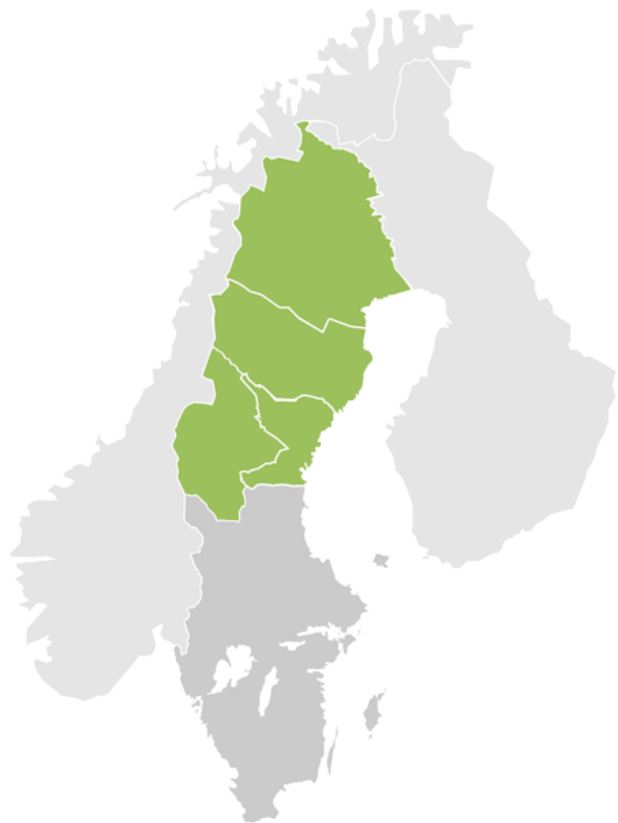


# BioFuel Region™



We are working long-term to support our members work to create a sustainable society

