SONAE ARAUCO
Taking wood further

1ST EUROPEAN CONFERENCE SMALL FOREST HOLDING'S
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ROME » ITALY

Session 7 - Global value chains & new business models

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SONAE ARAUCO

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WOOD BASED PANEL PLANTS

Portugal, Spain Germany & South Africa

	BEESKOW, DE	LINARES, ES	MANGUALDE, PT	MEPPEN, DE	NETTGAU, DE	OLIVEIRA DO HOSPITAL, PT	VALLADOLID, ES	WHITE RIVER, SA
MDF*	●		●	●			●	●
PB**	●	●			●	●		●
DP***	●	●			●	●		●
OSB****					●			

*Medium density fibreboard / **Particleboard / ***Decorative Panels / ****Oriented strand board

2

Resin and Impregnated Paper PLANTS

Portugal & Germany

1

Sawn wood and pallets PLANT

Spain

12

Wood waste recycling centers

Portugal & Spain

core & TECHNICAL Products

Particleboard (PB)
Medium density fibreboard (MDF)
Oriented strand board (OSB)
3DF (Three-dimensional fiberboard)

innovus Decorative Products

Decorative Panels (DP)| Laminates | Essence | Thin painted MDF | Coloured MDF | Edgebanding & Frames Coating

AGEPAN

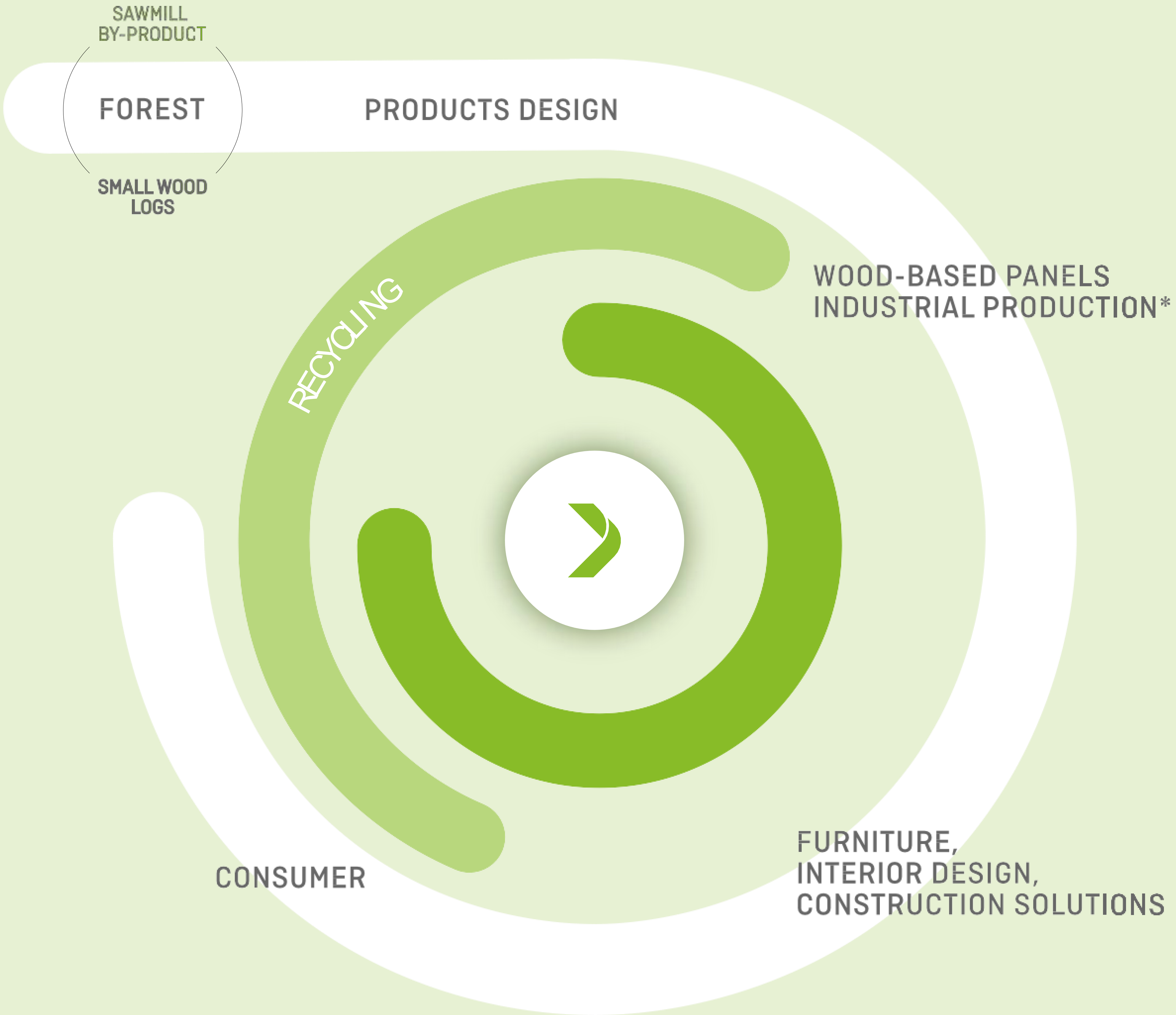
Quality solutions for timber construction: Wood fibre insulation boards | DWD products | OSB

