

A close-up photograph of a pine needle cluster, showing the sharp, green needles radiating from a central brownish-orange point. The background is a soft, out-of-focus green.

Monitoring and evaluation of our operations at SCA Skog

2022



Introduction

In line with the requirements of the Swedish FSC® standard for forest management, SCA Skog continuously monitors and assesses the outcome of operations, to steer toward our targets and improve our operations. SCA Skog has a long tradition of working with quality assurance of measures taken and of working practices, which over time has created a model for following-up forestry measures at several stages of a process.

Our model for following-up measures taken includes, in general terms, the following steps:

1. The person performing a measure makes a self-assessment by following up their own work, which we refer to as their own follow-up
2. The responsible production supervisor or other staff conducts spot checks on measures taken
3. Appointed persons with suitable qualifications and experience for the assignment perform a central follow-up of spot checks on measures taken. We believe performing regular qualification exercises and having a present leadership play a major role in ensuring a good dialogue and standardized working practices.

In this presentation, we describe some of the recurring follow-ups performed by SCA Skog, and briefly report and reflect on the results of the follow-ups and other activities during the year.

Pleasant reading

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1. Management plan for our forest
2. Follow-up of forestry measures
3. Follow-up of social and environmental impact of forest use
4. Follow-up through auditing
5. Major changes during the year



Management plan for our forest

SCA's nature consideration work and distribution of conservations areas*

Voluntary set-asides (100% retention)

Forests with very high natural values do we set aside voluntary for free development or to be manage in a nature conservative way so that the forest maintains its natural values over time. For example, we carry out conservation burning to benefit fire-dependent species or harvesting competing spruces in pine or deciduous forests. Our goal is 7% voluntary set-asides of SCA's total land holdings.



Combined targets (> 50% retention)

Forests with moderate to high natural values can we manage with less extraction of wood while preserving the existing natural values and without creating large bare areas. These forests can be managers with mainly various continuous cover methods or adapted retention, that preserve the forest feeling. Our goal is 3 % combined targets of SCA's total land holdings.



Production with adapted retention (15-30% retention)

Forest with mainly adapted retention - another 3% of our forest holdings are managed with adapted retention. For example, we save conservation patches in order to preserve sensible species or we save screens with deciduous trees in order to create bright, open deciduous forests that many birds benefit from. Consideration for the reindeer husbandry, like buffert zones with lots of lichens, is another example.



Production with general retention (~15 % retention)

The remaining part of our land, 87%, is handle with basic retention in our forestry. This means, among other things, that we save buffert zones against waterways and bogs, smaller forest areas for sensitive species and leave groups of trees, dead wood and scattered trees that are old or otherwise important for insects and birds, for example.



Objectives and outcomes 2022

% of productive forests land		
	Goal	Outcome 2022
Basic retention hänsyn (~15% retention)	87	88,5
Voluntary set-asides (100% retention)	7	8,3
Combined targets (> 50% retention)	3	1,7
Adapted retention (15-30% retention)	3	1,4
Share of older forest (%)	>2%	6,9
Burned forest land (ha)	Approx. 200 ha*	28
Leaf-dominated area (%)	>5%	3,5
Percent of total forest holdings		
Markomvandling (Pinus Contorta and wind power)	Max 5%	3,1% (**Pinus Contorta 80,819 and Wind 686 ha)

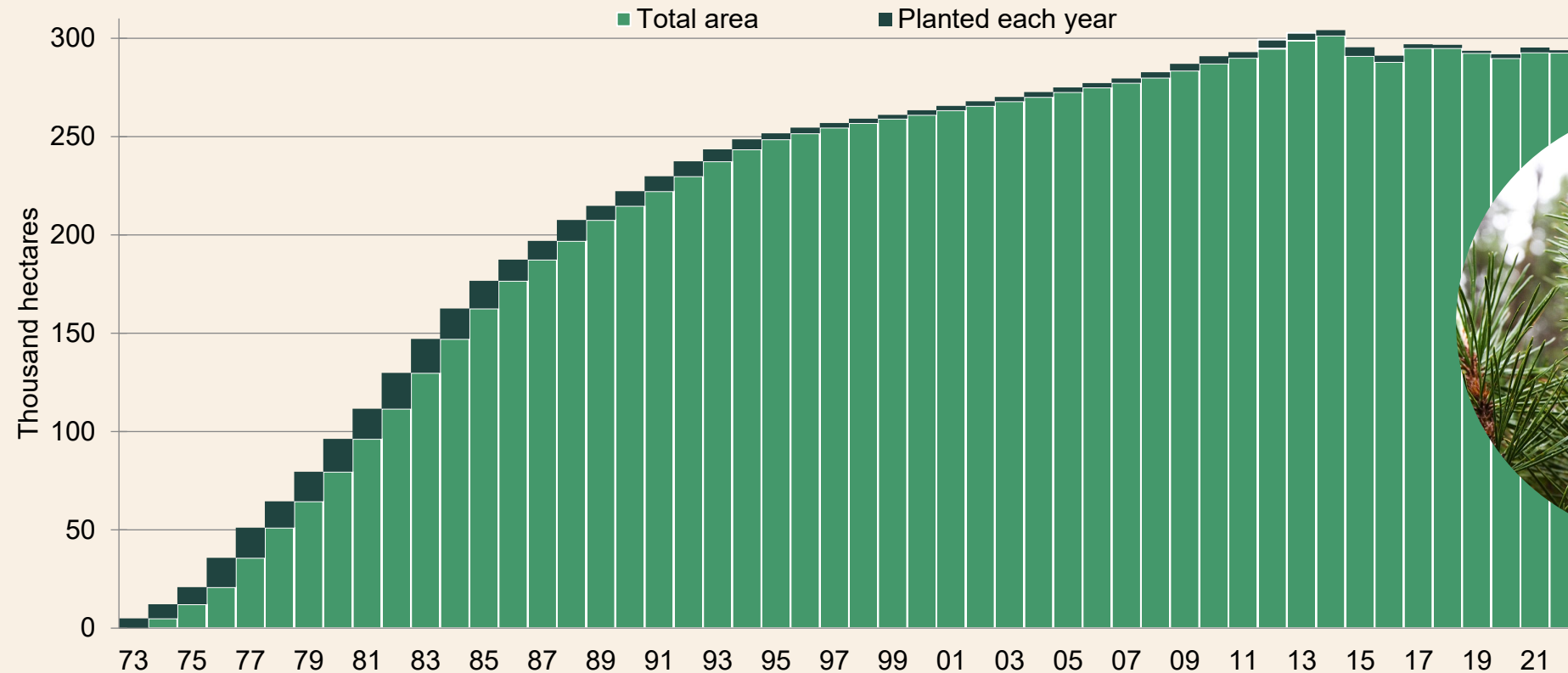
* Corresponds to approximate burned area required to reach the target level of 495 ha/year after enumeration factors. Burning carried out in 2022 corresponds to 46 ha with accrual factors.

** Established Pinus Contorta after 1994



Total area of Pinus Contorta

SCA began planting large-scale contorta pine stands around 1970. The use of non-native tree species is regulated in the Swedish Forestry Act and by the FSC and PEFC forest management standards. The area declined slightly after the storms in 2011 and 2013. In 2022, contorta pine constitutes approximately 15% of the forest holdings. Since the storms, annual planting has been approximately 1–2,000 hectares, and mainly carried out on land that had previously been planted with contorta pine. Sites are chosen following collaborative planning with relevant Sami communities and in accordance with the FSC standard. The long-term objective is that the contorta pine stand shall amount to 15% of the forest holding.



