



Monitoring and evaluation of our forestry operations at SCA Skog

2023



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. 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
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 of our forest
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Management plan of 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 managed 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.



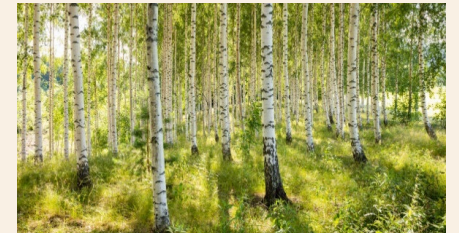
Combined targets (> 50% retention)

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 managed 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 to preserve sensible species, or we leave a roof of deciduous tree canopies to create bright and open deciduous forests that many birds benefits from. Also, consideration to the reindeer husbandry, like buffer zones with lots of lichens, is another example of forests with adapted retention.



Production with general retention (~15 % retention)

The remaining part of our land, 87%, is handled with basic retention in our forestry. This means, among other things, that we save buffer zones adjacent to waterways and bogs and saves smaller forest areas for sensitive species. It also includes leaving groups of trees, dead wood and scattered trees that are old or otherwise important for insects and birds, for example.



Target numbers and outcomes, 2023

	Percent of productive forest land	
	Target number	Outcome 2023
Basic retention (~15% retention)	87	88,0
Voluntary set-asides (100% retention)	7	8,2
Combined targets (>50% retention)	3	2,1
Adapted retention (15-30% retention)	3	1,7
Share of older forest* (%)	>2%	6,9
Burned forest land (ha)	Approx. 200 ha**	157
Area dominated by deciduous trees (%)	>5%	3,5
	Percent of total forest holdings	
Converted area according to the Swedish FSC standard definition (Pinus Contorta and wind power)	Max 5%	3,1% (**Pinus Contorta 80,819 and Wind 686 ha)



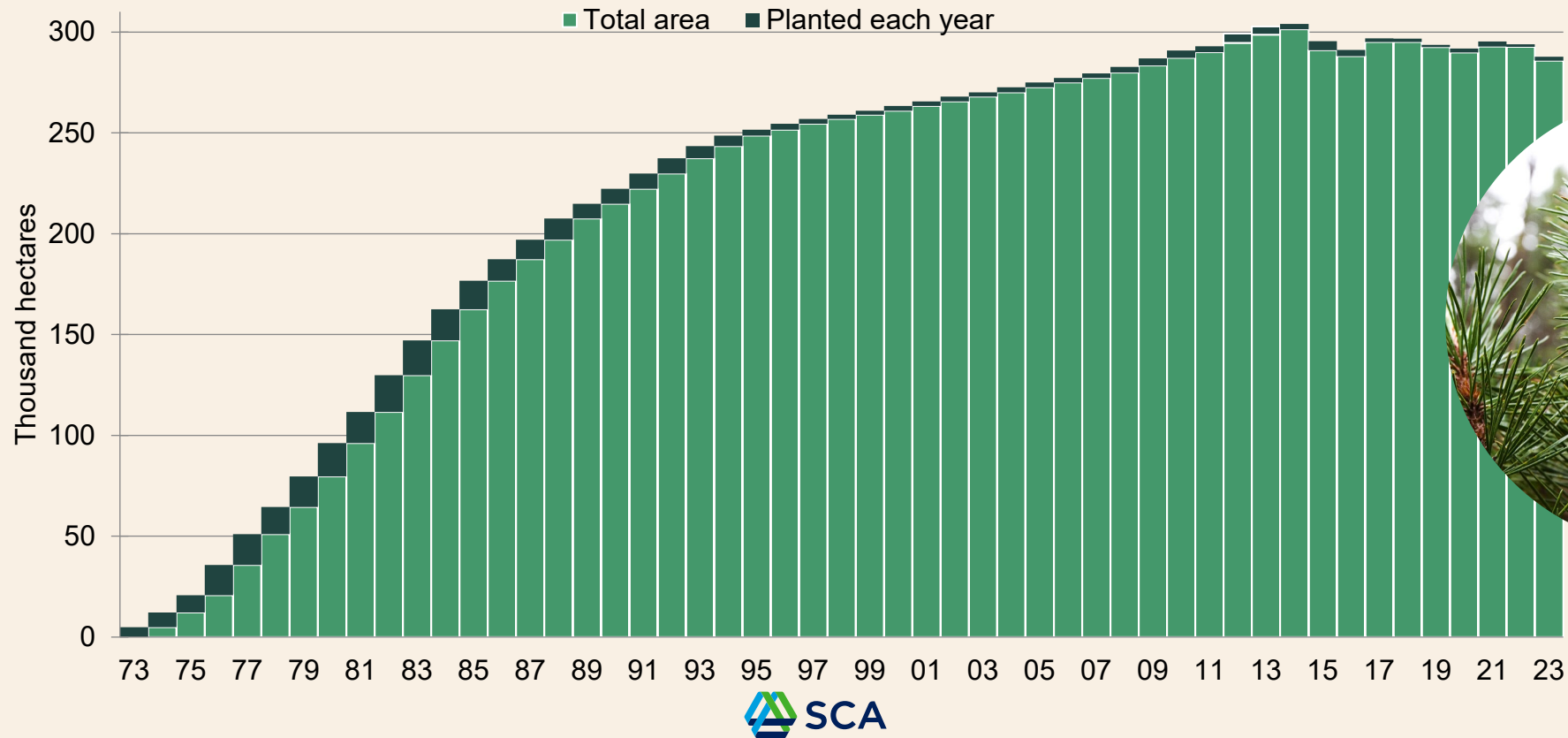
*Older forest \geq 140 years

**Corresponds to approximate burned area required to reach the target level of 495 ha/year after enumeration factors. Burning carried out in 2023 corresponds to 313 ha with accrual factors.

***Established Pinus Contorta after 1994

Total area 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 2023, 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 earliest plantations are becoming mature for felling, and the felled area has increased in recent years. 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).