BUSINESS PRACTICES:

The pine industrial value chain has a huge diversity of markets, products, and agents, in a complex and extensive value chain with high interdependence, which materializes through commercial transactions of wood, products and by-products between the forest owners, the panel industry, sawmills and the furniture industry.

ONE OF THE BEST EXAMPLES OF CIRCULAR BIOECONOMY

Sonae Arauco uses raw materials that otherwise would be treated as waste and turns them into value added products, that may be recycled at the end of their lifecycle.



*WOOD THAT CANNOT BE RECYCLED IS USED AS AN ENERGY SOURCE

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Wood availability

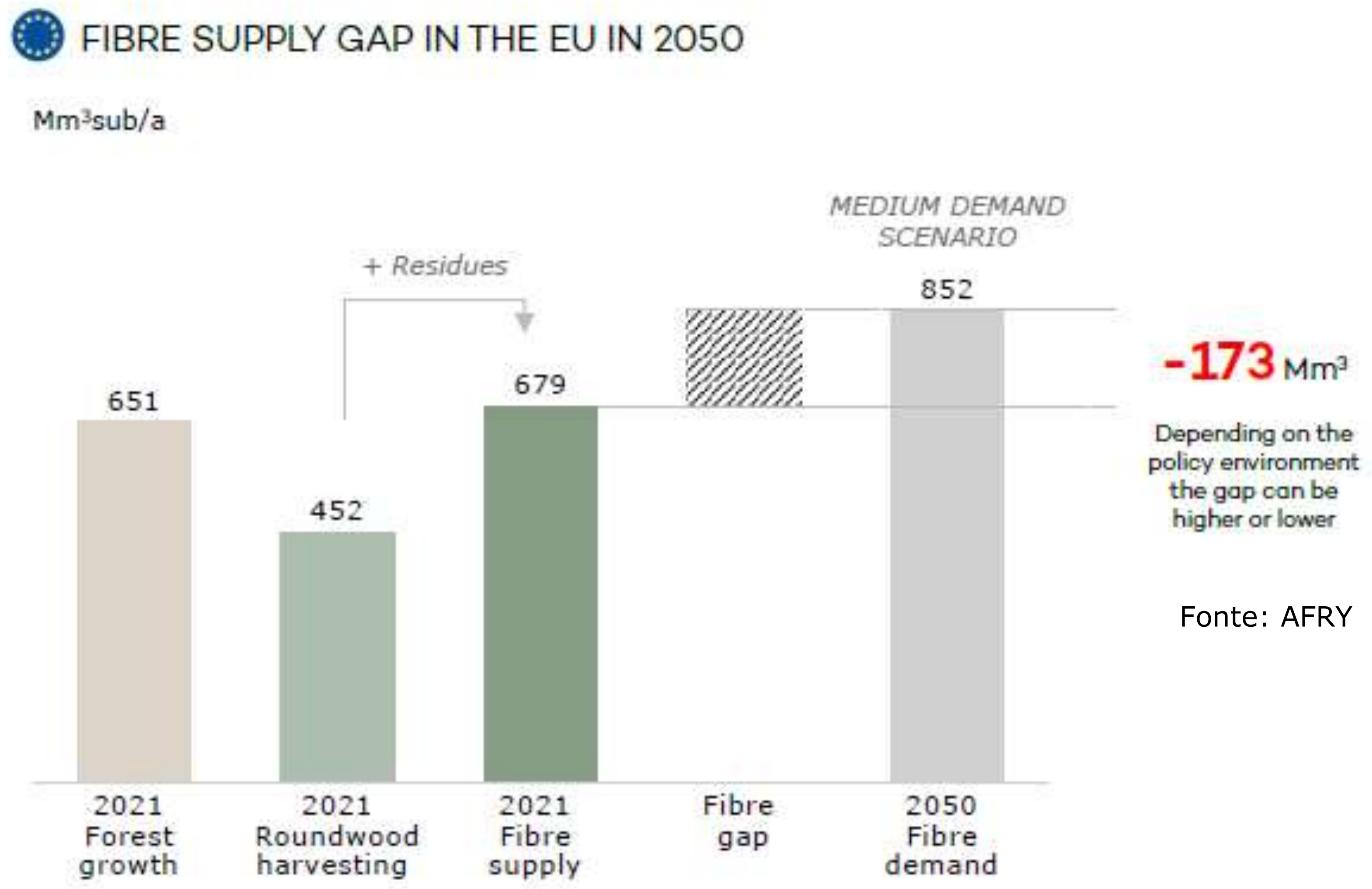
Several projections indicate a significant increase in wood consumption compared to the current situation.

