



**Una cadena de valor  
*de la alimentación  
y de la madera competitiva***

**A competitive value chain  
*for food and wood***



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# Euskadi: un pequeño territorio de infinitas oportunidades

**Basque Country**  
*small surface, big  
opportunities*



# 01

# HAZI



We are an  
implementation  
vehicle for the  
Basque Government

# 01 OUR FUNCTION

- *To coordinate and catalyse strategic projects to boost the competitiveness and sustainability of the food and forestry value chain.*
- *To improve the rural and coastal environment of the Basque Country.*

# 01 HOW DO WE DO IT?

*Trough:*

- *Services that add value.*
- *Cooperation with partners and alliances.*
- *Specialised knowledge and information systems.*
- *Innovative solutions and services.*

# 02.1

## FOOD AND FOREST-TIMBER VALUE CHAIN

*Professionalism, competitiveness and adaptation.*

### Opportunities::

- Capacity for development and **innovation**.
- Generating **employment**.
- Proposal of **new products** and activities.

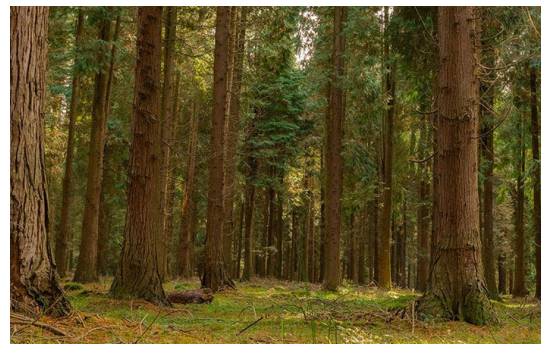
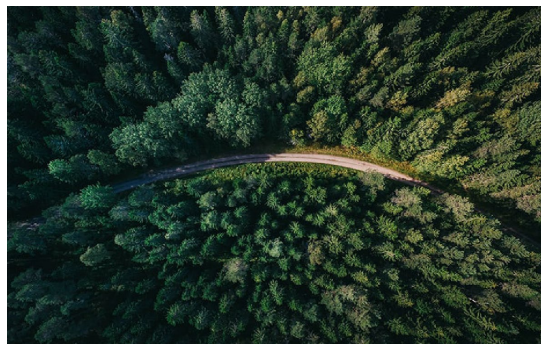
### What does HAZI do??

It works to provide greater professionalism, training, competitiveness and continuous improvement to people working in this field.

It offers a comprehensive service to support needs and adapt to new challenges in:

- 02.1.A **Training**
- 02.1.B **Entrepreneurship**
- 02.1.C **Cooperative innovation**
- 02.1.D **Digitalisation**
- 02.1.E **Forestry development**





## Knowledge

Forest Map of the Basque Country with **distribution mapping** of the wooded areas.

Development of systems based on satellite information for forest management:

- Remote sensing monitoring of diseases
- Species identification (Forest Map of Europe)
- Radar determination of phenology (Sentinel 1)
- Automated detection of logging

Calculating stock using LiDAR and photogrammetry.

Improving cubic meters calculation tools and making them available to the sector.

Silvicultural risk and variable models.

## Forest certification

Guarantees that the forest management practices meet **sustainability standards**.

We prepare the applications for obtaining SFM and COC certification (both, PEFC and FSC).

Development and maintenance of forestry planning applications:

- Gestfore
- EBIS
- Reforestation viewer

Applications and advice for companies on CE marking, Carbon footprint, Life-cycle analysis.

Internal audits for companies in timber value chain.

## Forest bioeconomy

In a collaboration with the Basque Alliance for the Bioeconomy, we **promote** this model based on forest resources and the creation of innovative products.

Technical Secretariat of the Basque Alliance for the Bioeconomy.

Development of PEMA (Strategic Timber Plan) and relationship with the value chain (Baskegur):

- Internationalisation
- Competitiveness
- Training
- Environment

Egurtek

Leadership of projects (Zurgrader, Iforwood, etc.)