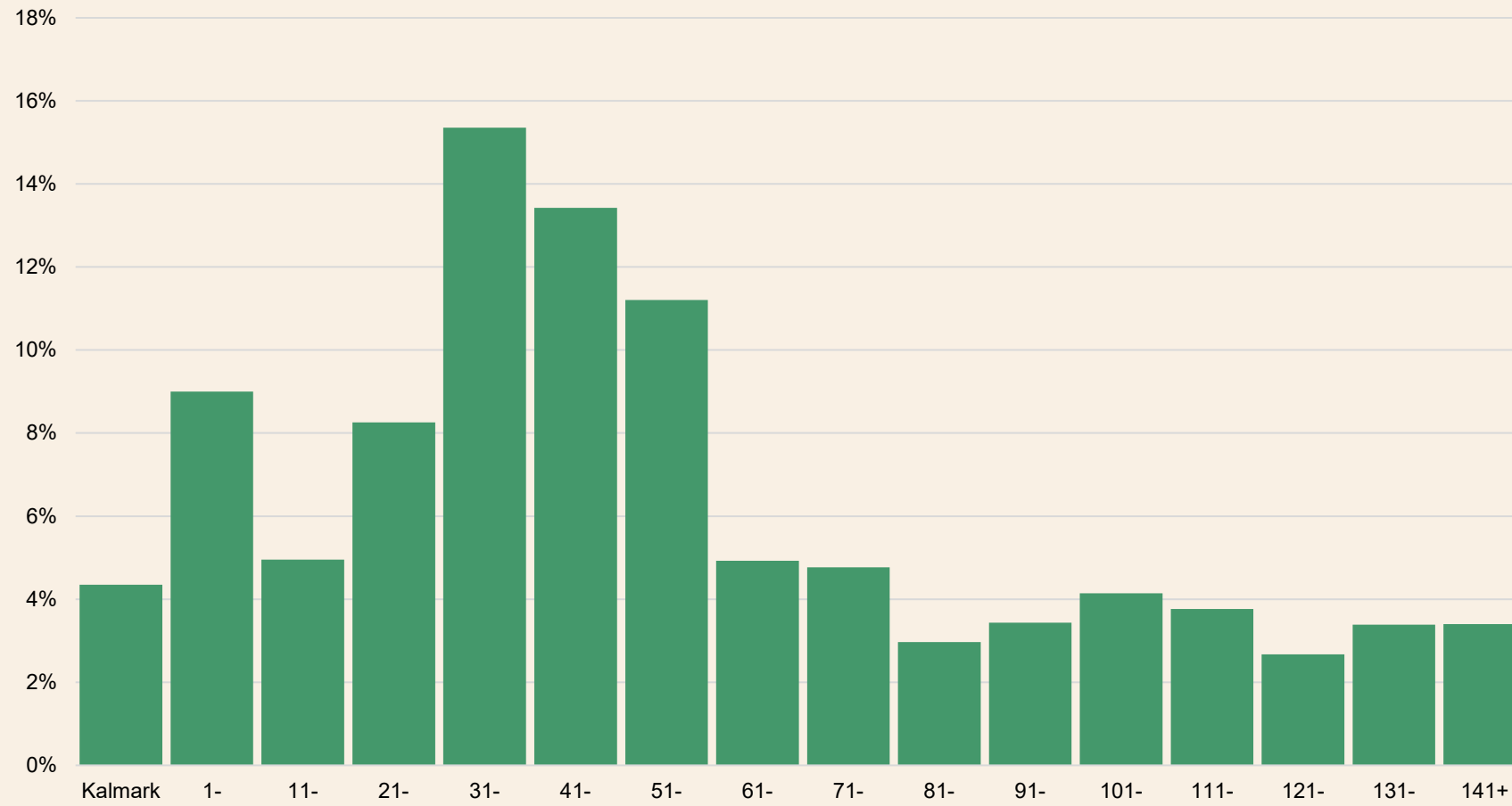
Harvesting calculation

- SCA's strategic targets for managing forest resources include that it should be sustainable in the long term. To ensure this, the company works with both follow-up and long-term forward-looking impact analyses.
- **Forest inventory (abbreviated in Swedish to “FTAX”)**
SCA uses forest inventories for detailed follow-up of the development of the forest status. FTAX is an inventory of spot checks of the company's forest and is carried out every six to eight years. The result is used in following-up the forest status and as inputs in the company's harvesting calculations. SCA conducted its first FTAX in 1947. The latest survey was completed in 2019 and was the tenth to be performed (FTAX 10).
- **Harvesting calculation (AVB)**
Every six to eight years, SCA carries out impact analyses of different strategies for harvesting and forest management. The calculations have a time horizon of 100 years to ensure long-term sustainability. Internally, the impact analyses are referred to as Harvesting calculations (abbreviated in Swedish to “AVB”) and lead to decisions on the size of harvesting and direction for the period until the next AVB is performed. The latest calculation was completed in 2020 (AVB 20).



