

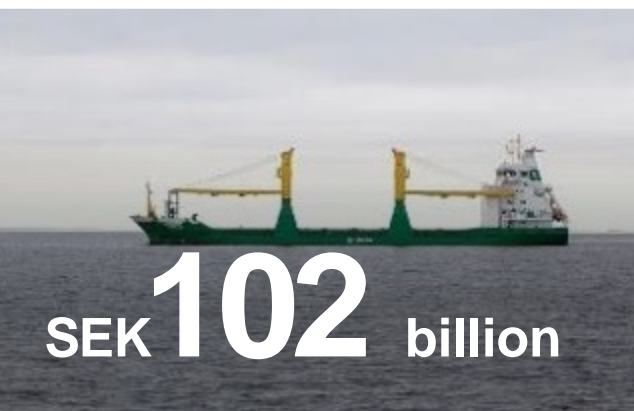
Contribution of the forest sector to innovation, growth and jobs

Lena Ek, Chairman of Södra

2019-04-25



Sweden – a forest nation



SEK **102** billion



22%



330,000



70,000

**Net export value
SEK 102 billion**

World's 2nd largest exporter of pulp,
paper and sawn timber

**22 % of Swedens industrial
investments**

The Swedish forest industry
invested for just over
SEK 15 billion 2018.

**330,000 private small and
midsize enterprises**

The backbone of countryside Economy

The most common form of female
enterprise

Average forestry income 10,000 €/yr

70,000 direct employed

Plus 30,000 full time contractors

Plus considerable multipliers within
construction industry, transport,
service, consulting etc.



