



D4.1

Report about Innovation Lab on valorization of environmental performances in the wood supply chain

WP4/Task T4.1



Partners



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1. SCOPE AND METHODOLOGY

The application of wood materials in the construction sector, considering all the supply chain, generates environmental benefits during the life cycle of the buildings. These environmental benefits can be valorized to support the supply chain actors (starting from forest management), the buildings and spaces appeal and the territory attractiveness.

The innovation lab of Emilia-Romagna region is focused on the valorization of environmental performances in the wood supply chain aimed at the elaboration of a toolkit for companies, professionals and public officers.

The Lab has been carried out between October 2024 and March 2025 through the institution of a Focus Group composed by experts of environmental certification schemes, representatives of supply chain and of public administration.

Organizations participating to the Focus Group are:

- National Cluster Italia Foresta Legno
- Emilia-Romagna Regional Authority
- EMAS Italy Committee
- CREA (leading Italian research organization dedicated to the agri-food supply chains)
- Certiquality
- Green building council Italy
- PEFC Italy
- ART-ER
- FederLegnoArredo (FLA)
- FLA – Assoimballaggi (packaging)
- FLA – Edilegnoarredo (furnitures)
- FLA – Assopannelli (panels)
- FLA – Assolegno (wood)

FLA members represent about 750 companies distributed in all the wood supply chain.

The first meeting of the group has been held on 22nd October, in which the main objective has been the sharing of knowledge about the relevant certification schemes and the point of view of experts.

The second meeting has been 5th December, in which the main objective has been the sharing of the phases of the supply chain and the point of view of enterprises about the applicability of the certification schemes.

After these meetings a draft of the toolkit has been developed by ART-ER and feedback by the members have been collected through a google form expressing strengths and weaknesses of the toolkit.

The toolkit has been presented in a workshop at Bologna, 20 March 2025.

2. FOCUS GROUP ACTIVITY

During the first meeting of the Focus Group, held in Bologna the 22nd October 2024, ART-ER presented the aim of the work and the goal of the group.

The experts presented the features of the following environmental certification schemes:

- sustainable forest management and chain of custody (e.g. PEFC, FSC)
- environmental management system (EMAS and ISO14001)
- eco-labels (e.g. ISO14067 carbon footprint, EU Ecolabel, EPD)
- environmental certification of buildings (e.g. LEAD, BREEAM)
- voluntary carbon credits (e.g. EU CRCF, VCS)

The presentations have been followed by a discussion in which companies and public administrations have exposed doubts and questions.

Main topics:

- To maximize benefits is important to approach these issues from a supply chain perspective, and not from a single company.
- Environmental certifications can increase the competitiveness of companies, but is important to increase the awareness of producers and consumers.
- Sustainable and Local are a great connection but difficult to find at the moment. The work of the focus group will also contribute to promoting the environmental certification of forests of Emilia-Romagna.
- A harmonized forest management able to consider both productive function and conservation function represents the goal of regional policy.
- Is important to use transparent tools, because companies, in particular if small, see the certification as an obstacle and not as a simplification
- A certification gives benefits in terms of image, differentiation from competitors and legal requirements
- It is important to make clear the differences among the different certification schemes.

The slides of each expert, written in Italian language, have been shared within all the members. The participants to the meeting were 25.

During the second meeting of the Focus Group, held on-line the 5th December 2024, ART-ER and FLA presented a framework of the defined phases of the wood supply chain in the construction sector and a proposal of attribution of the certification schemes analysed in October to the relevant supply chain phases. The participants to the meeting were 14. The considered supply chain phases are:

- Forestry
- First woodworking
- Wood construction
- Wood finishes for construction and outdoor furniture

- Panels and semi-finished products
- Furniture and furnishings
- Packaging

After a preliminary assignment of the environmental certifications to the phases, the producers have shared their reflections about the following issues:

Difficulties in terms of

resources needed (human and financial)
 knowledge required
 complexity of application
 credibility and recognition
 market return from a supply perspective
 market availability from a purchasing perspective

Opportunities in terms of

access to new markets
 advantages in pricing
 increased competitiveness
 image
 organizational improvement
 communication potential

Main highlights from the discussion:

Difficulties

- The majority of supply chain enterprises are medium-small companies, with few large producers. Small entities have poor internal resources and little awareness of these issues. Therefore, a strong awareness of these issues is needed
- Products, in order to be certified, have to have a higher price and this makes them lose competitiveness to countries that are freer from regulations; however the added value enhances the product for the consumer
- Fragmentation of forest properties is a limit to the implementation of certified forest management.

Opportunities

- The tool can be useful in providing tools to companies in the supply chain (roadmap)
- The benefits are related to competitiveness in the market, including from a business-to-consumer communication point of view
- Environmental certifications can improve communication strength and image
- Environmental certifications can improve the organizational improvement

- Cluster certification able to aggregate small companies represent a suitable approach.



Focus Group Meeting (22th October 2024 - Bologna)

2.1 The toolkit

The toolkit (Annex I) has the form of an interactive pdf file and is a sort of map to support strategic decisions for companies belonging to all the phases of the wood supply chain.

But it could be useful also for professionals involved in the design at different phases (architects, engineers, agronomists) and for policy officers engaged in public projects or calls for funding.

The toolkit is conceived to approach both environmental benefits due to the adoption of wood and the enterprises objectives.

The considered **environmental benefits** are:

- resilience and forest protection
- protection and restoration of ecosystem services
- reduction of process environmental impacts
- reduction of product environmental impacts
- reduction of building environmental impacts
- reduction of CO₂ emissions
- absorption of CO₂
- increased circularity

The considered **enterprises objectives** are:

- increase corporate and consumer awareness
- ensure effective and transparent communication
- access new markets
- accessibility to public tenders
- organizational improvement
- improving the environmental quality of the product
- enhancement of environmental benefits and increased profitability

For both the categories is highlighted the relation to the supply chain phases and to the environmental certification schemes suitable to satisfy them.

For each scheme the toolkit offers a brief description and links to institutional websites and documentation.

The draft of the toolkit has been assessed by the Focus Group members, in order to define strengths and weaknesses.

The toolkit has been reviewed by the participant to the Focus Group considering the following areas:

- a) *format of the toolkit*: the iPDF is accessible? Is it easy to use?
- b) *strategic role of the toolkit*: do you consider the toolkit a decision-support tool? Is it useful to guide users in their decisions?
- c) *clarity of contents*: contents are presented in a proper manner? Is the used terms/taxonomy appropriate?

- d) *completeness*: the selected elements of the decisional path (environmental benefits, business objectives, supply-chain segments and tools' description) provide a comprehensive overview?
- e) *content quality and correctness*: any comments about gaps or errors in tools description.

Feedbacks have been collected in the form of textual contribution or responses to a questionnaire (via Google form) sent to the participants.

For the online survey, questions have been asked using a “linear scale approach” for an assessment from 1 (minimum) to 5 (maximum).

Main strengths and weaknesses were outlined. The feedbacks have been reviewed and implemented in the final version of the toolkit.

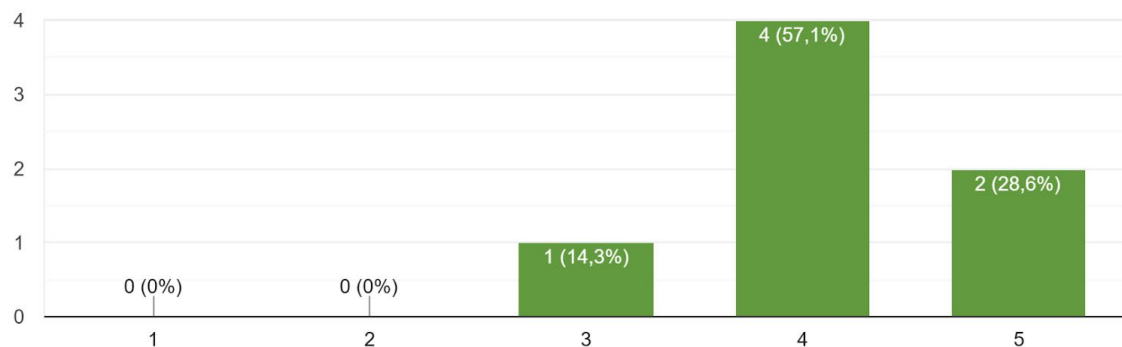
The presented results take into account the whole contribution received (text and survey answers). No negative feedback were received.

An analysis of the responses is reported below:

Format of the toolkit: the toolkit was considered accessible and easy to use (4: 57.1%; 5: 28.6%; 3: 14.3%). The visual approach (icons and infographics) and the external links included in each tool for additional insight were appreciated. An introductory guidance was suggested to ensure a higher comprehension of the decisional paths proposed.

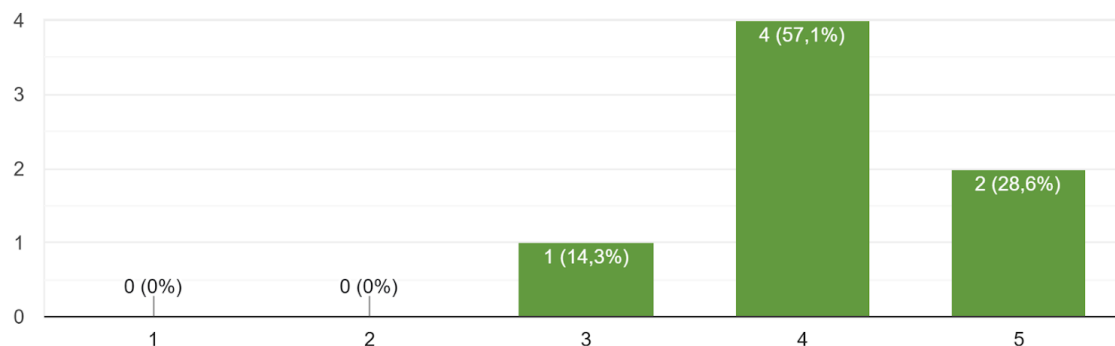
Il PDF interattivo è fruibile?

7 risposte



Il PDF interattivo è facile da usare?

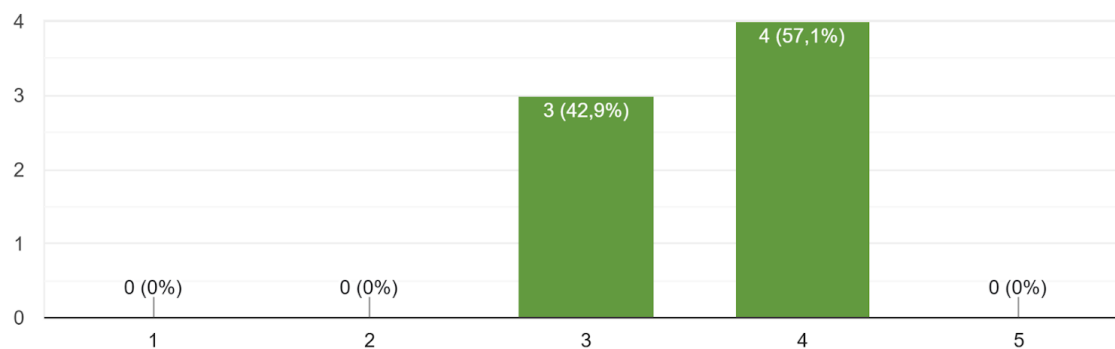
7 risposte



Strategic role of the toolkit: the toolkit was considered a valid support for the sector (5: 57.1%; 4: 42.9%). ***Questions*** (translation): Is the interactive pdf usable (1)? Is the interactive pdf user-friendly?

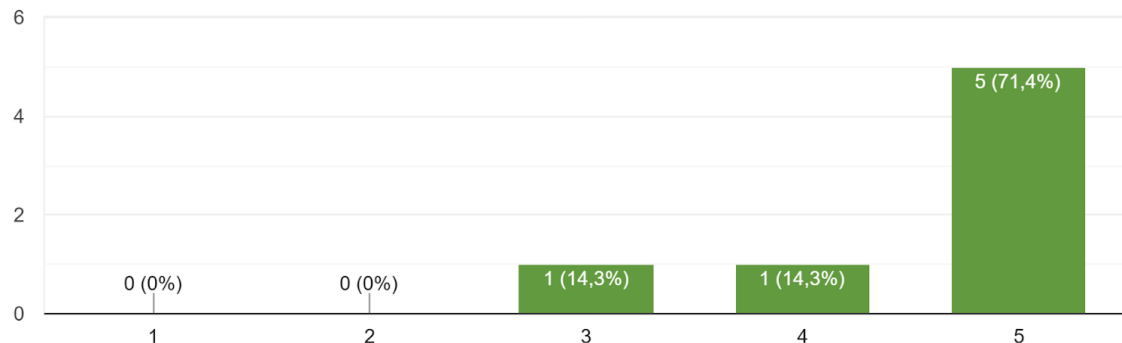
Ritenete il toolkit uno strumento di supporto alle decisioni?

7 risposte



Ritenete il toolkit una mappa che aiuta ad orientarsi?

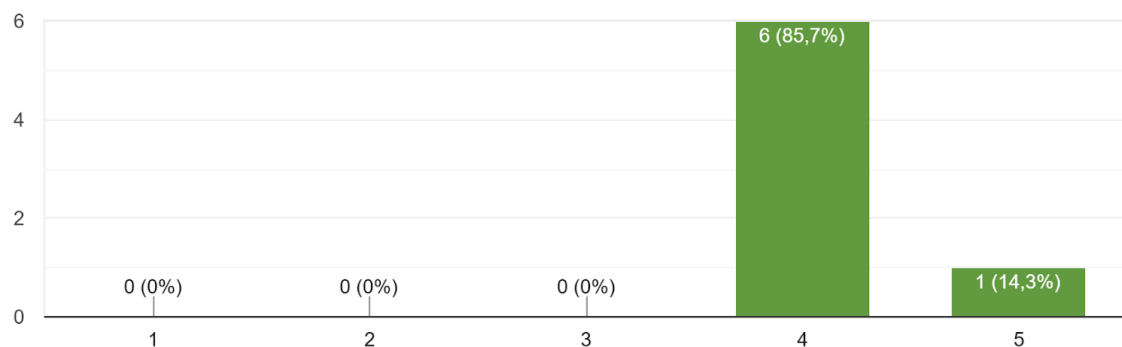
7 risposte



Clarity of contents. contents were deemed to be correctly presented (4: 85.7%; 5: 14.3%) also take into consideration the synthesis that characterize the tool. The terminology and languages used were suitable (5: 57.1%; 4: 42.9%) particularly considering that primary users are stakeholders and professionals within the wood sector. *Questions* (translation): Do you consider the toolkit a decision support tool? Do you consider the toolkit a map to help you find your way around?

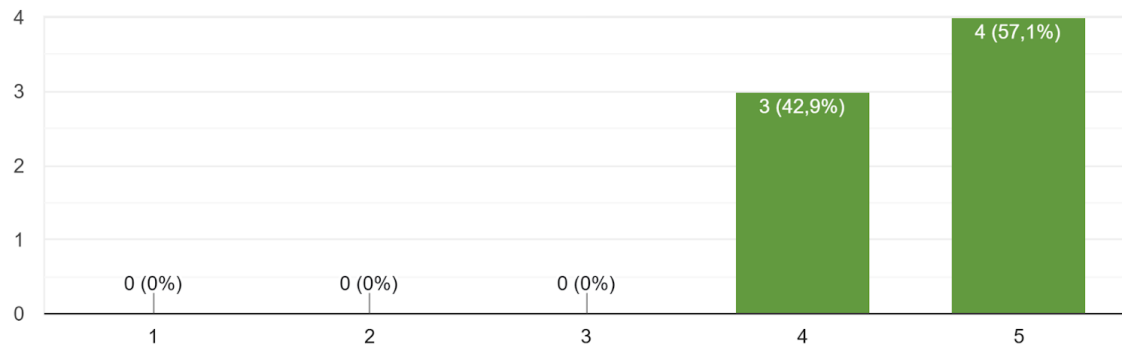
Le informazioni sono presentate in maniera consona?