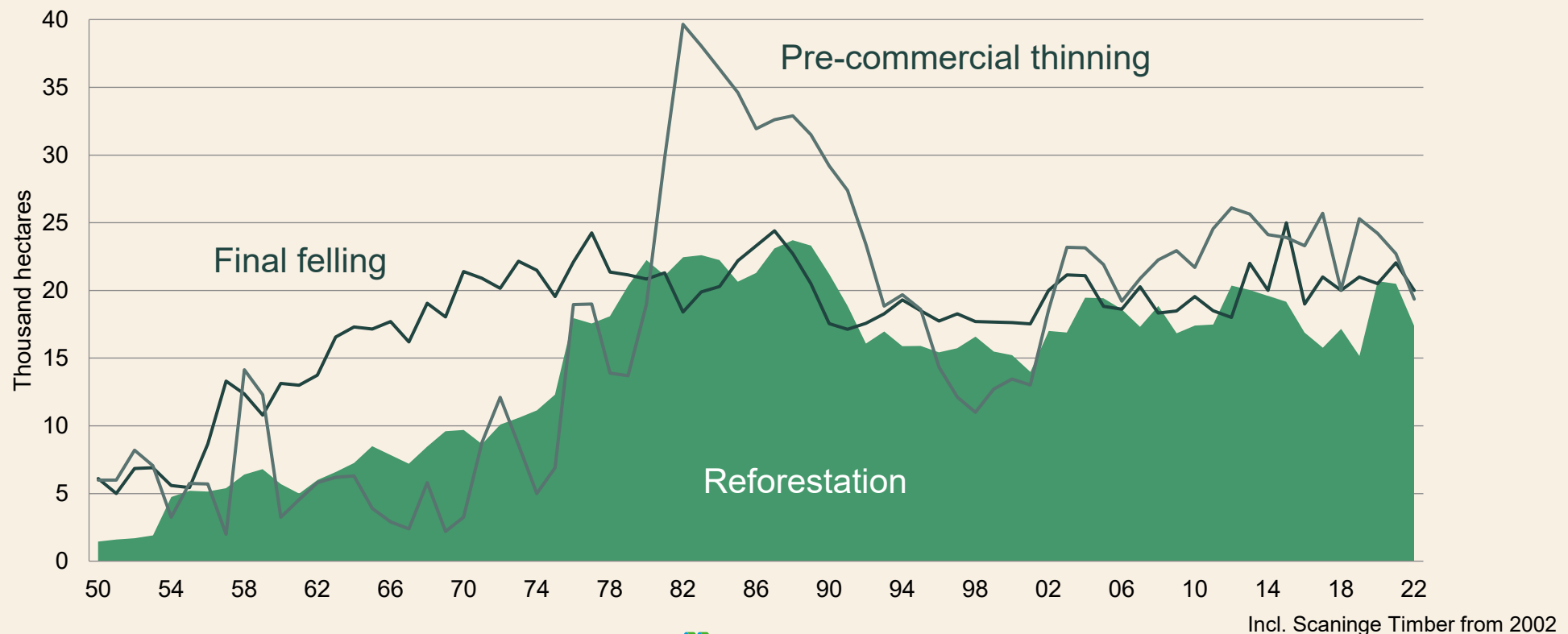
Age class distribution

SCAs most recent forest inventory, conducted in 2019 (FTAX 10)



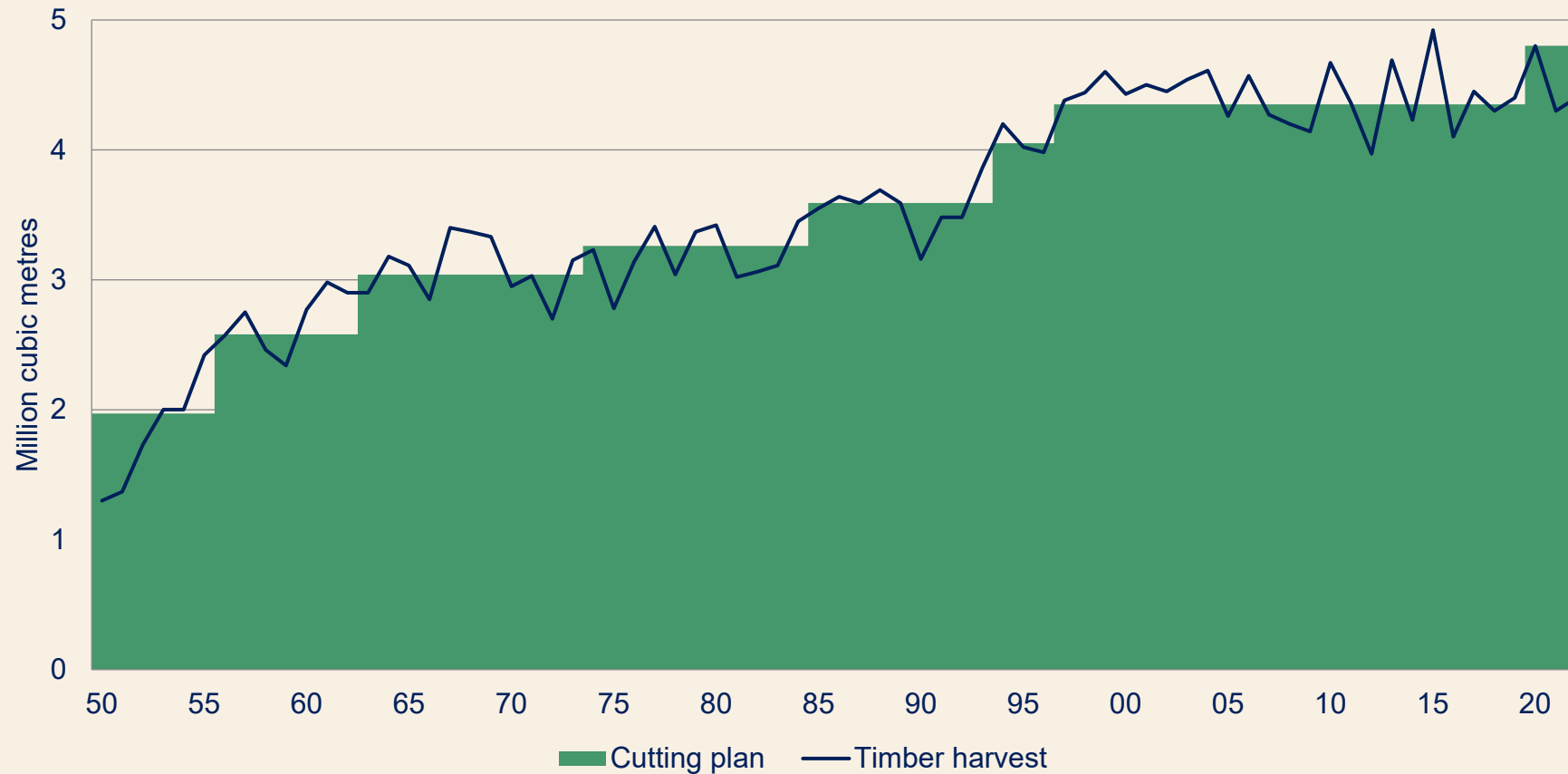
Area of final felling, pre-commercial thinning and reforestation