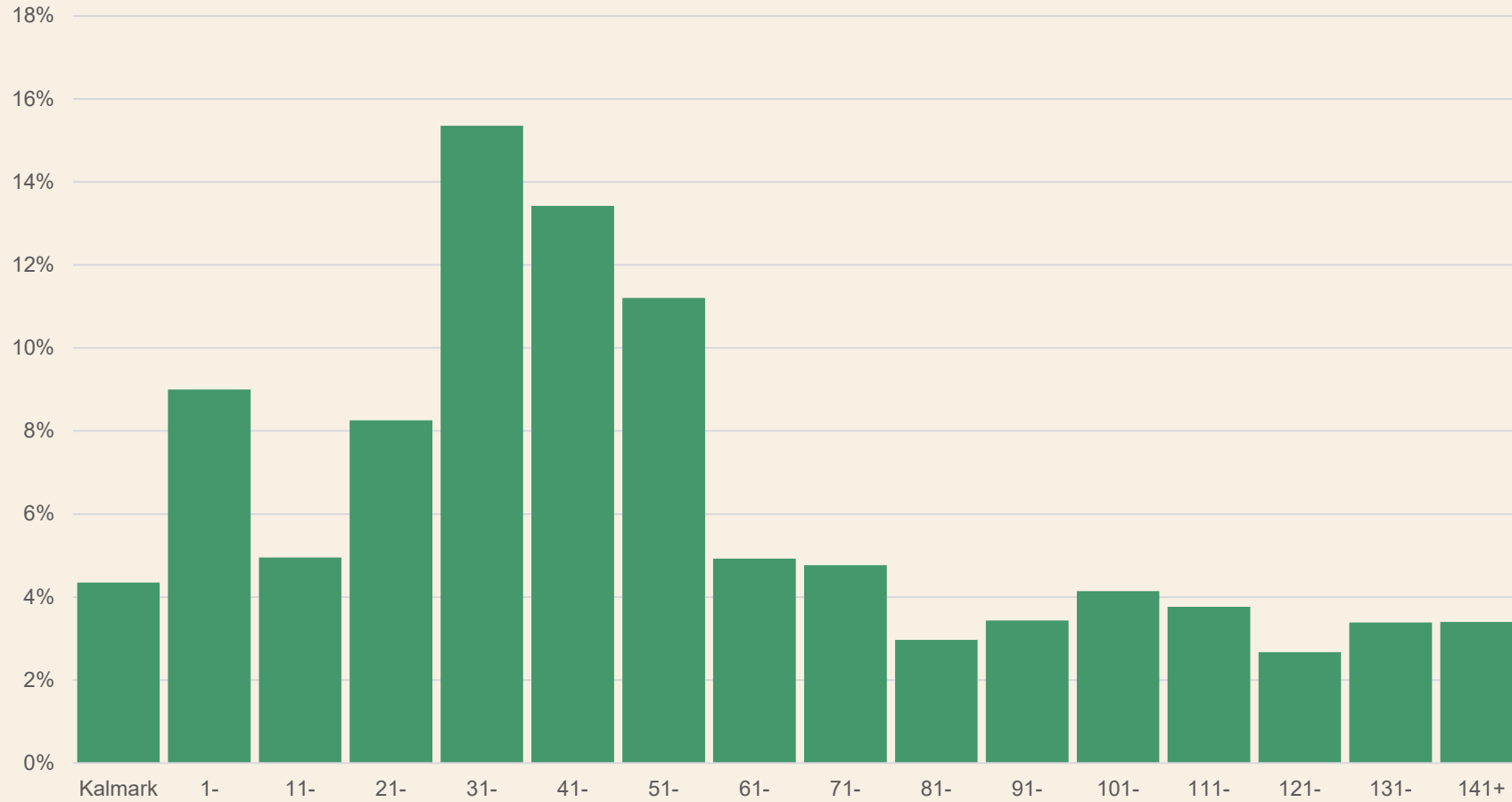
Harvesting calculation (abbreviated in Swedish to "AVB")

- 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).