Many companies in the forestry sector are making investments to increase industrial capacity in order to meet the rising demand in traditional segments.

There are several wood/biomass-based applications under development that will impact wood availability:

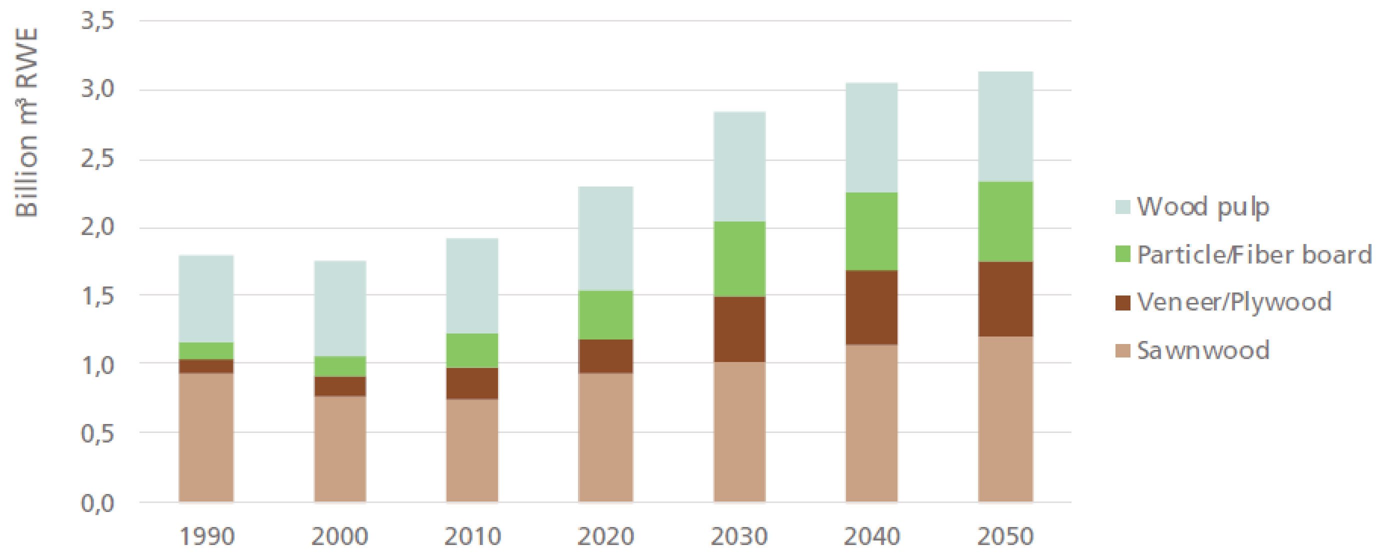
- Structural building materials used in new wooden buildings to replace fossil-based materials
- Packaging materials based on virgin fiber (cellulose) to replace plastic packaging
- Cellulosic textiles to replace synthetic textiles (polyester)
- Liquid biofuels to replace fossil-based fuels
- Biochemicals to replace fossil-based chemicals