## Main task. Developing the bioeconomy in the timber value chain.

We are familiar with the entire timber value chain (first and second processing) and technological knowledge centres (including universities)

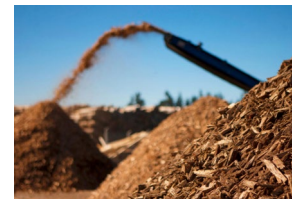
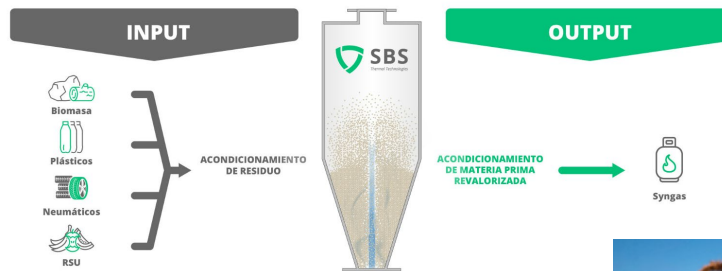


### Our greatest asset.

We have direct contact with practically all the sawmills in the Basque Country, who trust in us (because of our work in certification).



We act as a contact point between the technological centres, universities and companies in the value chain, to convert their research projects into commercial products and to help companies searching a solution for their current needs



We help entrepreneurs from technology centres and universities to launch start ups.



BIOECONOMY ECOSYSTEM



Since 2021 we evaluate and score the projects submitted to the Basque Government Bioeconomy Innovation Calls: we are on the field

In 2023 HAZI launched a circular forest bioeconomy Challenge related to Enkarterri Bioeconomy HUB.

**BASQUE BIOECONOMY ALLIANCE**

EUSKO JAURLARITZA GOBIERNO VASCO

hazi

ENERGIAREN EUSKAL ERAKUNDEA ENTE VASCO DE LA ENERGIA

GRUPO SPRI S.A.D.A.

NEIKER

EKONOMIAREN GARAPEN ETA ARQUITECTURA SAILA DEPARTAMENTO DE DESARROLLO ECONOMICO E INFRAESTRUCTURAS

SBS Thermal Technologies

Ma+D

SIMUNE ATOMISTICS

ctechnao coating technologies

onan ta zabal zazu

UPV EHU

Evolgene

ORLOGA INGENIERÍA

BiORP Bio Refinery Processes

birziplastik bizi bizirik

ERREKA

tajo GROUP

axalko

BaskEgur ASOCIACION DE LA MADERA DE EUSKADI SINGULARES CUADROS Y MATERIAS

biotermiak

egoin WOOD GROUP

GLOBAL ARANGUREN

LANA 60 years

Forestry and timber

cikautxo GROUP

Rubber solutions for Automotive; Household appliances; Elastomeric materials;