Forest restoration in Sweden – 1900



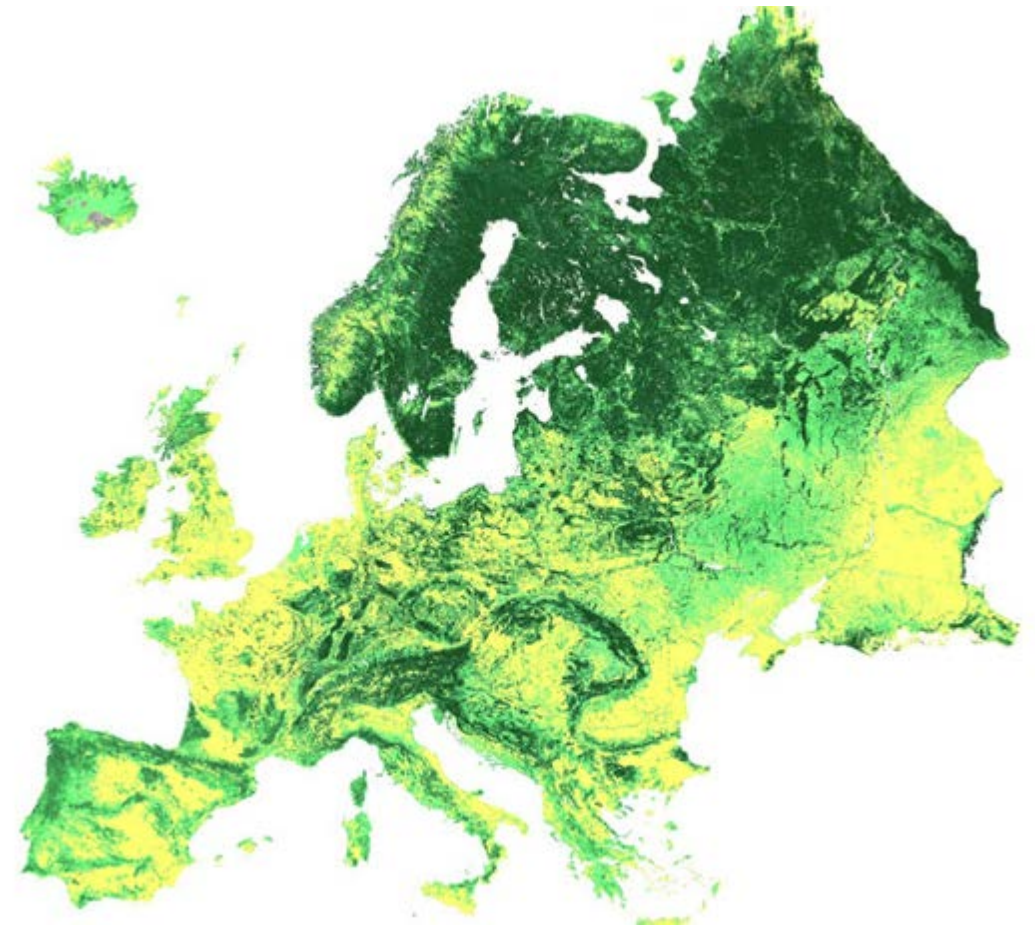


Current situation



European forest history

- 70% of Europe was covered by forests in prehistoric times
- Intensified land use pushed back the forests, culminating around the time of the big emigration in mid 1800
- A large reforestation campaign was launched in Sweden around 1900
- Today 70% of Sweden is again covered by forests, and 39 % of EU-countries. Both forest area and the standing forest volume is increasing in the EU.
- Europe's forests compensate for 12% of the emissions of green house gases. The potential is the double



The infrastructural backbone of sustainable forestry

- The Forest act of 1903
 - Regeneration becomes law
- The Swedish National Forest Inventory
 - Continuous monitoring forests since 1923
- The Forest act of 1993
 - Production and biodiversity of equal importance in forest management
 - Common values replace judicial details: Freedom and responsibility



The Swedish National Forest Inventory, at work since 1923.



