Conservation of Arctic Flora and Fauna

Memorandum 2/11/2018

CC3: Building social-ecological resilience

This memo provides a summary of reports submitted on the session CC3 organized at the Arctic Biodiversity Session in Rovaniemi, Finland, October 9-12 organized by the Stockholm Environment Institute and the Ministry of Agriculture & Forestry, Finland.

Attendance: 50

Arctic Biodiversity Assessment recommendation themes most prominently addressed in the session:

- Climate change
- Addressing stressors
- Improving knowledge and public awareness

Key points raised in the session that were important to note:

- Resilience is the ability of a system to bounce back. The Arctic Resilience Report illustrated 25 cases of community response to climate change. Highly resilient communities were more likely to have high abilities to self-organise and integrate knowledge through a range of expertise needed in problem solving. Accepting change as the norm was also a key factor in improving resilience. The goals of the Arctic Resilience Action Framework are to increase the capacity of Arctic countries and communities to understand and respond to risks and changes that are based in an ecosystem context.
- Understanding climate change adaptation is difficult for people, similarly to understanding resilience. If you don't understand what it means, it's difficult to act. Part of resilience work is highlighting vulnerabilities in social and ecological structures, and how resilience is the glue that strengthens communities. Finland has a 2005 strategy for adaptation to climate change, updated in 2014 with a plan, in order to communicate what to do as the climate warms, how to identify risks, and how to take mitigation approaches. Learning from a community of practice with a range of best practices, as well as communicating these best practices, is key in order for people to adapt to mitigation. The Arctic Resilience Forum is an example of how to build these networks to assess risks and respond to mitigation. Risk assessment is a related and critical part of resilience work.
- Reindeer grazing may have effects on controlling shrubification through browsing shrubs, particularly willow (Salix spp.). Reindeer especially need green forage to improve their health and put on weight during summer months. Landslide areas are preferred by herders for grazing reindeer, because of the growth of new willows, whose new shoots are preferred. Tall willows are not preferred for grazing but are still valuable for shelter in hot winter and insect relief. They do not therefore suppress the growth of tall willows.
- Understanding social-ecological systems is key to building resilience into climate change adaptation. A comparative analysis of yak and reindeer husbandry provides context for assessing differences in resiliency in these cultural herding traditions and cultures. Yak husbandry in Yushu (China) and reindeer herding in Finland are currently facing present changes in climate, livestock population, and are also responding to the effects of past drivers. To respond to cumulative changes, participatory approaches and new networks are required.

- Arctic Resilience Action Framework (ARAF) final scientific report was published 2016 – and a synthesis for Arctic leaders in 2017. These kinds of synthesis are highly useful for more than just decision makers.
- The definition of resilience is different if you look at it from a human or ecosystem perspective.
- Arctic communities can be highly resilient, because of self-organization, knowledge integration, diversity and having/taking change as the norm.
- A comparative analysis with yak herding in Tibetan plateau, Yushu, Qinghai Province ,China and reindeer herding in Lapland, Finland is about to begin. It is a research project in cooperation with Arctic Centre - University of Lapland, IIASA – Austria and Peking University – China. Social-ecological systems of Tibetan plateau and Lapland are geographically distant, but socially and ecologically in many ways interestingly similar.

Recommendations/actions identified for how to deal with the issues raised in the session:

- Identify ongoing projects and activities that are building resilience
- Build and support a community of practice via the Resilience Forum
- Design and develop projects based on social-ecological systems
- Develop indicators of social-ecological resilience in the Arctic
- We need to be better at moving data into practice to strengthen resilience. To do this, we also need to improve sharing and collaboration, build multi-disciplinarily and an understanding of each other, communicate and build awareness of risks, and bring hydro-meteorological data to decision-making.
- "We need to turn science into practice – so that people can understand it." What does resilience take in the first place? Awareness of risks, collaboration and hydro-meteorological data.

Take home message from the session:

- We can't engage in conservation initiatives without remembering that we are integrated into ecological processes. An integrated system model of social-ecological connections and feedbacks is required to tackle problems effectively and systematically. The way we build a community of practice around resilience is to look at what others are doing on this topic and build networks in order to learn from one another. Resilience goes hand in hand with sustainability and biodiversity.
- Biodiversity is so strongly also "behind" resilience and a reason to cherish it!
- "…with untrained eyes it is not possible to see – but if you look closely…" - remember the trained eyes of Indigenous and local people!