MAIER Automotive

Papresa we are paper

Smurfit Kappa Pulp&Paper

SKFK Clothing

MARIA DUOL SKIN SCIENCE

Cosmetics

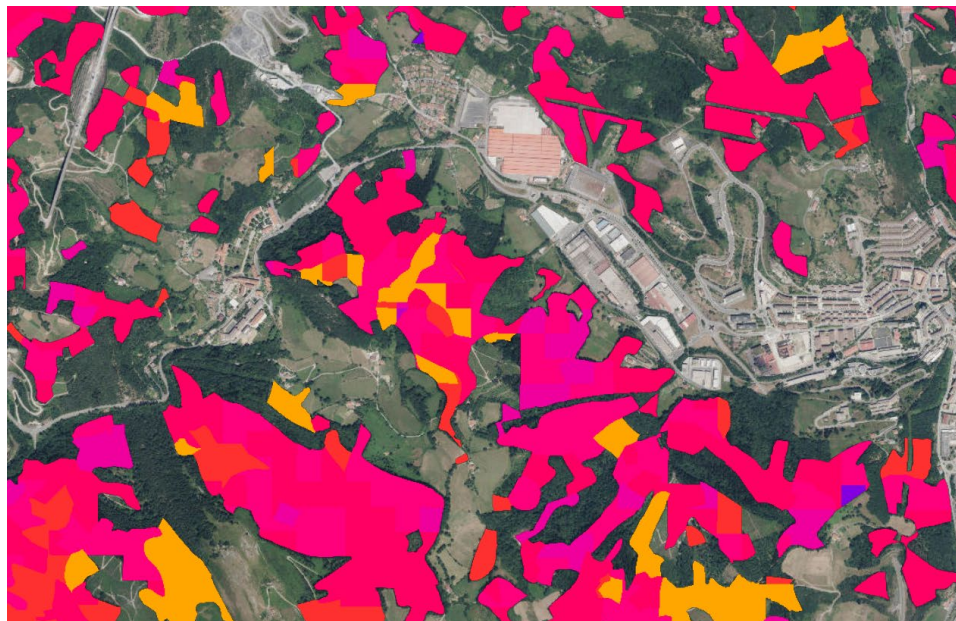


 hazi



EUSKO JAURLARITZA  
GOBIERNO VASCO

## FORESTRY DEVELOPMENT



722.977 Ha

54,8% (396.191 Ha) of the Basque Country is covered by trees.

PARA OBTENER 1.300.000 Tn DE TRONQUILLO y SIERRA (DE RADIATA) SE NECESITAN APROXIMADAMENTE 4.080 HECTAREAS DE CORTA FINAL

Especie	Superficie 2022 (ha)	Superficie 2021 (ha)	Superficie 2016 (ha)
<i>Pinus sylvestris</i>	17.493	17.476	17.511
<i>Pinus laricio</i>	13.857	13.896	13.885
<i>Pinus pinaster</i>	8.002	7.669	6.768
<b><i>Pinus radiata</i></b>	<b>102.488</b>	104.521	123.921
<i>Pseudotsuga menziesii</i>	8.412	8.360	7.360
<i>Larix spp</i>	7.668	7.683	7.915
<i>Cham. lawsoniana</i>	3.184	3.182	3.297
<b>Total coníferas</b>	<b>169.693</b>	170.475	184.590
<i>Quercus robur+petraea</i>	17.488	17.427	16.598
<i>Quercus pyrenaica</i>	13.258	13.258	13.110
<i>Quercus faginea</i>	26.892	26.856	26.665
<i>Quercus ilex</i>	26.757	26.764	26.364
<i>Eucalyptus</i>	25.316	24.771	18.194
<i>Quercus rubra</i>	4.121	4.103	3.907
<b><i>Fagus sylvatica</i></b>	<b>55.291</b>	55.225	54.619
<b>Bosque mixto atlántico</b>	<b>38.138</b>	38.011	35.414
Total frondosas	226.498	225.496	212.633
Total especies	396.191	395.972	397.223

