



# Pilot action in Emilia-Romagna

**Feasibility study of a local sustainable wood value chain for the social housing building sector in Emilia-Romagna**

*Irene Diti - ART-ER*

**LIFE Be-WoodEN Final Conference**

**Tackling embodied carbon through wooden construction**

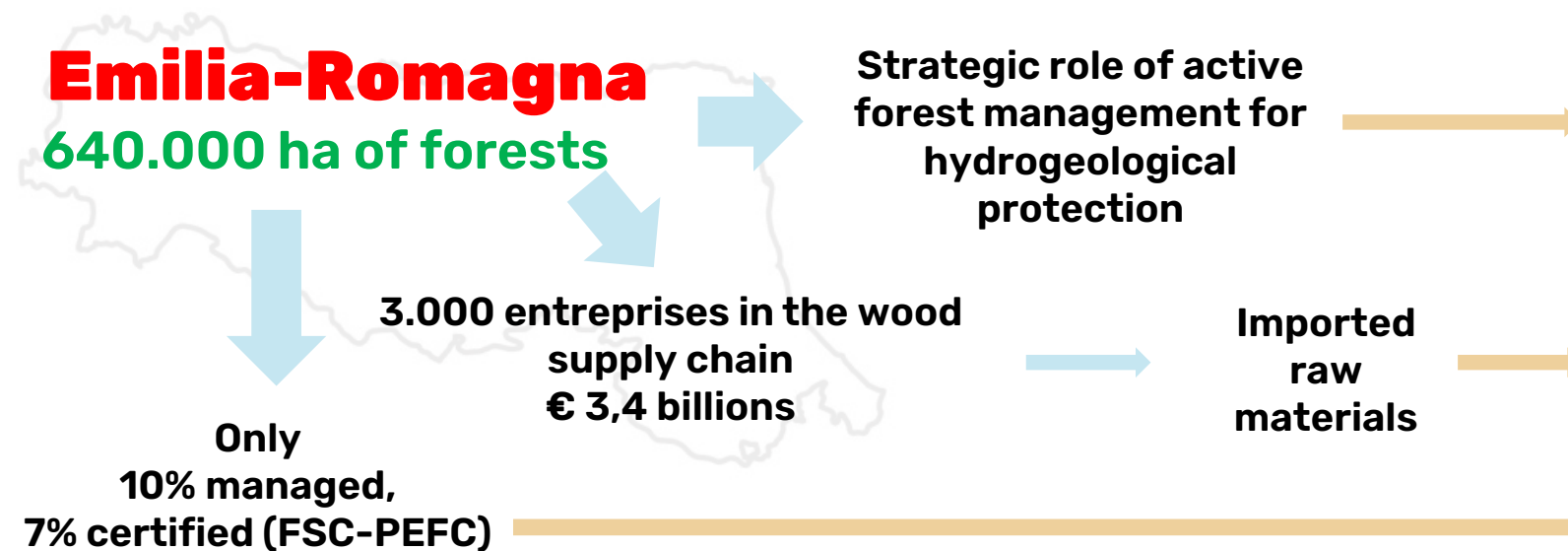
*The role of bio-based materials and the New European Bauhaus in building greener futures*

*03<sup>rd</sup> December 2025*

*Brussels*



# THE PILOT ACTION IN EMILIA-ROMAGNA

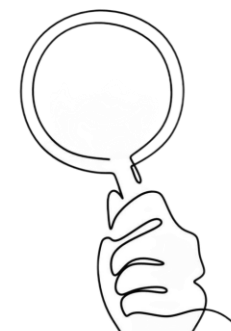


The action consists in assessing the feasibility of a local **sustainable supply chain** for use in the building industry and aiming at increasing its penetration in the **social/affordable housing sector**.

## SCALE OF THE ANALYSIS

Based on the topic addressed the focus can be limited to the **pilot area (Reggio-Emilia Province)** or extended to the entire **Emilia-Romagna Region**

- Enhance hydrogeological safety
- Promote natural capital
- Support forest planning
  - Promote forest certification
  - Increase the competitiveness of the value chain



## FOREST RESOURCES

- WOODS IN EMILIA-ROMAGNA
- TARGET SPECIES FOR CONSTRUCTION SECTOR IN RER
- WOOD AVAILABILITY IN RER

## FORESTRY AND WOOD PRODUCTS CERTIFICATION

FSC  
PEFC



- TERRITORIAL ANALYSIS
- SUSTAINABLE FOREST MANAGEMENT
- WOOD PRODUCTS

## WOOD SUPPLY CHAIN

- FOREST
- CONSTRUCTION
- TIMBER
- FURNITURE

## SOCIAL HOUSING

- SOCIAL HOUSING FRAMEWORK
- TERRITORIAL ANALYSIS

## NEB APPROACH

- NEB COMPASS

# WOODEN vs TRADITIONAL BUILDINGS

## BUILDING MODEL

### Reference building (project)

Existing building in Reggio Emilia - **ACER Reggio Emilia**

**5 floors**

**20 units**

### TRADITIONAL

- FUNDATIONS
- STRUCTURAL FRAMEWORKS
- FLOORS
- ROOFING
- MASONRY AND PARTITION WALLS
- WATERPROOFING AND INSULATION
- SUBFLOORS & FLOOR FINISHES

