Resilience and Sustainable Development concepts integration through long-term sustainability monitoring in the Arctic

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The 1st Arctic Resilience Forum, How to build Arctic resilience- Sharing of good practices.
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There could be considerable benefits for total Arctic sustainability from Resilience theory and SDG concepts integration.

- **SDGs concept**
  - SDG1: No poverty
  - SDG2: Zero hunger
  - SDG3: Good health & wellbeing
  - SDG4: Quality education
  - SDG5: Gender equality
  - SDG6: Clean water & sanitation
  - SDG7: Affordable & clean energy
  - SDG8: Decent work & economic growth
  - SDG9: Industry, innovation & infrastructure
  - SDG10: Reduced inequalities
  - SDG11: Sustainable cities & communities
  - SDG12: Responsible consumption & production
  - SDG13: Climate action
  - SDG14: Life below water
  - SDG15: Life on land
  - SDG16: Peace, justice & strong institutions
  - SDG17: Partnerships for the goals

- **Resilience concept**
Main differences between Resilience building and Sustainable development Concepts, their strong and weak features and possibilities of their integration for reaching SESs sustainability through transdisciplenarity

RESILIENCE

Main focus and aim:
DEVELOPING ADAPTIVE CAPACITY.
RESILIENCE BUILDING.
Resilience prioritize process and cycle of change. Change is normal and is a fundamental feature of a socio-ecological system (SES).
UNIT- SES has a Multi-scale character.
MAIN APPROACH. Elaborate means to increase adaptive capacities and increase human, social capital (HSC) to maintain Ecosystem and Societal services (Arctic services.)
WEAK FEATURES: Resilience approach is hardly to be included in the planning process at different levels and space scales.

SUSTAINABLE DEVELOPMENT

Main focus and aim:
FUTURE DESINE, PLANNING, LOCAL AGENDAS for SD, etc.
Formulating SDGs in sustainable development strategies as outcomes.
UNIT – nation, local administrative region with set boarders
MAIN APPROACH. SDGs formulation in strategies and SD plans
WEAK FEATURES:
The issue is that different stakeholders may have different views, values, goals and agendas.
Uncertainties of happening social and ecological changes can not be predicted.
In local agendas complex issues such as food, water and energy security are not covered due to institutional different sets of targets (different ministries have different tasks not correlated with each other)
The way for Integration SDGs with Resilience building priorities

- Permanent Transdisciplinary sustainability monitoring activities, gathering diverse stakeholders to delineate main sources of SESs resilience and implementation of SDGs and putting them into planning process at different space scales, delineating sustainability priorities, indicators and monitor their implementation.

The SDGs and their targets should be reassessed for the Arctic SESs within its specific focal scales features.

At the Pan-Arctic scale it should be specifically taken into account that:

Climate change affects indigenous peoples whose traditional way of life, culture and identity are closely interconnected with the natural environment.

The importance of mixed and subsistence economies which are not accounted in SDGs

Migration related variables are not applicable to the rapid population and demographic and urbanization shifts in the Arctic (ibid). (Scold, 2018)

Importance of collaboration, connectedness between different scales, especially important for remote Arctic regions for achieving Arctic sustainability.
Monitoring Sustainability of Arctic SESs

- **Sustainability** – is the capacity of a socio-ecological system (SES) at different scales, organizational and time lines to be FLEXIBLE to transform or proactively adapt to impacts and processes (both external and internal, shock and slow ones) increasing long-term human and social capacities (HSC) to sustain social and ecosystem services.

- **SES**
In the Anthropogenic period the main focus (transformation pathway) to sustainability should be put to the development of Human and social capital and capacities **HSC** (including not only Health, Education, but proactive adaptive, flexibility capacities).

**Human & Social Capital (HSCC) are proactive adaptive capacities,** desires (believes), values and certainly demands of Arctic people. They are put in the central position in this SES framework. HSC – is both the main source of SES sustainable development and resilience building (sustainability) and main driver of change. Humans nowadays in order to achieve sustainability (R & SD) in permanently changing disturbances have to adapt, set targets, design scenarios for sound solution of appearing challenges arising between Human and Social Capital demands and provision of ecosystem and social services – economic, social, nature-environmental, governance as well as the

This methodology is developed within SOO and the IASOS network during the IPY 2007-2008. SCOBS IPY- Social observations.
Focus on Increasing **COLLABORATION, CONNECTEDNESS** at cross-cutting scales:

Collaboration at **cross-cutting scales** from local to **global** producing and disseminating new knowledge, and developing new frameworks for analysis, monitoring, synthesis and innovation.
THE CREATION of ARCTIC SUSTAINABILITY MONITORING NETWORK on the base of the Arctic Resilience initiatives, SDWG, IGU-CHAR, ASUS Belmont forum as well as IASSA, IASC and such local activities as EIA, SIA, etc.

The creation of such a pan-arctic transdisciplinary space (s) is viewed as one of sources of learning and transformations towards sustainability. is making possible to observe and shape rapid changes happening in the Arctic based on sustainability knowledge co-production involving diverse stakeholders (local/indigenous people, decision-makers, scientists, educators, etc).

The construction of continuous pan-Arctic monitoring network on the base of key monitoring sites enables to define adaptation and transformation sustainability pathways in the Arctic - the most rapidly changing region of our planet.
THANK YOU ALL !!!

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