

# All presentations from the Arctic Council's Senior Arctic Official's meeting in Luleå, Sweden, November 8-9 2011.

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## Arctic Council

### Arctic Council Secretariat

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# Arctic Resilience Report

Presentation at SAO meeting in Luleå  
8 November 2011  
by Ambassador Andreas von Uexküll



Ecological and social changes are strongly interlinked.

Social-ecological systems are self-organizing systems that can reorganize with impact on ecosystem service and human well-being.

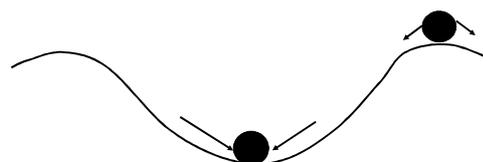
Drivers at local, regional and global scales interact, sometimes with greater impact on ecosystem services than each driver in itself.



There are *limits* to how much a system can be changed and still recover.

Beyond those limits it functions differently, and the system changes to some other state.

Resilience is the ability to cope with shocks and at the same time preserve its main functions.



## Purpose of assessing resilience...

Identifying potential for large shifts in ecosystem services that affect human well-being.

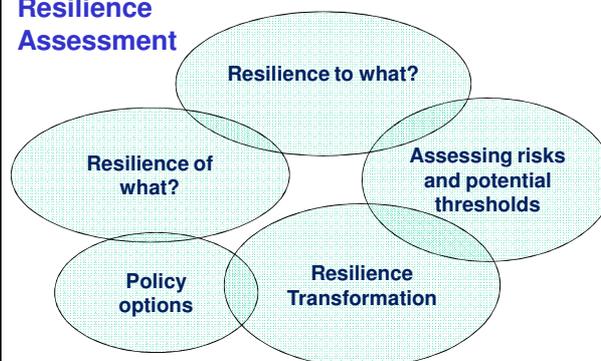
Understanding how different drivers of change interact and affect the ability to withstand shocks.

Evaluating strategies for adaptation and transformation.

...is to prepare for change.



## Resilience Assessment



Example: Food security

**Resilience of what?**

- Food supply – something to eat.
- Ecosystems that support traditional harvests.
- Food that contributes to healthy communities.

What do we value and what do we want to maintain?



What are the risk factors?

**Resilience to what?**

*Disturbances:*

- Toxic substance.
- Loss of hunting and harvesting skills.
- Cost for equipment and fuel.

*Shocks:*

- Oil spill.
- Loss of transport routes.



Assessing risks and identifying potential thresholds

- Marine ecosystems that no longer sustain fisheries.
- Grazing land no longer suitable for reindeer herding.
- Changing of migration routes for marine mammals.
- Loss of community sharing practices.



Strengths and capacities

**Resilience**

What helps maintain food security today?  
Can it be strengthened to deal with anticipated changes and stresses?

**Transformation**

What capacities are available to move from one form of food security to another?



Increasing capacity

**Policy options**

- Influencing drivers of undesirable change.
- Building capacity to ensure food security in spite of new circumstances.



Input to ACA and EBM

- Identify potential thresholds.
- Provide insights about drivers and interactions that could be pursued with targeted activities.
- Provide scientifically based scenarios of possible futures.
- Provide framework for integrating research findings aimed for decision-makers.