7 risposte



Il linguaggio utilizzato è appropriato?

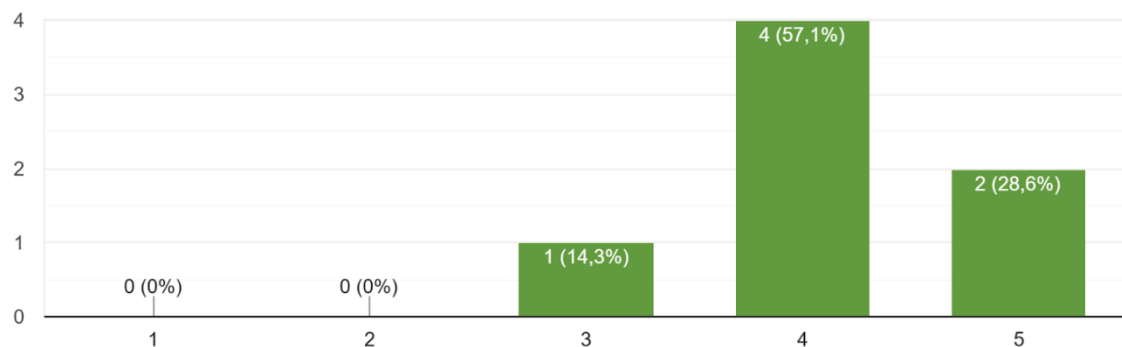
7 risposte



Completeness: the decisional paths, organized and categorized in steps, were considered effective and complete (4: 57.1%; 5: 28.6%; 3: 14.3%). ***Questions*** (translation): Is the information presented in an appropriate manner? Is the language used appropriate?

Benefici ambientali, obiettivi aziendali, segmenti della filiera ed elementi descrittivi degli strumenti forniscono una visione esaustiva?

7 risposte



Content quality and correctness. A few integration in the description of the valorization tools were proposed and integrated in the final version (e.g. specification of the program operators, text rewording). ***Question*** (translation): Do environmental benefits, business objectives, supply chain segments and descriptive elements of the instruments provide a comprehensive view?

3. FINAL WORKSHOP

A workshop to present to stakeholders the toolkit has been held at Bologna the 20 March 2025. The participants were 64.

The workshop has speakers representative of Policy makers, Sector companies, Professionals and BE-WoodEN partners.

The event card features a header with logos for BE-WoodEN, LIFE, New European Bauhaus, ART-ER, and Regione Emilia-Romagna. Below is a stylized illustration of a wooden village. The main text is in white on an orange background, detailing the event title, date, time, and location. It also includes a registration requirement and the event's sponsors.

Co-funded by the European Union

New European Bauhaus
beautiful | sustainable | together

ART-ER
ATTRATTIVITÀ
PUBBLICA
E TERRITORIO

Regione Emilia-Romagna

Convegno

**SOSTENIBILITÀ E COMPETITIVITÀ
NELLA FILIERA DEL LEGNO IN EMILIA-ROMAGNA**

20 marzo 2025, ore 9.00 • 13.30
Viale Aldo Moro 30, Bologna • Aula Magna

Per partecipare al convegno è necessario iscriversi

Promosso da Regione Emilia-Romagna
In collaborazione con ART-ER nell'ambito del progetto LIFE BE-WoodEN

Università di Genova | DAD DIPARTIMENTO
ARCHITETTURA E DESIGN

ART-ER

FLA

HOUSING EUROPE

P

Università di Bologna

Card of the event

The agenda was the following:

9.00 a.m. Registration of participants

Work is coordinated by Roberto Diolaiti, Emilia-Romagna Region

9.30 a.m. *Introduction* - Gessica Allegni Councillor for Culture, Parks and Forestry, Protection and Enhancement of Biodiversity, Equal Opportunities Emilia-Romagna Region

9.50 a.m. *The national forest information system in the National Forest Strategy* - Raoul Romano, CREA

10.10 a.m. *The policies of the Emilia-Romagna Region in the wood forestry supply chain* - Gabriele Locatelli, Emilia-Romagna Region

10.30 a.m. *Increasing sustainability in buildings: the Life BE-WoodEN (Buildings and Education in Wood Ecosystem for the New European Bauhaus) project* - Giovanna Franco, University of Genoa

10.50 a.m. *Structural wood and the potential role of short supply chains in construction* - Marco Togni, University of Florence

11.10 a.m. *A resilient supply chain: the forest-wood ecosystem in Emilia-Romagna* - Chiara Terraneo, FederlegnoArredo

11.30 a.m. - *Environmental sustainability and competitiveness of the wood construction supply chain* - Irene Diti, ARTER

11:50 a.m. *Roundtable: Perspectives for the wood supply chain in Emilia-Romagna*

Moderator: Roberto Diolaiti, Emilia-Romagna Region

Speakers:

- Alessandro Liverani, Regional Federation - Ordine Dottori Agronomi e Forestali

- Carlo Piemonte, National Cluster Italia Foresta Legno

- Francesco Grandi, ClustER Build

- Nicoletta Azzi, Assopannelli FederlegnoArredo

- Andrea Gnudi, Province of Bologna - Ordine degli Ingegneri

13:15 p.m. End of works

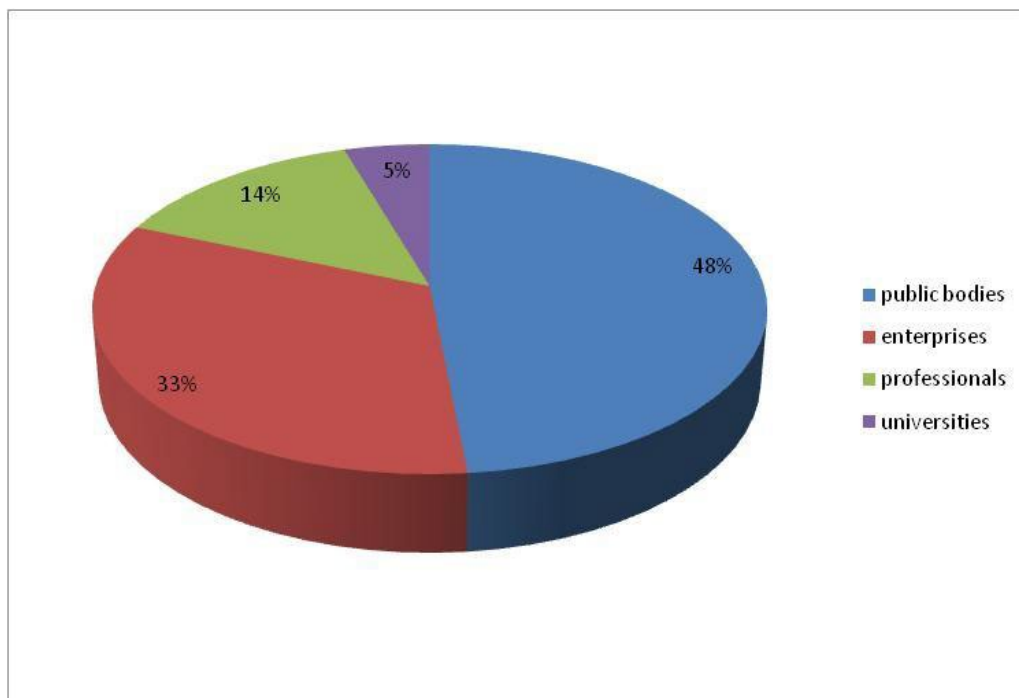




Final workshop (20th March 2025 - Bologna)

The participants were representatives of public administration, enterprises, professionals and researchers.

The following diagram shows the distribution of the categories of participants:

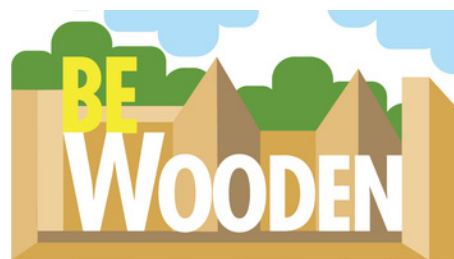


The discussion has been rich of suggestions and inputs both for the toolkit implementation and for the regional policy about the valorization of wood in the supply chain.

During the workshop have been collected also some information about the knowledge and application of the NEB approach in Emilia-Romagna.

4. ANNEX

Annex I – Toolkit to valorize the environmental performances of wood supply chain



TOOLKIT FOR THE VALORIZATION OF ENVIRONMENTAL PERFORMANCES IN THE WOOD SUPPLY CHAIN





INTRODUCTION

LIFE BE-WOODEN

SUSTAINABILITY, BEAUTY, INCLUSION: THESE ARE THE THREE PILLARS OF THE NEW EUROPEAN BAUHAUS APPROACH THAT HAVE INSPIRED THE LIFE BE-WOODEN PROJECT.

THE PROJECT AIMS TO:

- PROMOTE **SUSTAINABILITY IN CONSTRUCTION** BY OVERCOMING THE FRAGMENTATION OF THE LOCAL WOOD SECTOR SUPPLY CHAIN;
- OVERCOME CULTURAL, TECHNICAL, AND ECONOMIC BARRIERS THAT CURRENTLY LIMIT THE **USE OF WOOD AND BIO-BASED MATERIALS IN THE CONSTRUCTION SECTOR**;
- PROMOTE **NEB PRINCIPLES** THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS—FROM PRODUCTION AND DESIGN TO INSTALLATION AND BUILDING MANAGEMENT—THROUGHOUT THEIR LIFECYCLE.



PROJECT WEBSITE

TOOLKIT OBJECTIVES

THE OBJECTIVE OF THIS **GUIDE** OR **TOOLKIT** IS TO PROVIDE WOOD SUPPLY CHAIN OPERATORS A ROADMAP OF TOOL CATEGORIES AIMED AT ENHANCING THE ENVIRONMENTAL PERFORMANCE ASSOCIATED WITH THE USE OF WOOD IN CONSTRUCTION.

FOR EACH CATEGORY, AN IN-DEPTH ANALYSIS OF THE MOST WIDELY USED AND RECOGNIZED ENHANCEMENT TOOLS IS PROVIDED.

THE GUIDE DOES NOT AIM TO BE EXHAUSTIVE BUT SEEKS TO SUPPORT OPERATORS IN MAKING STRATEGIC DECISIONS ON THEIR SUSTAINABILITY PATH.

TARGET USERS

THE TOOLKIT IS PRIMARILY AIMED AT STAKEHOLDERS IN THE WOOD SUPPLY CHAIN, BUT IT MAY ALSO BE USEFUL FOR PROFESSIONALS AND PUBLIC OFFICERS.

HOW TO USE THE TOOLKIT

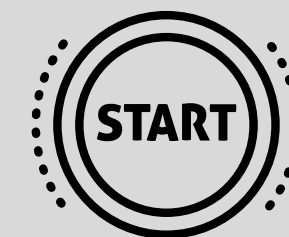
THE TOOLKIT IS AN **INTERACTIVE PDF**.

EACH ICON IS LINKED TO A HYPERTEXT CONNECTION THAT REDIRECTS USERS TO SPECIFIC PAGES WITHIN THE DOCUMENT.

COLORS AND ICONS GUIDE USERS IN NAVIGATING THE TOOLKIT.



USER
GUIDE



START



USER GUIDE

HOW TO USE THE TOOLKIT

THE PROCESS BEGINS BY CHOOSING BETWEEN TWO DECISION PATHS:

- 1.ENVIRONMENTAL BENEFITS
- 2.ENTREPRISES OBJECTIVES

ENVIRONMENTAL BENEFITS PATH

THE USER IS GUIDED THROUGH THE FOLLOWING STEPS:

- 1.SELECTING THE SUPPLY CHAIN PHASE TO WHICH THEIR COMPANY BELONGS
- 2.CHOOSING THE ENVIRONMENTAL BENEFIT ASSOCIATED WITH THE SELECTED SEGMENT
- 3.SELECTING THE TOOL CATEGORY LINKED TO THE CHOSEN BENEFIT
- 4.CHOOSING A SPECIFIC TOOL FOR FURTHER EXPLORATION WITHIN THE SELECTED CATEGORY
- 5.PRESENTATION OF THE TOOL

ENTREPRISES OBJECTIVES PATH

THE USER IS GUIDED THROUGH THE FOLLOWING STEPS:

- 1.SELECTING THE ENTREPRISE OBJECTIVE
- 2.CHOOSING THE TOOL CATEGORY LINKED TO THE SELECTED OBJECTIVE
- 3.CHOOSING A SPECIFIC TOOL FOR FURTHER EXPLORATION WITHIN THE SELECTED CATEGORY
- 4.PRESENTATION OF THE TOOL



EXAMPLES

ICONS AND COLORS GUIDE THE USER IN NAVIGATING THE TOOLKIT.