1950-2022



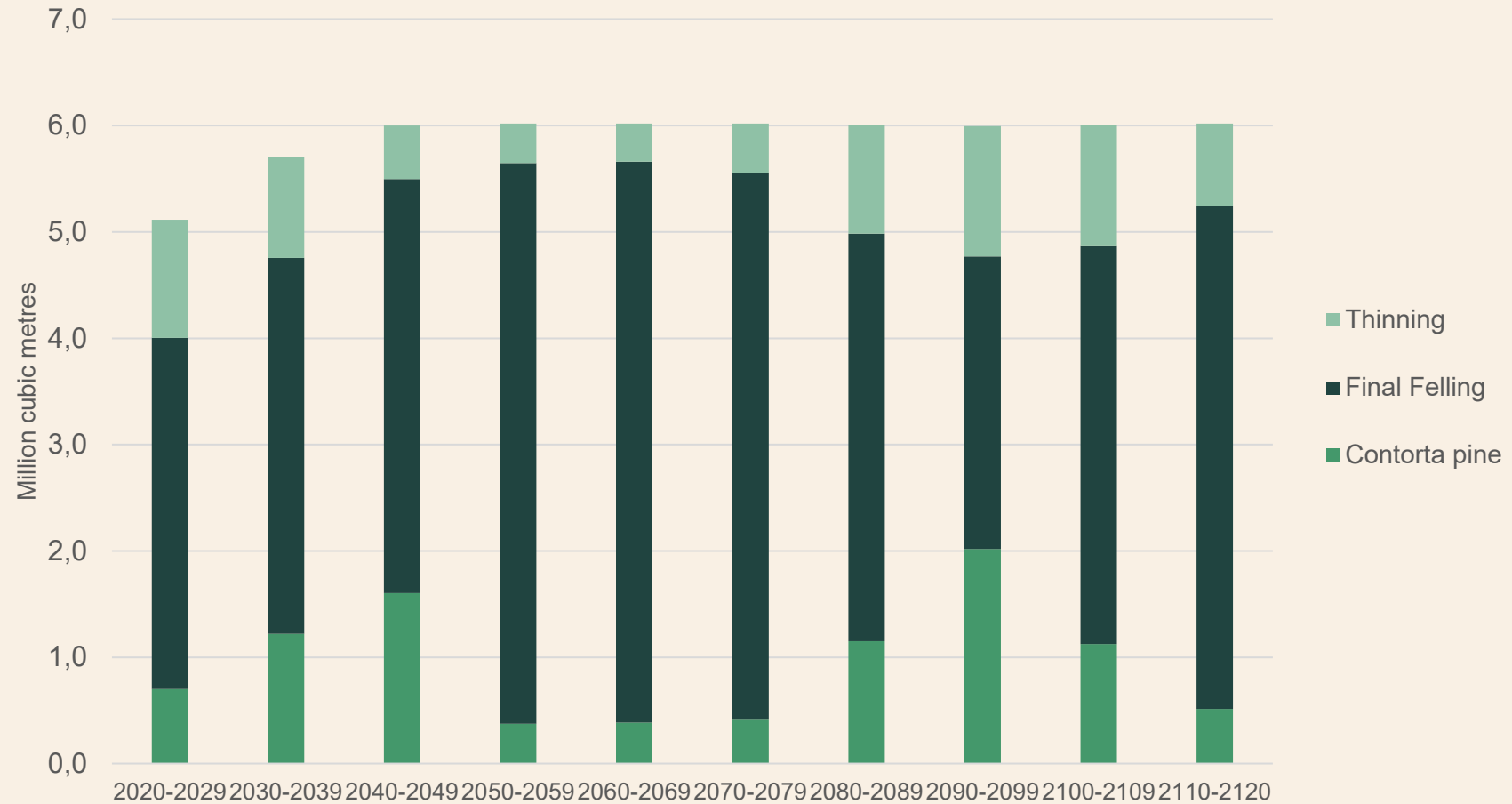
Timber felling from own forests

1950-2022



Potential harvest

Harvesting in ten-year periods according to SCA's harvesting calculation plan 20 (AVB20)



Follow-up of forestry measures

Soil scarification, planting and pre-commercial thinning

- On its own land, SCA is to select tree species and forestry methods that create a long-term, profitable and high level of timber production. In all forest management measures, SCA takes into consideration natural conditions, natural and cultural environments, reindeer herding and social values such as recreation and outdoor activities. SCA promotes good forest management when we undertake work on behalf of private forest owners and primarily offers services aligned with SCA's strategy for establishing new forest. The planning and execution of forest management is performed by trained personnel and contractors with the right expertise for the assignment.
- Each year, SCA performs forest management measures on large areas of its own forest and at private forest owners who engage SCA, see slide "Forest management area excl. fertilization". To ensure future timber production and good nature and cultural conservation, the quality of work performed is of the utmost importance. Most of SCA's forest management is performed by contractors and when an assignment is completed a quality declaration is prepared that measures and assesses quality. Objects that fail must be rectified.
- SCA conducts spot checks on completed quality declarations to build a common understanding of quality and performance. As a guideline, at least 20% of the projects should be followed-up. Follow-up is stepped up for contractors/teams that have demonstrated quality defects. The result of SCA's quality follow-up for site preparation and planting is presented below. Acceptable level is 90% approved planting spots or plants in relation to the objective in the contract.



Share of deciduous

SCA's young forests must have at least 10% deciduous trees

Deciduous trees are an important feature in our forests but have become a rarity in Swedish forests due to earlier extensive removal of broad-leaved trees.

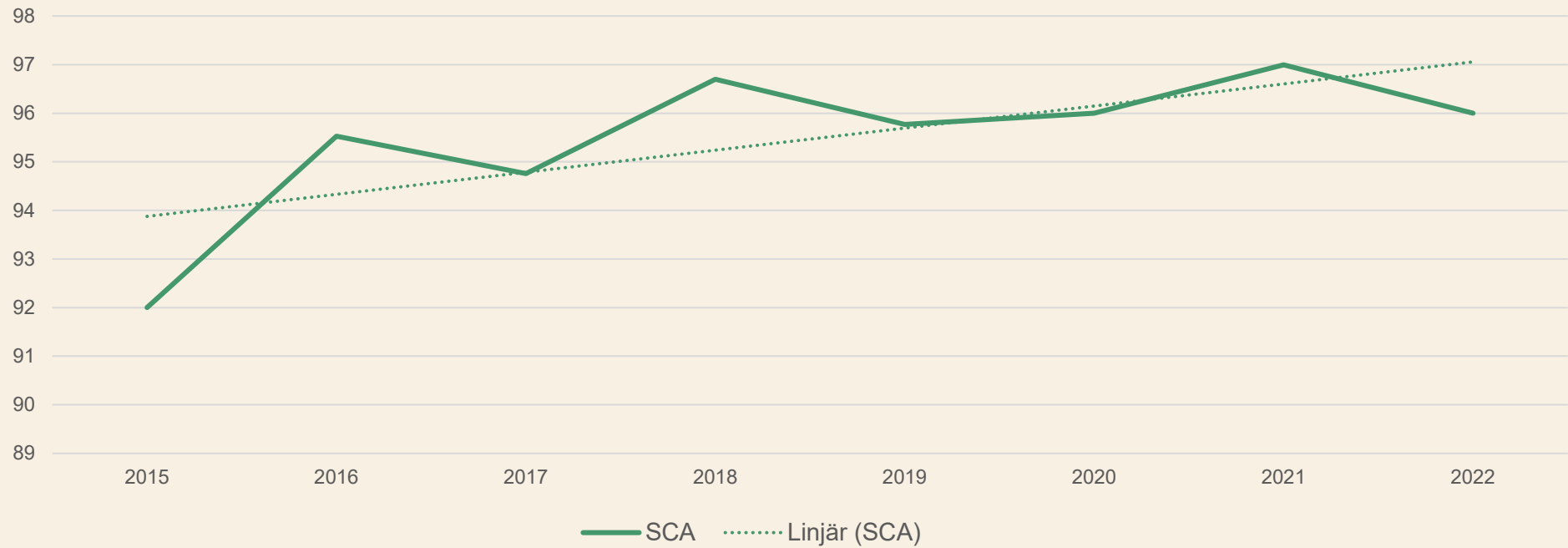
Deciduous trees are important for timber production but above all to promote biodiversity by contributing to diverse forests.

SCA's certifications and clearing instructions are geared toward at least 10% of deciduous stems in our young forests. In 2022, deciduous trees accounted for an average of 19% of stems capable of development left (main stems).