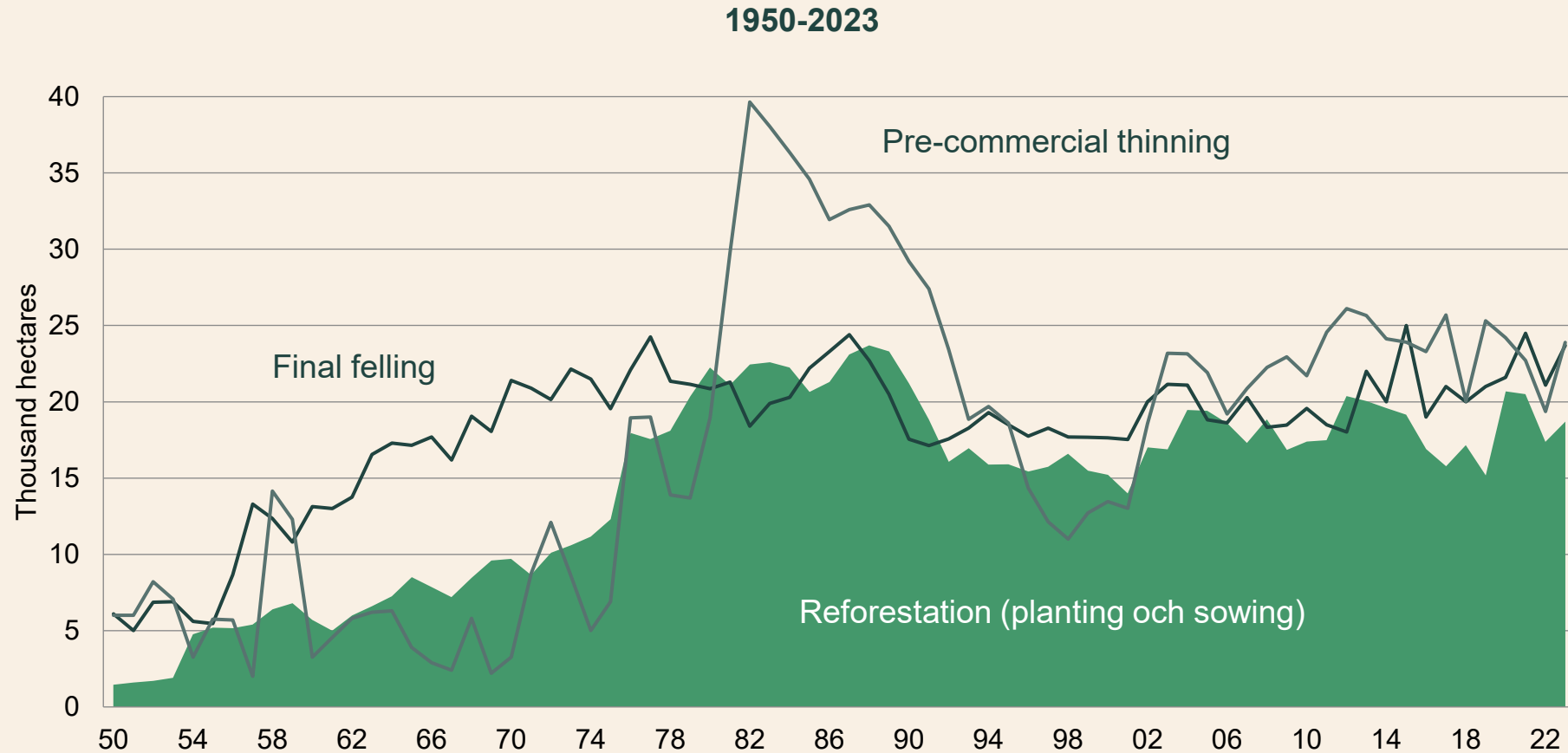


Age class distribution of the forest

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

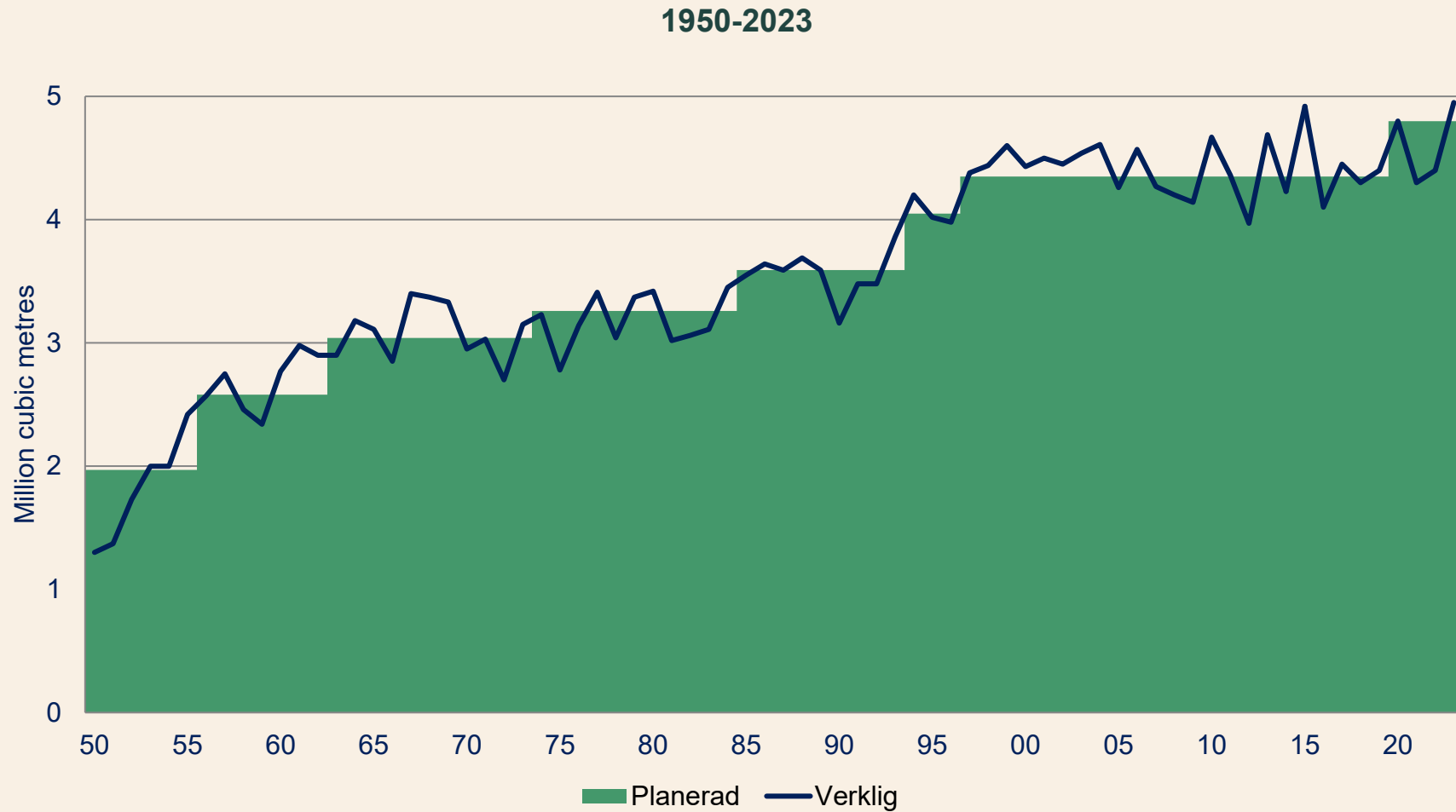


Area of final felling, pre-commercial thinning and reforestation



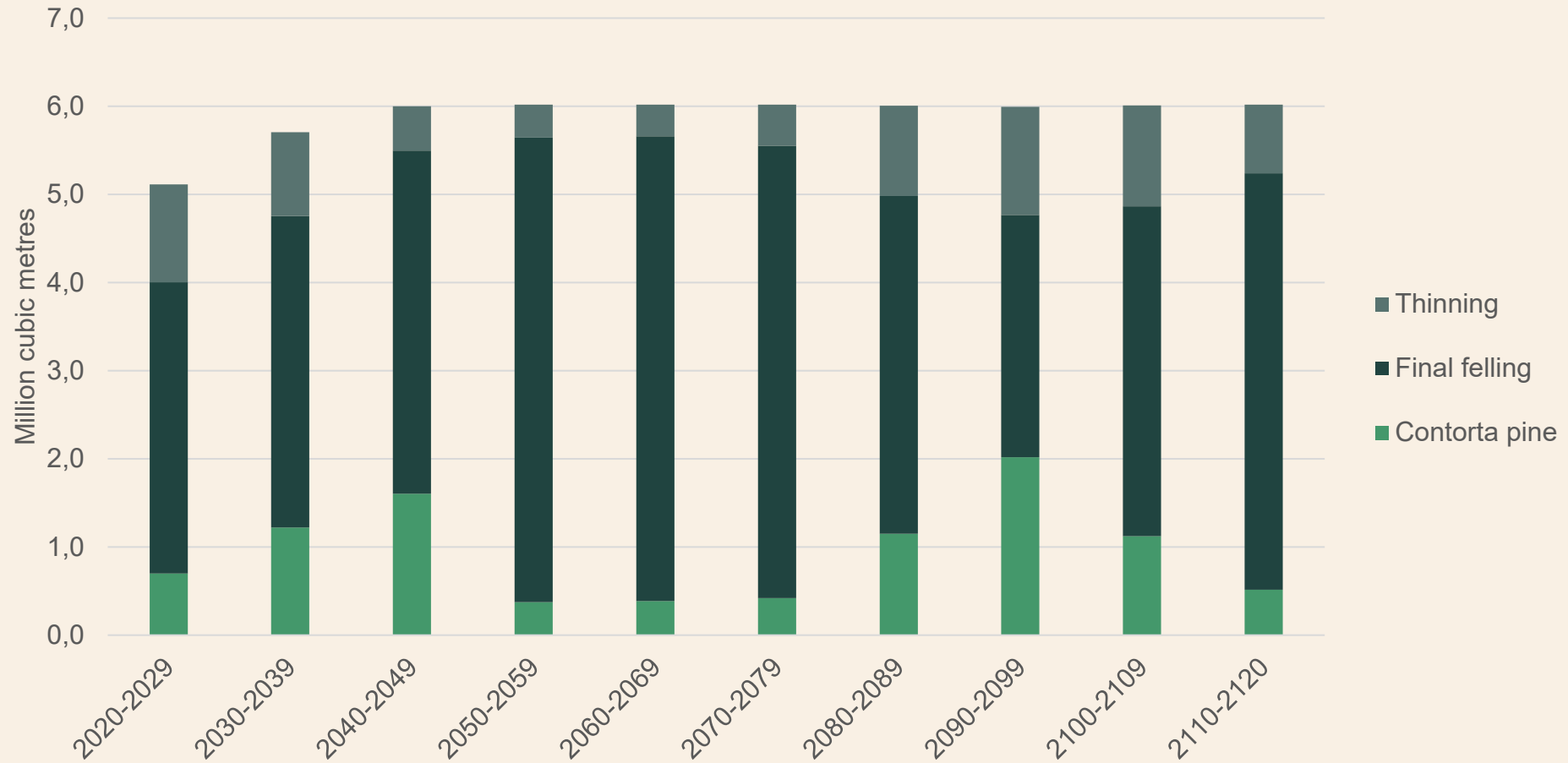
Incl. Scanninge Timber from 2002

Planned and actual harvesting from own forest



Potential harvesting

Potential harvesting in ten-year periods according to SCA's harvesting calculation 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 