

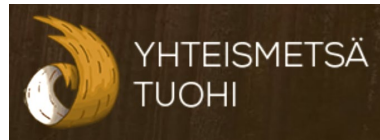
Green jointly owned forest - TUOHI

The green jointly owned forest TUOHI is a multi-owner forest property applying continuous cover (uneven-aged) forest management regime and thus avoiding clear cutting in forestry. TUOHI is juridically private, established according to the Act on Jointly Owned Forests in Finland.



Summary

In TUOHI, the contract solutions include private investments in the jointly owned forest in forms of invested money or forest property. Monetary investments are spent for acquisitions of forest land.



All shareholders of TUOHI have agreed on the management regime based on continuous cover (uneven-aged) forestry. In addition to economic benefits to shareholders, TUOHI is addressing improvements in forest biodiversity and increasing carbon storage. General juridical provisions on jointly owned forests are applied. Currently, TUOHI is attracting increasing number of investors.

Objectives

- Win-win solution: Profitable forestry without clear cuttings
- Preservation of rich forest nature and multiple use opportunities of forests
- Maintain and increase carbon storage in forests



Problem description

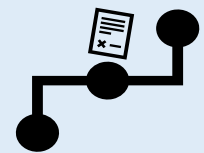
In Finland, uneven-aged forest management has been allowed since an amendment in Forest Act in 2014. Before this amendment, forest management was legally restricted practically only to even-aged forestry regime. This restriction lasted approximately 60 years. In even-aged forestry, all trees on a forest site have roughly the same age and height, and the forest is regenerated in a single point of time, typically with clear cutting. In uneven-aged forestry (continuous cover forestry), clear cutting is avoided and the forest is regenerated naturally by harvesting mainly only part of the biggest trees. Therefore, there is no single point of regeneration and the forest remains wooded all the time. In uneven-aged forestry, dispersed age class structure increases the features of natural forest, biodiversity, scenery and recreation possibilities, as well as carbon storage. Currently, uneven-aged forestry is still applied in rather low levels in Finland. If applied with success, uneven-aged forestry may also result in valuable roundwood products and economic benefits to owners. Traditionally, jointly owned forests as a forestry-specific juridical and financial entities have had strictly planned management with even-aged forestry regime. If the shareholders of a jointly owned forest agree with an uneven-age forestry management regime, this may be taken as the main forest management regime of the jointly owned forest. In addition, the jointly owned forest area of uneven-aged management may increase, if it attracts investors with additional private capital. In the case of the jointly owned forest TUOHI, new legal opportunities (structural change) combined with skilled initiators in continuous cover (uneven-aged) forestry management this kind of development has taken place.

LAND TENURE



Tenure of the forest property is given to TUOHI that applies continuous cover (uneven-aged) forest management practices

VALUE CHAIN



There are also some features of value-chain; the timber cut from TUOHI forests can be sold as "Clear cut free wood products" and there is brand co-operation with Jukola Lumber Ltd.

COLLECTIVE



Collected investments from investors/forest owners, forest area owned jointly by the investors, profits shared in relation to share of ownership

CONTRACT

Private – private contract
(Jointly owned forest is a juridically private entity)



Contract conclusion:
Written agreement



Financing party: Market sector-oriented



Start of the program:
Establishment in 2015, thereafter increasing number of contracts by investors/ forestry property mergers
End: Basically permanent, withdrawal is possible

PRODUCT

There are no specific product requirements. Uneven-aged forestry emphasizes production of valuable sawlogs instead of less valuable pulpwood. The applied forest certification criteria must also be fulfilled.