And with…disruptive wood supply due to forest fires, storms and pest outbreaks (and disruptive consumption due to bioenergy)



Fonte: AFRY

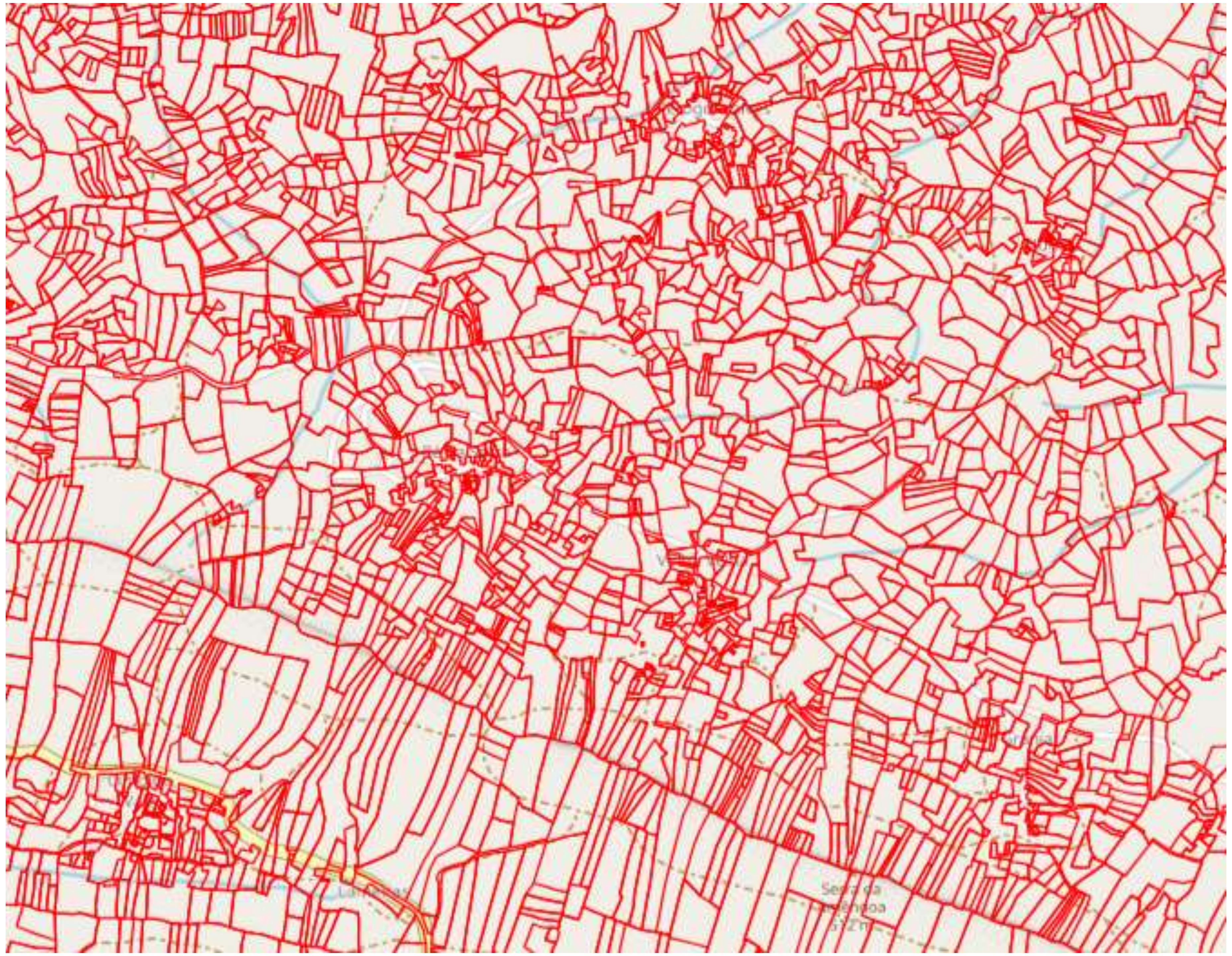
Figure 6. Global historical and projected consumption of wood products, 1990 to 2050

