

Resources, reindeer and man. How can research contribute to sustainable development?

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Abstract: The sami reindeer industry is a socio-economic system based on biological productivity. In the biological production chain, plants are converted to reindeer. The basic conditions for this production are laid down by the fraction of primary plant production available to the reindeer, the physiology of the deer, and the size and age and sex composition of the deer herd. The amount of plant production available is influenced by 1: climate, topography, and geology, 2: preferences of the reindeer, and 3: the amount consumed by other exploiters i.e. sheep, made inaccessible by others (roads and cottages), destroyed by vehicles or spoilt by pollution. Losses to the production is caused by herding operations, disturbances from other human activities, predators parasites and diseases. The industry is attempting to maximize the yield through herding activities and the implementation of various remedies, i.e. fences, scooters, cars, helicopters, and sometimes by the use of commercially manufactured fodder. These efforts may be classified as oilbased. The

biological production is converted to money in the market. The politically defined aim of the industry is to supply its participants with economic security. This is influenced by the number of participants and the form of ownership and distribution of herd sizes among them. Policies relating to Sami affairs and the general agricultural policy of the country will also strongly influence this side of the industry.

Scientific research has been carried out on relatively few of these elements, and there is, for example, little scientific data available relating to the claimed overexploitation of the vegetation of most of Finnmark county. The Scientific committee of the reindeer industry is trying to identify where research is most needed within this complexity of biological and socioeconomic elements. The committee further regards it as equally important to initiate research that aims at understanding and quantifying the interaction among the elements and the various total results different configurations may produce.