Production and biodiversity - A success story from 1993

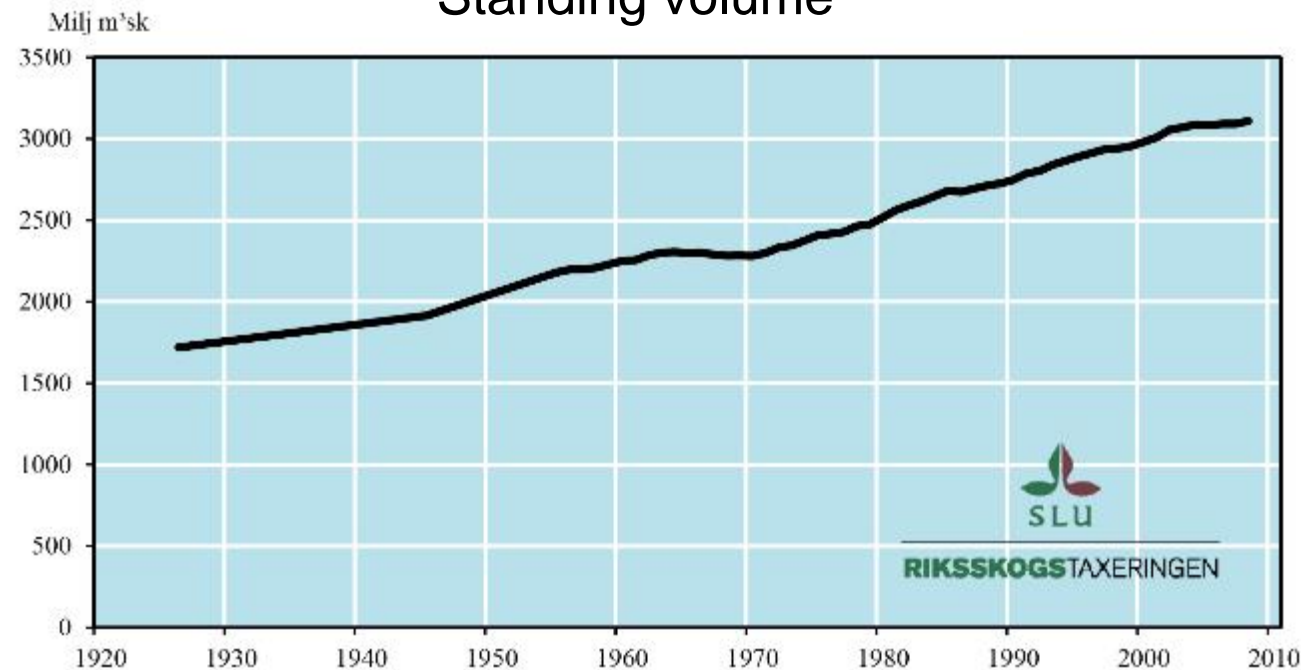
Production

- Increased forest inventory
- Increased growth
- Increased harvesting

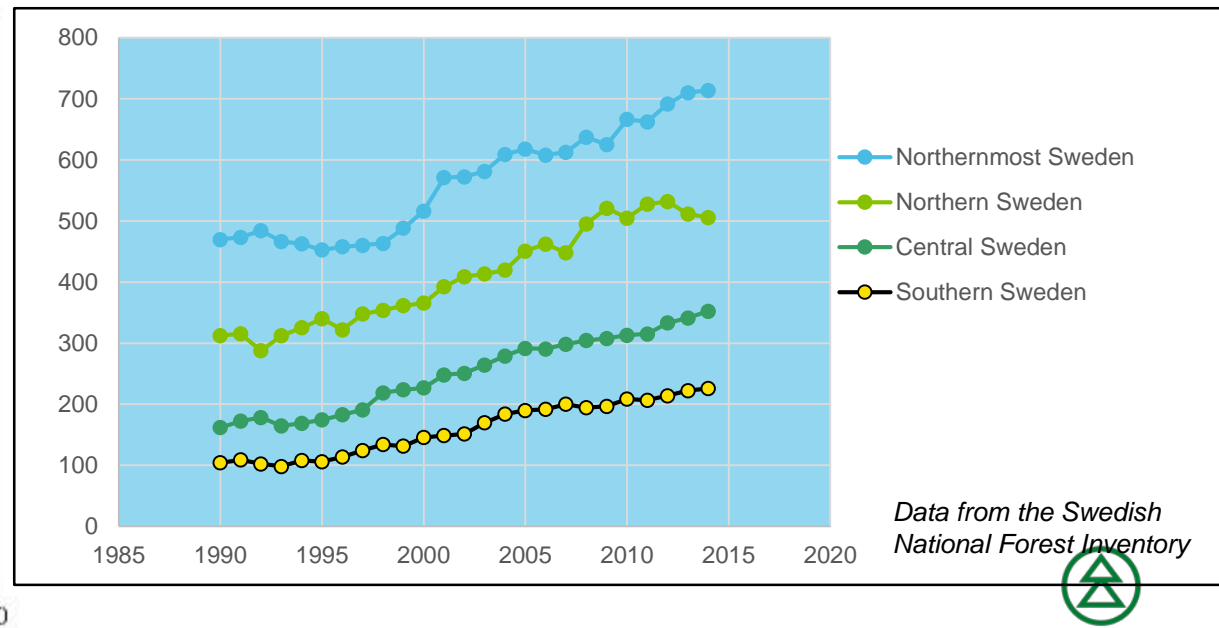
Biodiversity

- Increase of old forests
- Increase of broadleaves
- Increase of dead wood

Standing volume



Old forests, 1000 ha





This is Södra

Sales

SEK **24** billion

