

Northern Timberline Forests (NTF) Workshop

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organized by the Arctic Centre (University of Lapland, Rovaniemi), Finnish Forest and Park Service (Rovaniemi), Finnish Forest Research Institute (Rovaniemi), and the University of Joensuu under the project "Sustainable Development in Northern Timberline Forests" within the "Sustainable Development Program" of the Arctic Council and its Working Group on Sustainable Development (2000-2002).

Recommendations on Environmental and Socio-economic Issues and Concerns in the Northern Timberline Forests

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Preamble

The workshop participants who came from almost all regions in the circumpolar north are in agreement that the "Northern Timberline Forests" should receive more attention with respect to environmental, socio-economic, cultural and political conditions, both internally and externally. The Northern Timberline Forests constitute the transition ecosystem between productive forest (commercial forestry) and the natural treeless areas (tundra), referred to as the forest tundra zone or *lesotundra* in Russian. Due to its lower human population density, this zone has been the target of 'more gentle' human impact. However, this condition is rapidly changing. Natural and human requirements meet in this zone; therefore, it should be possible to reconcile both.

It was noted that this meeting allowed the broadening of the exchange of ideas among practitioners, users and scientists. The following recommendations are seen as contributing to the development of policies and their implementation with respect to urgent issues which are of concern to the peoples living in the Northern Timberline Forests. These recommendations are intended to reach the Ministries of the environment, forestry, regional development, education and research along with other administrative realms within each of the polar countries in the Arctic Council.

General parameters

- It is noted

... that the Northern Timberline Forests are inhabited mainly by aboriginal peoples whose position is to be recognised through equal partnership (including possible co-management regimes) in decision-making, concerning, among other aspects, property rights, governance, traditional knowledge and general development on the local and regional level;

... that the Northern Timberline Forests provide a functioning base for multi-purpose resource utilization related to the indigenous knowledge of flora and fauna whose maintenance is of paramount interests to both local and aboriginal residents;

... that there exists considerable regional variations throughout the circumpolar north and, in particular, within the belt of Northern Timberline Forests;

... that the emerging participatory process in research still shows discrepancies in the use of disparate language, i.e. jargon, terms and concepts between scientists and local residents with respect to both 'scientific' and 'indigenous' knowledge'; there is urgent need to overcome this gap through open communication and the use of plain language;

... that there is urgent need for alliances between local communities and research communities to support the assessment of particular conditions that would lead to enhancing the cultural and economic diversity of the region. The NTF Workshop endorsed the request by the World Congress of Reindeer Herders (Johan Mathis Turi, president) to be a partner in an alliance in of research activities focusing on the conditions and prospects of reindeer herding as a viable economic and cultural expression by aboriginal peoples and local residents of the Northern Timberline Forests;

... that the exchange of information and knowledge and ways of communication among peoples with the Northern Timberline Forests should be increased and enhanced; and that both linguistic and cultural diversity is maintained and reinforced through translation and interpretation among the languages.

... that there exist real and perceived regional and global threats to both the ecological and human base of the Northern Timberline Forests, i.e. climate change (e.g. insect pest outbreaks, regional variations in changes of summer and winter temperatures, changes in the North Atlantic Oscillations), erosion (thawing of permafrost), pollution of different kinds, economic utilisation of various resources by various interests for different purposes (resources exploitation, forestry, grazing by wildlife, reindeer and sheep, and tourism), and energy needs (firewood).

Recommendations

The following recommendations are based on the discussions that emerged from the "Timberline Workshop" held at the Arctic Council's "Sustainable Development Workshop" in Whitehorse (Yukon Territory, Canada) in May 1998 (published in the Finnish Forest Research Institute Research Papers 734, 1999). These discussions continued during the 2002 workshop and led to the formulation of focused recommendations expressly taking into account the conditions in the Northern Timberline Forests throughout the circumpolar north. Recommendations with respect to contaminants and pollution have been provided by AMAP. Based on the ACIA (Arctic Climate Impact Assessment) Scientific Report, which is due by the autumn of 2004, the AMAP and the CAFF will deliver policy recommendations to the Arctic Council regarding mitigation of climatic change impact in the northern circumpolar regions.

General recommendation

Develop a permanent circumpolar monitoring network on human dimensions, i.e. living conditions and sustainable management of resources. Based on the integration of scientific and local knowledge, this network would serve as a complement to existing programs such as AMAP, CAFF, LULC and others.

