

Historical signs in the landscape: Investigating the practice of pollarding in Western Norway

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ROTATE's partners are NIBIO, the Czech University of Life Sciences Prague, Biology Centre (CAS) and IBOT. Norwegian PI is Dr Fride Høistad Schei at NIBIO, seen here with other project participants by a pollarded tree in Ulvik in Western Norway. Credit: Anna Birgitte Milford

In the lush landscapes of Western Norway, pollarded trees bridge the past with modern environmental concerns. In a recent study, researchers investigated what motivates farmers to continue this ancient tree pruning practice.

Pollarding, a traditional practice of pruning trees to encourage new growth, mainly for fodder, has found a new lease of life, particularly in Western Norway. This is among other things due to policy grants aimed at preserving cultural landscapes and enhancing biodiversity.

In the [study](#), published in *Agroforestry Systems*, researchers delved into modern pollarding practices and their [ecosystem services](#) in Vestland county. The study combined in-depth interviews with quantitative surveys targeting pollarding farmers across the region.

"Traditionally, pollarding provided additional fodder from the tree layer and made it possible to utilize resources from areas unsuitable for grazing and grass harvesting. The leaves were used as fodder, and the branches were used for tools, poles, and firewood. Today, the economic returns of pollarding are too low to be worthwhile for farmers," says Anna Birgitte Milford, social economist and researcher at NIBIO.

The researchers have been interested in investigating exactly what it is that motivates the farmers to carry on. Do they pollard mainly due to the grants they receive in doing so, or are there other aspects of pollarding they highlight as most important?

In the study modern pollarding practices were explored, including procedures and the ecosystem services pollarded trees offer in terms of bioresources, cultural benefits, and biodiversity conservation. Challenges with pollarding were also addressed.

Part of our cultural heritage

Through the interviews and survey, the researchers discovered that some farmers are motivated to pollard because of the erosion control and sheltering functions it provides to animals. For most of the farmers, however, the ecosystem services obtained from pollarding are first and foremost related to cultural and aesthetic values.

"Many of the farmers we interviewed described how they appreciate a landscape with pollarded trees because of the cultural heritage it represents, and highlighted this as their main motivation to continue the practice," says NIBIO-researcher Jørund Johansen who conducted most of the interviews.

As far as policies regarding pollarding is concerned, the researchers found that the farmers' motivation for pollarding extended beyond mere economic incentives.

"The farmers who took part in the study see few disadvantages with pollarding. While the public grant serves as a welcome incentive, most of the farmers expressed a genuine commitment to continue pollarding irrespective of financial support," Johansen says.

Pollarding enhances biodiversity

Old trees are extremely important for biodiversity. A pollarded tree has an increased likelihood of becoming old due to its aesthetic value and the tree's physiology.

"Pollarded trees have a relatively small crown on a low and thick trunk, which makes the tree more robust against weather and wind. Additionally, pollarded trees often become hollow in the middle at a younger age than trees that are not managed. Hollow deciduous trees are a particularly valuable habitat for a variety of species," says NIBIO

researcher and ecologist Fride Høistad Schei.

"Solitary trees dotting agricultural landscapes serve as havens for lichens, mosses, fungi, and insects, fostering a rich tapestry of biodiversity. This was highlighted by several pollarding farmers as a significant motivating factor."

The study also revealed that several farmers who practice pollarding let the branches and twigs from the trees decay in heaps outside in the field. This increases the structural complexity of the landscape and provides nesting opportunities for animals.

"It is interesting to note that farmers do this against the advice of the County Governor who provides the pollarding grant, who rather recommends the pollarded area to be kept "nice and tidy,"" says Schei.

"This shows that in the formation of the pollarding policy the aims of achieving both ecological and aesthetic values are up against each other, something which is typical in the management of cultural landscapes."

She adds that this is one of the topics the researchers brought forth in discussions with representatives from the County Governor of Vestland, with a recommendation that changes be made to future guidelines.

Grant scheme should continue

Anna Birgitte Milford says that gaining insight into the aspects of modern pollarding practices can be useful when anticipating the future of pollarding, and to identify opportunities for enhancing the outcomes.

"Our results indicate that sharing information about the cultural heritage of pollarding and the benefits it may have on biodiversity, to farmers as well as to the general public, can be an important part of a strategy to

uphold pollarding. Furthermore, it seems likely that without the economic incentives from the public grant, pollarding would to some extent continue, but perhaps more sporadically, and with less establishment of new pollarded trees," she says.

The researchers believe that pollarding among [farmers](#) in Western Norway most likely requires the continuation of a grant scheme.

"To provide additional benefits to biodiversity, it could also be considered to revise the advice against piling branches in heaps instead of burning," Schei concludes.

More information: Anna Birgitte Milford et al, "Historical signs in the landscape": Ecosystem services, motivation and challenges of pollarding in Western Norway, *Agroforestry Systems* (2024). [DOI: 10.1007/s10457-024-00994-9](#)

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