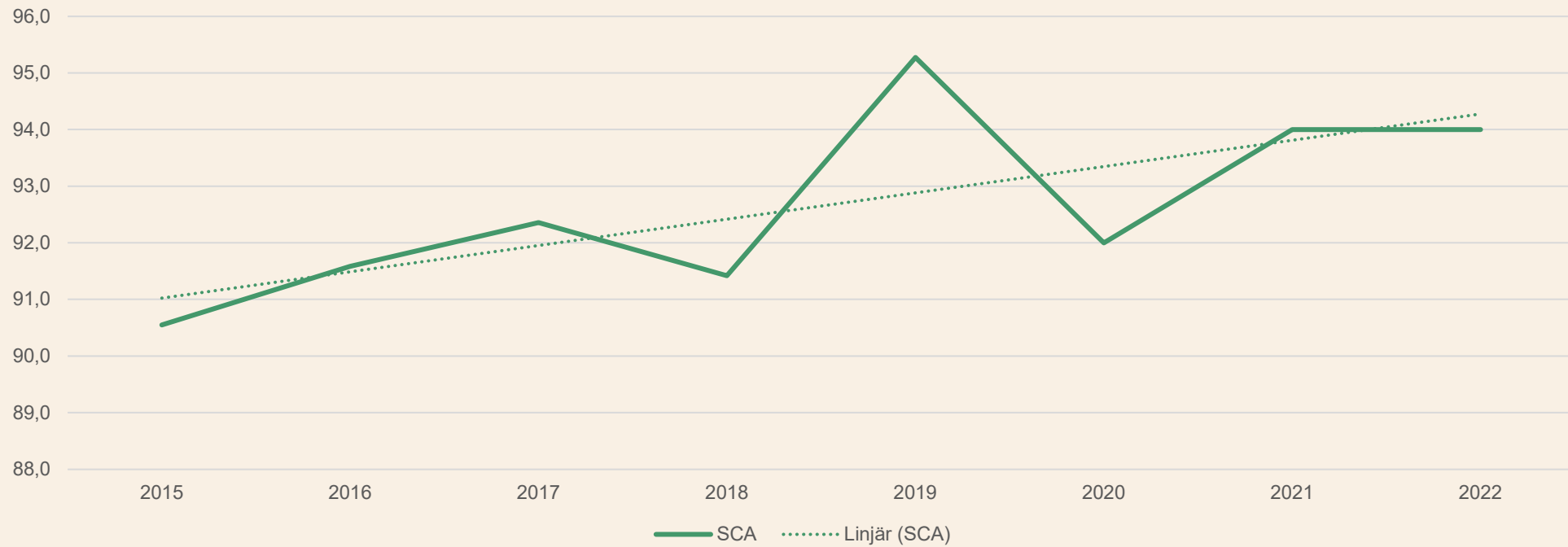
Soil scarification

SCA's quality limit is 90%, our goal is 95%



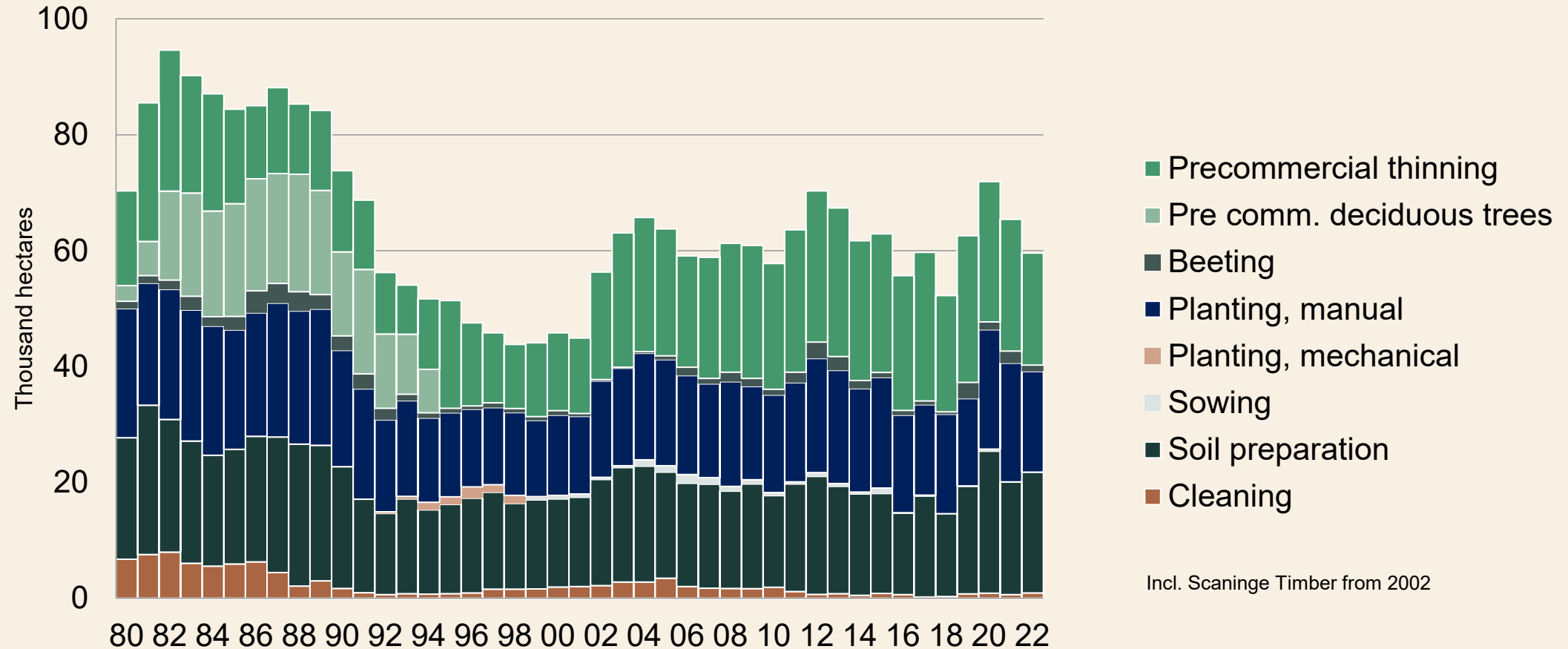
Planting

SCA's quality limit is 90%, our goal is 95%



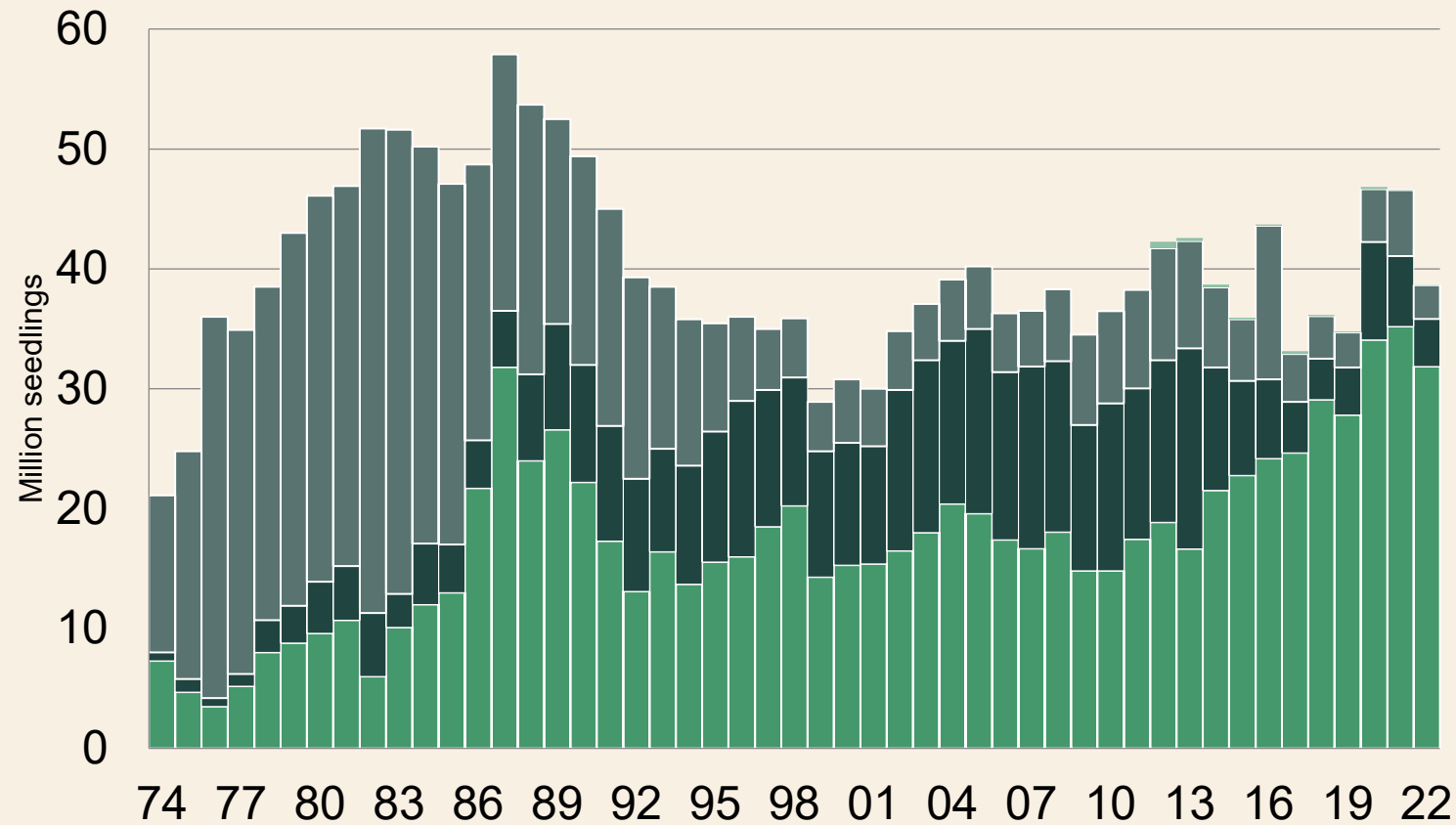
Silviculture acreage excl. fertilization

1980-2022



Seedling consumption

1974-2022



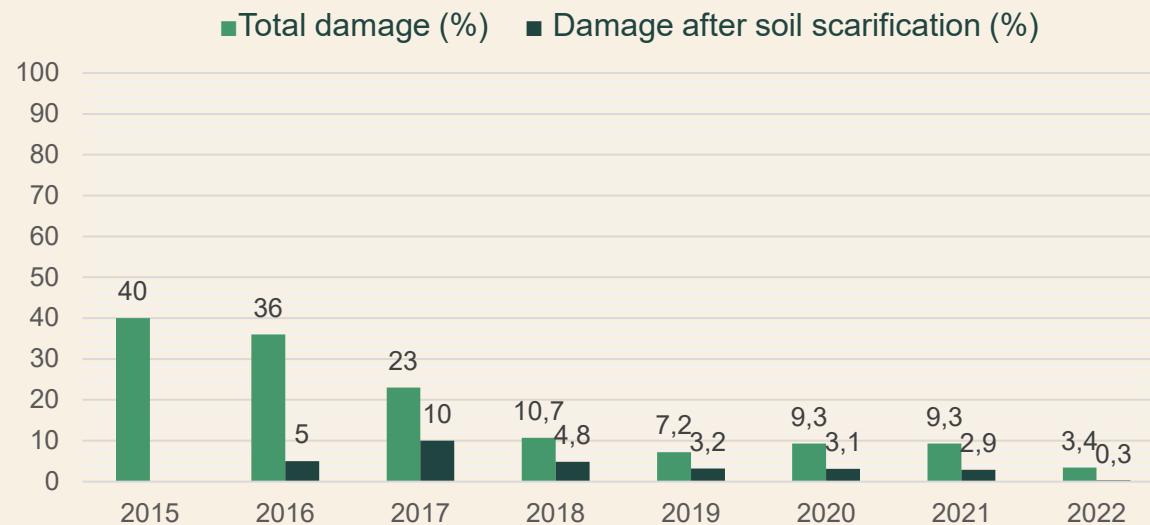
- Larch
- Contorta pine
- Spruce
- Pine

Incl. Scaninge Timber from 2002

Damage to ancient and cultural remains

The follow-up indicates damage to known remains overall and following soil scarification

- In 2022, follow-up was performed on 560 remains (incl. restricted areas) (443 in 2021)
- The result in 2022 was in line with our vision zero
- One of several successful measures in our efforts to achieve our vision zero has been the clear instructions for consideration in all stages of forestry management that involves cultural environments



Damages objects	Number	%
Rutting damage	7	1,2
Forest residues	9	1,6
Windfalls	2	0,3
Soil scarification	2	0,3
Total	20	3,4

Operational planning