SUPPLY CHAIN SEGMENT



TOOLS CATEGORIES



ENVIRONMENTAL BENEFITS



VALORIZATION TOOLS



ENTREPRISE OBJECTIVES



GO BACK TO THE PREVIOUS SELECTION



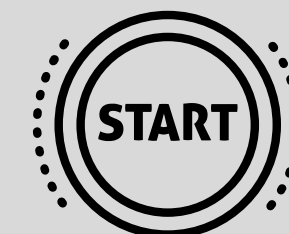
GO BACK TO THE INITIAL PAGE



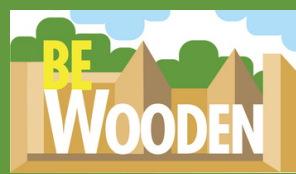
USER GUIDE



LEGEND



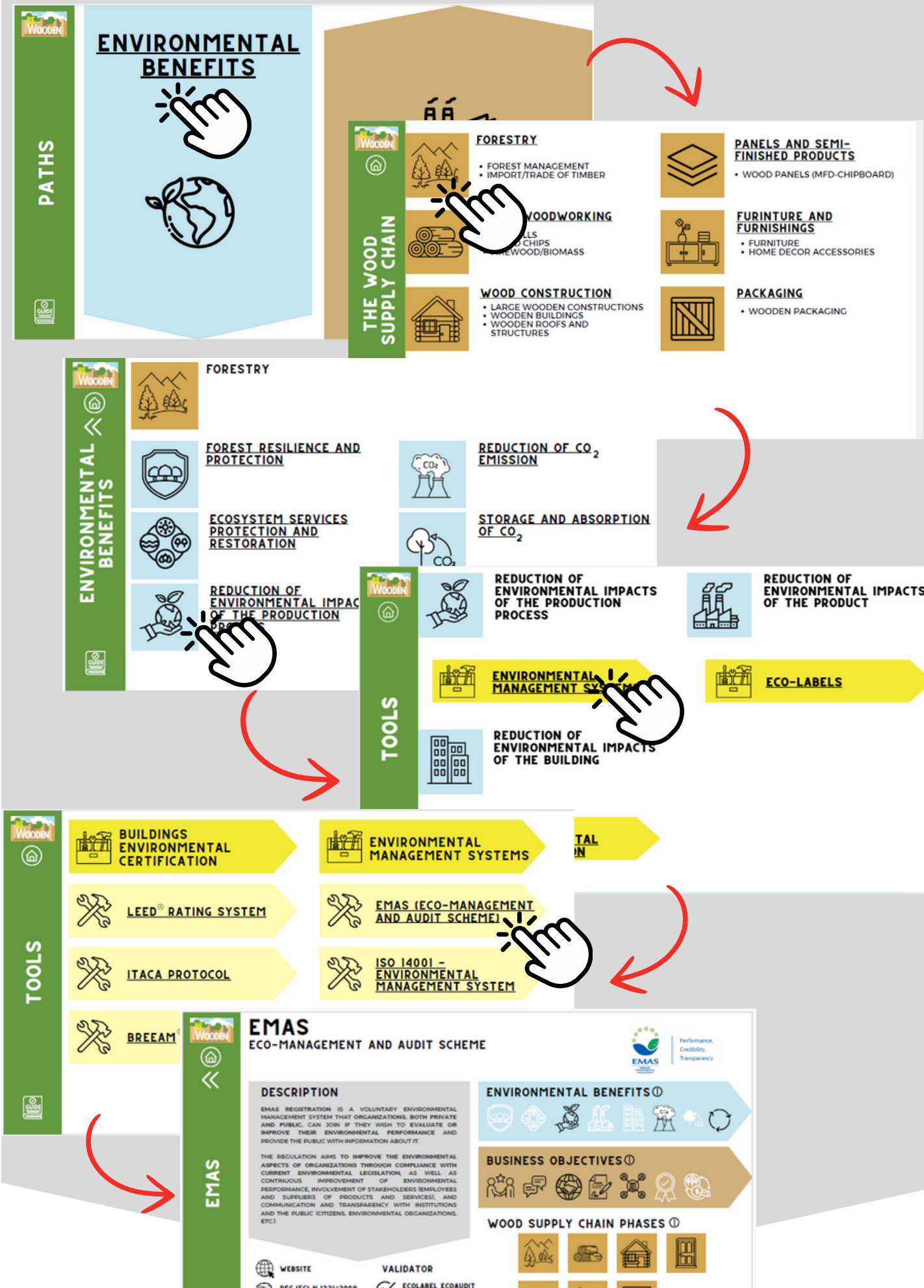
START



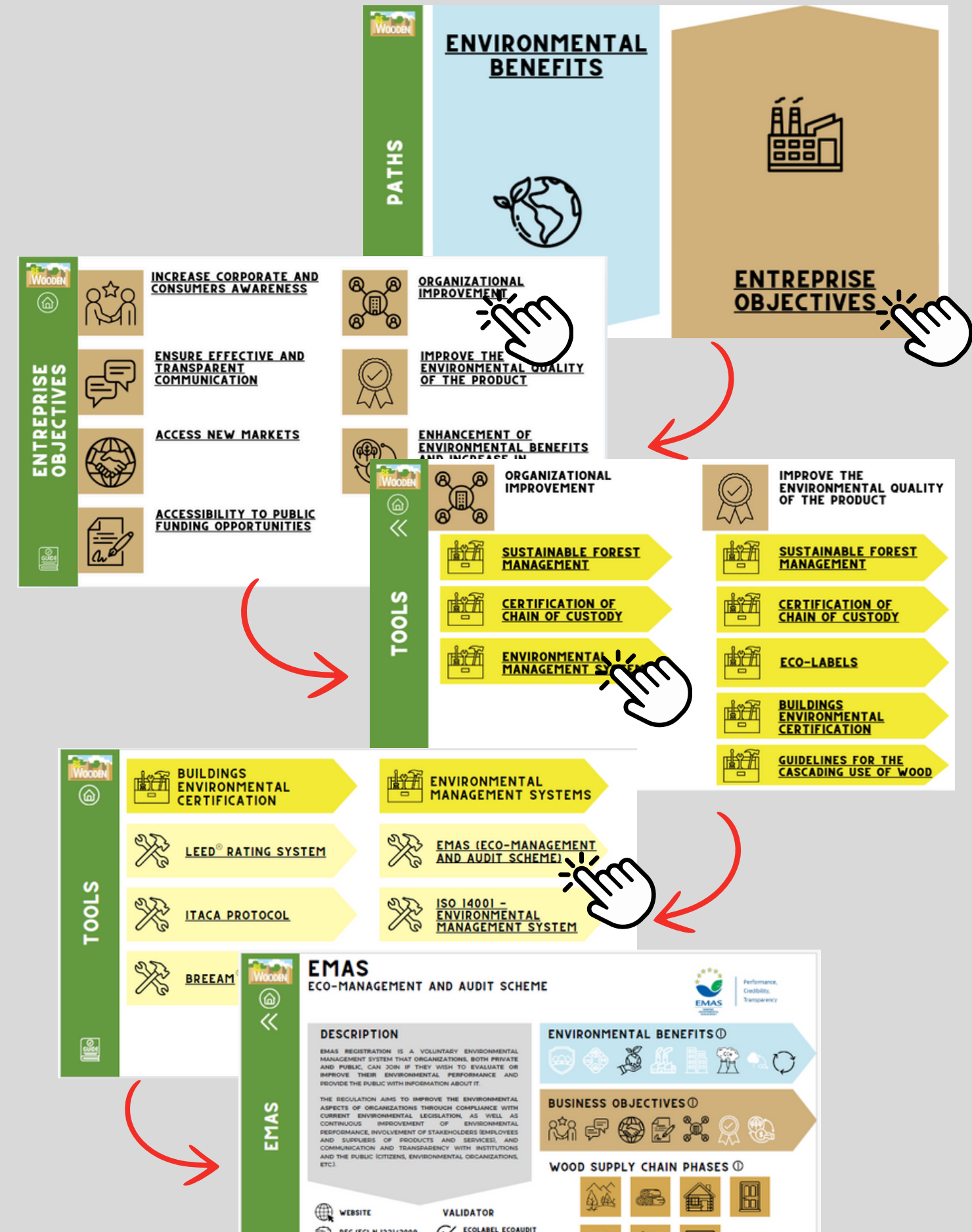
EXAMPLES



ENVIRONMENTAL BENEFIT PATH



ENTREPRISE OBJECTIVE PATH



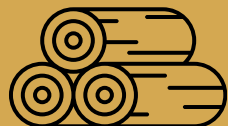


LEGEND

WOOD SUPPLY CHAIN PHASES



FORESTRY



PRIME WOODWORKING



WOOD CONSTRUCTION



WOOD FINISHES FOR CONSTRUCTION AND OUTDOOR FURNITURE



PANELS AND SEMI-FINISHED PRODUCTS



FURNITURE AND FURNISHINGS



PACKAGING

ENVIRONMENTAL BENEFITS



FOREST RESILIENCE AND PROTECTION



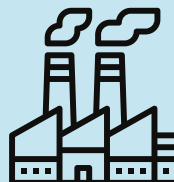
ECOSYSTEM SERVICES PROTECTION AND RESTORATION



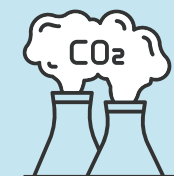
REDUCTION OF ENVIRONMENTAL IMPACTS OF THE PRODUCTION PROCESS



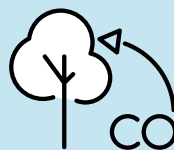
REDUCTION OF ENVIRONMENTAL IMPACTS OF THE BUILDING



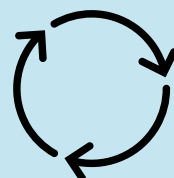
REDUCTION OF ENVIRONMENTAL IMPACTS OF THE PRODUCT



REDUCTION OF CO₂ EMISSIONS



STORAGE AND ABSORPTION OF CO₂



INCREASE IN CIRCULARITY

ENTREPREISE OBJECTIVES



INCREASE CORPORATE AND CONSUMERS AWARENESS



ENSURE EFFECTIVE AND TRANSPARENT COMMUNICATION



ACCESS NEW MARKETS



ACCESSIBILITY TO PUBLIC FUNDING OPPORTUNITIES



ORGANIZATIONAL IMPROVEMENT



IMPROVE THE ENVIRONMENTAL QUALITY OF THE PRODUCT



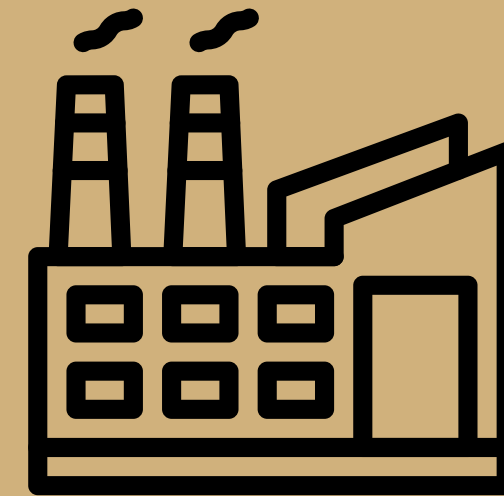
ENHANCEMENT OF ENVIRONMENTAL BENEFITS AND INCREASE IN PROFITABILITY



PATHS



ENVIRONMENTAL BENEFITS



ENTREPRISE OBJECTIVES

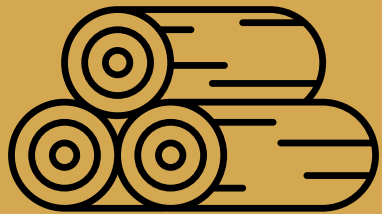


THE WOOD SUPPLY CHAIN



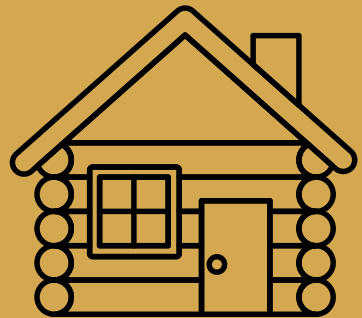
FORESTRY

- FOREST MANAGEMENT
- IMPORT/TRADE OF TIMBER



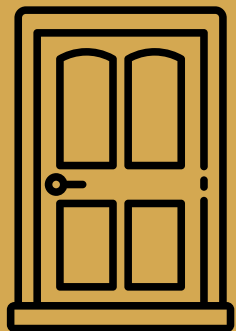
PRIME WOODWORKING

- SAWMILLS
- WOOD CHIPS
- FIREWOOD/BIOMASS



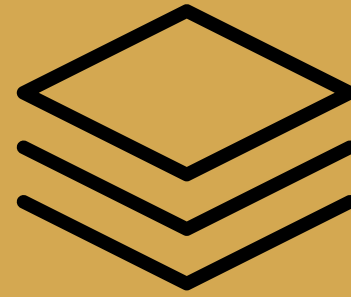
WOOD CONSTRUCTION

- LARGE WOODEN CONSTRUCTIONS
- WOODEN BUILDINGS
- WOODEN ROOFS AND STRUCTURES



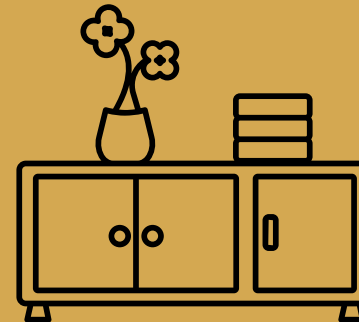
WOOD FINISHES FOR CONSTRUCTION AND OUTDOOR FURNITURE

- WOODEN FLOORING
- DOORS AND FIXTURES
- BOISERIE
- OUTDOOR WOODEN FURNITURE



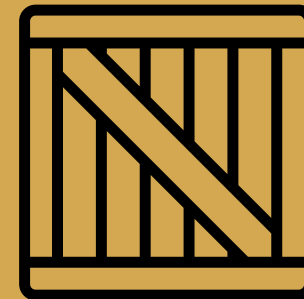
PANELS AND SEMI-FINISHED PRODUCTS

- WOOD PANELS (MFD-CHIPBOARD)