the slide "Silviculture acreage 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

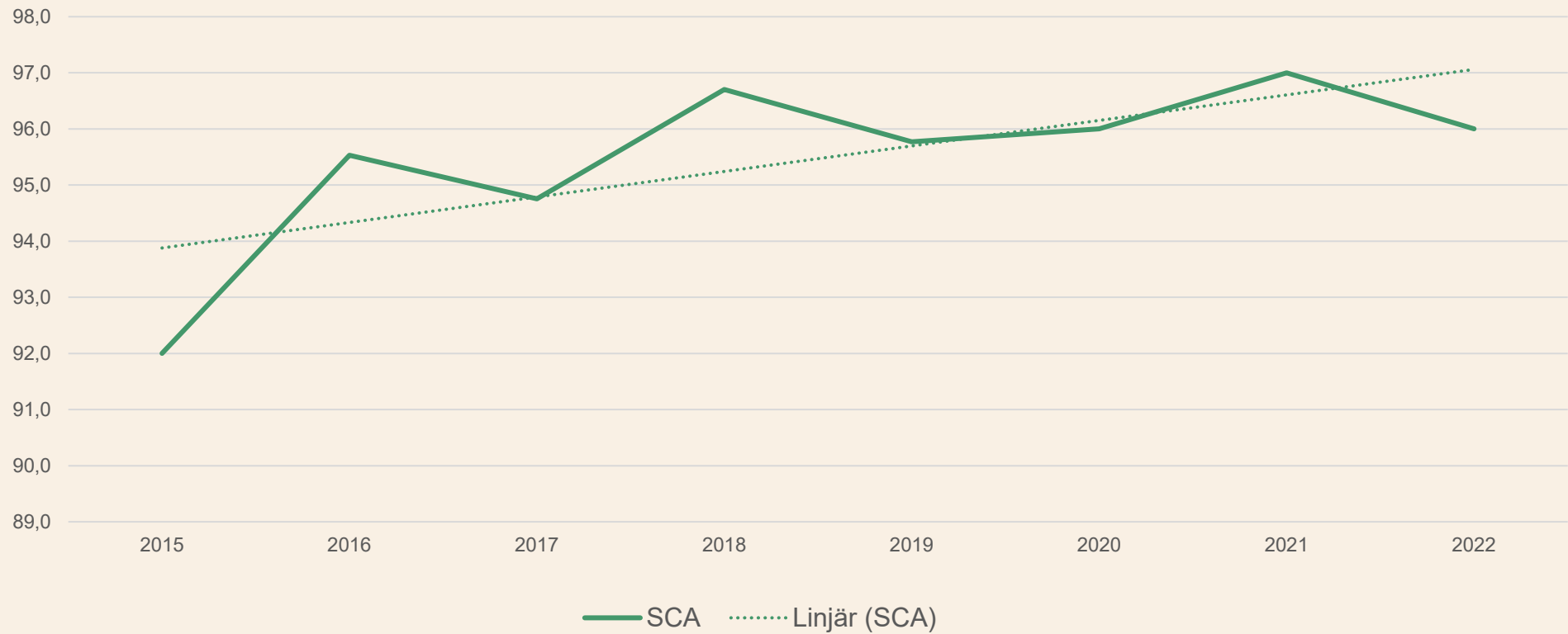
SCA's young forests must have at least 10% deciduous trees

- Deciduous trees are an important feature in our Swedish forests but have been in short supply in due to extensive control in the past.
- 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 2023, deciduous trees accounted for an average of 20 % of stems capable of development left (main stems).



