HOW ARE ESTONIAN WOODLAND KEY HABITATS MANAGED - WHAT HAS REMAINED AND HOW ARE THEY PROTECTED?

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Introduction

The concept of woodland key habitat (WKH) was established in Scandinavia in 1990s and was accepted also in Estonia. The main inventory of *WKHs* was conducted between 1999 and 2002. After 2002, the registration of WKHs continued through the forest management planning process. In state forests, the protection of WKHs is based on the directive of the Ministry of Environment and on the international forest stewardship (FSC) standard. The maintenance of WKHs in private forests is voluntary and owners have the possibility to sign a contract with the Estonian state to get compensation for the loss of income. Our goals with this study are: 1) to analyse the role of WKHs in the establishment of the Estonian protected area network; 2) to estimate the effectiveness of international certification schemes in preserving forests with high conservation value; 3) to estimate effectiveness of voluntary protection scheme in private forests.

Methods

The information on WKHs, protected areas and land ownership was provided by the Estonian Environmental Register and Estonian Land Board in Mapinfo format. We analysed the number and area of WKHs within nature conservation areas with different protection regimes and in commercial forests with different ownerships. We registered cuttings in WKHs. To define forest cuttings we visually analysed ortophotos. We used publicly available ortophotos through public WMS service offered by the Estonian Land Board. The ortophotos were made between 2005 and 2009.

Results

In 2010 the number of WKHs in the State Environmental Register was 8558 (22894.5 ha), average area of WKHs was 2.7 ha. The number of WKHs in strict protection zones was 1476 (6297 ha) and 1742 (4959.4 ha) WKHs were situated in zones of protected areas with more loose management regulations. 5340 (11637.2 ha) WKHs were registered in commercial forests. In state commercial forests the number of registered WKHs on different cadastre units was 4276 and in private forests 5469 cadastre units had registered WKHs. In private forests voluntary protection contracts cover 621 ha of WKHs. In State owned commercial forests more than hundred registered WKHs with an area over 300 ha and in private forests more than 200 WKHs with an area over 1000 ha have been at least partly cut after the main inventory.

Discussion & conclusions

The presented figures are underestimating the actual state as three-fourths of the ortophotos were older than 1 year. Based on this data we will discuss if voluntary protection scheme is considerable alternative to conventional nature conservation methods. WKHs have played a significant role in the development of the Estonian protected area network. WKHs and places with high WKHs concentration have been often used to designate new protected areas or to expand existing ones. The maintenance of valuable forest habitats outside the protected areas through voluntary protection schemes has not been as successful as it was hoped at the end of 20th century. The protection of WKHs in commercial private forests has remained one of the main challenges in Estonia. But also improving the management practices in certified forests is hard task for managers and other interest groups.

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