Data and Facts - Contract

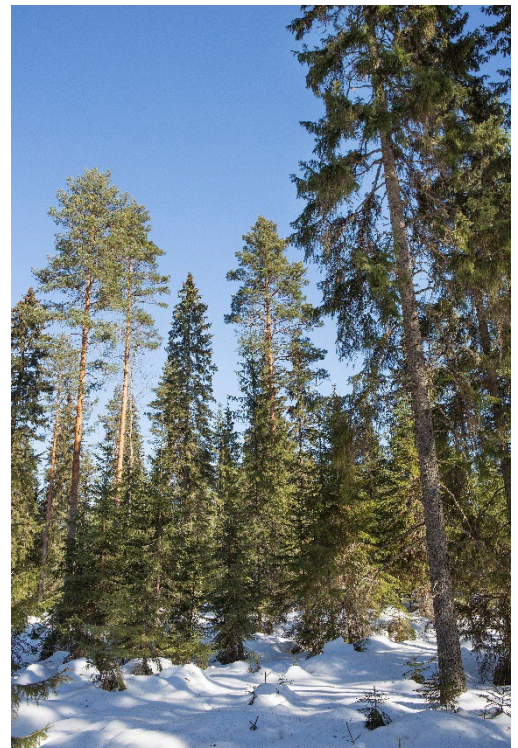
Participation: TUOHI has approximately 45 shareholders and the total area is 500 hectares (October 2019). The forests of TUOHI are located in several provinces, and the operating area is whole Finland. The shareholders of TUOHI are not participating on the operative level, but an agreed number of them are annually elected to TUOHI's administrative board to manage the jointly owned forest.

Involved parties: Contracting parties are the shareholders of the jointly owned forest. Involved parties are individual entrepreneurs, who perform cutting operations in jointly owned forest TUOHI and timber buying companies, who buy the harvested timber. All citizens have free access to forests of TUOHI (Everyman's right) and can enjoy the provision of benefits from forests, but this is similar practically in all forests in Finland.

Management requirements for farmers: If a forest owner invests into TUOHI with his/her own forest property by merging it into jointly owned forest, there are no specific requirements. After joining the TUOHI, the forest property is managed according to TUOHI's continuous cover (uneven-aged) forestry regime.

Controls/monitoring: Due to accepted management regime by shareholders, TUOHI has no specific external but rather internal control mechanism (e.g. annual partnership's meeting of all shareholders). However, the applied forest certification criteria must be fulfilled. In applied PEFC group certificate, controlling is focused more on areal and entrepreneur/contractor performance, and less on property level.

Renewal / termination: No need for renewal, due to permanent contract. Withdrawal of a shareholder is possible with invested money and if agreed with forest property, but not necessarily with the originally invested/merged forest property.



Conditions of participation: In establishment process, at least two forest properties are needed to form a new jointly owned forest. In case of TUOHI, the principal conditions of participation are minimum amount of investment (10,000 euros) or merged forest property and acceptance of uneven-aged forestry regime.

Risk/uncertainties of participant: In jointly owned forests, there are normal investments risks for participants (shareholders). If a shareholder invests into jointly owned forest with his/her own property, he/she cannot use his/her forest as "a bank" any more, but incomes will be distributed more evenly over years. When uneven-aged forestry regime is applied, there are also natural regeneration risks and risks related to forest health (e.g. root rot risk) as well as damage risks caused by biotic and abiotic factors (insect outbreaks, wind and snow damages). The same risks prevail, however, also in even-aged forest management.

Information: www.yhteismetsatuohi.fi

Funding/Payments: Jointly owned forests are principally privately financed. Private investments are received from forest owners and investors in forms of forest property or invested money. Forest owners and investors receive a share of jointly owned forest.

However, government is offering some incentives for establishing and running jointly owned forests; first, land management measures like establishment of a new jointly owned forest or merging a forest property into existing jointly owned forest are fully financed by the government. Second, jointly owned forests have income tax rate, which is some percentages lower than that of family forest owners.

Context features

Landscape and climate: Finland is one of the world's northernmost countries, the landscape being mostly flat with few hills and fewer mountains. 78% of Finland's land area is covered by forests and 10% by water (lakes, rivers and ponds). Landscape and climate are Nordic boreal forests characterized by softwood tree species. Typically, summers are warm and winters are freezing but the temperature varies considerably between the southern coastal regions and the extreme north, indicating characteristics of both maritime and continental climate. The annual amount of precipitation varies between 500 and 650 millimeters. Lapland has the lowest precipitation, while inland areas in the southern and central parts of the country get the most downpour.

Farm structure: In Finland, forest ownership is dominated by private forests. Measured in productive forest land percentage shares (year 2016), public forest owners include state (26%), municipalities (2%) and parishes (1%) and private forest owners include private persons (59%), jointly owned forests (3%), limited companies (8%) and other owners (1%).