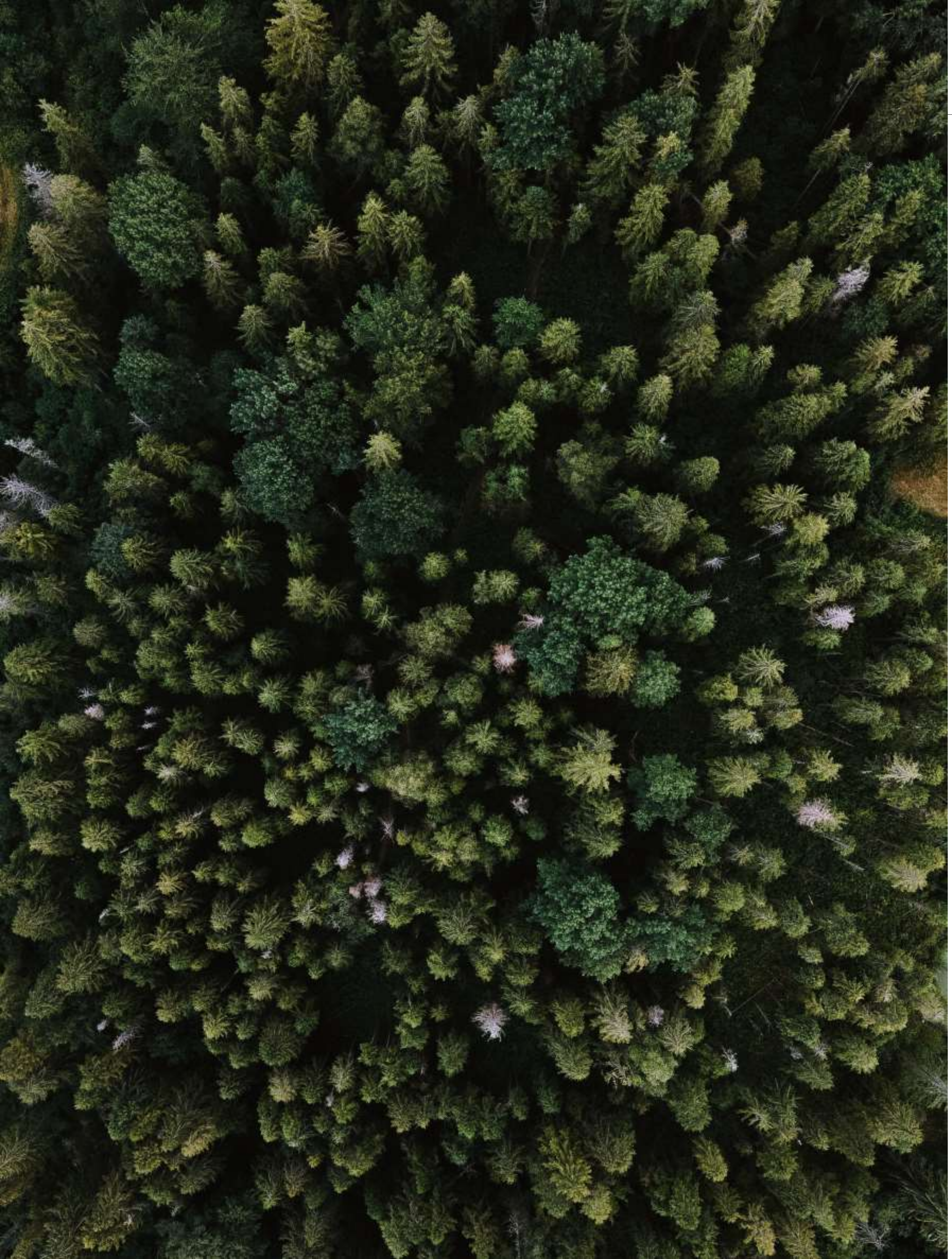


Fonte: FAO

Small forest owners – land reality from Portugal example

- 9,2 million hectares
- 11,5 million rural properties registered at Tax Authority
- The North and Center regions, which together make up 54% of Portugal's total area, concentrate 85% of the rural properties
- Size:
  - Alentejo region - average area of 9.9 ha
  - North region - average area of 1.3 ha
  - Center region - average area of 0.6 ha
- 30% of the rural properties are under indivisible inheritance (inheritance that has not yet been divided among the heirs after a person's death.")
- 51% of the land "deals" were under "mortis cause" transmission





Scale is very important

The dimension of the land plays a crucial role in forest management for several reasons:

Risk mitigation
Fixed costs dilution
Cost reduction
Viable operations mechanization
Long term investments rational strategic approach
Landscape approach
Multiproduct & multifunctional forest
Long term supply deals (products & ES)

Lack of scale = lack of profitability = tunnel vision = single forest solutions = short term profitability monoculture = unviable C2NF & continuous cover= unviable costly mechanization = risk exposure = high losses = lack of solutions = land abandonment

What are we doing?

- Testing different species, provenances, and families of pines in Portugal
- Getting inside forest owners' pains trough Antarr project (as operational manager)
- Increase knowledge transfer to forest management trough Sonae Forest (ForestLAB)