FORESTRY DEVELOPMENT

D=100km

BIZKAIA

GIPUZKOA

ARABA / ÁLAVA



FORESTRY DEVELOPMENT

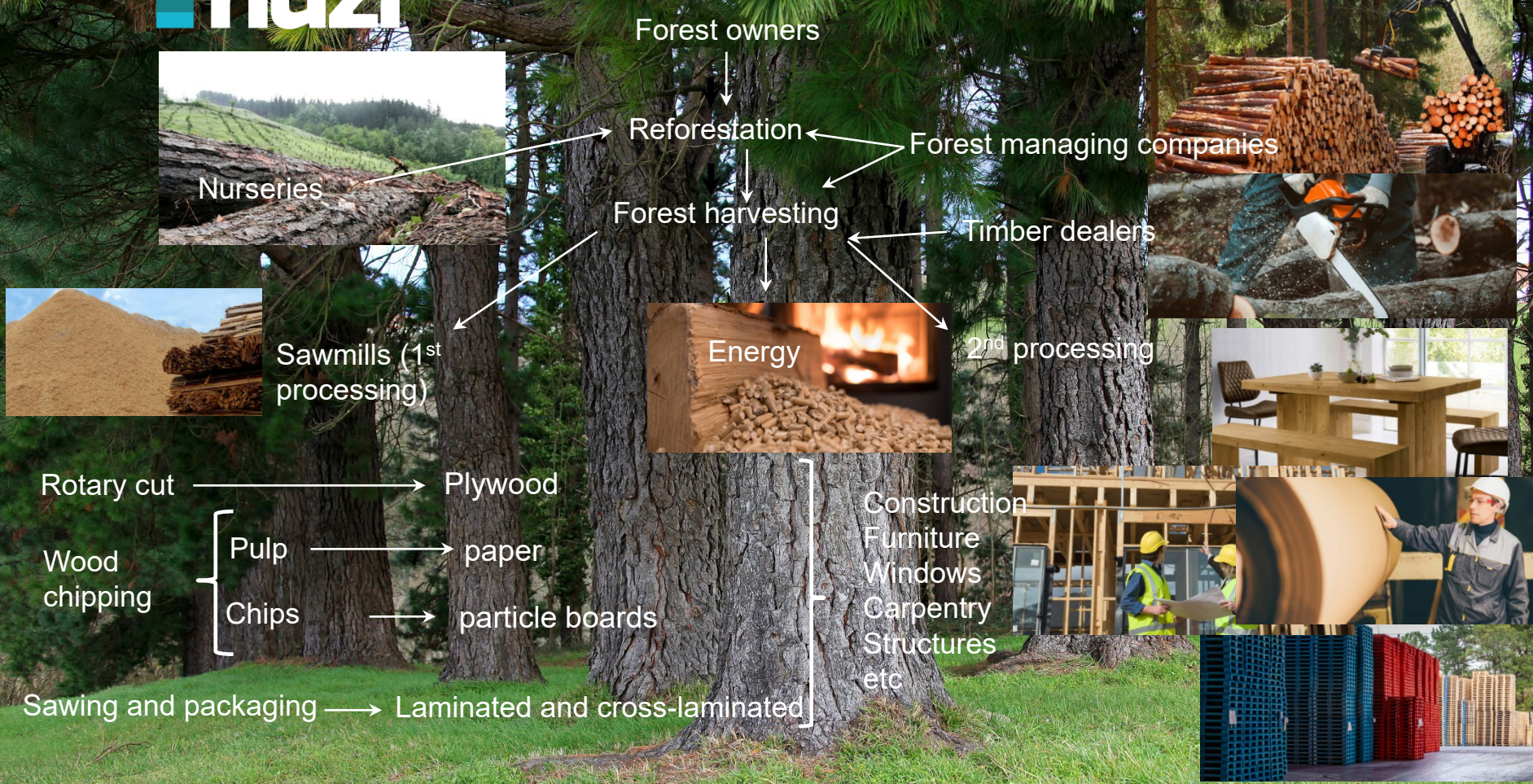
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BIZKAIA