Operational planning encompasses planning of how the area should be harvested, the nature conservation measures we should take, which roads are needed and whether they are in good enough condition, how machinery should drive to protect the soil and how to ensure regeneration. Planning requires work both from the office and in the field.

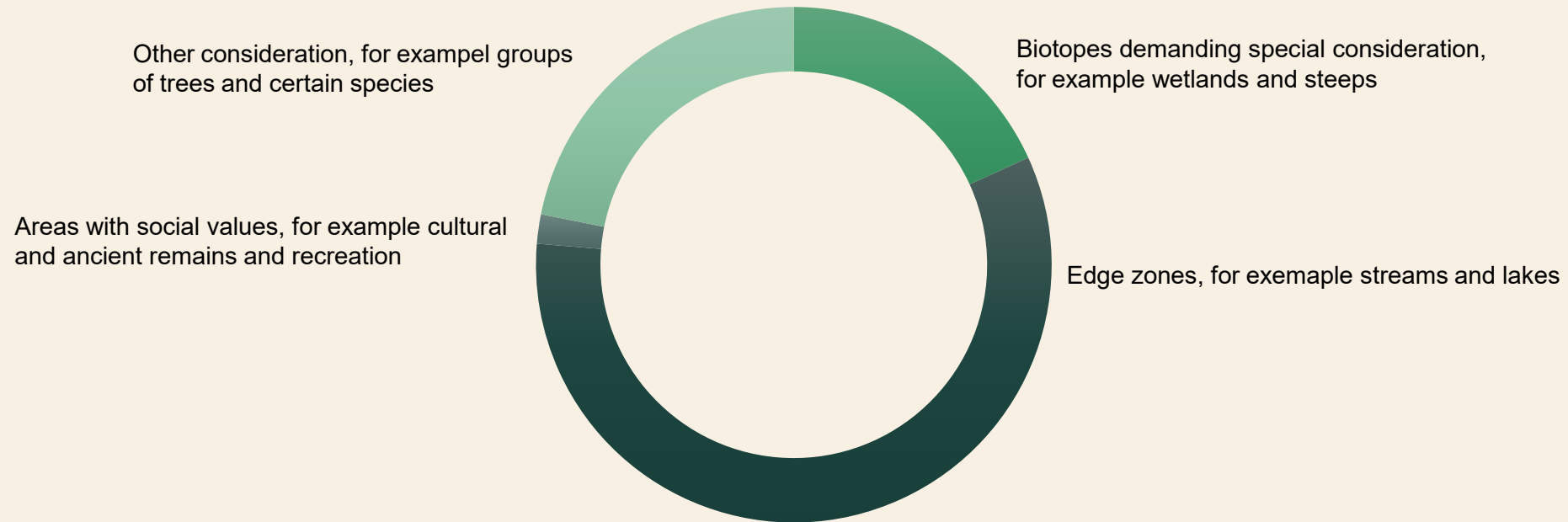
Operational planning follow-up (abbreviated in Swedish to “TPU”)

- A central component of the follow-up in operational planning is our TPU. This is a coherent and targeted quality follow-up that uses spot checks, with a particular focus on new employees and new contractors.
- The follow-up indicates shortcomings and potential improvements for the operational planners, and what has worked well that we want to build further on.
- Operational planning follow-up provides supporting data to pursue continuous improvements in respect of our introductions, instructions and working practices.
- One measure implemented in 2022 to strengthen expertise in species consideration and to support our planners was the creation of a new position that we refer to as operational planning specialist. These individuals will support planners in conservation value assessments, for example, and act as a complement to our nature conservation experts.