## **FOCUS AREAS**

Fossil free transports

Bioeconomy

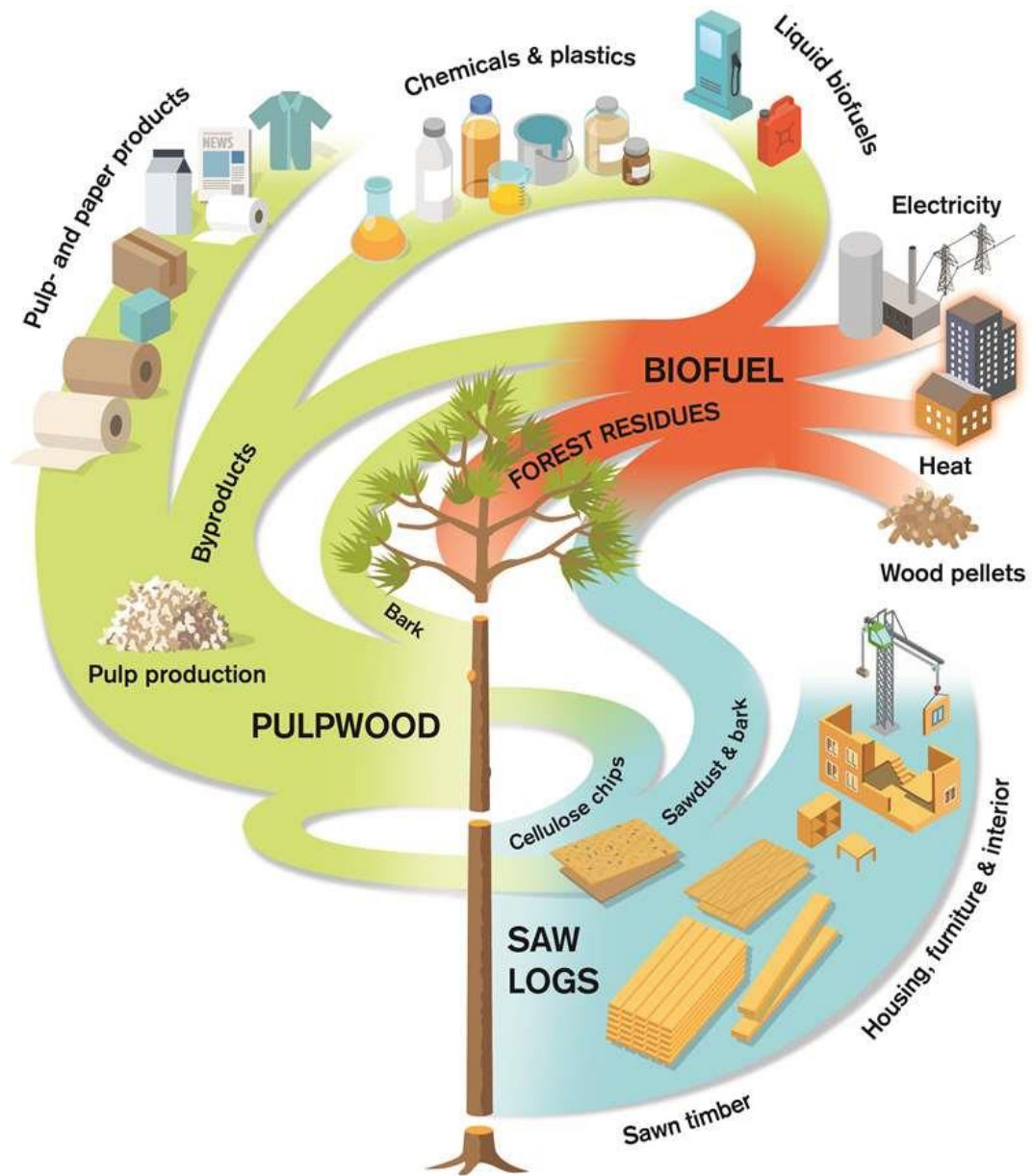


**THE GLOBAL GOALS**  
For Sustainable Development

Utmaning. Samverkan. Förändring.

