

Loss of continuity forests in boreal Sweden, what are the major biodiversity concerns?

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The Swedish boreal forest has since the onset of commercial forestry in the mid-1800s been transformed from a pristine ecosystem to a fragmented landscape dominated by managed forest stands. Especially the current sustained yield forestry, based on clearcut harvesting, has since the Second World War left only remnants of more natural forests. In this presentation, I will present an analysis based on remote sensing data on the remaining continuity forests in Northern Sweden. These forests represent the last of remnants of old forests and hence of critical importance for forest biodiversity. The analysis highlights a Scandinavian Green Belt in the western parts of Northern Sweden where still relatively large tracts of more natural forests exist and with a landscape level continuity. East of this belt, the landscape is strongly fragmented and with very limited connectivity. The concept of Green Infrastructure (GI) is gaining strong policy importance and aims to secure, at landscape scale, a network of valuable forest stands supporting the maintenance of species and ecosystem services on a national scale. Given the current lack of old and natural forests in large parts of northern Sweden, the establishment of such a functional GI is major challenge. It will require increased focus on protection of remaining valuable forest, but also significant efforts in restoration of habitat qualities in less valuable stands. This is unlikely to happen across all of northern Sweden and hence spatial prioritization will be needed. A starting point would be to implement landscape planning to achieve what the late Professor Ilkka Hanski suggested as a rule of thumb – to ensure that in at least one third of the landscapes that one third of the area is in high conservation status. Although the landscape context in northern Sweden is different from Danish circumstance, the mapping of historical land use as a starting point for prioritization of forest protection and restoration is likely to be equally valid.