Planned nature consideration in final fellings

Nature consideration area by types*



In SCA's final felling planning about 17% of the area is saved, which corresponds to about 12% of the volume**.

Harvesting

Harvesting at SCA should adopt effective and functional consideration measures. We monitor this continuously in a number of stages based on different variables to create a sense of commitment and improvement efforts that pervade the entire chain.

Environmental consideration follow-up after harvesting (abbreviated in Swedish to “NUPP”)

- The Production function continuously monitors the quality of regeneration harvesting. This follow-up (NUPP) uses targeted spot checks each quarter with an established scope per forest machine team.
- NUPP is performed by each production supervisor and is primarily designed to offer constructive feedback to the forest machine teams that are harvesting as part of efforts to achieve continuous improvements.
- NUPP provides a quality rating of the consideration for which the forest machine teams are responsible in terms of the functional considerations. A rating of 3 and 4 means the consideration is approved, while a rating of 1 and 2 means the quality of the consideration is either below or above the target level.

Summary NUPP, 2022

The quality of the consideration for which the forest machine teams are responsible is reported in the following categories:	Share of approved sitee:
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Damage to soil and water	93%
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Damage to soil and water	93%
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Consideration for ancient and cultural remains	94%
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Consideration for ancient and cultural remains	94%
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Living trees	94%
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Living trees	94%
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Dead trees	94%
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Dead trees	94%
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Follow-up of social and environmental impact of forest use

Collaborative planning with reindeer herders

The term and process “collaborative planning” was introduced into the Swedish FSC standard in autumn 2020 and involves collaboration between the forest industry and reindeer herders to enable coexistence. Through collaborative planning, we want to identify solutions that minimize impact and are as effective as possible for both industries.

The collaborative planning process has a long-term perspective with a time horizon of at least five years at a time.

The process with the relevant Sami community to decide on the long-term plan takes about 3–6 months and includes, in general terms, the following steps:

1. We contact the Sami community and offer collaborative planning with a suggested date for a first meeting
2. Documentation and contact details are sent in an invite via our joint digital platform – samplanering.se
3. The first meeting takes place
4. If necessary, a second meeting and/or a joint field visit is undertaken
5. If necessary, the parties request mediation to assist in the discussion
6. If necessary, the parties request dispute resolution via FSC Sweden

Some 30 Sami communities have institutional rights to herd reindeer on SCA's land.

The following variables could be important to discuss in collaborative planning: harvesting date, site preparation method, fertilization, choice of tree species when replanting and the construction of forest roads. In areas where reindeer herding is particularly important, other measures such as clearing, thinning, extraction of felling residue for energy purposes (brash), and alternative forms of harvesting. The measures can often be designed to ultimately improve pasture supply for reindeer.



Collaborative planning process in 2022 with reindeer herders



Activities in 2022 have focused on finding forms for collaborative planning and developing tools to facilitate collaborative planning:

- Decision taken to use the new planning tool samplanering.se
- During the year, SCA conducted collaborative planning with 20 Sami communities and a total of 37 meetings were held that discussed 4,600 forest holdings.
- Collaborative planning activities were considerably restricted during the first part of the year due to the coronavirus pandemic, which meant the number of meetings will increase in the years ahead.

Sacred pine (Sw: Offertall), south of Kallön in Lapland. Photo: Anna Marntell © 2021

Restoration of wetlands

During the 1900s, many wetlands and peatlands were drained off to increase forest production. This dried out wetlands and peatlands and weakened habitats for many species that depend on wet sites for their long-term survival. This also resulted in increased CO₂ emissions as oxygen breaks down the peat, which has a negative impact on the climate. The ability for wetlands to retain water in the landscape also declined.

Our objective is both to initiate and undertake actions on our own land with a geographical distribution, and to act as host for projects initiated by, for example, county administrative boards.

In 2022:

- Restoration of a total of 194 hectares of wetlands by SCA (22 km of ditches filled) and we initiated two new projects in Västerbotten and Västernorrland.
- SCA acted as host during the restoration of two minor rich fens in Fjärilandskapet, and the restoration of floodplains* in Mjällån and Björkån (initiated by the Västernorrland County Administrative Board). During the year, a collaboration was initiated to implement measures in Alderängsån by Sportfiskarna/OX2, Sännån in Rivers of Life by the Jämtland County Administrative Board, and in northern Gävleborg by Hudiksvall Municipality. The measures are also continuing in Mjällån and Björkån.
- Action plans have also been prepared for further projects but we are awaiting permits to implement these.



SCA's Species Commitment

SCA has an ambition to improve habitats that are important for species that are disadvantaged by forestry. This will help us achieve even greater precision in our work to protect biodiversity within our forest holdings.



- In collaboration with the SLU Swedish Species Information Centre, we have identified 203 species that are negatively affected by clear-cut harvesting. These include certain fungi, mosses, lichens, insects and birds. We have also identified 11 different habitats that these species are associated with.
- Many of our Species Commitment have specific requirements for their habitat and may need different types of targeted measures. Some of the species are also ÅGP species (See page 29).
- In 2022, work begun to direct efforts to the landscapes where we know that ÅGP species are present. Not only for nature conservation areas such as our voluntary reserves, but also to production stocks where clearing and thinning are adapted to the needs of the species in question.

Habitat category	Number of Species Commitment
1 Coniferous forest with long-term continuity of living trees	40
2 Coniferous forest with long-term continuity of dead wood	87
3 Open pine forest on sandy soils with continuity of living trees	16
4 Coniferous or mixed coniferous/deciduous forest on nutrientrich soils with continuity of living trees	15
5 Pine forest with continuity of dead wood	28
5b Low-productive forest due to shallow soil / dry conditions	10
6 Forest with predominantly deciduous species and presence of dead wood	40
7 Forest recently impacted by fire	10
8 Forest on humid or wet soils, often adjacent to streams and lakes	41
8b Low-productive forest due to wet conditions	16
9 Living and dead trees with high exposure to sunlight	10
10 Species have other habitat needs that require location specific measures	11
11 Detailed information on habitat requirements are missing	4
Total (One Species Commitment can be linked to more than 1 habitat)	328

* Particularly prioritized habitats

Action Plans – ÅGP – for endangered species and habitats as well as SCA's Species Commitment*

Certain endangered species found in our forests depend on disturbances to survive and are disadvantaged in environments that are set aside to develop freely. As natural disturbances do not often occur today, we can use targeted initiatives to benefit many species of interest in nature conservation by the use of relatively simple measures. These measures lead to improved conditions for these species as our efforts are prioritized in areas with a known presence. Prioritization is conducted in collaboration with authorities and/or non-profit organizations.