Employees

3,100

Wood volume **16,5** million m³ sub

3 pulp mills and **7** sawmills

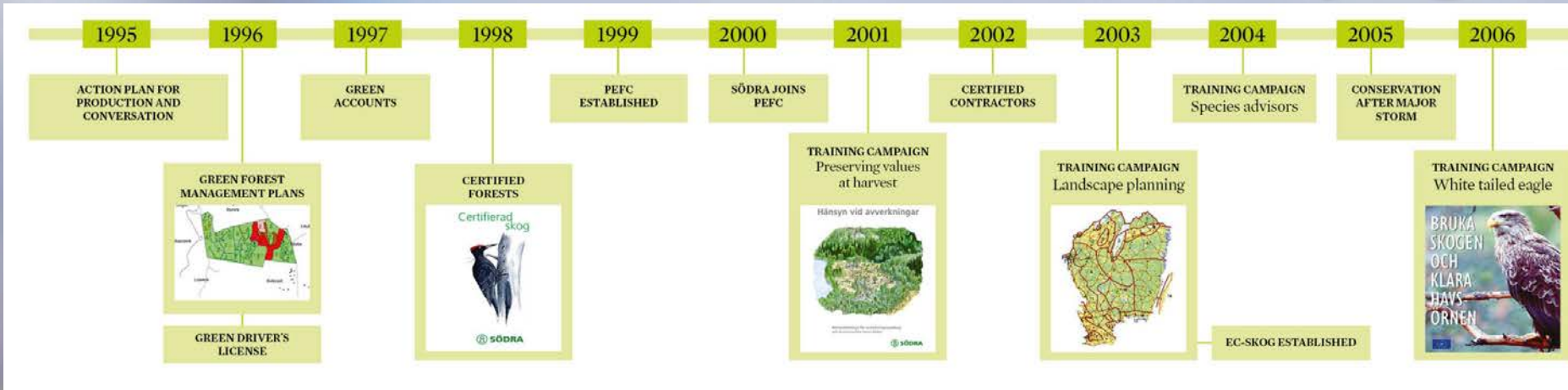
52,000 members





Sustainable development
– the heart of our business, at the top of our agenda

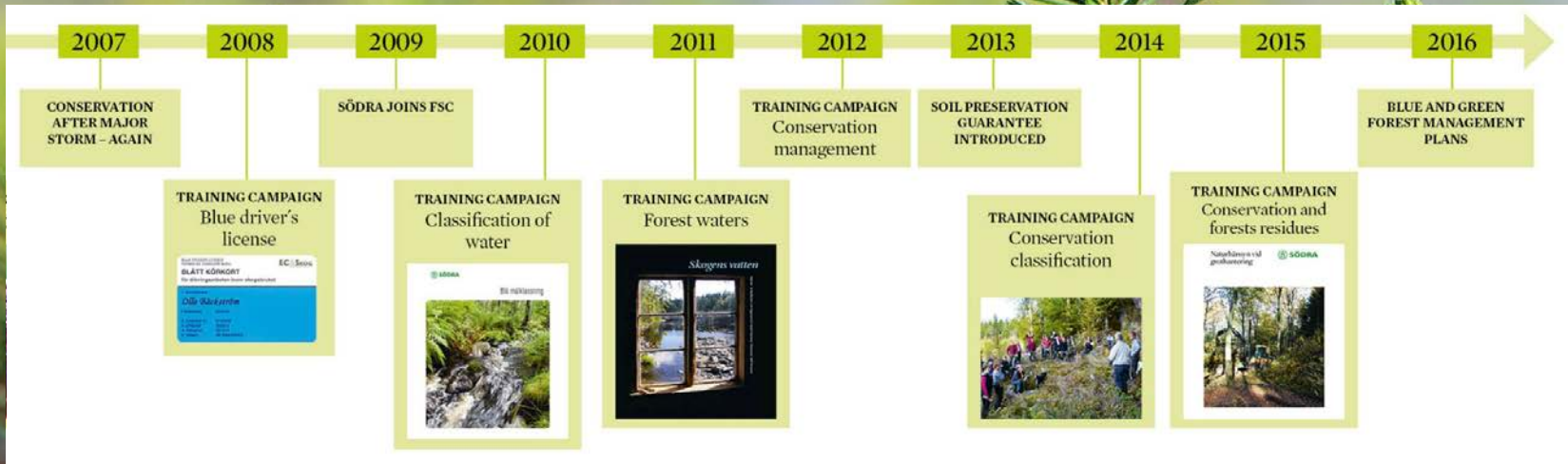
Sustainability since 1938

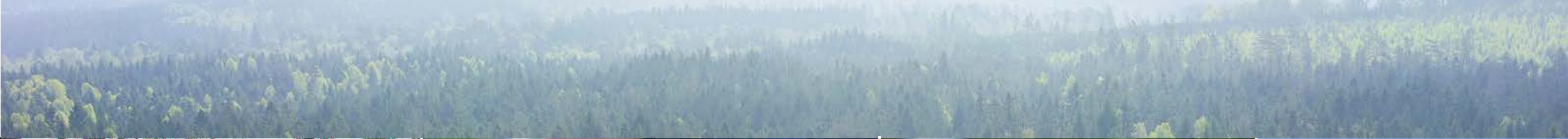


Own Cert scheme

PEFC

FSC