GIPUZKOA

ARABA / ALAVA







## FORESTRY DEVELOPMENT

### Aprovechamientos 2020

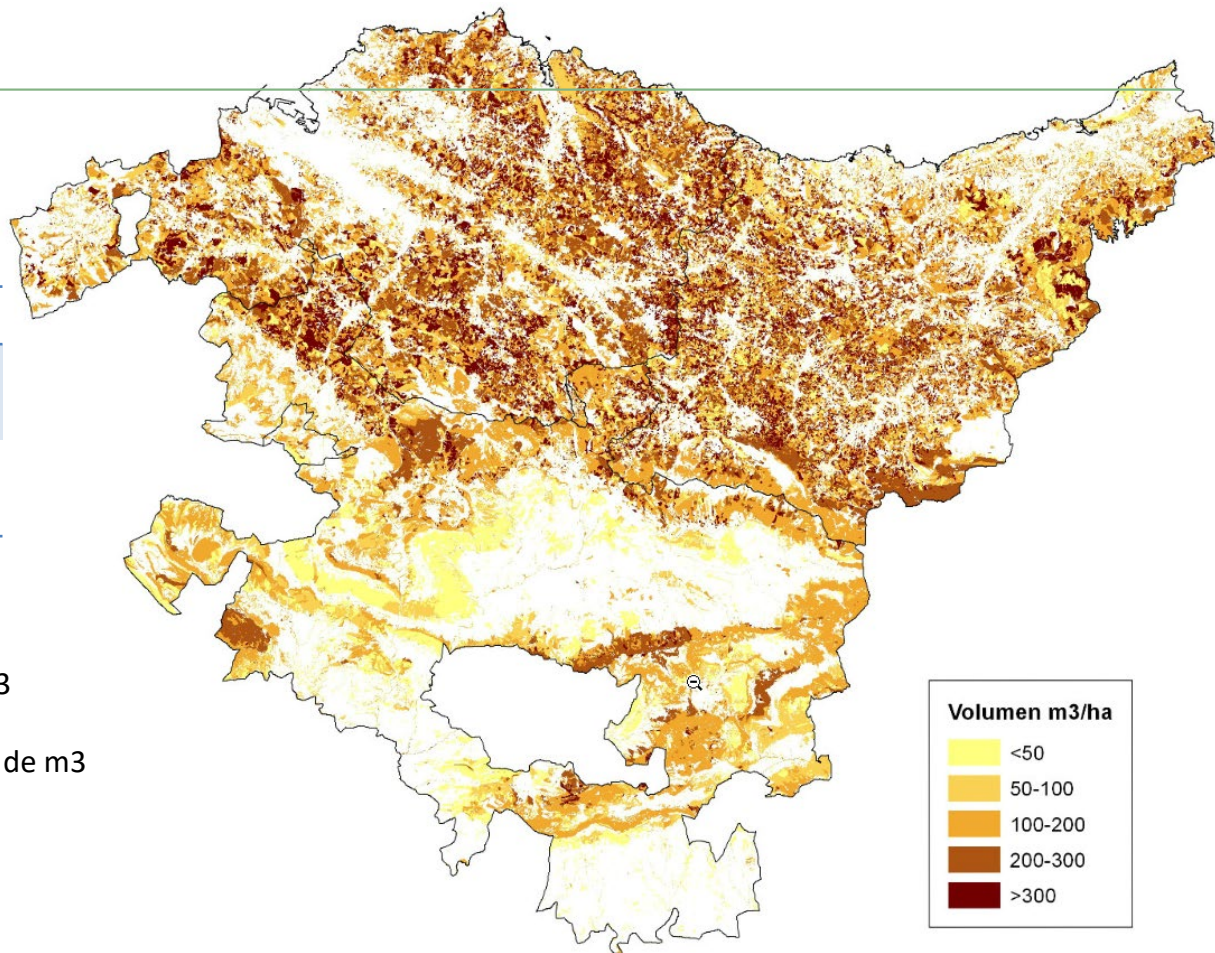
Bosque de plantación	2.332.633 m <sup>3</sup>
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Bosques naturales	15.743 m <sup>3</sup>
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Stock 73,9 millones m<sup>3</sup> madera

Crecimiento anual de 4,5 millones de m<sup>3</sup>

Aprovechamiento anual de 2,5 millones de m<sup>3</sup>



## FORESTRY DEVELOPMENT

EL MODELO DE NEGOCIO DE CGT NO COMPITE CON LOS MERCADOS ACTUALES DE LA MADERA ASERRADA. LA MATERIA PRIMA QUE UTILIZA, Y TIENE SENTIDO UTILIZAR POR CARACTERISTICAS FÍSICAS Y DE MERCADO, ES EL SUBPRODUCTO: ASTILLAS, SERRIN Y CORTEZA.

EN EL PROCESO DE ASERRADO LOS RENDIMIENTOS SUELEN RONDAR:  
50% MADERA ASERRADA  
50% SUBPRODUCTO (corteza, astilla y serrín)

2.000.000 Tn ROLLO VERDE = 1.000.000 Tn SUBPRODUCTO VERDE

¿Hay suficiente subproducto forestal en Euskadi para una facility de biocarbon?

## FORESTRY DEVELOPMENT

CGT en Canadá produce 20 tn/día de biocarbon a partir de astilla de madera de frondosa, que durante 200 días de producción al año, suponen 4.000 Tn de biocarbon.

4.000 Tn biocarbon → 24.000 Tn de subproducto forestal 45-60% HR

1Tn de biomasa al 15%HR → 300 kg de biocarbon

1Tn de biomasa al 15%HR → 2 Tn de biomasa al 45-60%

1.000.000 Tn 45-60% HR → ?

¿CUAL ES EL VALOR AÑADIDO QUE TIENE EL BIOCARBON RESPECTO A LOS ACTUALES DESTINOS DEL SUBPRODUCTO?

¿PUEDE COMPETIR UNA FACILITY DE BIOCARBON CON LOS ACTUALES COMPRADORES DE SUBPRODUCTO?



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