Specific recommendations

1) The Human-Forest Interaction: the socio-economic and cultural dimension

It is recommended, in order to enhance and sustain the human conditions in the belt of northern timberline forest, to

... study the inhabitants' distribution, density and socio-economic conditions;

... assess the possibilities and prospects for local and regional economic development including particular emphasis on energy requirements and alternate energy sources (wood, etc.), locally based small-scale tourism, reindeer herding, fishing and hunting, and regional agroforestry:

... monitor and evaluate the expansion or restriction of commercial forestry, exploitation of hydropower, oil/gas and mineral resources, and large-scale tourism, settlement patterns and infrastructure, as well as the impact of environmental conservation and protection policies and regimes (i.e. exclusion or inclusion of local interests) within the northern timberline forests;

... survey the consistent application of environmental protection laws throughout the region;

... assess the varying regional and national definitions and levels of living standards and quality of life with emphasis on education and capacity building, physical and mental health, cultural and linguistic base, sense of belonging and commitment to place;

... evaluate the political developments towards local governance and control, legislative and administrative powers, decision-making processes and community building, territorial claims and title to land.

2) Resource Management in the Northern Timberline Forests

There are already a number of monitoring systems in place documenting specifically environmental changes in the circumpolar north. It is suggested that these be expanded so that these monitoring schemes become more holistic in their approach and capabilities. It is therefore recommended to

... develop permanent circumpolar monitoring networks (including plot networks) on changes in Land Use and Land Cover (LULC) and environment as part of the AMAP/CAFF monitoring programmes and establish a new open and accessible data center whose mandate is the collection, collation and coordination of information concerning changes in environment and land use and their impact on the local communities in the circumpolar north; extend these data sets to include socio-economic and cultural aspects;

... establish a permanent working group on land use and land-cover change modelling in which the research focus is on the driving forces of change both on the local level and global level within the context of human dimensions;

... design models for the prediction of impacts by different land-use management practices, including models on risk estimations by regionally and globally throughout the forest belt;

... develop spatial decision-making support systems for land use management with full involvement by local communities utilising tools as a Geographical Information System (GIS) and Global Positioning System (GPS) capabilities;

... support and press for the development of more efficient and effective legislation and regulations focusing on the timberline forests; this also includes the requirement for Environmental and Socio-economic Impact Assessment studies in all areas of the belt of northern timberline forest.

3) Forest and Reindeer Herding Economy in the Northern Timberline Forests

Reindeer herding is exposed to changes, threats and pressures on the regional, national and international (global) scale. Specific attention is being given to the continued sustainability of reindeer herding, which today competes for space and resources along with other industrial interests. Here, sustainability includes the ecological, socio-cultural and economic aspects. For the enhancement of the reindeer herder's position throughout the Northern Timberline Forests, it is recommended to

... attain full integration and partnership of the reindeer herding communities in the decision-making process, which also fully respects traditional knowledge;

... strengthen solidly the legal and political status of reindeer herders along with the requirement that the socio-cultural and linguistic environment are maintained and developed for reindeer herding communities;

... develop regimes to secure the economic feasibility of reindeer herding as a small-scale industry with permanent employment opportunities and stable income levels;

... carry out monitoring and continuous mapping of reindeer herding land use patterns and practices on a smaller scale locally, and develop explanatory models to include competing land use in the same territory at the same time.

4) Maintaining Biodiversity in the Northern Timberline Forests

Maintaining biodiversity in the northern timberline forests is a crucial element. Therefore it is recommended to

... develop and implement internationally compatible legislation and regulations to protect the ecosystem of the northern timberline forests and the adjoining areas as wide buffer zones in order to guarantee biodiversity;

... maintain natural forest structures and allow natural disturbances to preserve biodiversity and promote natural successions;

... avoid disturbances to and excessive utilisation of bio-resources respecting reproductive cycles; monitor the harvesting of bio-resources through established and available techniques;

... use changes in the ecosystem as an indicator of natural and human impacts, e.g. apply biodiversity as an indicator for climate change;

... guarantee that both scientific knowledge and traditional knowledge form the base for sustainable management of biodiversity;

... promote certification for eco-tourism (i.e. outdoor recreation) with minute affect and impact on natural conditions.