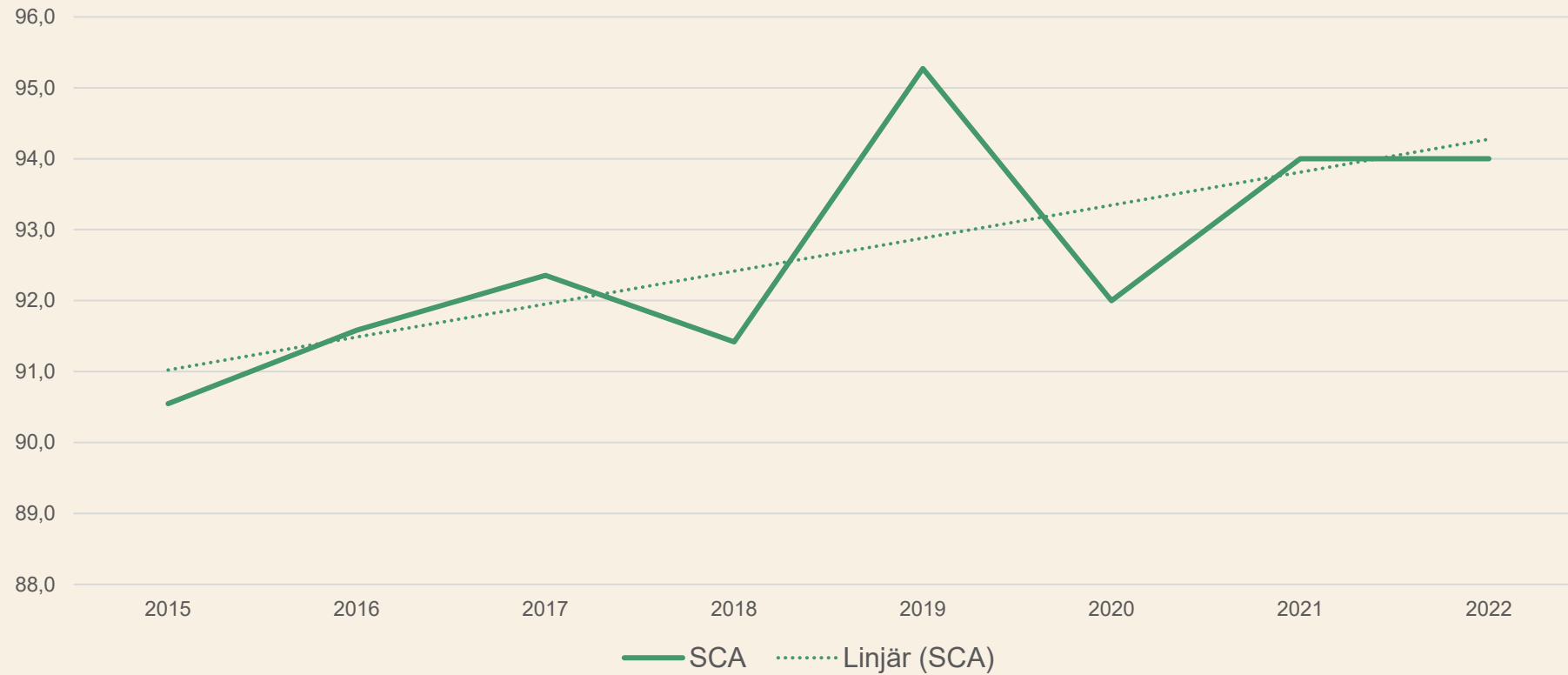
Soil scarification

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



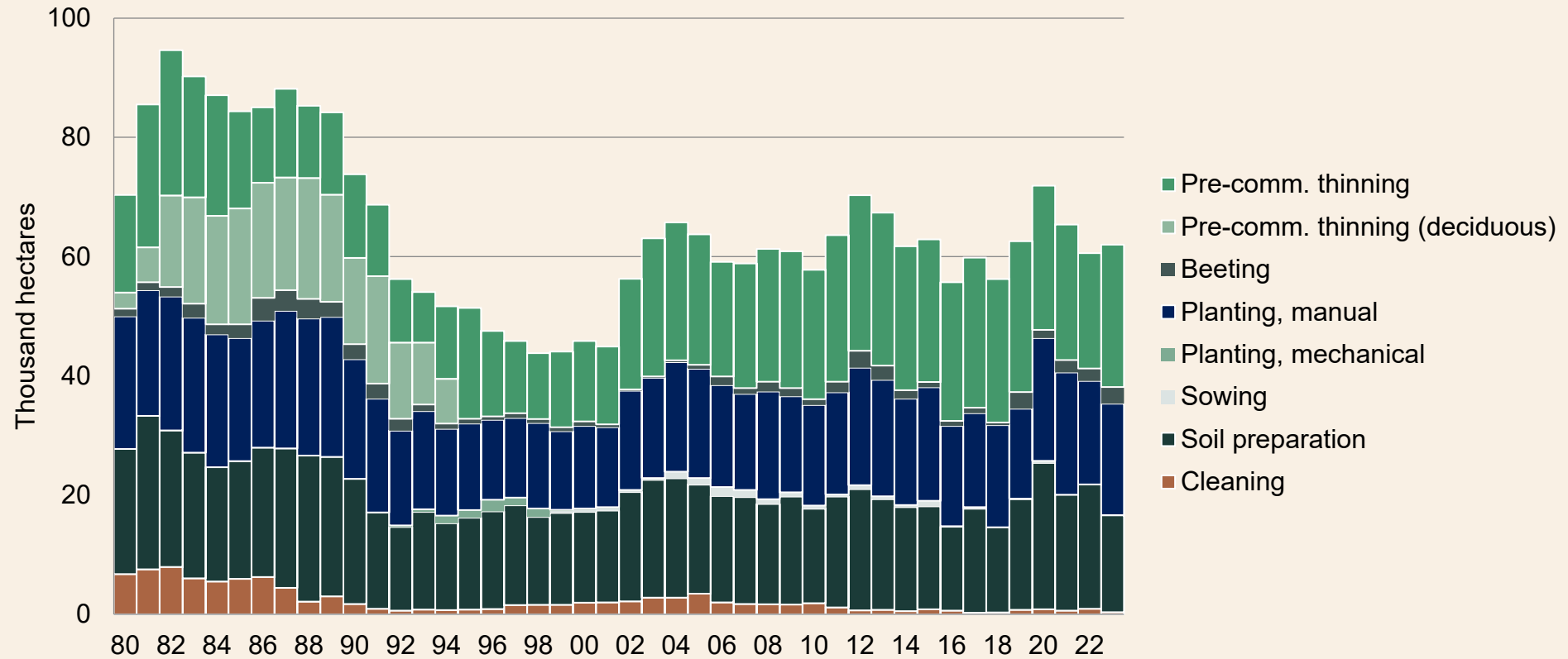
Planting

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



Silviculture acreage excl. fertilization

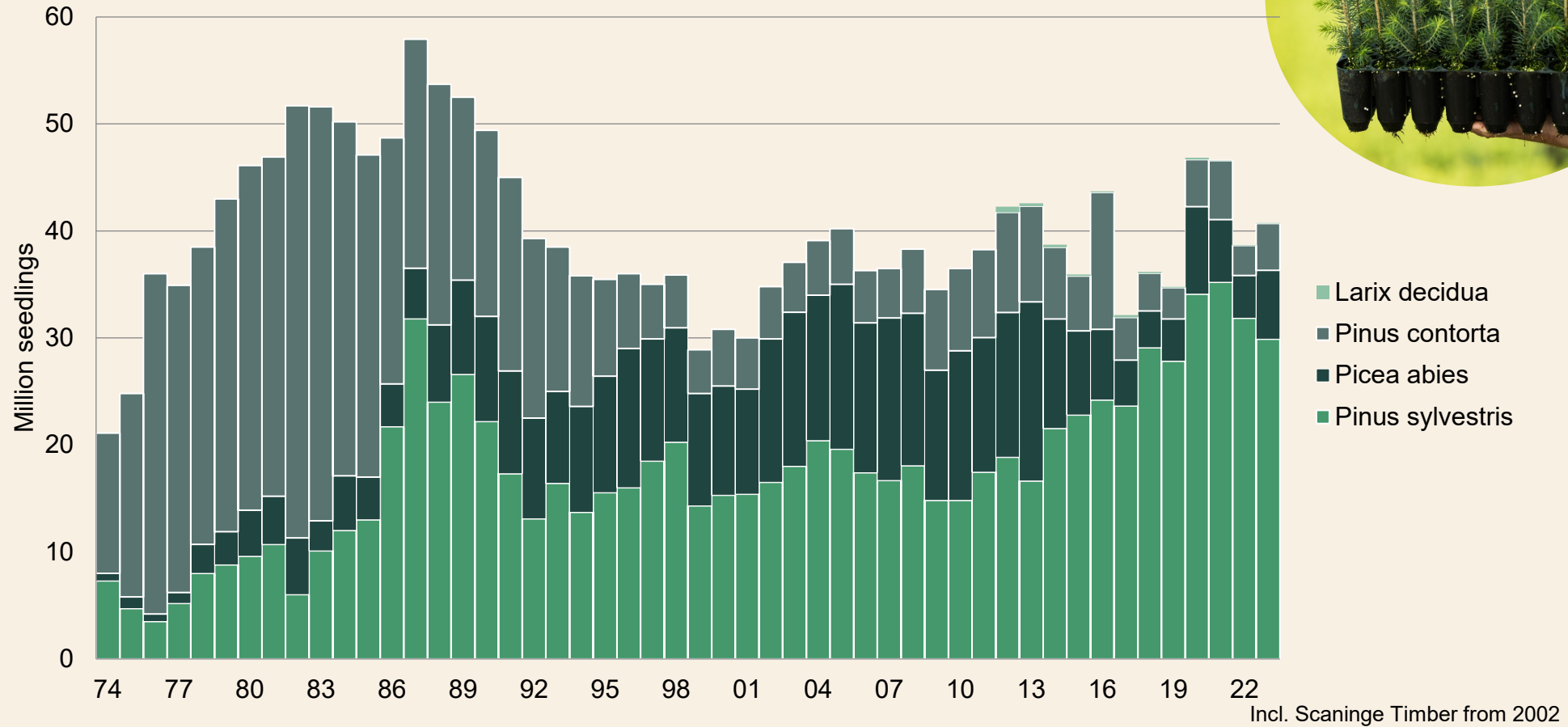
1980-2023



Incl. Scanning Timber from 2002

Seedling consumption

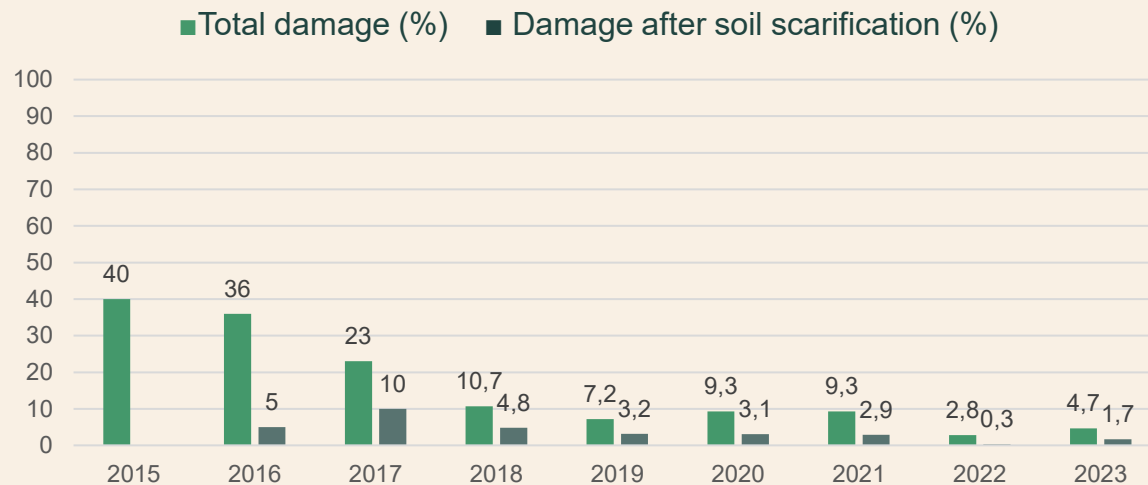
1974-2023



Damage to ancient and cultural remains

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

- In 2023, follow-up was performed on 401 remains (incl. restricted areas) (560 in 2022).
- The result in 2023 was a slightly worse (in percentage) than 2022.
- Continued measures in 2024 according to our instructions and action plan to reach the vision zero.



Damaged ancient and cultural remains	Number	Percent
Rutting damage	4	1,0
Forest residues	2	0,5
Windfalls	6	1,5
Soil scarification	7	1,7
Total	19	4,7

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.

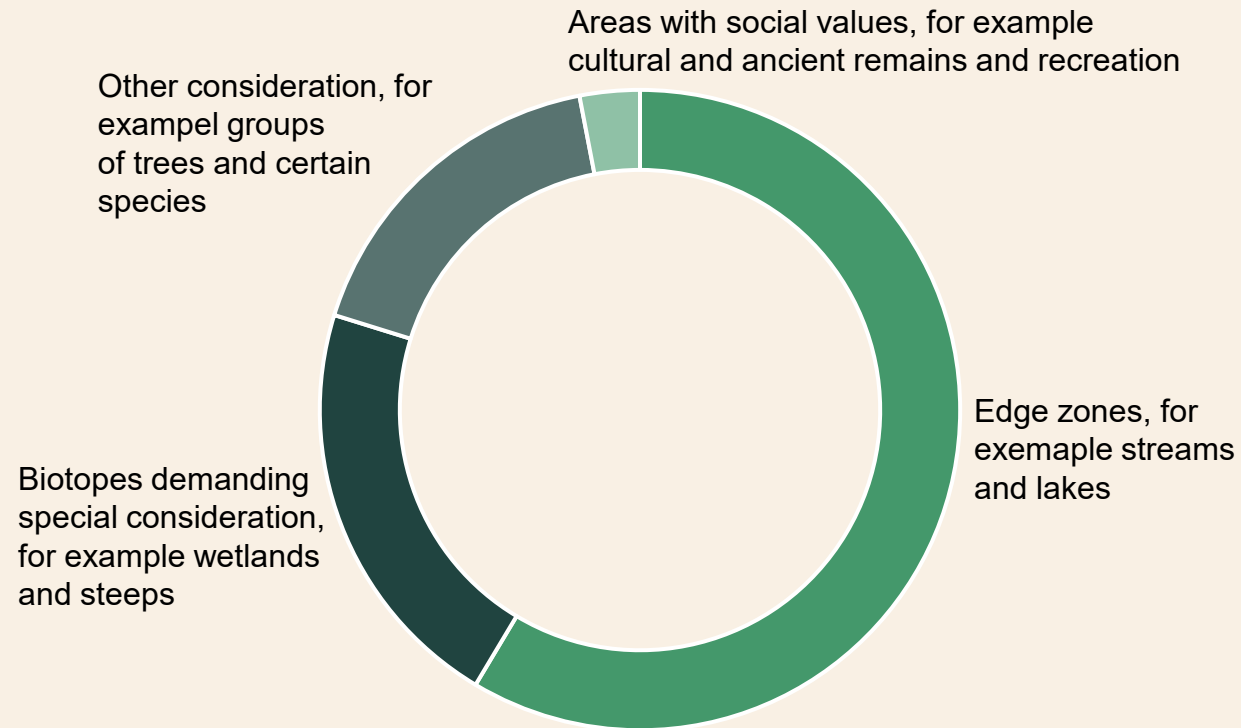
Operational planning follow-up (abbreviated in Swedish to “TPU”)

- TPU is a centralized follow-up of our operational planning process. It 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, but also on what has worked well and 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. The specialists 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 16,22% of the area is saved.