FURINTURE AND FURNISHINGS

- FURNITURE
- HOME DECOR ACCESSORIES



PACKAGING

- WOODEN PACKAGING



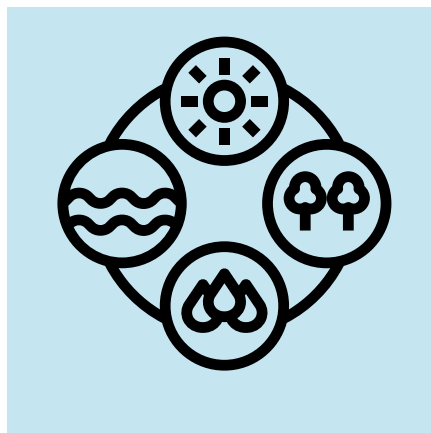
ENVIRONMENTAL BENEFITS



FORESTRY



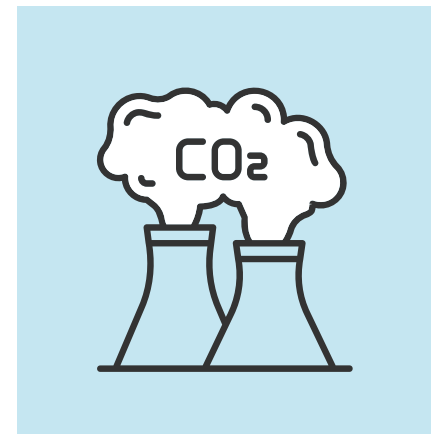
FOREST RESILIENCE AND PROTECTION



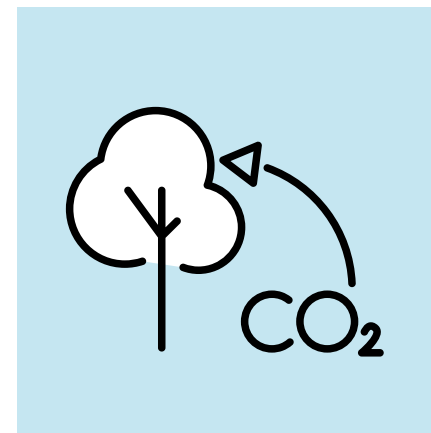
ECOSYSTEM SERVICES PROTECTION AND RESTORATION



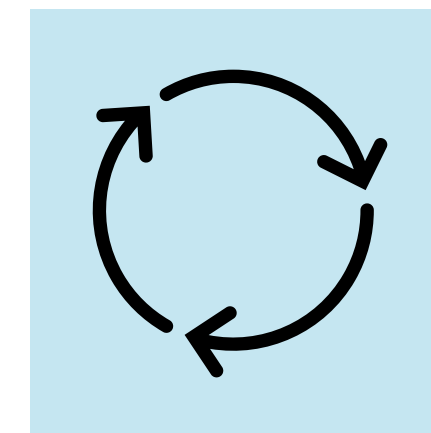
REDUCTION OF ENVIRONMENTAL IMPACTS OF THE PRODUCTION PROCESS



REDUCTION OF CO₂ EMISSION



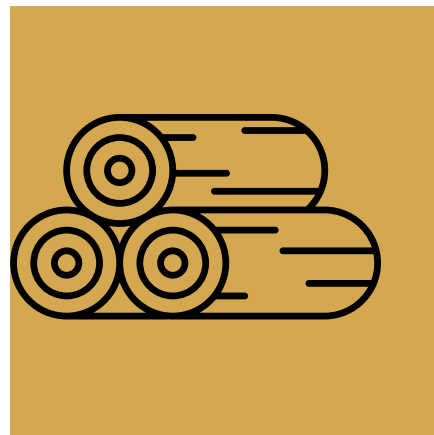
STORAGE AND ABSORPTION OF CO₂



INCREASE IN CIRCULARITY



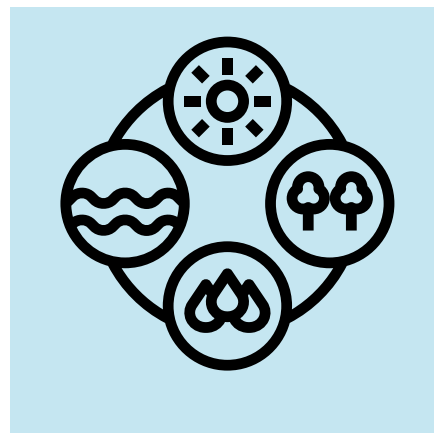
ENVIRONMENTAL BENEFITS



PRIME WOODWORKING



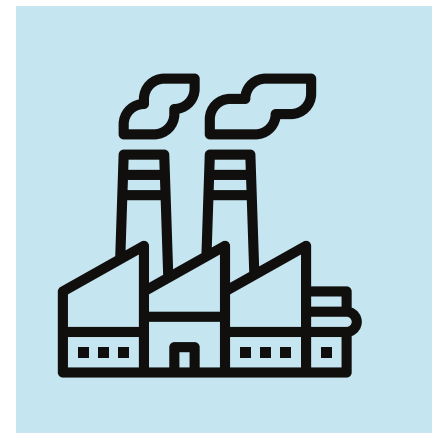
FOREST RESILIENCE AND PROTECTION



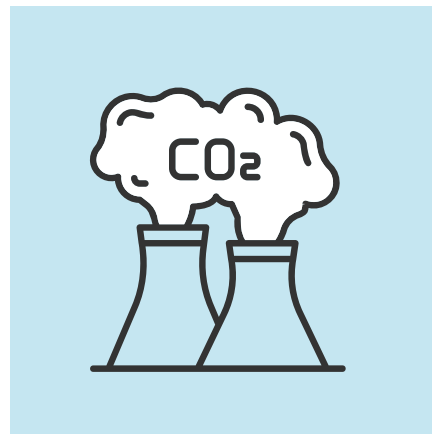
ECOSYSTEM SERVICES PROTECTION AND RESTORATION



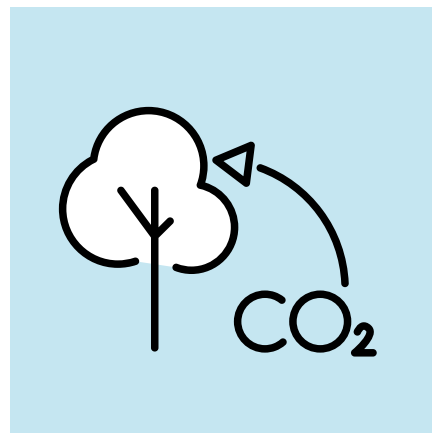
REDUCTION OF ENVIRONMENTAL IMPACTS OF THE PRODUCTION PROCESS



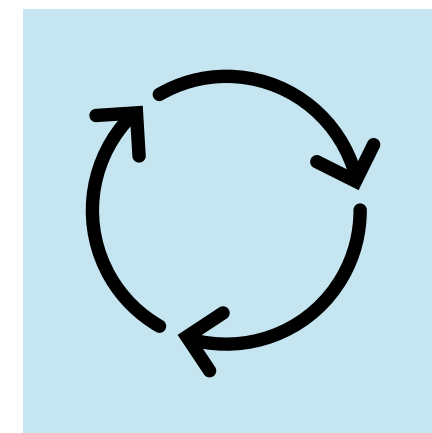
REDUCTION OF ENVIRONMENTAL IMPACTS OF THE PRODUCT



REDUCTION OF CO₂ EMISSION



STORAGE AND ABSORPTION OF CO₂



INCREASE IN CIRCULARITY



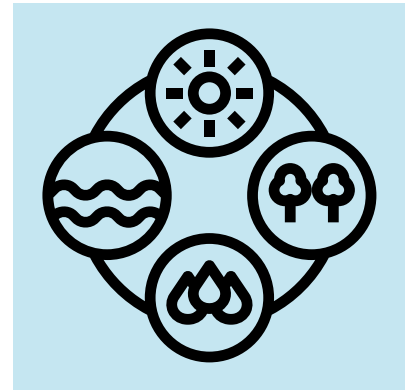
ENVIRONMENTAL BENEFITS



WOOD CONSTRUCTION



FOREST RESILIENCE AND PROTECTION



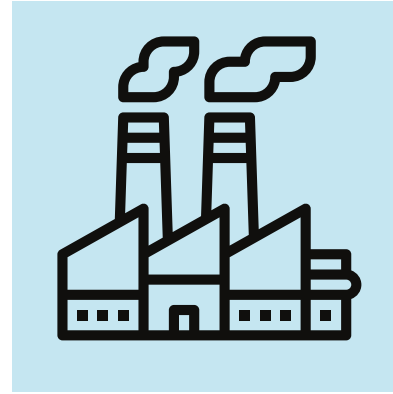
ECOSYSTEM SERVICES PROTECTION AND RESTORATION



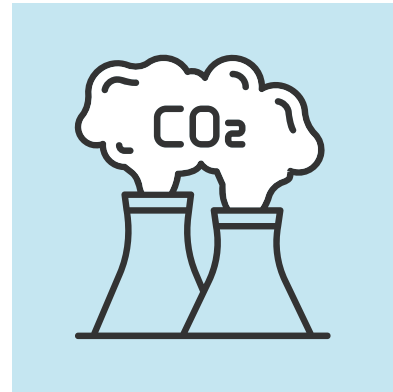
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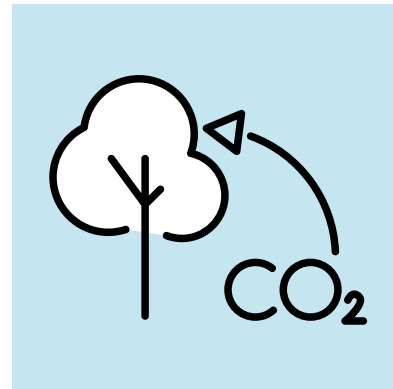
REDUCTION OF ENVIRONMENTAL IMPACTS OF THE BUILDING



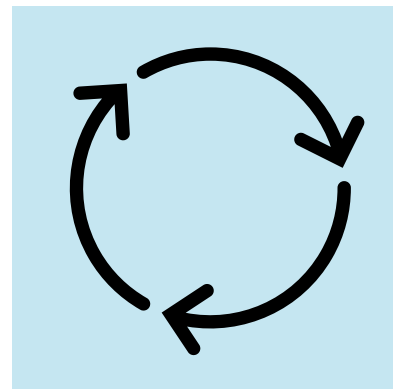
REDUCTION OF ENVIRONMENTAL IMPACTS OF THE PRODUCT



REDUCTION OF CO₂ EMISSION



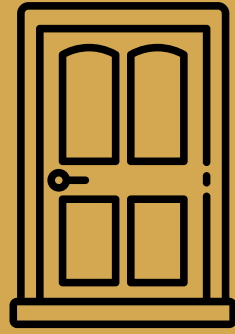
STORAGE AND ABSORPTION OF CO₂



INCREASE IN CIRCULARITY



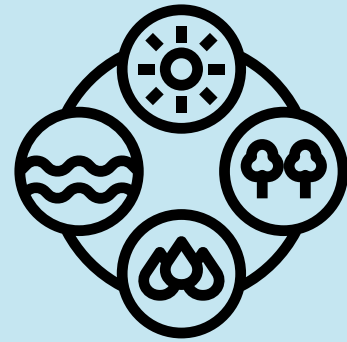
ENVIRONMENTAL BENEFITS



**WOOD FINISHES FOR
CONSTRUCTION AND
OUTDOOR FURNITURE**



**FOREST RESILIENCE AND
PROTECTION**



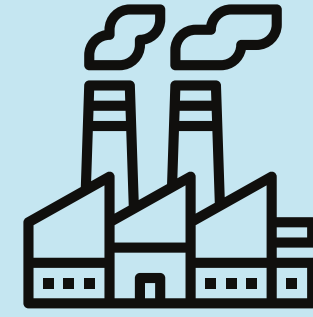
**ECOSYSTEM SERVICES
PROTECTION AND
RESTORATION**



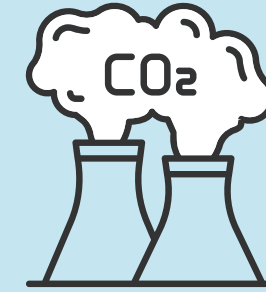
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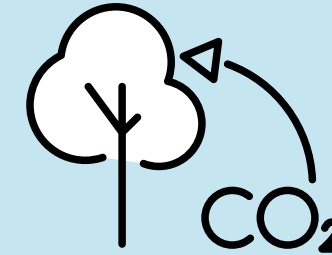
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ENVIRONMENTAL IMPACTS
OF THE BUILDING**



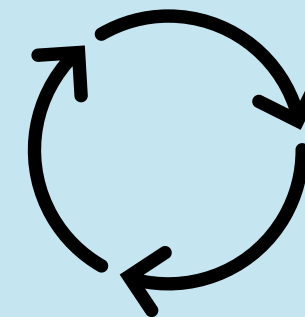
**REDUCTION OF
ENVIRONMENTAL IMPACTS
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**REDUCTION OF CO₂
EMISSION**



**STORAGE AND ABSORPTION
OF CO₂**



INCREASE IN CIRCULARITY



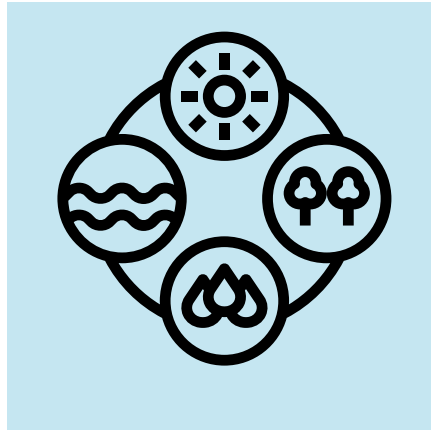
ENVIRONMENTAL BENEFITS



**PANELS AND
SEMI-FINISHED
PRODUCTS**



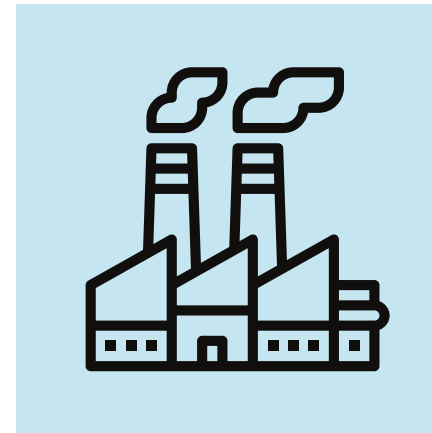
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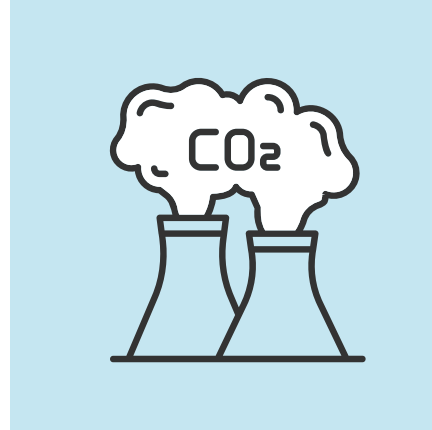
**ECOSYSTEM SERVICES
PROTECTION AND
RESTORATION**



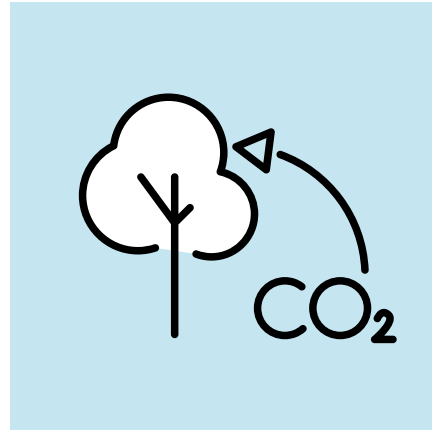
**REDUCTION OF
ENVIRONMENTAL IMPACTS
OF THE PRODUCTION
PROCESS**



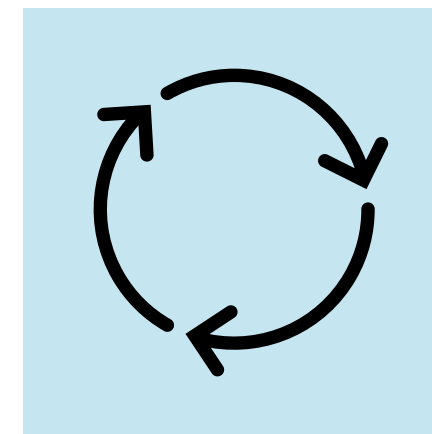
**REDUCTION OF
ENVIRONMENTAL IMPACTS
OF THE PRODUCT**



**REDUCTION OF CO₂
EMISSION**



**STORAGE AND ABSORPTION
OF CO₂**



INCREASE IN CIRCULARITY



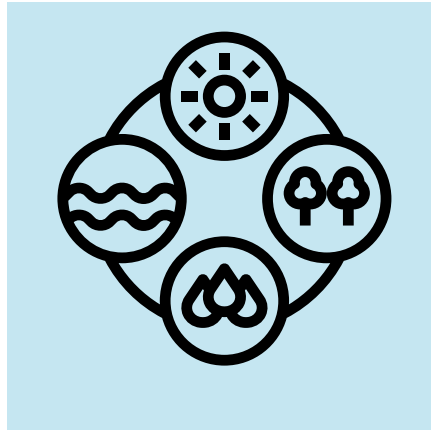
ENVIRONMENTAL BENEFITS



FURNITURE AND FURNISHINGS



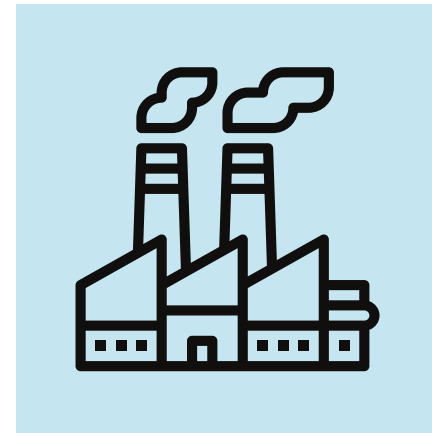
FOREST RESILIENCE AND PROTECTION



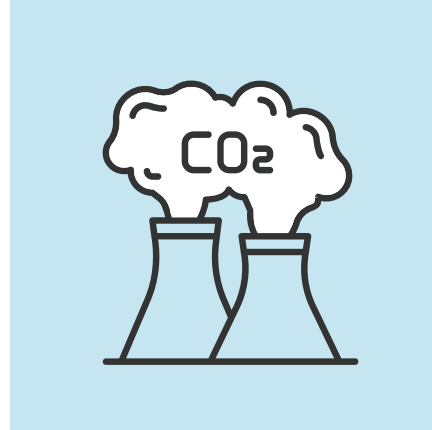
ECOSYSTEM SERVICES PROTECTION AND RESTORATION



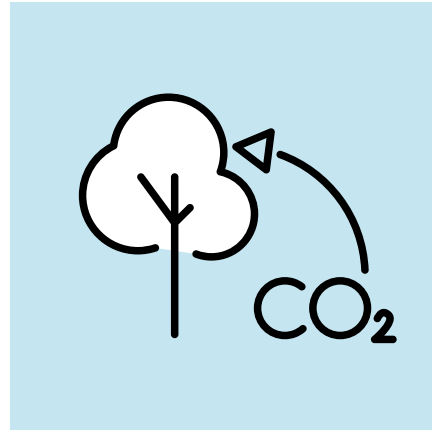
REDUCTION OF ENVIRONMENTAL IMPACTS OF THE PRODUCTION PROCESS



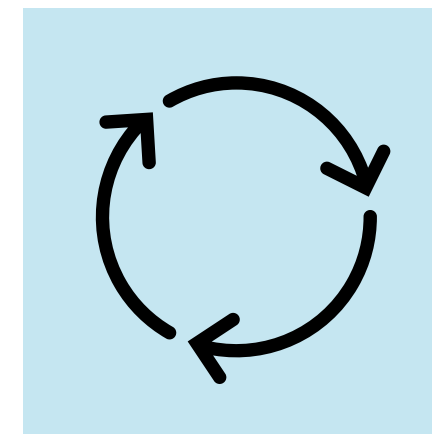
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REDUCTION OF CO₂ EMISSION



