



## Traditional grazing of sheep as a sustainable silvopastoral system

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Extensive transhumance of sheep is practiced in Carpathian mountains since centuries. In Polish Carpathians, sheep belonging to many owners graze on remote mountainous pastures in summer from the early May to the end of September. Grazing is managed by chief shepherd with trained helpers. This sustainably managed grazing scheme can be the source of valuable silvopastoral system.

The main threat to the grassland is heavy encroachment of bushes after land is abandoned. Grazing helps to stop the encroachment process and restores the land to agricultural use. The chief shepherd knows very well habitats and decides which species should be removed (including for domestic fuel use) and which are needed to be left and/or protected by grazing. Some individual woody plants are left in order to maintain biodiversity, protect against erosion and finally increase grassland productivity. In this way, open woodland-landscape is created offering a set of environmental and cultural values. Trees left provide shade and shelter for animals. Moreover, sheep are selectively browsing young twigs and leaves that supply them essential nutrients or deworm. Livestock is also browsing woodlands during herd transhumance to higher located pastures. Animals browse leaves and twigs of beech, hornbeam, pine, alder, willow, poplar, birch or bird cherry. Despite this fact, browsing usually does not decrease significantly wood production on mountain wood pastures. Studies show grazing at adequate stock rate supports sward biodiversity and spruce seedlings growth. To summarize, wooded pasture with sheep grazing can be sustainable productive system providing animal products, wood and enhancing diverse and valuable cultural landscape.



Figure 1. Silvopastoral landscape in Polish Carpathians

### Further reading:

Kohut P. (2013). *The concept of pastoralism development within Polish Carpathians area* [in Polish]. Expertise.

[www.porozumieniekarpackie.pl](http://www.porozumieniekarpackie.pl) [access: 09/02/2019].

Gąsiorek S. (1993). *Ekologic aspects of sheep grazing on mountain wooded pasture* [in Polish] Wydawnictwo Sececja, Kraków.

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