

Closer-to-nature forest management

Nordic Family Forestry Alliance Position paper



January 2026

Nordic Family Forestry would like to share views related to closer-to-nature forest management (CNF) that has been discussed in various legislative acts, strategies, voluntary guidelines and statements by the EU Commission.

Closer-to-nature forest management is one of the many ways of managing forests across the world. In the Nordics, closer-to-nature forest management is often associated with continuous cover forest management (CCF) that means leaving various age structures to grow. In this method trees to be felled are selected depending on their size and usually the biggest trees are removed.

However, NSF highlights that CNF should not be seen as one and fixed black-and-white criteria for acceptable forest management, but instead as a versatile set of possible actions and forest regimes to improve ecological sustainability, including continuous cover forest management but not limited to that. It's highly important to recognize that forest management in the Nordics is embedded in the concept of sustainable forest management (SFM) that considers ecological, economic and social sustainability. CNF focuses heavily on environmental aspects and thus, it is not suitable for an overall concept to evaluate the sustainability of forest management. It is not suitable for a baseline of nature credits either.

Multiple objectives of private forest owners

NSF would like to share insights why closer-to-nature forest management should be seen as one of various management methods and not be lifted as a superior compared to other management methods in the EU discussions. In unsuitable places closer-to-nature forest management might not be an optimal solution from the viewpoint of climate or biodiversity objectives. The most important starting point in sustainable forest management is to choose the management method that is both suitable to the individual forest site and that fits the objectives of the forest owner. Forest owners have multiple objectives, and forest management in general produces many benefits simultaneously. This also argues in favour of enabling diverse forest management options.

The following points compare CNF and related CCF and a more traditional even-aged forest management:

Sprucification is a challenge

Closer-to-nature forest management and often related continuous cover forest management can be suitable for some forest types, such as peatland forests since the water level can be regulated in a better way. However, if implemented across all forest types, continuous cover forest management can lead to increased amount of spruce (so called "sprucification") that does not support climate goals in the long-term due to spruces' vulnerability in the changing climate and diseases such as root rot. Also, when shade-tolerant species such as spruce dominate, it reduces species diversity and favour a simplified understory.

Operational Complexity

Due to regular fellings in CNF and related continuous cover forest management, there might be even more visits with heavy machines to forests compared to even-aged forests. Harvesting in uneven-aged stands is also technically more challenging leading to higher risk of soil damage from repeated machine entries. Also, continuous cover forestry requires continuous monitoring and selective thinnings, which increases planning and operational costs compared to more traditional even-aged management.

Regeneration, production and climate benefits might fail

Natural regeneration using continuous cover forest management can be unreliable particularly for light-demanding species. Natural regeneration when applied in unsuitable forests, can lead into high number of seedlings, but the mortality can also be very high. For some species such as for pine and birch, the growth can be weak. This means that the growth conditions can be in general weaker in continuous cover forests which means that also timber yield to be used for bioeconomy products can be lower.

Natural generation can also risk carbon accumulation in trees. If promoting natural regeneration in large areas, it could hamper the growth of trees and their carbon accumulation in the long term. Also, according to studies, the carbon stock is usually lower in continuous cover forests compared to even-aged forests. Therefore, it cannot be generalised that CNF and related CCF are better options for climate. Also, the risk of windthrow and snow damages can rise because selective thinning creates irregular stand structures. In addition, pest and disease control is more complex in mixed age stands, as pathogens can persist in residual trees.

Biodiversity is not superior compared to even-aged forest management

Nature-related measures should be concentrated on areas where they have the greatest impact. Actions, such as optimising thinning intervals, boosting structural diversity and natural regeneration are examples of important measures implemented in various kinds of management methods that are decided depending on the national forest strategies and laws, location and forest owners' goals and values.

Closer-to-nature forest management is often associated with higher biodiversity. However, this varies a lot depending on the actual implementation. On a landscape scale, different management practices (including clear-cutting) often support greater overall biodiversity than closer-to-nature (and continuous cover forestry) alone. Continuous cover forestry as a sole method in large areas can lead to a homogeneous environment.

In Nordics, lack of old trees and old forests patches as well lack of deadwood are the most important reasons to species lost for example in Finnish forests. However, closer-to-nature and continuous cover forest management do not resolve this problem. It can be that the oldest trees are removed in CNF and CCF, so advice to protect part of old forest like in even-aged methods is needed. As a rule of thumb, nature management must be taken care of in all different management methods.

Especially in larger areas, a mosaic of even-aged forests at different stages of growth produces a diverse range of environments with different species compositions compared to uneven-aged forests of the same age. This can be relevant to preserve biodiversity and conditions for those species dependent on old forests. In addition, species groups that favour open environments may be absent from CNF and CCF methods.

A recent study in Norway with simulations based on NFI data, showed that conversion to CCF on a large scale, would lead to a reduction of the near natural forest, given the prerequisite that the harvest level was maintained. Thus having adverse effect on biodiversity.

It's necessary to acknowledge that biodiversity-positive actions need to be specifically planned and implemented in CNF – just like in other management methods too. Increasing the amount of deadwood, leaving retention trees, supporting the higher share of broadleaves, and safeguarding especially important areas such as habitats of threatened species do not happen automatically in CNF either. In other words, the actions are the key, not an overall concept of a single management method such as CNF or one of its related applications, CCF.

Therefore, a mixed management approach is often recommended for maximum biodiversity.

NSF would like to share following policy messages on closer-to-nature forest management:

- 1) Closer-to-nature forest management is one of the many ways of managing forests. It has its advantages and disadvantages, but it should not be brought to the forefront of EU discussions, as there is no scientific evidence of its superiority.
- 2) CNF is representing forest management methods focusing on environmental sustainability. At the same time, it considers other dimensions of sustainability such as economic aspects much less. Therefore, sustainable forest management (SFM) should still be seen as a guiding principle for forest management in Europe as all angles of sustainability are well assessed.
- 3) When implementing CNF and related voluntary guidelines, operators and decision-makers always need to consider the impacts, possible benefits and feasibility before implementing them. Therefore, CNF guidelines should only be seen as a voluntary tool and not be brought into EU legislative texts.
- 4) In all forest management methods, not only in CNF, biodiversity needs to be well considered and methodology developed in time. This includes e.g. safeguarding valuable habitats, part of the old forests and strengthening structural features valuable for biodiversity. Measures include among all adequate number of retention trees, deadwood, and favouring mixed species.