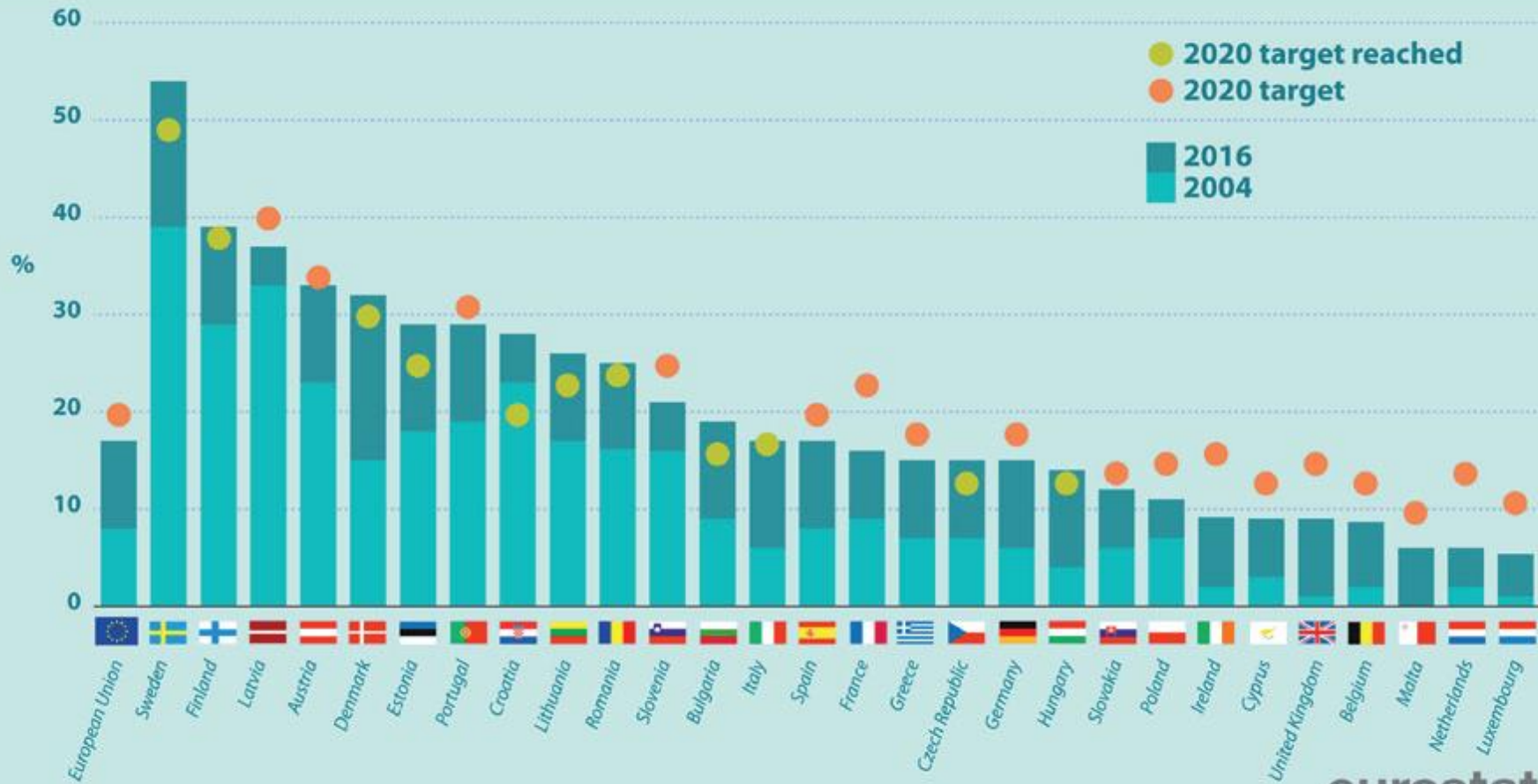
# The flagship of the forest Bioeconomy



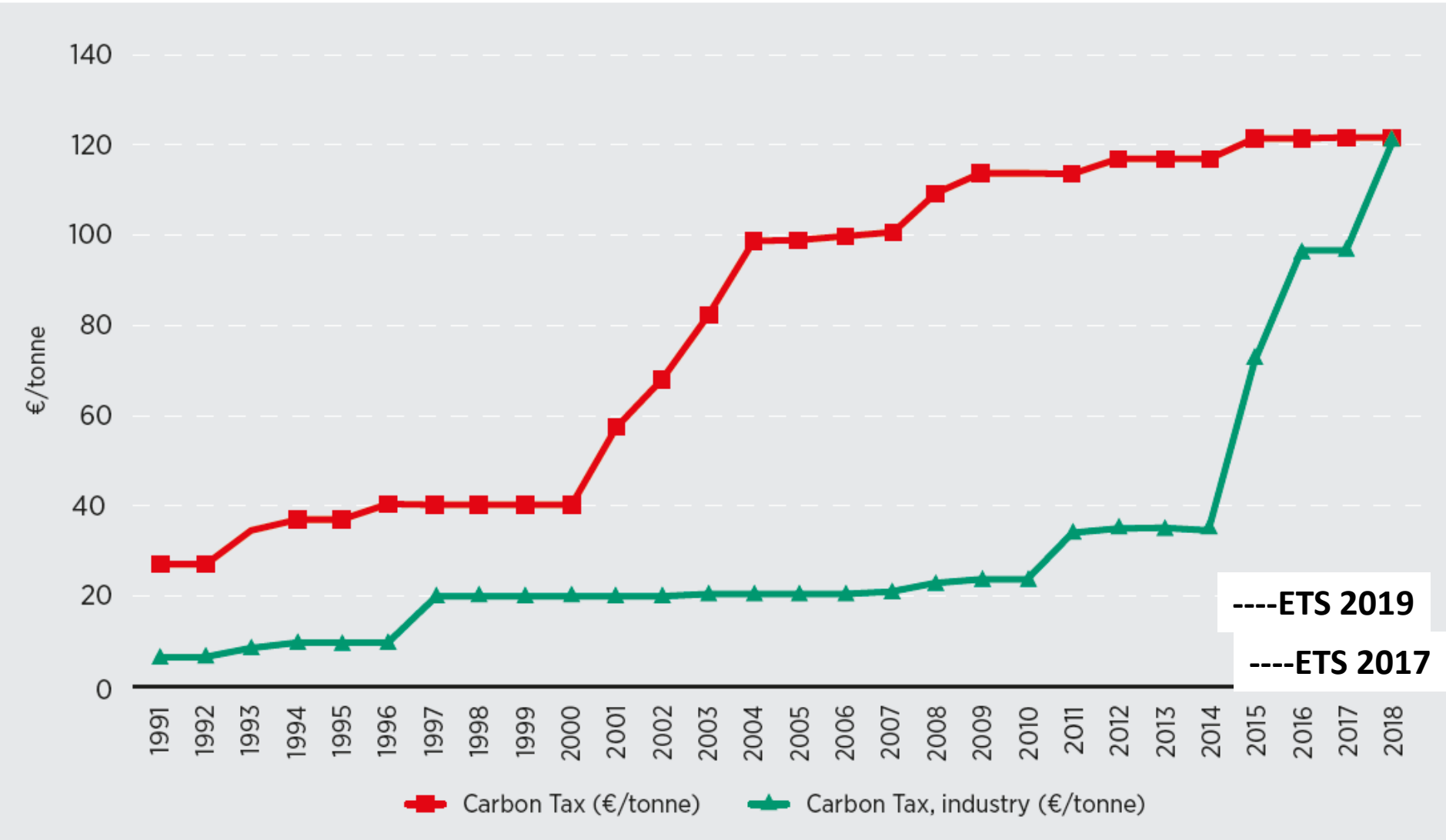


# Share of energy from renewable sources in the EU Member States

(in % of gross final energy consumption)