Harvesting

Harvesting at SCA should adopt effective and functional consideration measures. We monitor this continuously in several 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 random checks every quarter with a set 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, 2023

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

Collaborative planning with reindeer husbandry

The term and process “collaborative planning” was introduced into the Swedish FSC standard in fall 2020 and involves collaboration between the forestry and reindeer husbandry to enable coexistence. Through collaborative planning, we want to identify solutions that minimizes the impact on reindeer husbandry, with respect to management strategies and harvesting calculations.

- The collaborative planning process has a long-term perspective with a time horizon of at least five years at a time.
- The collaborative planning is carried out with a landscape perspective to overview effects and prioritize measures and possible adaptations.
- The process with the Sami villages 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 village 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 support in the process from FSC (so called mediation)
 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, and alternative forms of harvesting can become relevant to discuss. The measures can often be designed to ultimately improve pasture supply for reindeer.



Collaborative planning process in 2023 with reindeer husbandry



Work yard where the forest is to be thinned out according to the wishes of the Sami village. Collaborative planning was carried out in field summer of 2023. Photo: Anna Marntell ©.

In 2023, the focus has been on continuing the work to find the forms for co-planning and to develop tools that facilitate the process:

- Sami villages were offered co-planning in the planning tool samplanering.se, which facilitates co-planning from a landscape perspective.
- Co-planning was also offered east of the so-called "FSC border" that was in the previous FSC standard.
- During 2023, SCA co-planned with 21 Sami villages and a total of 83 co-planning meetings were held where approx. 4,800 forest stocks were managed.
- To be in phase the foresight that the Swedish FSC standard describes (5-7 years), the amount of co-planning needs to increase in the coming years.