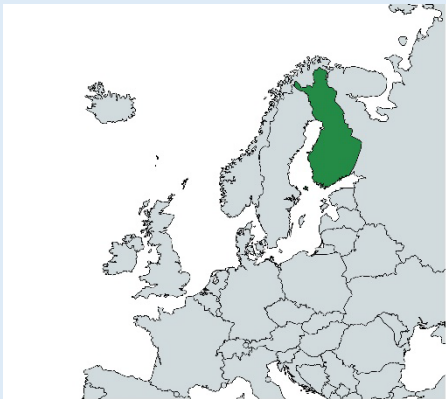
Public goods

Indirect effects: Wooded forest without clear cuttings benefits air quality and microclimate. Moreover, avoiding strong soil preparation increases soil quality. Uneven-aged forestry produces more sawlogs and less pulpwood (high-valued timber). Lesser drainage is needed due to more stable transpiration by trees which improves downstream water quality.

TUOHI is one of the pioneers with certain publicity in applying continuous cover (uneven-aged) forestry regime in Finland. Their expertise has, for instance, been employed in uneven-aged forest management recommendations, available for all forest owners.

LOCATION

FINLAND



The jointly owner forest TUOHI operates in whole Finland.

PUBLIC GOODS



Landscape and scenery
Avoiding clear cuttings and strong soil preparations



Recreational access / Improvements to physical and mental health
Recreational features are associated with wooded landscape and preserved paths since the clear cuttings are avoided



Biodiversity
Avoiding clear cuttings benefits species requiring large wooded areas



Climate regulation-carbon storage
More stable carbon storage in forests, and increased carbon storage in wood products



Resilience to natural hazards
Dispersed age distribution in forest stands may reduce risks

SUCCESS OR FAILURE?

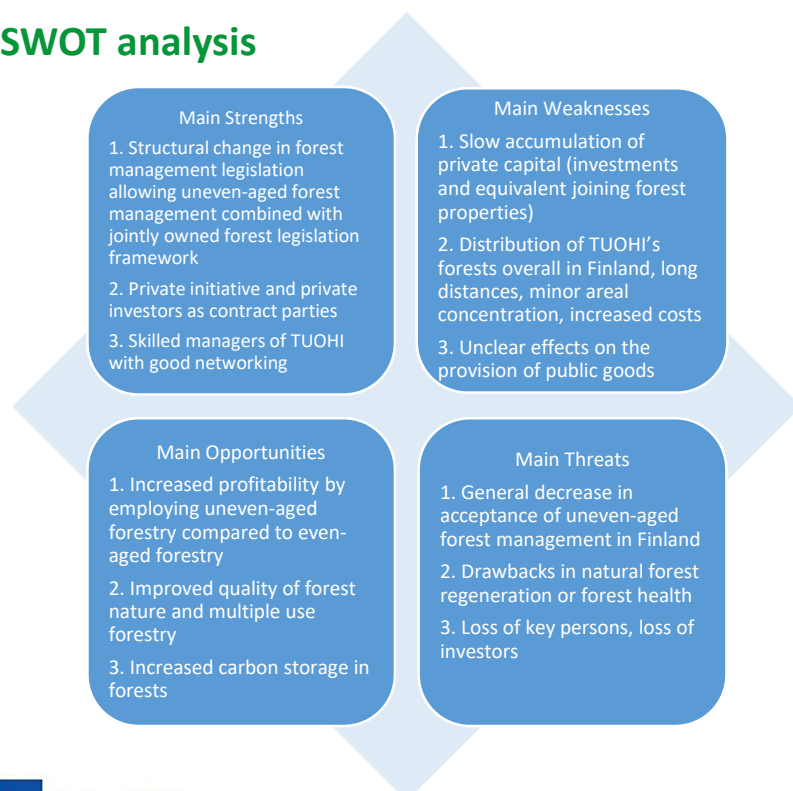


At the end of year 2016 there were in total 356 jointly owned forests in Finland with 455,000 hectares of productive forest land. Some of these entities are already over 100 years old. Jointly owned forest TUOHI is established in 2015 and can be regarded as a newcomer with rather small forest area in this group. TUOHI's emphasis strongly to increase continuous cover (uneven-aged) forest management in Finland has so far been exceptional among the jointly owned forests. The success of TUOHI may therefore not be evaluated only by assessing its' own hectares, but also by the example given to other forest owners. The operations of TUOHI are dominantly privately funded, with minor public assistance for certain operations. In Finland, there are no separate incentives (public costs) of promoting uneven-aged forest management. Due to short term in operation since 2015, TUOHI's contribution to uneven-aged forest management may be regarded as a success with regard to given example and expertise and unclassifiable with regard to own forest area. The effects to the provision of public goods can not be evaluated at the moment.