### INNOVATIVE



## 1. LCA - Life Cycle Assessment (EN 15804)

- Global Warming (GWP)
- Depletion of stratospheric Ozone (ODP)
- Photochemical Ozone Formation (POCP)
- Acidification
- Eutrophication (EP-marine, EP-freshwater, EP-terrestrial)
- Eco-toxicity
- Use of resources (PERE, PENRE, FW, fossil-non fossil)
- Waste and output flows

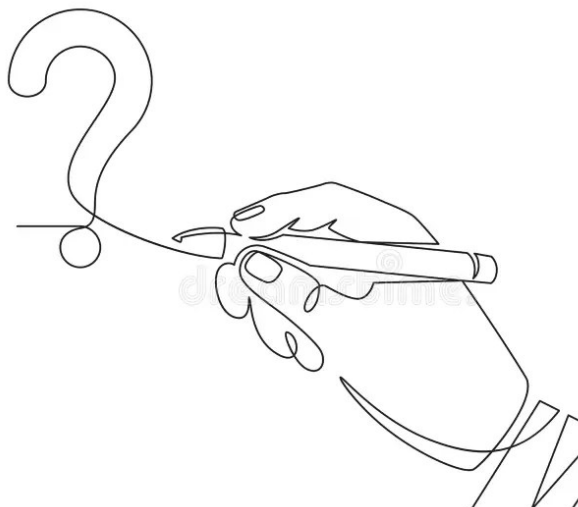
## 2. Cost analysis

## ACCEPTABILITY SURVEY



with the support of ACER Reggio Emilia

### ERP/ERS/AFFITTO PER LA CASA users



- APPEARANCE
- AESTHETIC/BEAUTY
- SAFETY
- COMFORT
- COSTS
- SUSTAINABILITY
- INTEREST IN PURCHASE/RENTAL
- BENEFITS OF WOODEN HOUSES
- ORIGIN OF MATERIALS
- WILLINGNESS TO PAY

- 81 responses

### CONSTRUCTION ENTERPRISES

- WOODEN CONSTRUCTION FEASIBILITY

- 6 companies



# RESULTS & CONCLUSIONS

## GREEN BUSINESS MODEL FOR LOCAL WOOD VALUE-CHAIN

### LOCAL WOOD USES

### ENVIRONMENTAL PERFORMANCE

### COSTS

### ACCEPTABILITY

**STRENGTHS AND  
WEAKNESSES OF REGIONAL  
WOOD SUPPLY CHAIN**

**NON-STRUCTURAL BARRIERS**



**POTENTIAL MEASURES TO BE  
APPLIED AT LOCAL AND REGIONAL  
LEVEL TO VALORIZE THE LOCAL  
WOOD SUPPLY CHAIN FOR SOCIAL  
HOUSING**

## GREEN BUSINESS MODEL FOR LOCAL WOOD VALUE-CHAIN

### LOCAL WOOD USES

### ENVIRONMENTAL PERFORMANCE

### COSTS

### ACCEPTABILITY

**Availability in Emilia-Romagna of timber suitable for structural use in construction, but an assessment of quantities is missing.**  
Emilia-Romagna is a major timber processor but a very poor producer (around 100% imported).

**The supply chain includes some areas of excellence but also significant gaps, especially in the early stages.**  
There are also knowledge gaps.

**The use of wood in construction generates clear environmental benefits, highlighted through the LCA comparative analysis.**

**Environmental benefits can be valorised through certification, which could help increase revenues along the supply chain.**

**Opportunities for a local construction timber chain in Emilia-Romagna are linked not only to planning and certification but also to ensuring a cost that is competitive with imports.**

**Citizens perceive wooden houses positively if “you can see that they are made of wood”.**

**There is low willingness to pay more for locally sourced wood**



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# LIFE BE-WoodEN

Buildings and Education in Wood Ecosystem for the New European Bauhaus

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**<https://lifebewooden.unige.it>**

Project Leader



**Università  
di Genova**

**DAD DIPARTIMENTO  
ARCHITETTURA E DESIGN**

Project Partners



REGIONE LIGURIA



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