**Figure 1.1** Carbon tax in Sweden, 1991-2018 (EUR per tonne of carbon dioxide)



Source: Swedish government, Ministry of Finance, and Svebio (2018)

# SCA Biorefinery Östrand 4% of Swedish transports

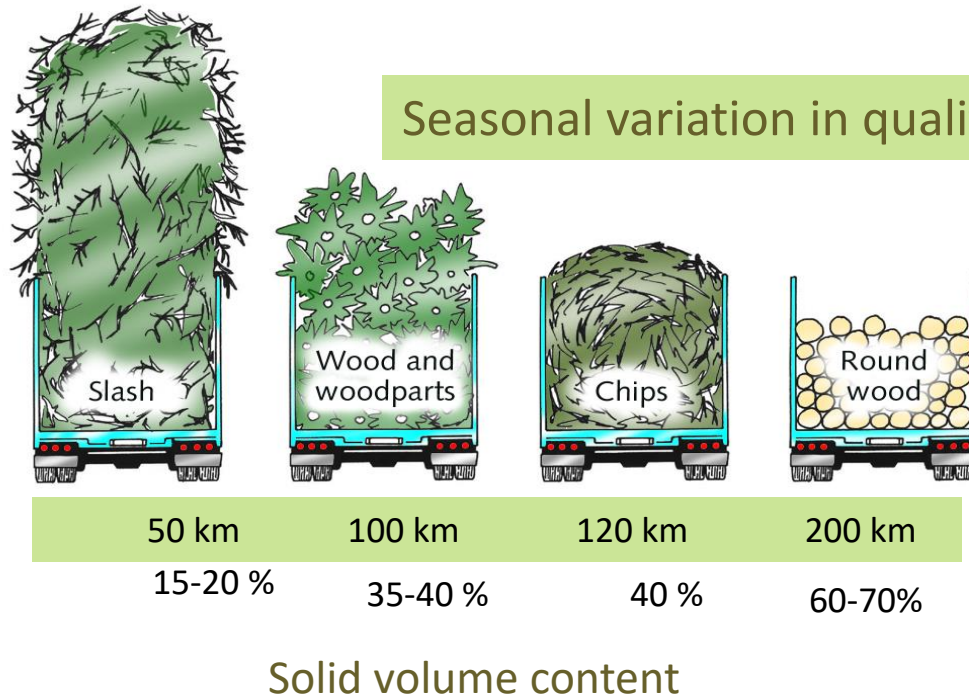
300 000 tonnes biofuels  
120 000 tonnes biocoal



Fotomontage av möjlig gestaltning av bioraffinaderiet (Scheiwiller Svensson Arkitektkontor AB)

## Forest Biomass

The cost for harvest, transport, storing and handling of the biomass is of prime importance when calculating the overall cost for biorefining



## Fast pyrolysis - Why make oil from biomass?



- Pyrolysis oil compared to raw biomass:
  - Pyrolysis oil is easier to store, transport and use than the biomass itself.
  - Biomass becomes available in many forms. With pyrolysis these can be converted to a homogeneous liquid.
  - Energy density of pyrolysis oil is 4-20 times higher than biomass.
  - Pyrolysis oil can be upgraded to transport fuels, chemicals and materials.