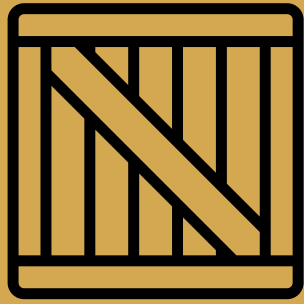
STORAGE AND ABSORPTION OF CO₂



INCREASE IN CIRCULARITY



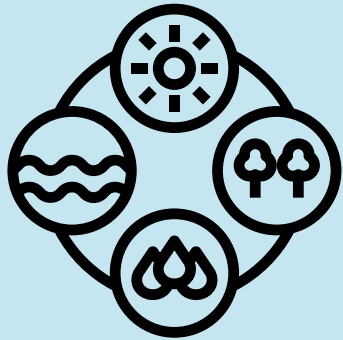
ENVIRONMENTAL BENEFITS



PACKAGING



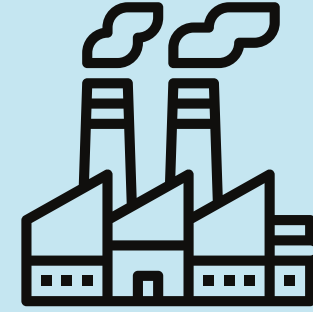
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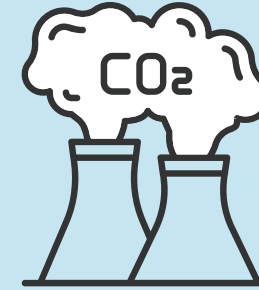
ECOSYSTEM SERVICES PROTECTION AND RESTORATION



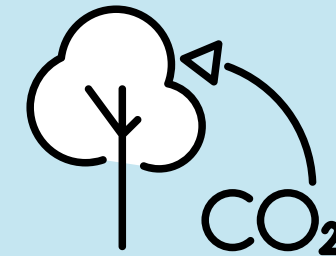
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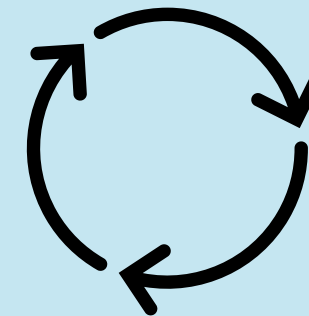
REDUCTION OF ENVIRONMENTAL IMPACTS OF THE PRODUCT



REDUCTION OF CO₂ EMISSION



STORAGE AND ABSORPTION OF CO₂



INCREASE IN CIRCULARITY



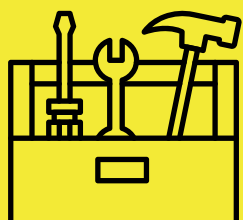
TOOLS



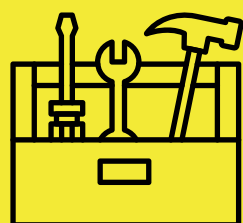
FOREST RESILIENCE AND PROTECTION



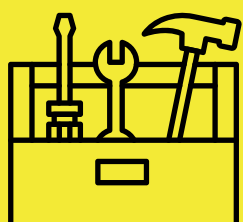
SUSTAINABLE FOREST MANAGEMENT



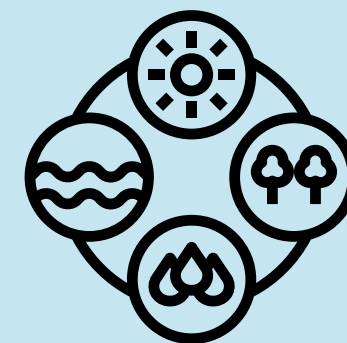
CERTIFICATION OF CHAIN OF CUSTODY



CARBON CREDITS



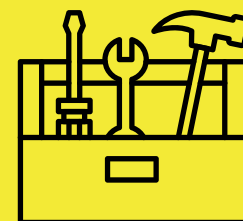
GUIDELINES FOR THE CASCADING USE OF WOOD



ECOSYSTEM SERVICES PROTECTION AND RESTORATION



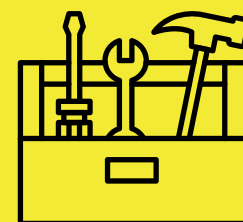
SUSTAINABLE FOREST MANAGEMENT



CERTIFICATION OF CHAIN OF CUSTODY



CARBON CREDITS



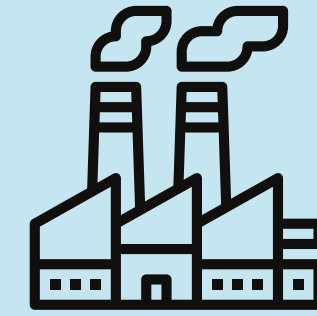
GUIDELINES FOR THE CASCADING USE OF WOOD



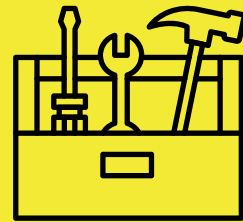
TOOLS



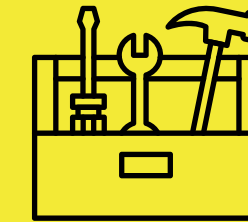
REDUCTION OF ENVIRONMENTAL IMPACTS OF THE PRODUCTION PROCESS



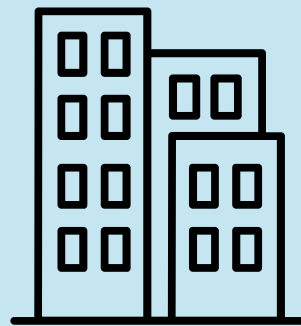
REDUCTION OF ENVIRONMENTAL IMPACTS OF THE PRODUCT



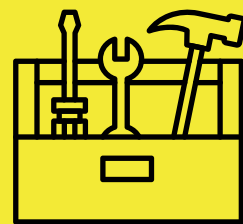
ENVIRONMENTAL MANAGEMENT SYSTEMS



ECO-LABELS



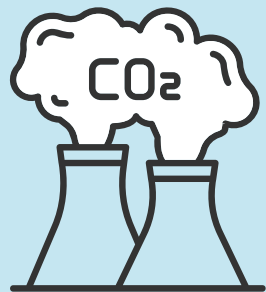
REDUCTION OF ENVIRONMENTAL IMPACTS OF THE BUILDING



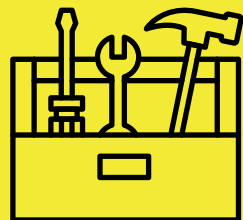
BUILDINGS ENVIRONMENTAL CERTIFICATION



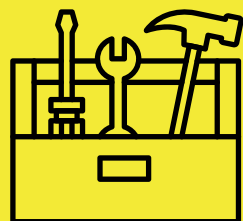
TOOLS



REDUCTION OF CO₂ EMISSION



ENVIRONMENTAL MANAGEMENT SYSTEMS



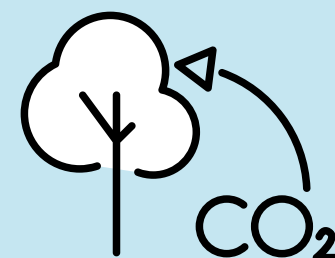
ECO-LABELS



BUILDINGS ENVIRONMENTAL CERTIFICATION



CARBON CREDITS



STORAGE AND ABSORPTION OF CO₂



SUSTAINABLE FOREST MANAGEMENT



CERTIFICATION OF CHAIN OF CUSTODY



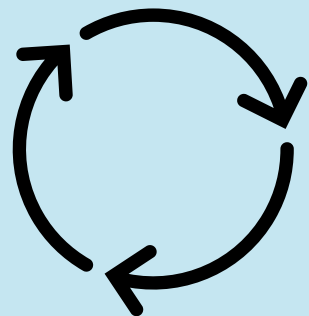
ECO-LABELS



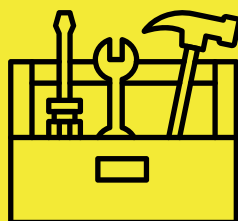
CARBON CREDITS



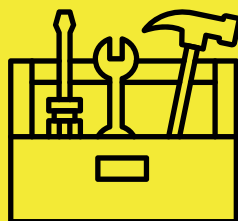
TOOLS



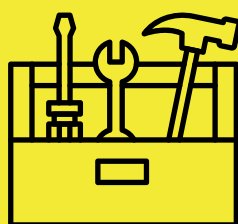
INCREASE IN CIRCULARITY



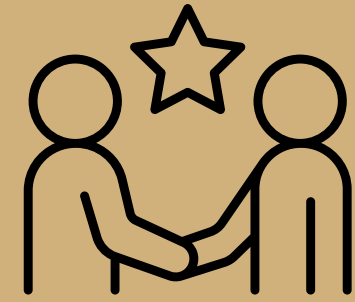
**ENVIRONMENTAL
MANAGEMENT SYSTEMS**



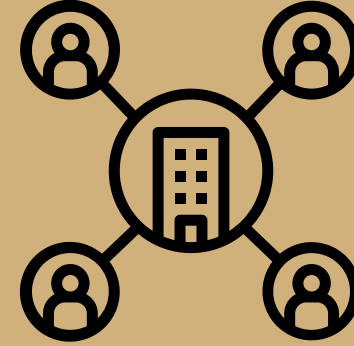
ECO-LABELS



**GUIDELINES FOR THE
CASCADING USE OF WOOD**



INCREASE CORPORATE AND CONSUMERS AWARENESS



ORGANIZATIONAL IMPROVEMENT



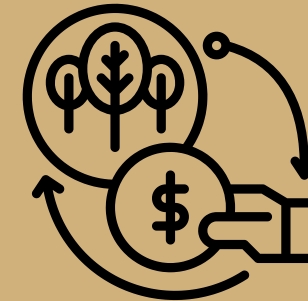
ENSURE EFFECTIVE AND TRANSPARENT COMMUNICATION



IMPROVE THE ENVIRONMENTAL QUALITY OF THE PRODUCT



ACCESS NEW MARKETS



ENHANCEMENT OF ENVIRONMENTAL BENEFITS AND INCREASE IN PROFITABILITY



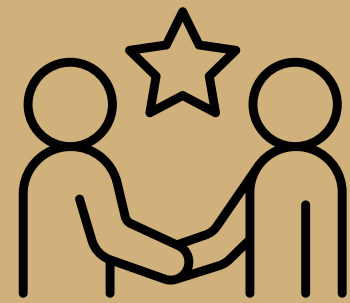
ACCESSIBILITY TO PUBLIC FUNDING OPPORTUNITIES

ENTREPRISE OBJECTIVES

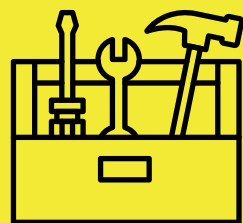




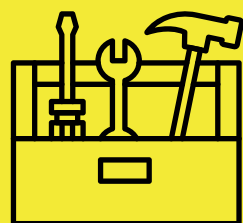
TOOLS



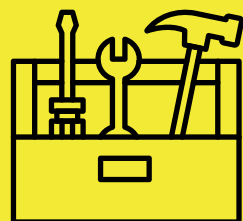
INCREASE CORPORATE AND CONSUMERS AWARENESS



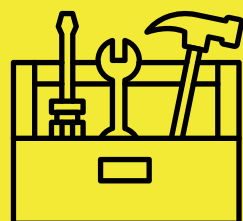
SUSTAINABLE FOREST MANAGEMENT



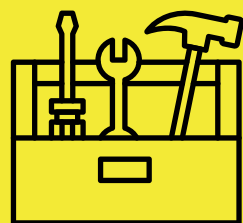
CERTIFICATION OF CHAIN OF CUSTODY



ENVIRONMENTAL MANAGEMENT SYSTEMS



BUILDINGS ENVIRONMENTAL CERTIFICATION



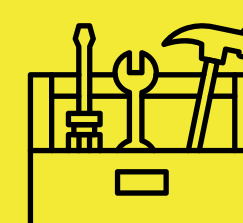
GUIDELINES FOR THE CASCADING USE OF WOOD



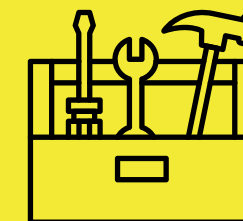
ENSURE EFFECTIVE AND TRANSPARENT COMMUNICATION



ENVIRONMENTAL MANAGEMENT SYSTEMS



ECO-LABELS



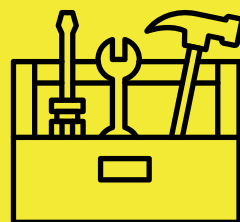
CARBON CREDITS



TOOLS



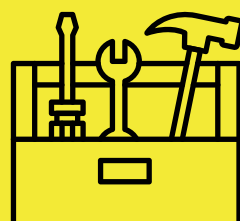
ACCESS NEW MARKETS



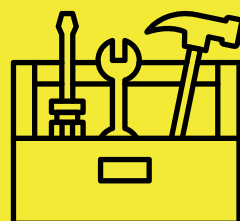
**SUSTAINABLE FOREST
MANAGEMENT**



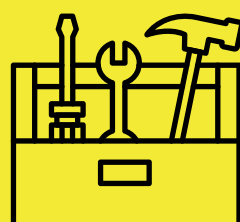
**CERTIFICATION OF
CHAIN OF
CUSTODY**



**ENVIRONMENTAL
MANAGEMENT
SYSTEMS**



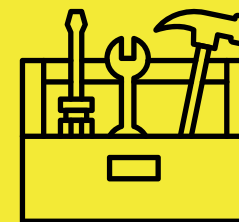
**BUILDINGS
ENVIRONMENTAL
CERTIFICATION**



ECO-LABELS



ACCESSIBILITY TO PUBLIC FUNDING OPPORTUNITIES



**SUSTAINABLE FOREST
MANAGEMENT**



**CERTIFICATION OF
CHAIN OF
CUSTODY**



**ENVIRONMENTAL
MANAGEMENT
SYSTEMS**



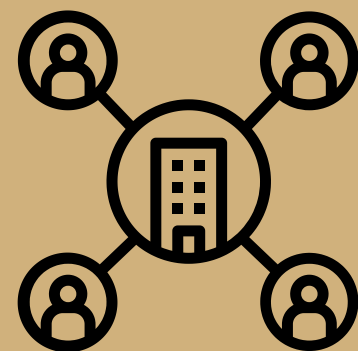
**BUILDINGS
ENVIRONMENTAL
CERTIFICATION**



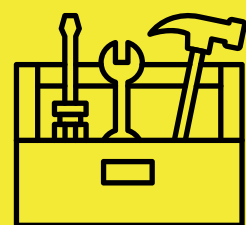
ECO-LABELS



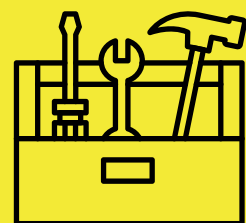
TOOLS



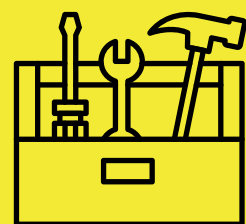
ORGANIZATIONAL IMPROVEMENT



**SUSTAINABLE FOREST
MANAGEMENT**



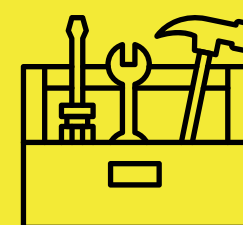
**CERTIFICATION OF
CHAIN OF CUSTODY**



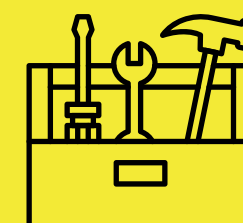
**ENVIRONMENTAL
MANAGEMENT SYSTEMS**



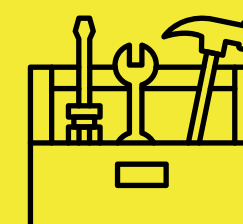
IMPROVE THE ENVIRONMENTAL QUALITY OF THE PRODUCT



**SUSTAINABLE FOREST
MANAGEMENT**



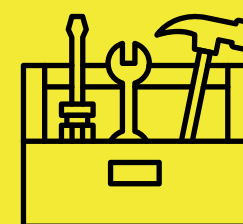
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CHAIN OF CUSTODY**