Three seedlings planted for each tree cut at final felling



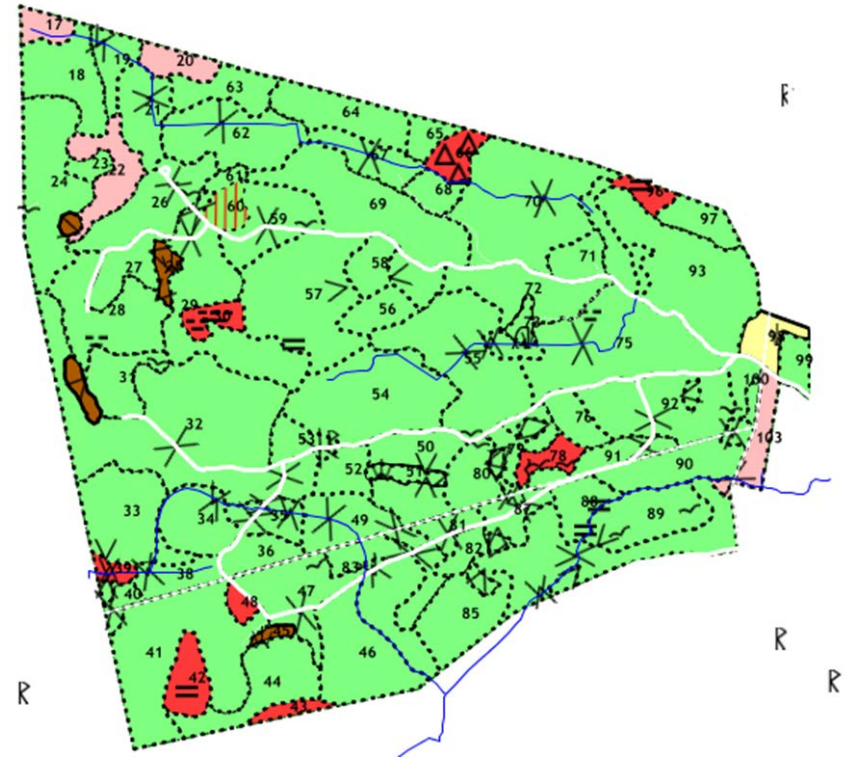


Södra's clearcuts have a mean area of 2,3 ha

Longterm target for each compartment

Four classes:

- PG – Production with general environmental consideration
- K – Combined targets (both production and environmental consideration)
- NS – Nature conservation requiring treatment
- NO – Nature conservation untouched.



