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ARCTIC SUSTAINABILITY SCIENCE: AGENDA 2020

Andrey N. Petrov (*University of Northern Iowa, United States*)

Fondahl Gail (*University of Northern British Columbia, Canada*)

Schweitzer Peter (*University of Vienna, Austria*)

andrey.petrov@uni.edu

An emerging Arctic sustainability science seeks to understand the character of interactions among society and nature in the circumpolar region. In the recent years scholarly work in Arctic sustainability and sustainable development are developing along three pathways: scientific discussion of what sustainability (including sustainable development) means; political discussion of the agenda for sustainable development, from local to global scales; and promoting social learning of actual nature-society interactions in order to guide humanity towards sustainability. Since the IPY there have been a number of studies that unraveled and articulated the meanings and manifestations of sustainable development in various Arctic regions. There have also been examples of practical applications of some sustainability principles to development in selected communities and regions. Certain aspects of sustainability, such as the notions of resilience and adaptation, received particular attention from both scholars and Arctic residents. Generally speaking, since the last Arctic science plans were created at ICARP II the study of Arctic sustainability experienced considerable progress. The growing knowledge base and interests to Arctic sustainable development issues brought about the emergence of a new science, the Arctic sustainability science. However, despite advancement of Arctic research in recent years, our understanding of the complex structures, functions and interactions within or among socio-ecological systems across this region is still incomplete as it lacks synthesis. In other words, the patchwork of sustainability knowledge in the Arctic is yet to evolve in to the framework that provides a comprehensive understanding of Arctic social-ecological systems. This paper opens the discussion of options and opportunities to develop such a conceptual framework relying on the knowledge based built during the last decades.