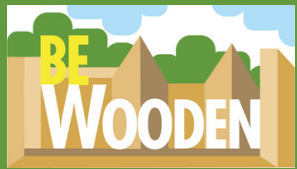
ECO-LABELS



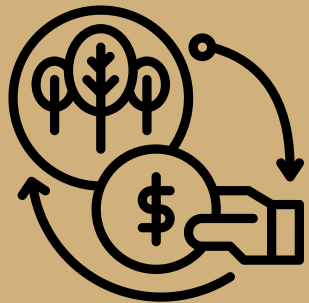
**BUILDINGS
ENVIRONMENTAL
CERTIFICATION**



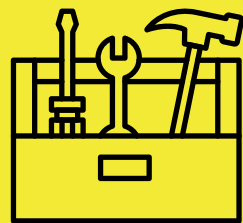
**GUIDELINES FOR THE
CASCADING USE OF WOOD**



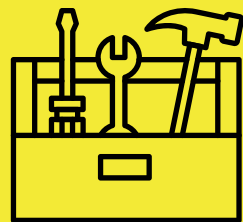
TOOLS



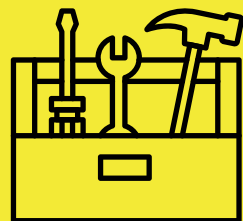
ENHANCEMENT OF ENVIRONMENTAL BENEFITS AND INCREASE IN PROFITABILITY



ECO-LABELS



BUILDINGS ENVIRONMENTAL CERTIFICATION

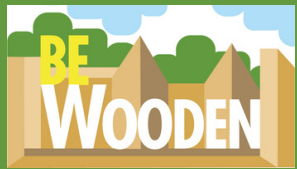


CARBON CREDITS

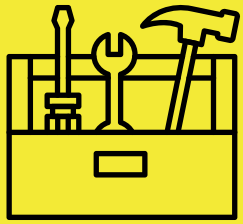


TOOLS

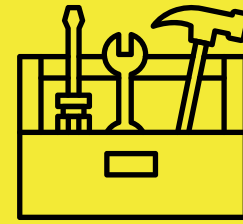




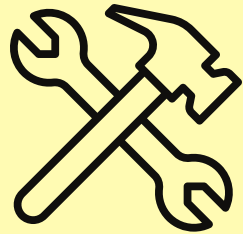
TOOLS



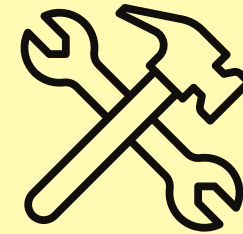
**SUSTAINABLE FOREST
MANAGEMENT**



**CERTIFICATION OF
CHAIN OF CUSTODY**



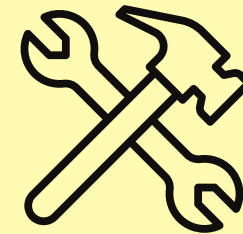
PEFC CERTIFICATION



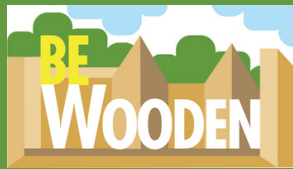
PEFC CERTIFICATION



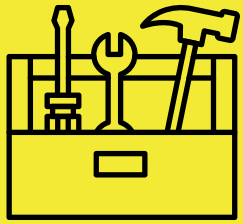
FSC[®] CERTIFICATION



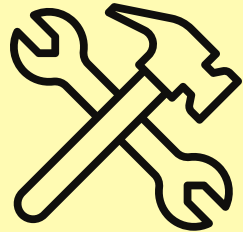
FSC[®] CERTIFICATION



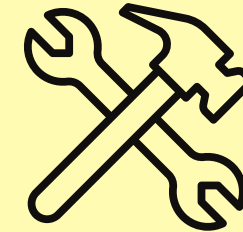
TOOLS



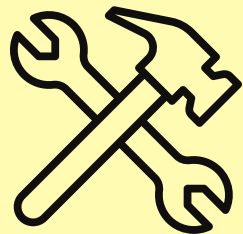
ECO-LABELS



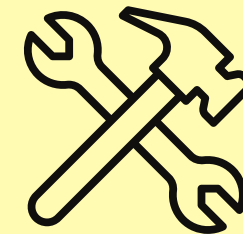
EU ECOLABEL



EU-CRCF PRODUCTS



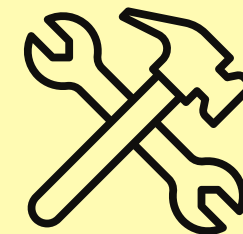
EPD[®] (ENVIRONMENTAL
PRODUCT DECLARATION)



PEFC CERTIFICATION



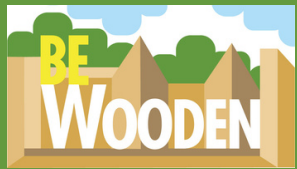
CARBON FOOTPRINT



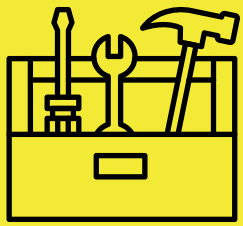
FSC[®] CERTIFICATION



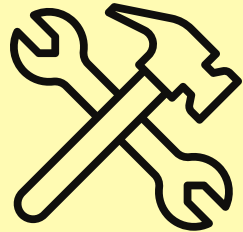
MADE GREEN IN ITALY



TOOLS



**BUILDINGS
ENVIRONMENTAL
CERTIFICATION**



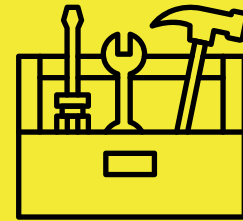
LEED[®] RATING SYSTEM



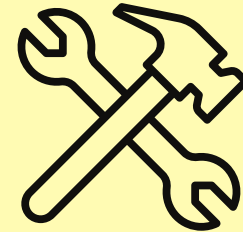
ITACA PROTOCOL



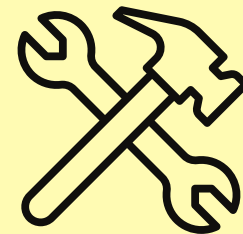
BREEAM[®]



**ENVIRONMENTAL
MANAGEMENT SYSTEMS**



**EMAS (ECO-MANAGEMENT
AND AUDIT SCHEME)**



**ISO 14001 -
ENVIRONMENTAL
MANAGEMENT SYSTEM**



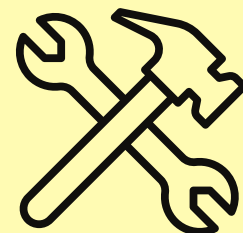
TOOLS



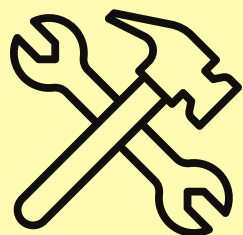
CARBON CREDITS



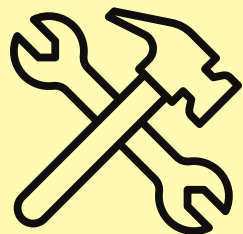
**CREA CARBON CREDIT
REGISTRY**



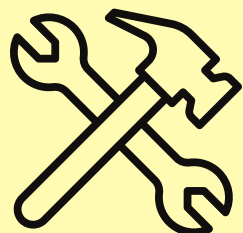
PLAN VIVO



EU-CRCF REGULATION



VERRA-VCS



GOLD STANDARD[®]



PEFC

PROGRAMME FOR ENDORSEMENT OF FOREST CERTIFICATION SCHEMES



DESCRIPTION

THE **PEFC CERTIFICATION** IS AN INTERNATIONAL, INDEPENDENT, AND THIRD-PARTY CERTIFICATION SPECIFICALLY FOR THE FORESTRY SECTOR AND PRODUCTS (WOODEN AND NON-WOODEN) DERIVED FROM FORESTS AND PLANTATIONS.

THERE ARE 2 TYPES OF PEFC CERTIFICATION:

- **FOREST MANAGEMENT CERTIFICATION (FM):** ENSURES THAT A FOREST OR A FOREST PLANTATION IS MANAGED IN ACCORDANCE WITH RIGOROUS ENVIRONMENTAL AND ECONOMIC STANDARDS.
- **CHAIN OF CUSTODY CERTIFICATION (COC):** GUARANTEES THE TRACEABILITY OF MATERIALS SOURCED FROM WELL-MANAGED FORESTS, CONTROLLED SOURCES, RECYCLED MATERIALS, OR A COMBINATION OF THESE SOURCES



WEBSITE (PEFC ITALY)



FM CERTIFICATION



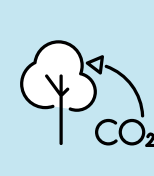
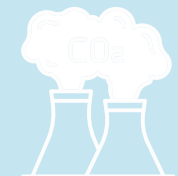
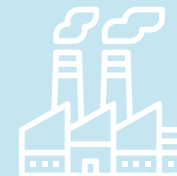
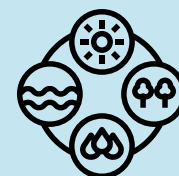
COC CERTIFICATION

VALIDATOR



PEFC ITALY

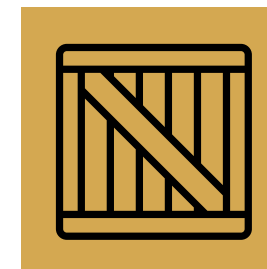
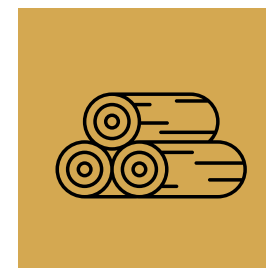
ENVIRONMENTAL BENEFITS ⓘ

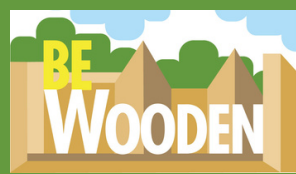


BUSINESS OBJECTIVES ⓘ



WOOD SUPPLY CHAIN PHASES ⓘ





FSC[®] CERTIFICATION



FSC[®] FOREST STewardSHIP COUNCIL[®]



DESCRIPTION

THE **FSC CERTIFICATION** IS AN INTERNATIONAL, INDEPENDENT, AND THIRD-PARTY CERTIFICATION SPECIFIC TO THE FORESTRY SECTOR AND PRODUCTS (WOODEN AND NON-WOODEN) DERIVED FROM FORESTS.

THERE ARE 2 TYPES OF FSC CERTIFICATION:

- **FOREST MANAGEMENT CERTIFICATION (FM):** ENSURES THAT A FOREST OR A FOREST PLANTATION IS MANAGED IN ACCORDANCE WITH RIGOROUS ENVIRONMENTAL AND ECONOMIC STANDARDS.
- **CHAIN OF CUSTODY CERTIFICATION (COC):** GUARANTEES THE TRACEABILITY OF MATERIALS SOURCED FROM WELL-MANAGED FORESTS, CONTROLLED SOURCES, RECYCLED MATERIALS, OR A COMBINATION OF THESE SOURCES.



WEBSITE (FSC ITALY)



FM CERTIFICATION



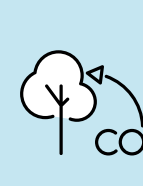
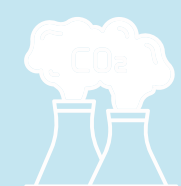
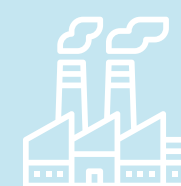
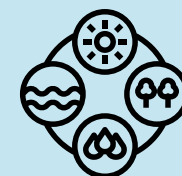
COC CERTIFICATION

VALIDATOR

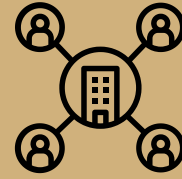


FSC ITALY

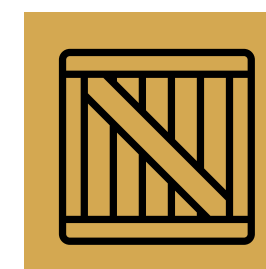
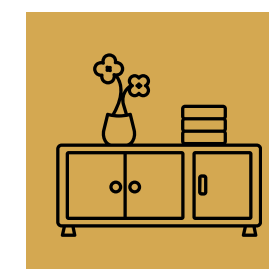
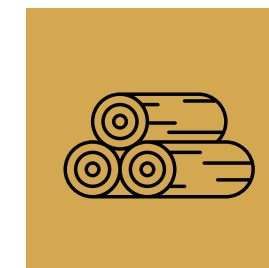
ENVIRONMENTAL BENEFITSⁱ



BUSINESS OBJECTIVESⁱ



WOOD SUPPLY CHAIN PHASESⁱ





EMAS



EMAS

ECO-MANAGEMENT AND AUDIT SCHEME



Performance,
Credibility,
Transparency

DESCRIPTION

EMAS REGISTRATION IS A VOLUNTARY ENVIRONMENTAL MANAGEMENT SYSTEM THAT ORGANIZATIONS, BOTH PRIVATE AND PUBLIC, CAN JOIN IF THEY WISH TO EVALUATE OR IMPROVE THEIR ENVIRONMENTAL PERFORMANCE AND PROVIDE THE PUBLIC WITH INFORMATION ABOUT IT.

THE REGULATION AIMS TO IMPROVE THE ENVIRONMENTAL ASPECTS OF ORGANIZATIONS THROUGH COMPLIANCE WITH CURRENT ENVIRONMENTAL LEGISLATION, AS WELL AS CONTINUOUS IMPROVEMENT OF ENVIRONMENTAL PERFORMANCE, INVOLVEMENT OF STAKEHOLDERS (EMPLOYEES AND SUPPLIERS OF PRODUCTS AND SERVICES), AND COMMUNICATION AND TRANSPARENCY WITH INSTITUTIONS AND THE PUBLIC (CITIZENS, ENVIRONMENTAL ORGANIZATIONS, ETC.).



WEBSITE



REG.(EC) N.1221/2009
(EMAS III)



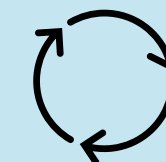
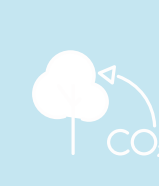
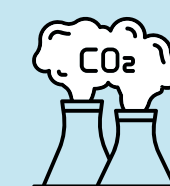
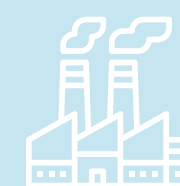
DECISION (EU)
2023/2463

VALIDATOR

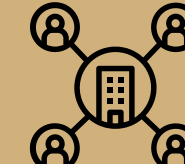


ECOLABEL ECOAUDIT
COMMITTEE

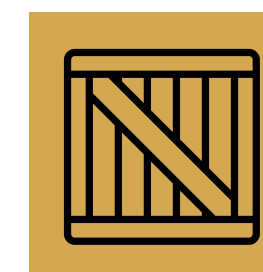
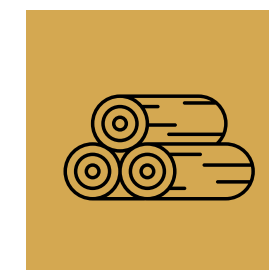
ENVIRONMENTAL BENEFITS ⓘ



BUSINESS OBJECTIVES ⓘ



WOOD SUPPLY CHAIN PHASES ⓘ





ISO 14001:2015



ISO 14001:2015

ENVIRONMENTAL MANAGEMENT SYSTEMS



DESCRIPTION

ISO 14001 IS AN INTERNATIONAL VOLUNTARY STANDARD APPLICABLE TO ANY TYPE OF PUBLIC OR PRIVATE ORGANIZATION, SPECIFYING THE REQUIREMENTS FOR AN ENVIRONMENTAL MANAGEMENT SYSTEM.