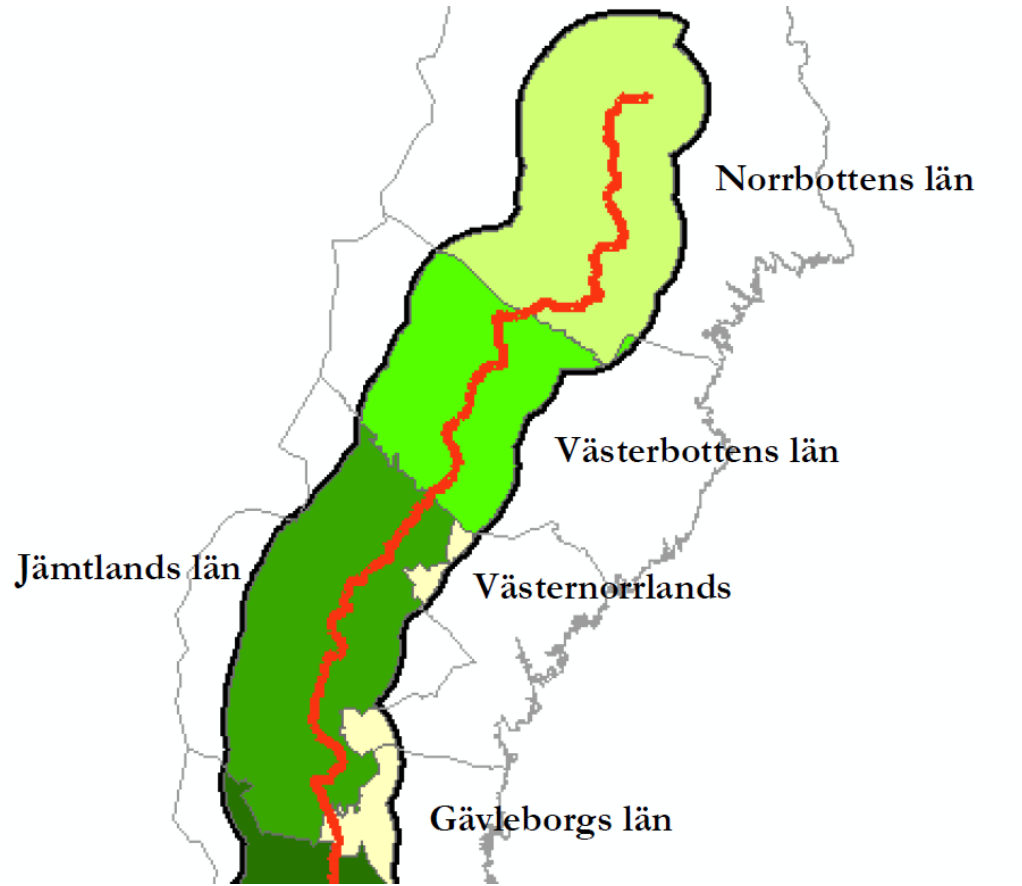
# Setra Group reveals pyrolysis plant plans



**Annual capacity of 32 000 tonnes**

Raw material supply  
85 000 tonnes of sawdust

**1/3 of the Swedish productive Forest Land is located within a 50 km radius from the inland railway but It is far away from consuming industries**