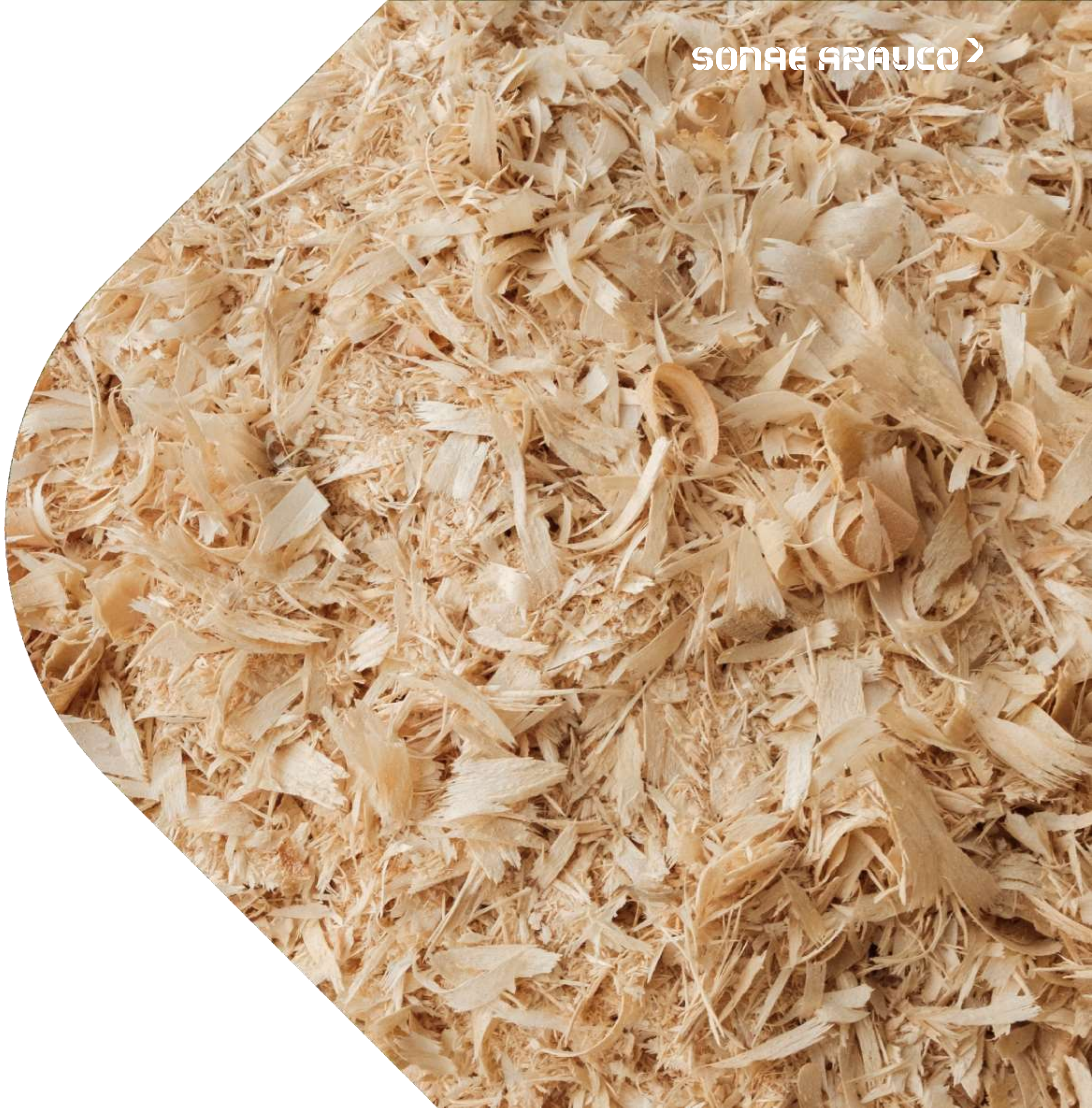
Floresta Sonae

- Develop collaborative projects through ForestWISE, such as rePLANT and TRANSFORM

forestwise

- Reinforce the work that Centro PINUS, an association representing the pine sector, has been developing in many critical areas (pine genetics, forest investment support policies, small forest holders support – pilot "Vale Floresta" & "Floresta Activa")

centro PINUS



FOREST R&D PROJECTS

Aims to enable forest producers in Portugal to access plants of high genetic quality and productivity, contributing to an increase in the profitability of the overall pine value chain.

Gene Radiata

rePLANT

5 species

Seeds from different families and origins: Portugal, Spain, France, Australia and Chile

47 HECTARES

In the Northern and Central Portugal, distributed in 16 different forest areas

Conclusions & Reflections regarding small forest owners

Land structure & Landowners

Forest owner with star treatment - fast track for the sale of forest property: a completely free procedure (zero tax) for both sellers and buyers.

Acquisition of forest land with access to a **credit line with subsidized loans** (which can be zero upon achieving objectives such as the size of aggregated consolidation, etc.) or non-refundable grants.

Program with FOO for the creation of contiguous/continuous units of at least 5 to 25 hectares (through land purchase with predefined values based on criteria, and incentives/bonuses based on levels of aggregated areas) – to place management units on the land market.

Public land consolidation program – similar to irrigated areas programs.

Question - can SMURF develop a cost benefit analysis study on forest land consolidation?

Active forest management

Program with FOO to create and manage **Long Term Formal Joint Management Areas** to mobilize small landowners with the aim of creating a scale compatible with investments and risk reduction – ensuring the mobilization of public investment through simplified and differentiated financial incentives.

Use of new technologies to improve forest profitability (example – Arboreal app can improve forest measurements at affordable costs – better deals).

Promote mixed financing models with realistic profitability returns and risk assessment through collaboration with the forestry industry or with key investors from a patient capital perspective (it is not philanthropy or patronage and involves management participation).

Question – Private funding can overcome the exclusive reliance on public funds, if it can get access to land – how to avoid small deals and high transaction costs?

Supporting Policies

Context costs – **legal and administrative simplification (Forest Omnibus).**

ES market development and regulation – to attract private investment under certain conditions.

Match the format and concept of investment support with the small forest owners needs & characteristics (one size does not fit all).

Replicate the environmental agri-schemes to forest investment support for small forest owners (e.g. traditional olive orchards).

Question – should FOO membership be legally binding?