TO DEFINE A SYSTEM THAT COMPLIES WITH ISO 14001, IT IS NECESSARY TO:

- CONDUCT AN ENVIRONMENTAL ANALYSIS, MEANING GAINING A THOROUGH UNDERSTANDING OF THE ENVIRONMENTAL ASPECTS (EMISSIONS, RESOURCE USE, ETC.) THAT AN ORGANIZATION MUST EFFECTIVELY MANAGE, UNDERSTANDING THE LEGISLATIVE FRAMEWORK AND APPLICABLE REQUIREMENTS FOR THE COMPANY, AND ASSESSING THE SIGNIFICANCE OF THE IMPACTS.
- DEFINE A COMPANY POLICY.
- DEFINE SPECIFIC ENVIRONMENTAL RESPONSIBILITIES.
- DEFINE, IMPLEMENT, AND MAINTAIN ACTIVITIES, PROCEDURES, AND RECORDS AS REQUIRED BY ISO 14001.

VALIDATOR

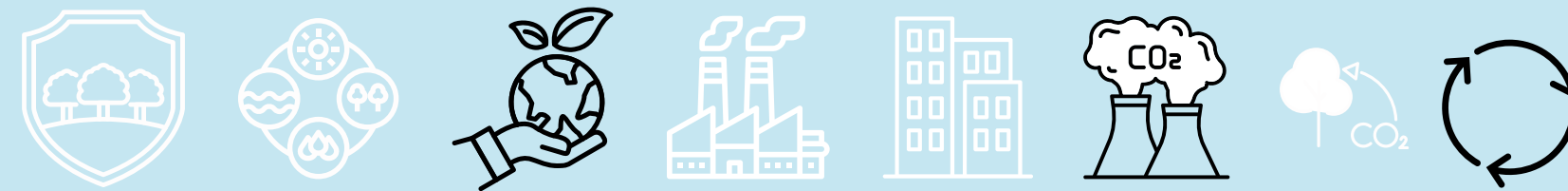


ISO 14001:2015
(STORE)



INTERNATIONAL
STANDARD FOR
ORGANIZATION

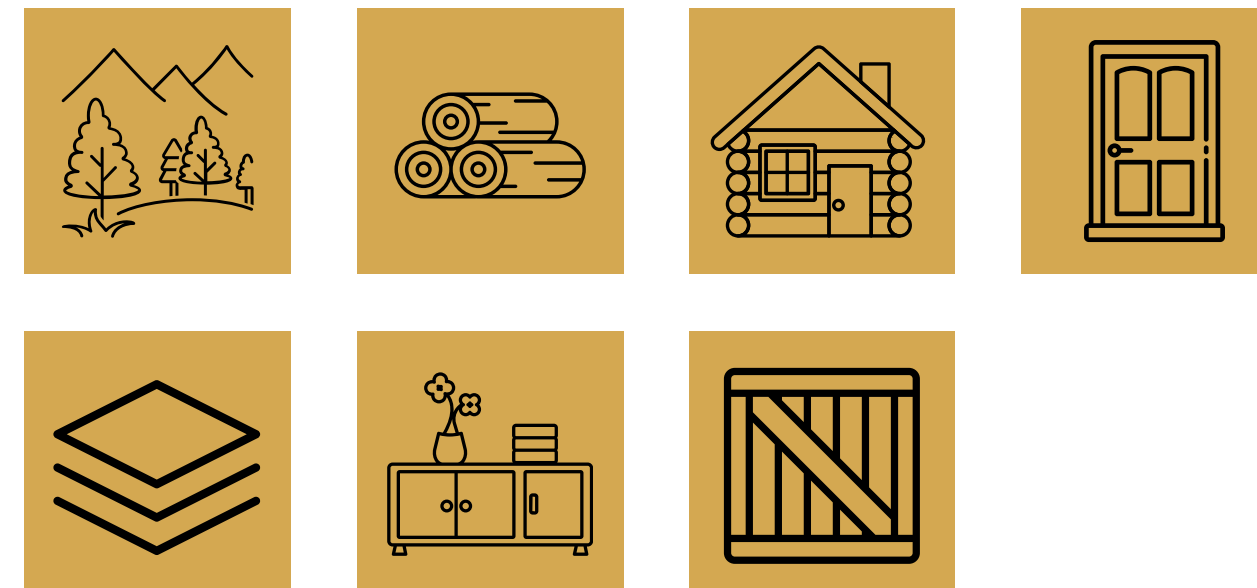
ENVIRONMENTAL BENEFITS ⓘ



BUSINESS OBJECTIVES ⓘ



WOOD SUPPLY CHAIN PHASES ⓘ





EU ECOLABEL



EU ECOLABEL



DESCRIPTION

THE **EU ECOLABEL** IS A VOLUNTARY ENVIRONMENTAL PRODUCT LABELING SYSTEM AIMED AT PROMOTING THE DESIGN, PRODUCTION, MARKETING, AND USE OF PRODUCTS WITH A LOWER ENVIRONMENTAL IMPACT **THROUGHOUT THEIR ENTIRE LIFE CYCLE**.

THIS IS BASED ON CRITERIA THAT EVALUATE ENVIRONMENTAL IMPACTS SUCH AS ENERGY CONSUMPTION, POLLUTION (WATER, AIR, NOISE, SOIL), AND WASTE MANAGEMENT. IT IS AN ENVIRONMENTAL EXCELLENCE MARK, MEANING IT HELPS CONSUMERS RECOGNIZE PRODUCTS OR SERVICES THAT HAVE A LOWER ENVIRONMENTAL IMPACT WHILE MAINTAINING THE SAME PERFORMANCE AND QUALITY AS OTHERS.

VALIDATOR



WEBSITE

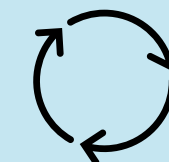
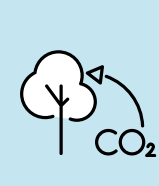
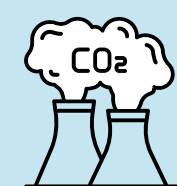
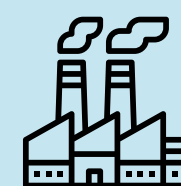


REG.(EC) N.66/2010



ECOLABEL ECOAUDIT
COMMITTEE

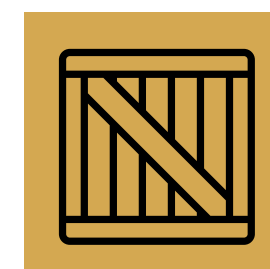
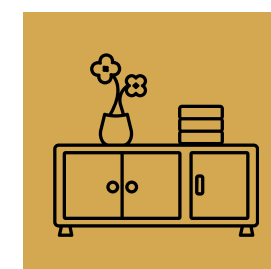
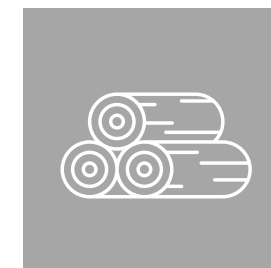
ENVIRONMENTAL BENEFITS ⁱ



BUSINESS OBJECTIVES ⁱ



WOOD SUPPLY CHAIN PHASES ⁱ





MADE GREEN
IN ITALY



MADE GREEN IN ITALY

NATIONAL SCHEME



DESCRIPTION

THE "MADE GREEN IN ITALY" LABEL AIMS TO ENHANCE THE MARKET VALUE OF ITALIAN PRODUCTS WITH GOOD OR EXCELLENT ENVIRONMENTAL PERFORMANCE (GUARANTEED BY A SCIENTIFICALLY ROBUST SYSTEM). ITS LOGO HELPS CONSUMERS EASILY RECOGNIZE THESE PRODUCTS, ENCOURAGING MORE CONSCIOUS CHOICES.

THE QUANTIFICATION OF A PRODUCT'S ENVIRONMENTAL PERFORMANCE IS BASED ON A COMPLETE PEF (PRODUCT ENVIRONMENTAL FOOTPRINT) STUDY, VERIFIED AND VALIDATED BY AN INDEPENDENT THIRD-PARTY ORGANIZATION.

THERE ARE **THREE PERFORMANCE CLASSES**: "A" (VALUE HIGHER THAN THE BENCHMARK), "B" (VALUE CLOSE TO THE BENCHMARK), AND "C" (VALUE LOWER THAN THE BENCHMARK). ONLY PRODUCTS IN CLASS A AND THOSE IN CLASS B (WITH A COMMITMENT FROM THE COMPANY TO IMPROVE PERFORMANCE) ARE ELIGIBLE TO USE THE LOGO.



ITALIAN MINISTRY
OF THE
ENVIRONMENT
(MASE)



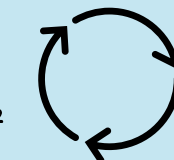
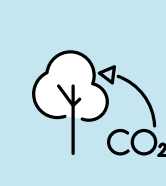
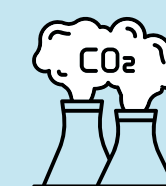
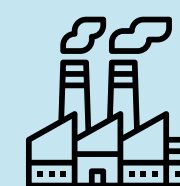
REGOLAMENTO
D.M. 56/2018

VALIDATOR



ITALIAN MINISTRY
OF THE
ENVIRONMENT
(MASE)

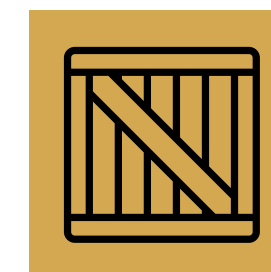
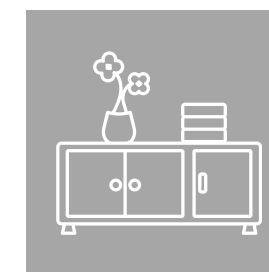
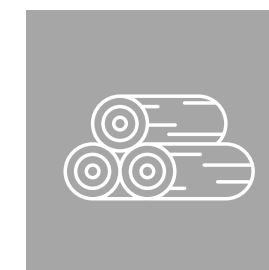
ENVIRONMENTAL BENEFITS ⁱ

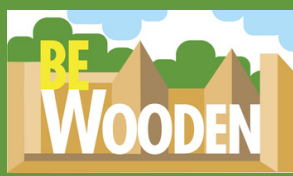


BUSINESS OBJECTIVES ⁱ



WOOD SUPPLY CHAIN PHASES ⁱ





EPD[®] - ENVIRONMENTAL
PRODUCT DECLARATION



EPD[®]

ENVIRONMENTAL PRODUCT DECLARATION



DESCRIPTION

THE **EPD (ENVIRONMENTAL PRODUCT DECLARATION)** IS A VOLUNTARY CERTIFICATION THAT HIGHLIGHTS THE ENVIRONMENTAL PERFORMANCE OF A PRODUCT, PROCESS, OR SERVICE TO IMPROVE ITS SUSTAINABILITY.

EPD IS DEVELOPED IN ACCORDANCE WITH THE UNI ISO 14025:2006 STANDARD (TYPE III ENVIRONMENTAL LABEL); THE ENVIRONMENTAL INFORMATION PROVIDED IS BASED ON A **LIFE CYCLE ASSESSMENT (LCA)**, IN COMPLIANCE WITH THE ISO 14040 SERIES STANDARDS.

VALIDATOR

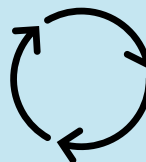
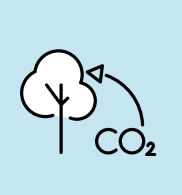
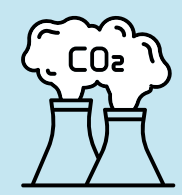
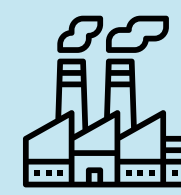


WEBSITE



INTERNATIONAL EPD
SYSTEM

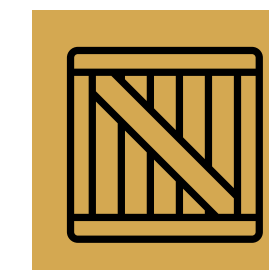
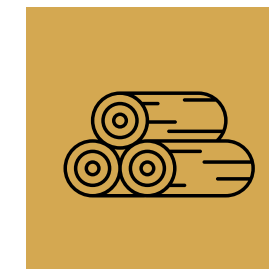
ENVIRONMENTAL BENEFITS ⁱ



BUSINESS OBJECTIVES ⁱ



WOOD SUPPLY CHAIN PHASES ⁱ





ISO 14067:2018

CARBON FOOTPRINT
OF PRODUCTS



ISO 14067:2018

GREENHOUSE GASES – CARBON FOOTPRINT OF PRODUCTS



DESCRIPTION

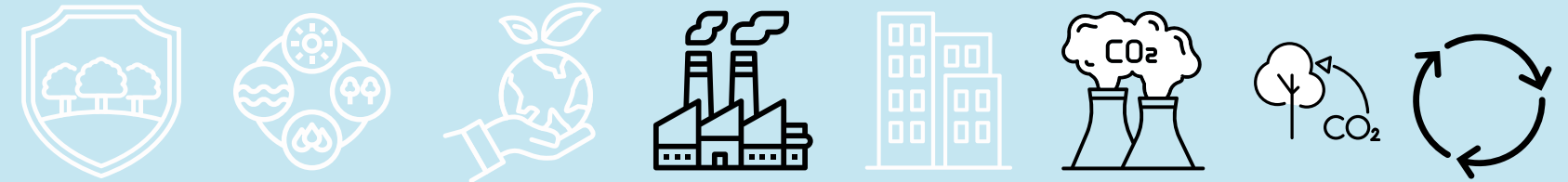
ISO 14067 DEFINES THE PRINCIPLES, REQUIREMENTS, AND GUIDELINES FOR THE QUANTIFICATION AND REPORTING OF THE **PRODUCT CARBON FOOTPRINT (PCF)**, BASED ON **INTERNATIONAL STANDARDS FOR LCA STUDIES (ISO 14040 AND ISO 14044)**.

THIS STANDARD PROVIDES ORGANIZATIONS WITH A METHOD TO CALCULATE THE CARBON FOOTPRINT OF THEIR PRODUCTS (DEFINED AS GOODS OR SERVICES) AND OFFERS THE OPPORTUNITY TO BETTER UNDERSTAND HOW TO REDUCE IT.

WHILE BASED ON THE LCA APPROACH, ISO 14067 FOCUSES SOLELY ON THE IMPACT CATEGORY OF "CLIMATE CHANGE."

THE CARBON FOOTPRINT IS UNDERSTOOD AS THE SUM OF GREENHOUSE GAS (GHG) EMISSIONS AND REMOVALS THROUGHOUT THE LIFE CYCLE OF A PRODUCT.