EU TECHNICAL EXPERT GROUP ON  
SUSTAINABLE FINANCE

FINANCING A SUSTAINABLE  
EUROPEAN ECONOMY

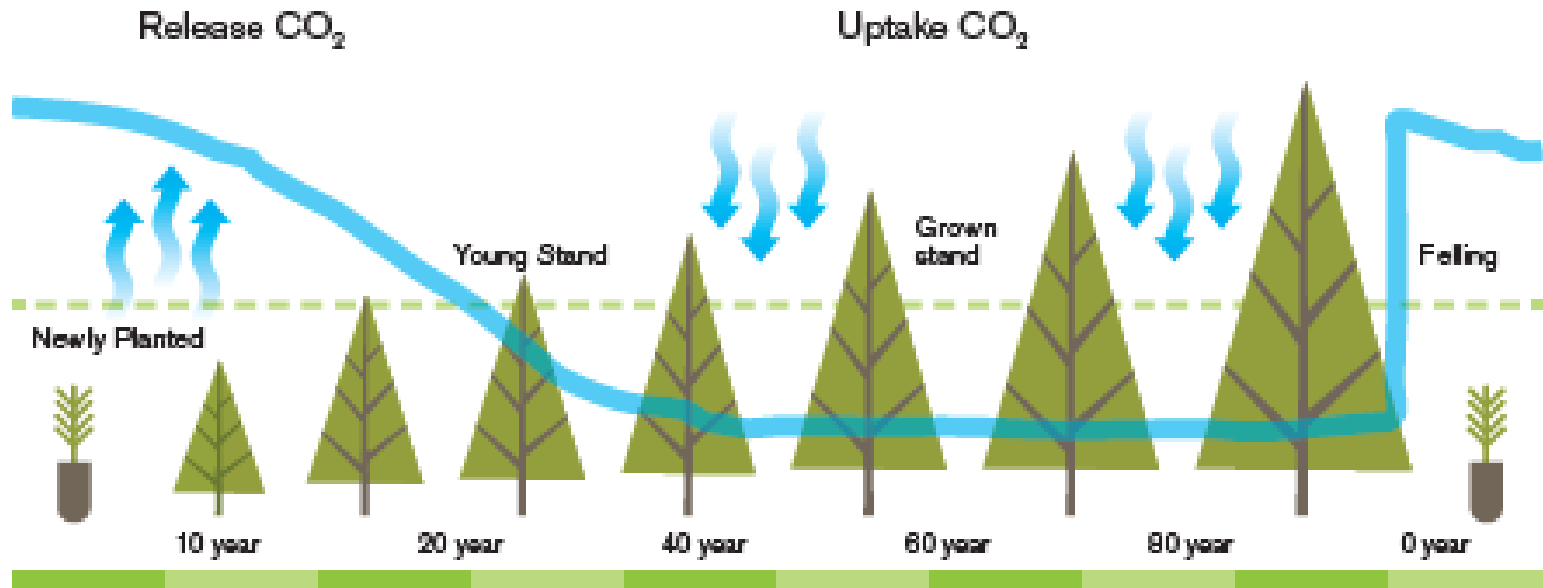


**TAXONOMY**  
Technical Report

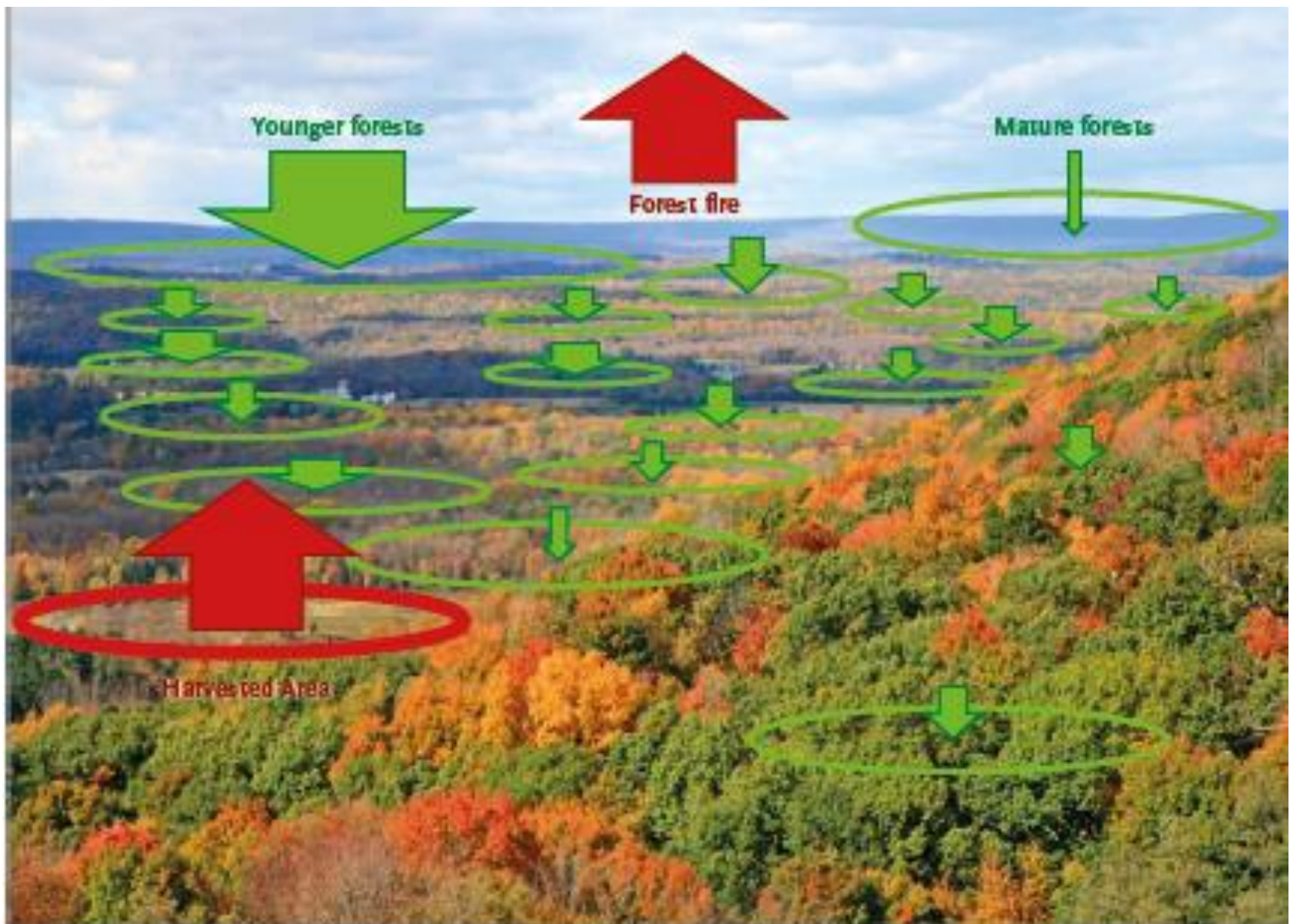
**Taxonomy Technical Report**

**June 2019**

Only 0.8% of Swedish forests are felled annually, while the remaining 99.2% continue to absorb CO<sub>2</sub>.