In 2022:

- Ten priority landscapes were identified containing pine and deciduous forests to benefit identified species, such as *Collema curtisporum* and powder-post beetles.
- Ensured that our handling of observations of very unusual ÅGP species is satisfactory through voluntary set-asides or alternative methods (concluded in 2023)

In 2023, we will initiate action plans for the identified landscapes, such as:

- Water-related ÅGP species: *Scapania* liverworts and freshwater pearl mussels
- Fire-affected ÅGP species: spring pasqueflower,
- Calcareous coniferous forest ÅGP species: *Hydnellum fennicum*, *Sarcosoma globosum*
- Sand pine forest ÅGP species: *Sarcodon scabrosus*
- Grassland ÅGP species: *Lycaena helle*
- Bank swallow



Health and safety for our forest contractors

Everyone who works on behalf of SCA Skog must have good working conditions and a safe and secure work environment. This means Swedish collective agreements are in place, and that the work environment is safe and complies with prevailing law. To ensure this, SCA has since 2017 visited employees working for our contracted companies and requested that they anonymously complete a questionnaire. Our greatest focus is on new contractors and contractors where we believe there is a risk that shortcomings may occur. The checks are conducted together with the Swedish union of forestry, wood and graphical workers (GS) and the responses to the questionnaire are used by us in our efforts to offer good working conditions and a safe work environment.

Follow-up 2022 (2021):

- Number of teams visited = 56 (47)
- Number of individuals who answered the anonymous form = 237 (212)
- Follow-up of questionnaire answers identified a number of shortcomings that were all classified as of a less serious nature. The trend is positive, but the shortcomings must be further reduced.

In the event of identified discrepancies, these are reported to the relevant contractor with the requirement that action should be taken. In the event of serious discrepancies, the contractor's activities must be halted until the necessary action has been taken or alternatively the business relationship is terminated.



Follow-up through auditing

Internal audit

SCA Skog is certified in accordance with ISO 14001. This entails a requirement to perform internal audits of our operations. These audits are performed each year by appointed employees. This applies to all organizational functions, and we conduct spot checks in different geographic areas.

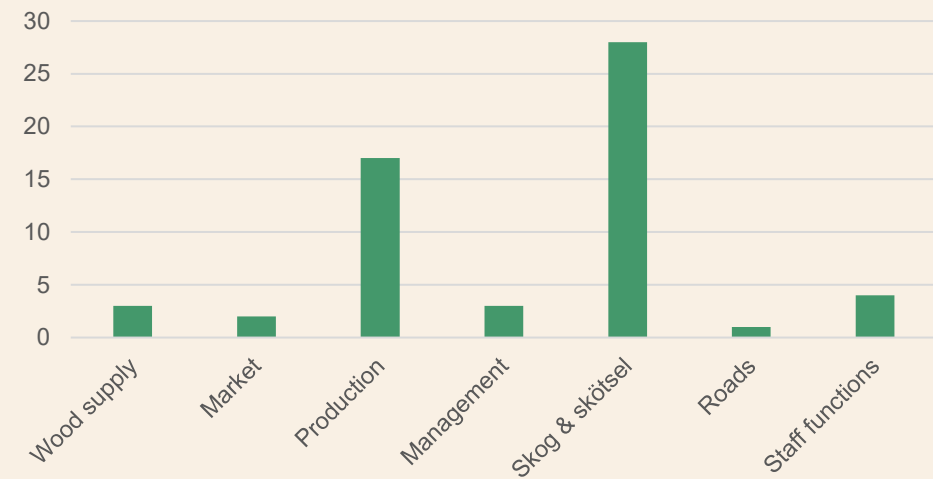
The requirements of our FSC and PEFC forestry standards also apply to these audits, as do all laws and regulations that apply to us. The result of the audit is reported to top management and the work with corrective actions is regularly monitored.

Our internal audit has a central role in our improvement efforts and generates improvements each year. In 2023, we plan to achieve a more effective audit procedure, which will include focused audits on our significant environmental monitoring systems.

Summary 2022

A summation of discrepancies, observations and improvements:	58 discrepancies
	36 improvements
Total time spent (excl travel and planning) and number of auditors	Approx. 1,056 hours and 25 auditors

Discrepancies by function



External audit

Within the scope of our forest management certification under FSC (FSC® C004466) and PEFC (PEFC/05-23-131), we are regularly examined by external auditors. This means, at least once per year, we are assessed by an independent party, who in turn verifies that we comply with all the requirements we have committed to follow. The audit takes approximately two weeks and includes an examination of governing documents, field visits and interviews.

The result of each external audit indicates whether the auditor detected shortcomings that we, as a certificate holder, must address if we are to maintain the quality required in the standards.

In addition to the external forest management audit at SCA Skog, audits are also performed of SCA's Chain-of-Custody certifications in accordance with FSC (FSC® C018408) and PEFC (PEFC/05-31-292), and also ISO 14001.

Both our internal (see slide 32) and external audits are important and serve as valuable tools for us as they help us to constantly develop and improve.

Summary 2022 (audit carried out in Västernorrland och Jämtland)

Positive observations:	Efficient organization, employees with a high level of competence, detailed causation analyses, creative environment and constructive discussions.
Shortcomings:	2 major discrepancies, 7 minor discrepancies. The major discrepancies concern infringements of prohibitions issued by the Swedish Forest Agency and the management of damage to lying dead wood.
Root causes and improvements:	<p>Shortcomings in communication and implementation of changes were highlighted as the most important overall root causes of both major discrepancies.</p> <p>At an overall level, we have clarified our internal procedures for processing official decisions and undertaken a comprehensive process to distribute information and consolidate knowledge at all levels of the chain for how we must work. Our minor discrepancies concern isolated findings but have led to important improvements in follow-up and clarifications of internal procedures.</p>

Major changes during the year

Major changes 2022

- During the year, a higher number of complaints were received compared to other years. The complaints primarily concerned consideration of protected species and some forest birds. A change in the legal situation has entailed new requirements under the Species Protection Ordinance (Sw. Artskyddsförordningen). However, the legal position remains often unclear, and many cases are awaiting review by the Land and Environmental Court, the Swedish Forest Agency and county administrative boards. Our procedures for species protection have been adapted and we are monitoring both the different applications by the authorities and legal developments.
- Despite the pandemic and substantial difficulties in finding qualified forest management personnel, SCA and our contracted forest management contractors have succeeded in raising the quality of work performed. The quality of environmental consideration and working conditions are good and we are continuing the follow up of this.
- A relatively high number of fines (six) were issued in 2022, when SCA failed to comply with injunctions from the Swedish Forest Agency. Procedures have been improved to limit the magnitude of errors by SCA or hired contractors.
- The internal audit has been enhanced by increasing the focus on summarizing and analyzing spot checks and data from operations.



More information

If you wish to know more about SCA Skog and our forestry operations, please visit our web page www.sca.com/en/forest/scas-forests or find out more in our annual and sustainability reports.

If you wish to get in contact with us, please send an email to info.skog@sca.com.