studies from across the full Circumpolar North. Russian colleagues and also Early Career Scientists played a highly-visible role.

Prior to the workshop the session organisers had submitted a proposal to the HABCOM (Humans and Biosphere) commission of INQUA. They agreed to publish the papers as a special issue of the international peer-reviewed journal Quaternary International (Elsevier), with Jordan and Desjardins serving as guest editors. Papers will appear online as soon as they have cleared peer review, with the full special issues published at a later date.

In conclusion, everything is on track and proceeding to plan.

In the coming years the SHWG will develop further initiatives to examine Arctic SEs from contemporary and future perspectives (details forthcoming).

Scientific Highlights

1. Launches the SHWGs new theme of 'Long-Term Perspectives on Arctic Social Ecological Systems'
2. Goal was to integrate archaeological, historical and ecological datasets to investigate Arctic SESs from a 'palaeo' perspective, and to better understand what contributes to their long-term fragility, resilience and long-term sustainability
3. Papers had wide temporal and full circumpolar geographic coverage; papers also presented by several Russian colleagues
4. Early Career Scientists played a central roles (both as speakers and as co-chair)
5. Papers will be published in a special issue of the peer reviewed journal Quaternary International (Elsevier).

Further Details:

Session 15. Long-Term Perspectives on Arctic Change: Implications for Archaeology, Palaeoenvironments and Cultural Heritage

The inter-disciplinary SES ('Social-Ecological System') framework is ideal for investigating what factors contribute to long-term vulnerability and resilience in complex human-environment relationships over three inter-locking time scales: (i) palaeo (millennial through to recent historical); (ii) contemporary; (iii) future. This session brings together insights into palaeo timescales, and thereby aims to contribute to the ICARP III (Part 3) sub-theme: 'Understanding of long-term responses to Arctic change, including in the areas of food and water security'. Speakers will integrate historical, archaeological and long-term environmental and climatic records from across the pan-Arctic to investigate what drives the deeper (pre)historic and recent cultural and environmental dynamics that shaped both past and present Arctic SESs. Additional papers will draw on a wide range of theoretical and empirical perspectives to explore the active role played by the rich yet endangered cultural, historical and environmental heritage in a range of Arctic SES's now being impacted by accelerating change. We are looking for papers that engage with the following themes:

We are looking for papers that engage with the following themes:

- High-resolution multi-proxy records of past Arctic ecodynamics (e.g. climate, terrestrial and marine ecosystems, past ocean and ice states, etc.) affecting environment conditions for human occupation
- Human responses to specific climate change 'events' (e.g. Last Glacial Maximum, Pleistocene – Holocene Transition, 8.2 Cal BP Cold Event; Medieval Warm Period; Little Ice Age; more recent historical fluctuations)

- Arctic food/water security and the dynamics of long-term subsistence/social transformations (eg. hunting, fishing, animal domestication, herding)
- Reconstructions of (human) palaeo-demographic (pre)history in the Circumpolar North
- Cumulative human impacts on circumpolar biological diversity (species/ecosystems)
- Multi-generational decision-making 'pathways' in Arctic communities adjusting to the onset of climate/environmental change
- What influenced (past) fragility, resilience and long-term sustainability in (earlier) Arctic Social-Ecological Systems?
- Mitigating loss of Holocene cultural/ecological heritage (palaeo-societal/palaeo-environmental archives) through modern climate change?
- Arctic material heritage – policy implications of transformation and decay
- Contrasting and contested perceptions of Arctic cultural heritage