The invaluable raw material from the forest

Lignin products

- Carbon fibre
- Vehicle fuels
- Adhesives and binders

Bark

- Specialty chemicals
- Food additives

Hemi products

- Oxygen barriers
- Birch sugar
- Plastics and chemicals

Lignin
30%

Cellulose
45%

Hemi
cellulose
25%

Energy

- District heat
- Electricity
- Fuel

Paper

- Tissue
- Speciality paper
- Nappies and sanitary pads

Textiles

- Viscose
- Lyocell
- New processes

Composites

- Biocomposites
- Hybrid composites



The outside world needs drive innovation



More sustainable housing



More sustainable textiles



More sustainable packaging



More fossil-free fuels



Substitution



1 m³ tree



500 kilo CO₂



900 kilo CO₂

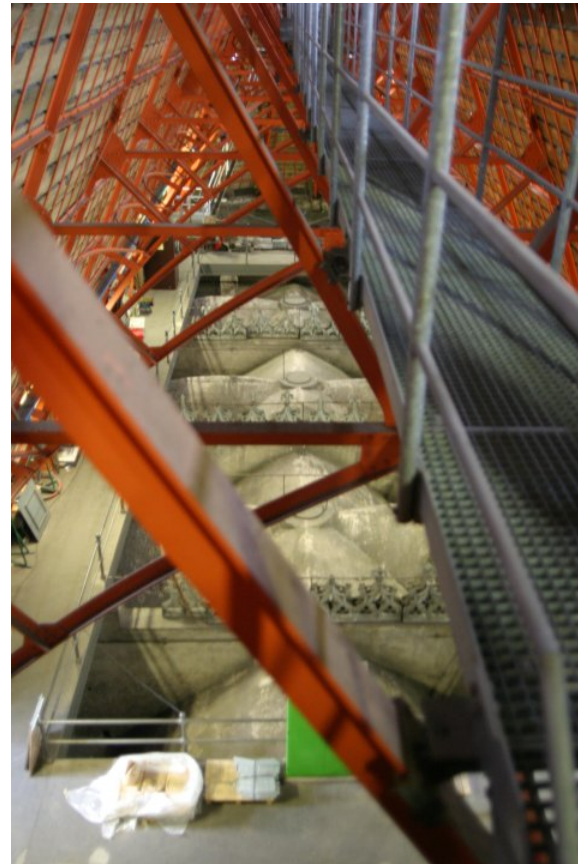


1 500 kilo CO₂





One m³ wood
substitute metal
constructions
1000-1500 kilo CO₂



http://commons.wikimedia.org/wiki/File:Koelner_Dom_Dach.jpg?uselang=sv



It is possible
to build tall
wooden
buildings

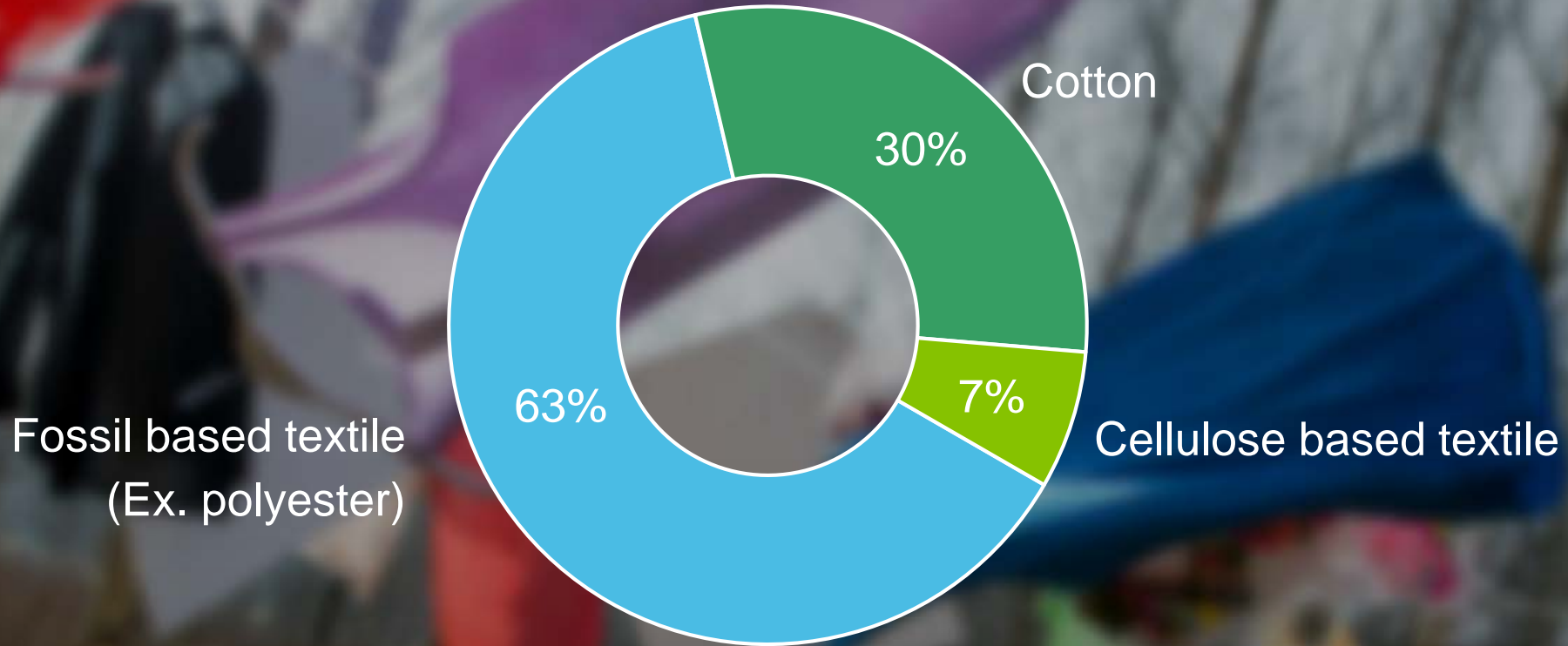


EU financed project FRESH



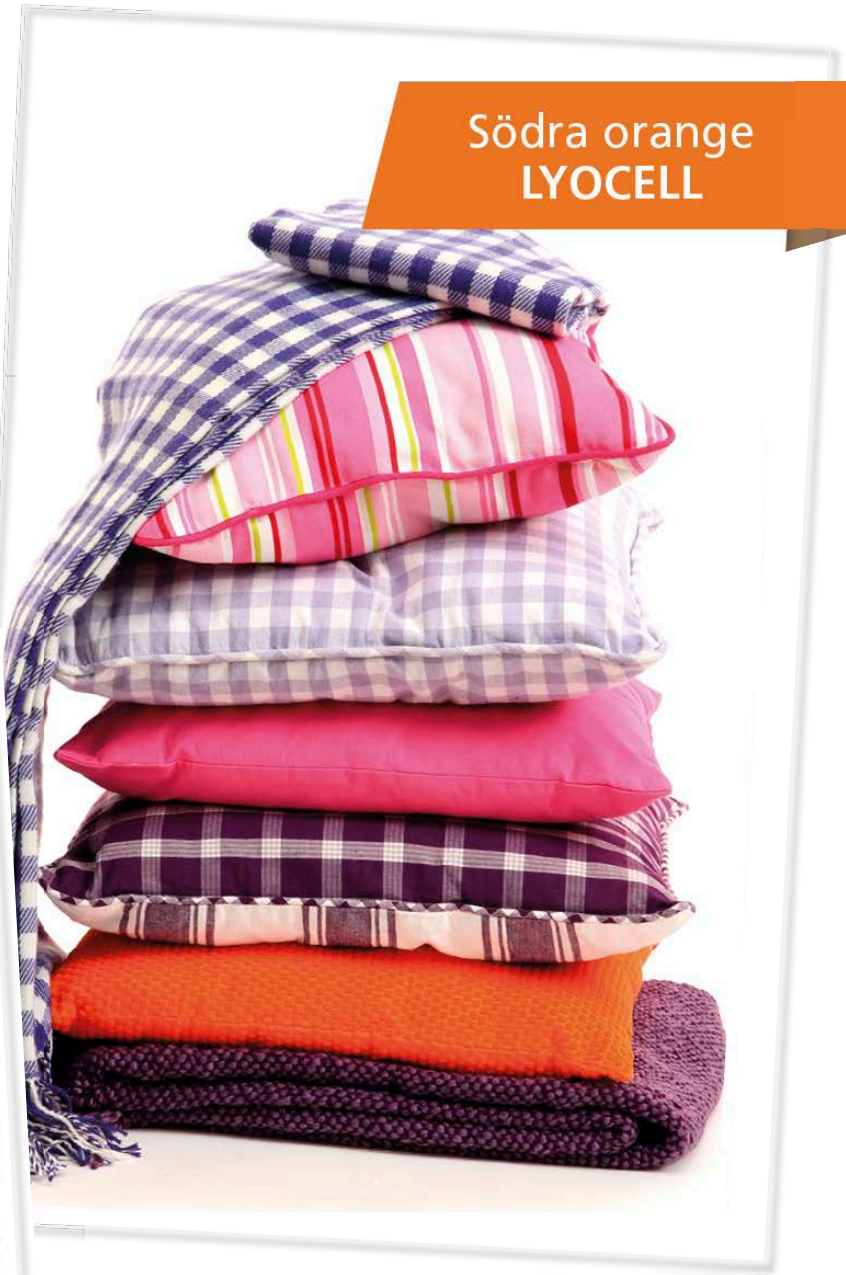
Biodegradable!
Renewable!
Same quality!