Reasons for success:

- Unclassifiable: Provision of public goods (in particular forest biodiversity) is not clear after only four years operations.
- Success: Private initiative in the establishment of TUOHI, skilled managers with good networking with forestry and environmental organizations and media.
- Unclassifiable: Slow accumulation of private capital for enlargement of TUOHI.

SWOT analysis



Developments since 2020

During the period 2019-2022, the number of shareholders has increased from 45 to 70, and the number of hectares has increased from 500 to 619. TUOHI has both FSC and PEFC certificates.

Main external factors influencing success

Political/governance, economic/market, social, technological, legal and environmental factors can all have a strong impact on the success of contract solutions. In this case study an in-depth analysis found that the following, selected factors were of specific importance.

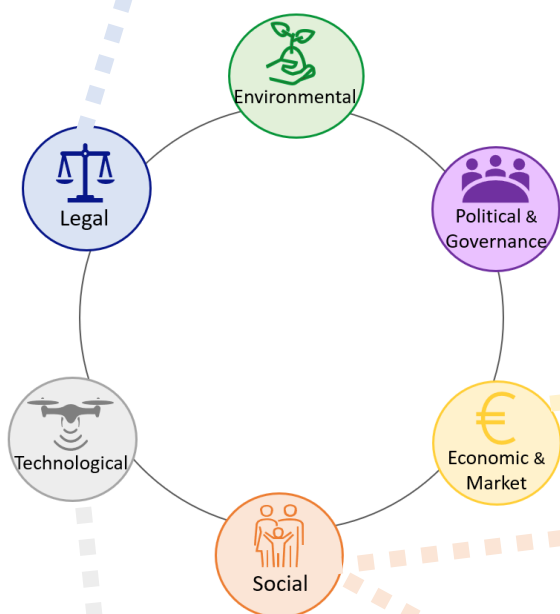


Two legal reforms have paved the way for TUOHI

The general basis was the **amendment of the Forest Act in 2014**, legalizing uneven-aged forestry management in all commercially used forests in Finland. Without this change of the forest act, the management regime promoted by TUOHI would not have been legal to be implemented.

Another fundamental reform laying the foundation for TUOHI was made for the **Act on Jointly Owned Forests in 2003 and 2007**. Jointly owned forests, have a long history in Finland as first legislation concerning them can be found already in the forest law of 1886.

The background for these legal reforms were quite different. There has been concern about ageing of forest owners and parcelization of family forest ownership. Instead of reforming tax or inheritance legislation affecting forest ownership, the compromise was to enhance joint ownership by **completely reforming the Act on Jointly Owned Forests**. The **considerable amendment of the Forest Act** was initially started as a juridical process 2008-2012 in EU by a private person and supported by research results on the uneven-aged forestry.



Gradual shift in demand side for uneven-aged forest management

A considerable share of family forest owners have shown interest towards applying uneven-aged harvesting. However, the demand for uneven-aged harvested roundwood has long been under priced or risk priced by roundwood buyers.

In the first phase after legal change, roundwood buyers therefore rather reacted to forest owner's demands, if she/he insists this forest management regime. **However, information and experiences on uneven-aged harvests have accumulated since then and attitudes towards uneven-aged management have been in change also on roundwood buyers' and harvesting contractors' as well as on forest owners' sides.**

From even-aged harvesting of forests to several harvesting opportunities including uneven-aged harvesting

>> *The reorientation of forest management from clear-cutting to a system of both even and uneven-aged forest management requires new orientation by all parties in the forestry value-chain.* <<

Principally the same technologies are applied in both even-aged and uneven-aged forest management (i.e. harvesting planning and harvesting technologies), but due to standardized principles **even-aged routines are considered to be simpler especially for the harvesting contractors and therefore have considerably lower unit harvesting costs.**

In uneven-aged forestry more planning and work supervision for harvesting was needed especially in the first phase. However, experiences and information on harvesting principles in uneven-aged forests have grown among wood buyers and harvesting operators, which decrease the unit harvesting costs and increase the opportunities for both even and uneven-aged forest management. Together with recent developments in forest resource information collection systems (e.g., laser scanning), new forest regimes may in the future also at least partly replace earlier compartment-based forest inventories and planning with individual tree inventories.