Capacity development to promote collaborative natural resource management and community-based monitoring in the Arctic

F. Danielsen¹(fd@nordeco.dk), H. Enomoto^{2*}, M. Enghoff¹, L.K. Holm³, O. Lee⁴, M. Nuttall³ and N. Otsuka⁵

¹Nordic Foundation for Development and Ecology (NORDECO), Denmark ²Arctic Environment Research Center, National Institute of Polar Research, Japan ³Greenland Climate Research Centre, Greenland ⁴University of Alaska Fairbanks, USA ⁵Hokkaido University, Japan

Up-scaling collaborative management and monitoring in the Arctic require an increasing number of resource managers and scientists able to facilitate participatory approaches to natural resource management and monitoring in practice. In recognition of this, UArctic is establishing a Thematic Network on Collaborative Natural Resource Management and Community-Based Observing. Here, we describe the background for the Thematic Network and we call for a dialogue to discuss how education and research institutions can contribute further to developing capacity in collaborative management and monitoring. The statement is based on a report to ISAR-6 in Tokyo 2-6 March 2020.

The distribution of life on Earth is experiencing dramatic effects from the most rapid climatedriven change in 25,000 years [1]. As local environments face persistent change, species move up mountains, deeper into seas, and towards the poles. Across the planet, global species re-distribution is impacting economies, trade, human wellbeing, governance, ecosystems and even the climate itself.

A short response time from observation to action is required to adapt natural resource governance to the rapid changes in distributions of species. One proposed solution is to improve decision-making by cross-weaving indigenous, industry, community-based and formal/academic science through collaborative monitoring and management of resources.

Collaborative management and monitoring facilitate adaptation of the livelihoods of indigenous and local fishing and hunting communities in the Arctic to the rapidly-changing environment, simultaneously ensuring the protection of biodiversity and the sustainable use of resources and ecosystems [2]. Local capacity and engagement in natural resource management can be significantly increased and strengthened through dialogue between resource users, scientists and managers. Co-producing indigenous/local and scientific knowledge will enhance the common knowledge. The two approaches can supplement each other and together provide for more timely and effective management and use of resources. Up-scaling, extending and promoting collaborative management and monitoring require an increasing number of resource managers and scientists able to facilitate, implement and operationalize participatory approaches to natural resource management in practice.

UArctic is establishing a Thematic Network on Collaborative Natural Resource Management

and Community-Based Observing [3]. We would like to initiate a dialogue to exchange experiences and discuss how education and research institutions can contribute to increase the number of Arctic resource managers and scientists who are able to facilitate, implement and operationalize participatory approaches to natural resource management in practice. These efforts will build on an experience exchange workshop at Hokkaido University that brought together CBM practitioners, researchers, and natural resources managers in June 2019, and an in-service course for government staff held in Greenland in October 2019.

Acknowledgments

Financial support was provided by the Government of Denmark, and the EC H2020 project INTAROS (grant 727890).

References

[1] G.T. Pecl et al., Biodiversity redistribution under climate change. Science, 355 (2017)

[2] F. Berkes et al., Collaborative integrated management. Coastal Man., 35 (2007)

[3] UArctic, Thematic Network on Collaborative Resource

Management. <u>https://www.uarctic.org/organization/thematic-networks/collaborative-resource-management/</u> (2020)