# Carbon losses in some stands are counteracted by carbon gains in other stands



# Forests – A powerful tool for the climate work

Increase Growth + Maximize Substitution = Increased Climate Benefit

1 m<sup>3</sup> wood subst.  
Coal 700 kg CO<sub>2</sub>



1 m<sup>3</sup> wood subst.  
Oil 500 kg CO<sub>2</sub>



1 m<sup>3</sup> wood subst.  
Gas 400 kg CO<sub>2</sub>



1 m<sup>3</sup> wood subst.  
Metal 1000-1500 kg CO<sub>2</sub>

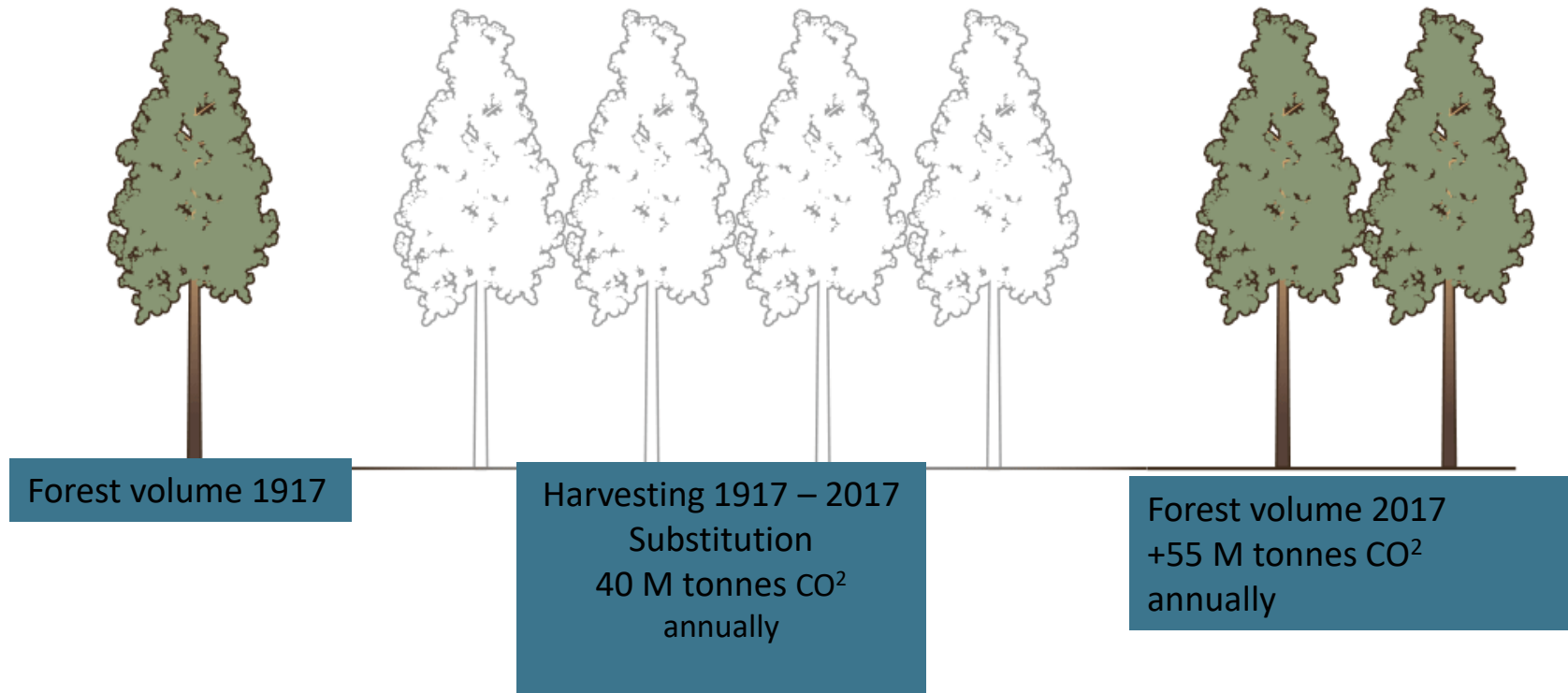


1 m<sup>3</sup> wood subst.  
Concrete 1500 kg CO<sub>2</sub>

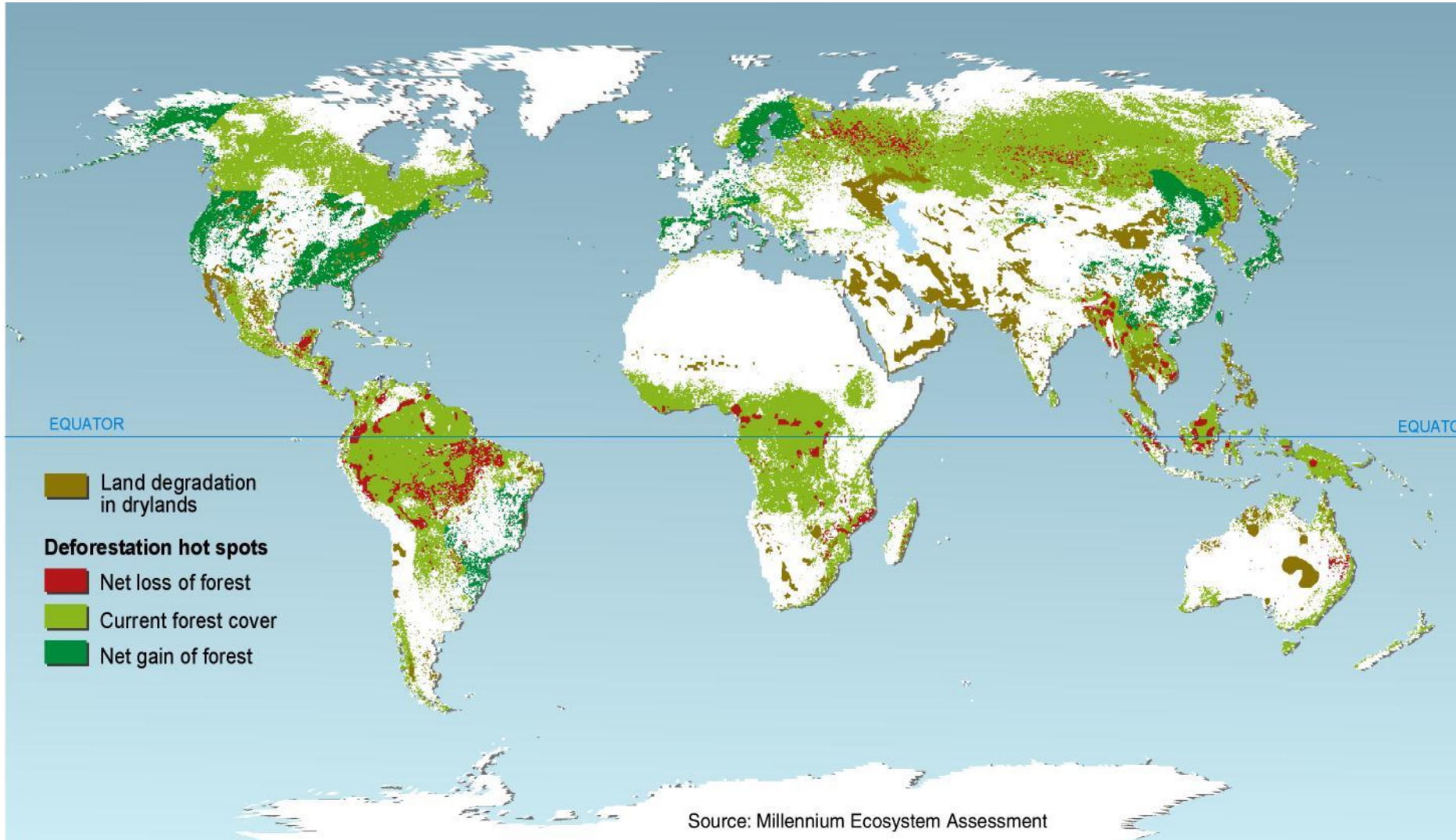


Climate policies  
should  
encourage  
increased forest  
growth

*Over the last 100 years the standing volume in Swedish forests has almost doubled and carbon stocks in forests and forest soil have quadrupled. At the same time, more than 4 billion cubic metres of timber have been felled and delivered to the society. Sustainable forest management has in other words proven to have a positive impact on climate change mitigation.*



# Global Deforestation Hotspots





# Conclusions

Sustainable and active forest management have a positive impact on climate change mitigation.

Investments in forest biorefineries can further boost this impact

- Technical risk
- Market risk
- Political risk

***Help us to reduce this risk otherwise investments will not happen !***



bioekonomi  
- regioner i samverkan



Welcome to BioFuel Region

Magnus Matisons

Project manager Bioeconomy, BioFuel Region

[magnus.matisons@biofuelregion.se](mailto:magnus.matisons@biofuelregion.se)

Hemsida

BIOEKONOMI – REGIONER I SAMVERKAN

BIOFUEL REGION | REGION NORRBOTTEN | REGION VÄSTERBOTTEN | REGION VÄSTERNORRLAND | REGION DALARNA | REGION VÄRMLAND

REGION ÖREBRO LÄN | VÄSTRA GÖTALANDSREGIONEN | REGION ÖSTERGÖTLAND | REGIONFÖRBUNDET I KALMAR LÄN | REGION HALLAND | REGION SKÅNE

MED FINANSIERING FRÅN