Restoration of wetlands

During the 1900s, many wetlands and peatlands were drained 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 the soils reacts to oxygen which breaks down the peat. In the long run, the ability of the wetlands to retain water in the landscape has decreased.

At SCA, we have aimed to restore wetlands. Our objective is both to initiate and undertake actions on our own land with a geographical distribution, and to act as a host for projects initiated by, for example, County Administrative Boards.

In 2023:

- We initiated and restored a total of 110 hectares of wetlands at our own land (12 km of ditches filled).
- We were hosts in restoration projects that resulted in another 77 hectares restored wetlands at SCA land. These projects was made in collaboration with County Administrative Boards, Rivers of Life, Sportfiskarna and wind power owners.



The photo shows a restored wetland.



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 the identified species have specific requirements for their habitat and may need different types of targeted measures. Some of the species are also ÅGP species (see next slide).
- 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 Commitmet can be linked to more than 1 habitat)	328

* Particularly priritized habitats

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

Some 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 using 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 2023:

- Another 700 hectare of production forest land has been given a long-term goal to be restored to benefit species that are pine or hardwood demanding. These areas are targeted at the 10 designated landscapes where several known occurrences of these demanding species exist today. We prioritize nature conservation measures, such as burning, in these areas where the species are, to achieve the best possible nature conservation benefit. Through greater precision in the nature conservation work, we wish to better connect these areas and increase the functionality at a landscape level. By these projects we wish to improve the conditions for the species over time.
- In targeted species inventories during the year 2023, previously unknown occurrences of very unusual ÅGP species have been discovered, which is clear evidence that the designated ÅGP landscapes are very significant.

In 2024 we will identify more landscapes which benefits:

- White-backed woodpecker
- *Baptria tibiale* (a butterfly)



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 survey are conducted together with the Swedish union of forestry, wood and graphical workers (GS). The responses helps us in our efforts to offer good working conditions and a safe work environment.

Follow-up in 2023 (2022)

- Number of teams visited: 79 (56)
- Number of individuals who answered the anonymous questionnaire: 310 (237)
- The survey resulted in a few 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 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 stopped 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.

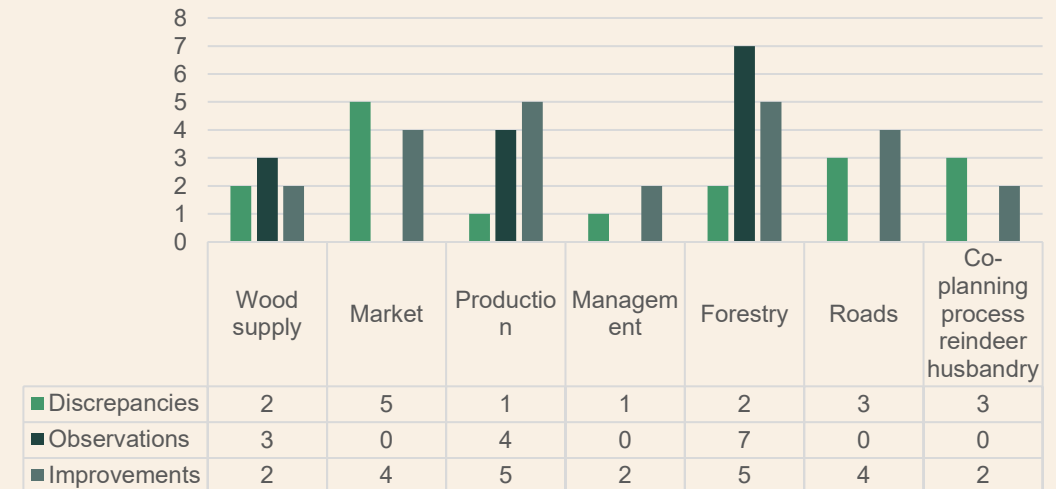
Our internal audit has a central role in our improvement efforts and generates improvements each year.

Summary 2023

A summary of discrepancies, observations and improvements: 18 discrepancies, 14 observations, 27 improvements

Total time spent (excl. travel and planning) and number of auditors: Approx. 250 h and 10 internal auditors

Distribution by function/department



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 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.

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Positive observations:	Efficient organization, committed employees, openness and transparent discussions, dedicated improvement work
Shortcomings:	1 major discrepancy, 7 minor discrepancies. The major discrepancy concerned FSC requirement 6.4.3 and consideration of red-listed species in the category “near threatened” (NT) and the species creeping lady’s tresses (<i>Goodyera repens</i>).
Root causes and improvements:	<p>The root cause of the major deviation was that SCA and the auditors interpreted the meaning of the standard requirement in different ways. As the internal instructions was considered to be deficient in certain respects, the deviation was classified as extensive (major). Now our internal routines have been clarified regarding NT species and <i>Goodyera repens</i>, and extensive work has been carried out to spread information and consolidate knowledge in all parts of the chain for how we will work.</p> <p>Our minor deviations concerned single events but have meant important improvements in follow-up and clarifications in internal routines.</p>

Major changes during the year

Major changes 2023

- During the year, there has been a continued high number of complaints, primarily regarding planned consideration of protected species and some forest birds. A large part of the views come from relatively few actors who instead send many complaints. Many of the complainants have developed common templates for legally arguing against logging. Consideration rules based on the Species Protection Ordinance (Artskyddsförordningen) are still under development and our routines for consideration of species have been adapted and we follow the various applications of the authorities as well as legal developments.
- During the year, several collaborative planning meetings with the reindeer industry was carried out. The ambition is to, in line with the FSC standard, increase the area that is co-planned, to make it easier for both SCA and the reindeer herders. During the year, co-planning has also taken place in some new areas, east of the former FSC border.
- In recent years, lodgepole pine has increasingly begun to be felled, in accordance with long-term plans. This creates an increased need to adapt logging design, guidelines for prioritizing felling of stands and consultation with the reindeer industry about reforestation of Norway spruce.
- A number of activities have been carried out to benefit biological diversity. This applies, for example, to action programs for endangered species and the restoration of wetlands.



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 contact us, please send an email to info.skog@sca.com.