Global consumption of textiles





Södra purple
VISKOS



Södra orange
LYOCELL



Biofuels based on forest raw materials → rest products



SUNPINE

Produces biodiesel
from tall oil
residue from mill



**Purification of
crude methanol**

Södra invest to
produce biomethanol
residue from mill

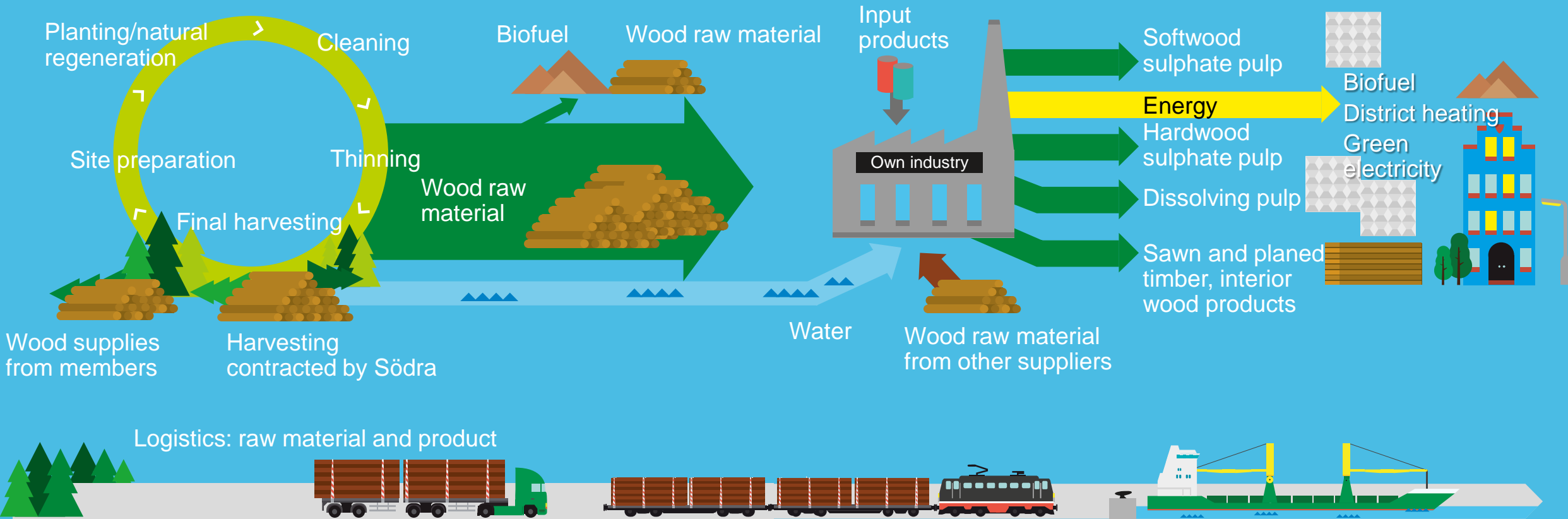


Silva Green Fuel

Advanced technology
for biofuels
residue from mill



From seed to finish product and a positive electrical energy balance



A pulp mill is a biorefinery



Pulp/dissolving



District heat



Green electricity



Bark/bioenergy



Pellets



Talloil



Methanol



Green chemicals



15 sustainability targets including three equivalent to our financial targets

Fossil-fuel free

Target: **0**



Södra's production will be fossil-free by 2020, and Södra's transportation will be fossil-free by 2030.

Rate of forest growth

Target: **20 %**



By 2050, the annual rate of forest growth will be 20 % higher than in 2015.

Occupational injuries

Target: **0**



A zero accident vision and the lost time accident rate (LTAR) will decrease by 15 % per year until 2020.



An average member estate offsets the CO₂ emissions of 40 Swedes – an area of 50 ha



Annual CO₂ emissions in Sweden are about 5 tonnes /person

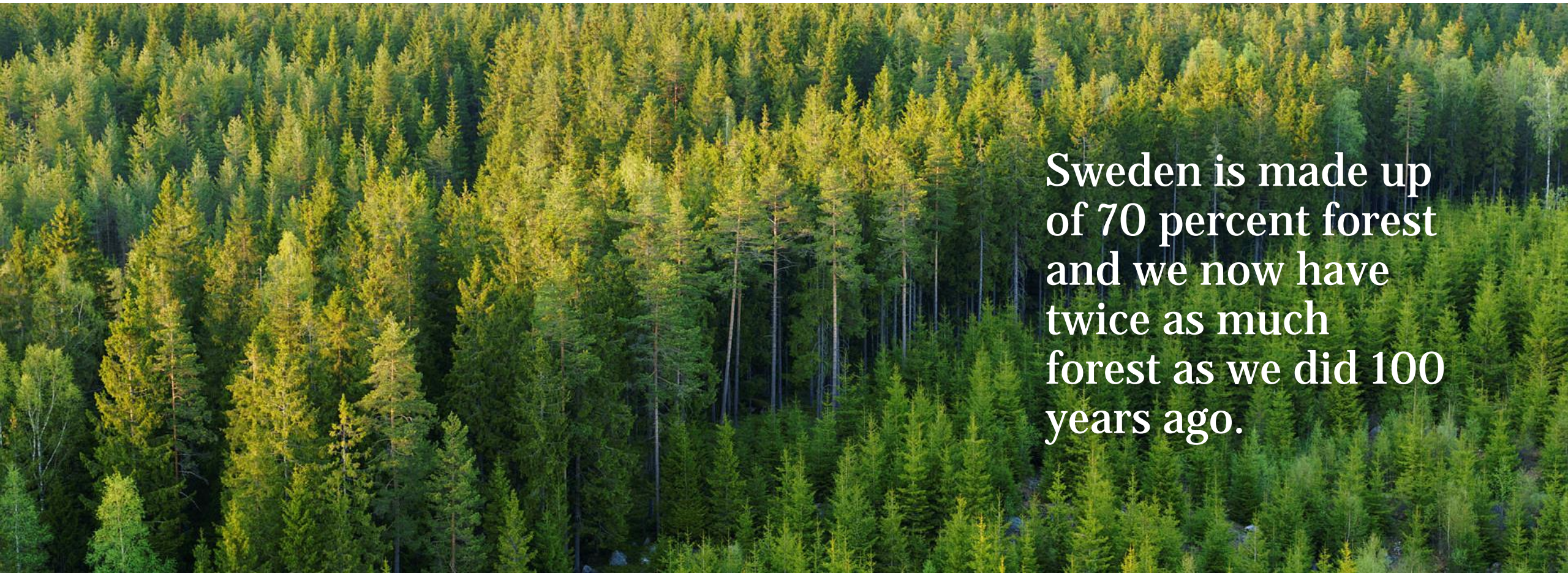


Södra contributes to the UN Sustainable Development Goals





The forest is a renewable superpower and improves the climate in three main ways



Sweden is made up of 70 percent forest and we now have twice as much forest as we did 100 years ago.





The future is made of trees