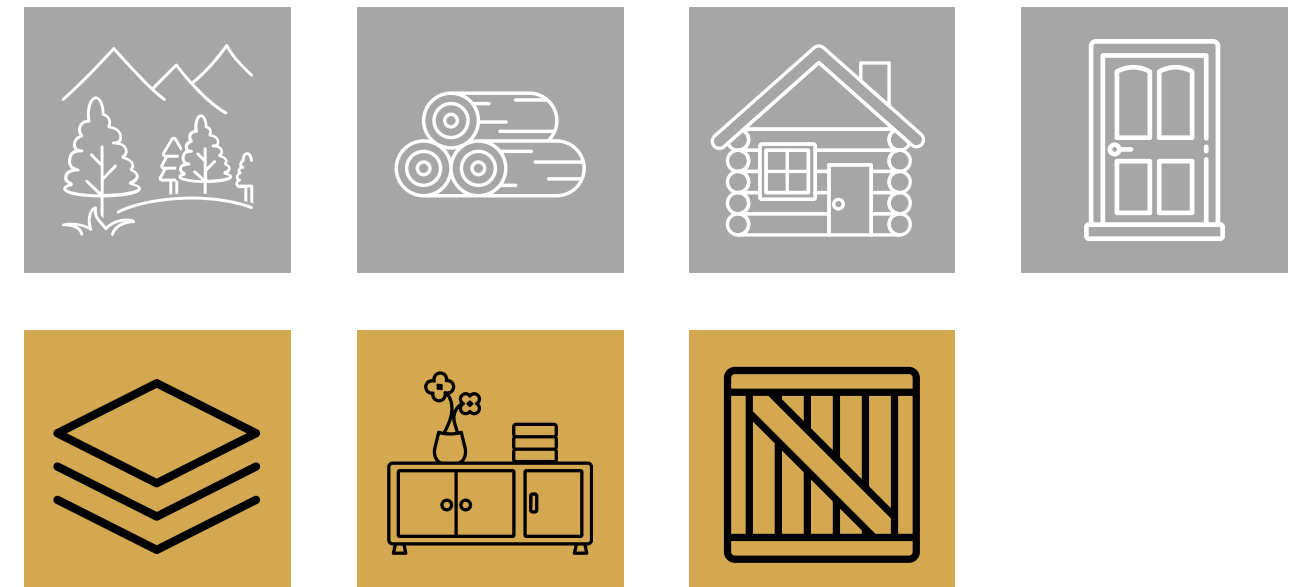
ENVIRONMENTAL BENEFITS ⓘ



BUSINESS OBJECTIVES ⓘ



WOOD SUPPLY CHAIN PHASES ⓘ



VALIDATOR



ISO 14067:2018
(STORE)



INTERNATIONAL
STANDARD FOR
ORGANIZATION



EU-CRCF PRODUCTS



EU-CRCF (PRODUCTS) REG.(EU) 2024/3012 CARBON REMOVAL AND CARBON FARMING



DESCRIPTION

THE OBJECTIVE OF THE SCHEME IS TO FACILITATE AND ENCOURAGE THE ESTABLISHMENT, BY OPERATORS OR GROUPS OF OPERATORS, OF **PERMANENT CARBON SEQUESTRATION, CARBON FARMING, AND CARBON STORAGE IN PRODUCTS**, AS AN ADDITION TO LONG-TERM EMISSION REDUCTIONS ACROSS ALL SECTORS, IN ORDER TO ACHIEVE EUROPEAN GOALS AND TARGETS.

THE SCHEME REQUIRES THE PUBLIC DISCLOSURE OF PERMANENT CARBON SEQUESTRATION, CARBON FARMING, AND CARBON STORAGE IN PRODUCTS THROUGH THE CREATION OF A UNION REGISTRY.

FOR **STORAGE IN PRODUCTS**, IT REFERS TO **PRACTICES OR PROCESSES THAT CAPTURE AND STORE ATMOSPHERIC OR BIOGENIC CARBON FOR AT LEAST 35 YEARS IN LONG-LASTING PRODUCTS. THESE PRACTICES MUST ALLOW ON-SITE MONITORING OF STORED CARBON AND BE CERTIFIED THROUGHOUT THE MONITORING PERIOD.**

VALIDATOR



**CARBON REMOVALS AND
CARBON FARMING
(EU WEBSITE)**

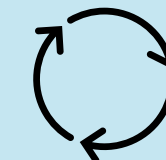
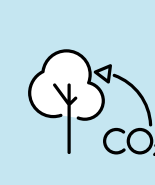
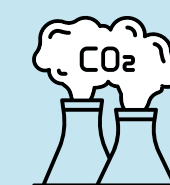
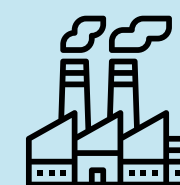


REG. (EU) 2024/3012



**EUROPEAN COMMISSION
DG ENERGY, CLIMATE
CHANGE, ENVIRONMENT**

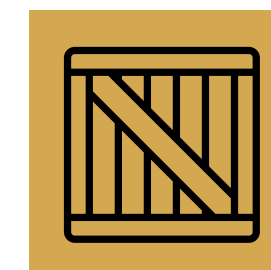
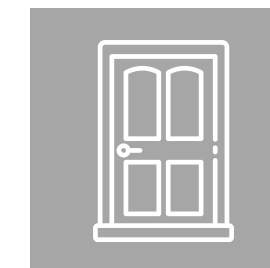
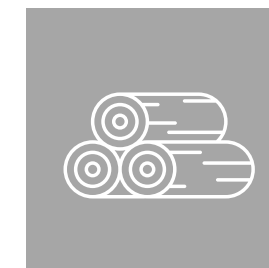
ENVIRONMENTAL BENEFITS ⓘ

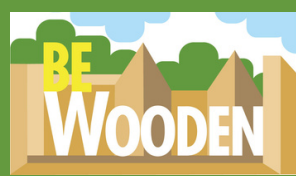


BUSINESS OBJECTIVES ⓘ



WOOD SUPPLY CHAIN PHASES ⓘ





LEED[®] RATING SYSTEMS



LEED[®] RATING SYSTEMS

LEADERSHIP IN ENERGY & ENVIRONMENTAL DESIGN



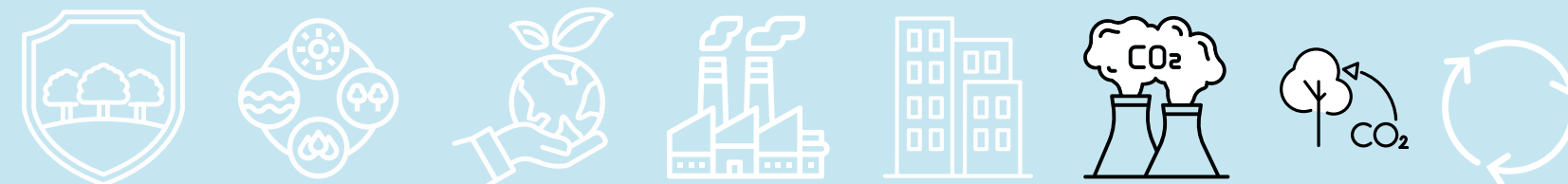
DESCRIPTION

LEED IS A VOLUNTARY SYSTEM DEVELOPED BY THE U.S. GREEN BUILDING COUNCIL. IT IS CONSENSUS-BASED AND FOCUSES ON THE DESIGN, CONSTRUCTION, AND MANAGEMENT OF SUSTAINABLE BUILDINGS AND HIGH-PERFORMANCE AREAS, AND IS INCREASINGLY BEING ADOPTED INTERNATIONALLY.

LEED CAN BE APPLIED TO ALL TYPES OF BUILDINGS AND PROMOTES AN INTEGRATED DESIGN SYSTEM THAT ADDRESSES THE ENTIRE BUILDING.

THE AVAILABLE CERTIFICATION STANDARDS (RATING SYSTEMS) ARE CLASSIFIED BASED ON THE TYPE OF BUILDING TO BE CERTIFIED.

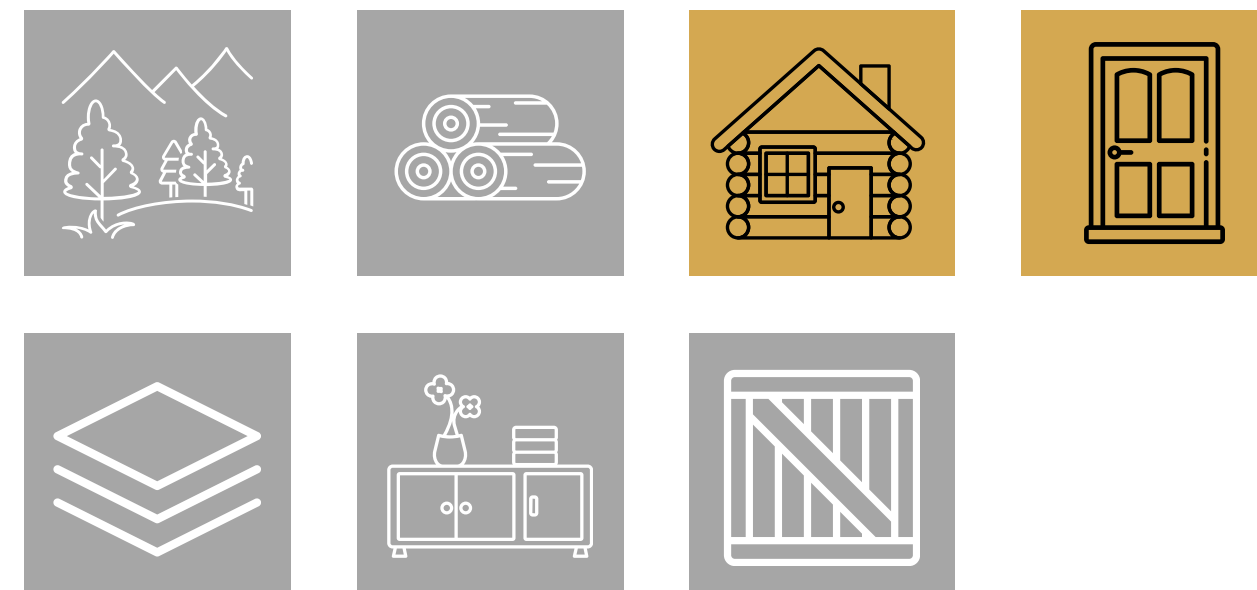
ENVIRONMENTAL BENEFITS ⁱ



BUSINESS OBJECTIVES ⁱ



WOOD SUPPLY CHAIN PHASES ⁱ



U.S. GREEN BUILDING COUNCIL

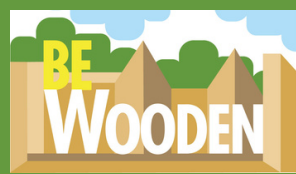


DOCUMENTI E RISORSE (ITA)

VALIDATOR



GREEN BUILDING COUNCIL ITALIA



ITACA PROTOCOL



ITACA PROTOCOL

FOR THE EVALUATION OF THE ENVIRONMENTAL SUSTAINABILITY OF BUILDINGS

PDR UNI 13.0:2023/13.1:2023/13.2:2023

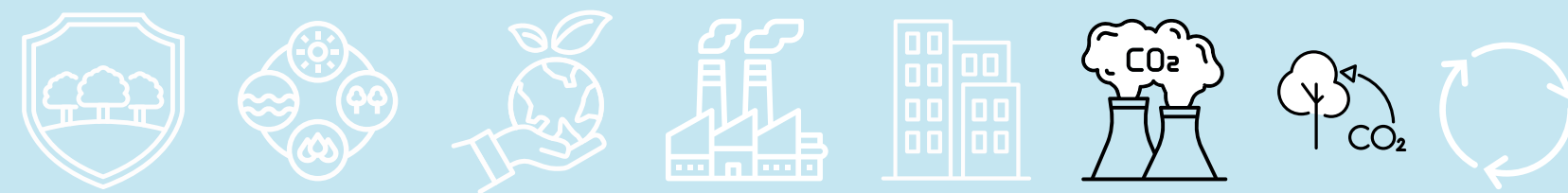


DESCRIPTION

THE ITACA PROTOCOL IS AN EVALUATION TOOL FOR ASSESSING THE LEVEL OF ENERGY AND ENVIRONMENTAL SUSTAINABILITY OF BUILDINGS AND URBAN AREAS. IT ALLOWS FOR THE VERIFICATION OF A BUILDING'S PERFORMANCE NOT ONLY IN TERMS OF ENERGY CONSUMPTION AND EFFICIENCY BUT ALSO CONSIDERING ITS IMPACT ON THE ENVIRONMENT AND HUMAN HEALTH, THUS PROMOTING THE CREATION OF MORE INNOVATIVE AND SUSTAINABLE BUILDINGS.

THE PROTOCOL ALSO ENSURES THE OBJECTIVITY OF THE EVALUATION BY USING INDICATORS AND VERIFICATION METHODS THAT COMPLY WITH TECHNICAL STANDARDS AND RELEVANT NATIONAL LAWS.

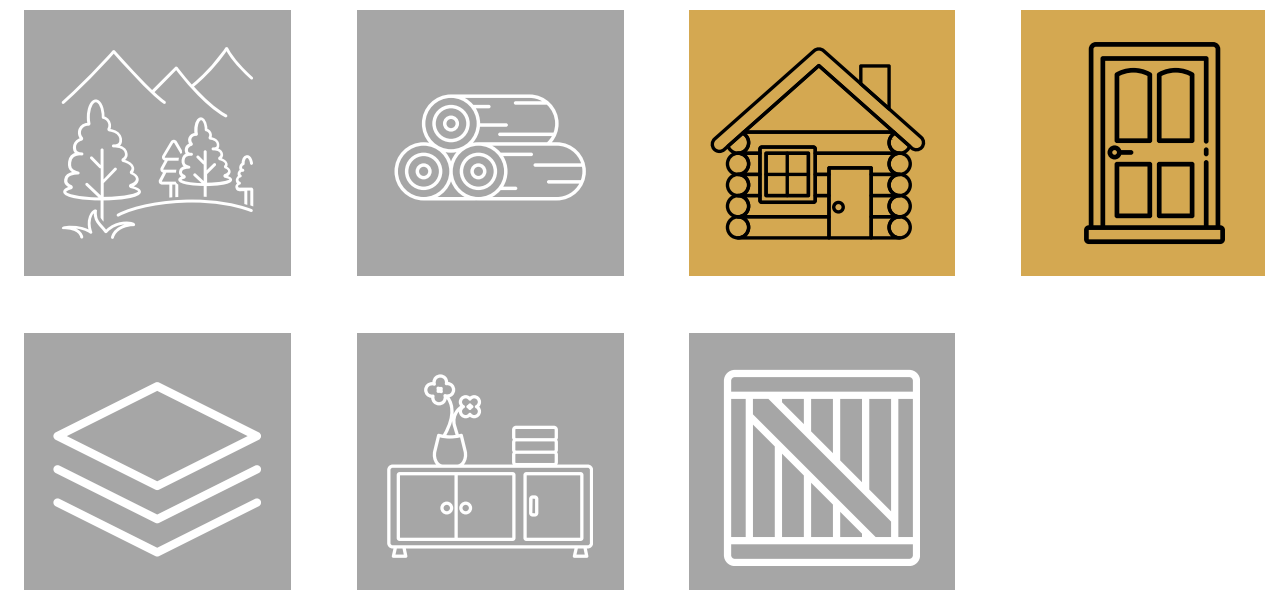
ENVIRONMENTAL BENEFITS ⁱ



BUSINESS OBJECTIVES ⁱ



WOOD SUPPLY CHAIN PHASES ⁱ



ITACA -
ENVIRONMENTAL
SUSTAINABILITY



PDR UNI 13
ENVIRONMENTAL
SUSTAINABILITY OF
BUILDINGS

VALIDATOR



ISTITUTO PER
L'INNOVAZIONE E
TRASPARENZA DEGLI
APPALTI E LA
COMPATIBILITÀ
AMBIENTALE



BREEM[®]



BREEM[®]

BUILDING RESEARCH ESTABLISHMENT ENVIRONMENTAL METHOD

DESCRIPTION

BREEM IS AN ENVIRONMENTAL SUSTAINABILITY ASSESSMENT METHODOLOGY DEVELOPED IN 1988 BY THE BUILDING RESEARCH ESTABLISHMENT (BRE).

IT IS A CERTIFICATION DESIGNED TO **MONITOR, EVALUATE, AND CERTIFY THE SUSTAINABILITY OF BUILDINGS.**

TO OBTAIN BREEM CERTIFICATION, IT IS NECESSARY TO ADOPT **SUSTAINABLE PRACTICES** NOT ONLY DURING THE DESIGN AND CONSTRUCTION PHASES OF BUILDINGS BUT ALSO THROUGHOUT SUBSEQUENT MANAGEMENT AND MAINTENANCE PROCESSES. THE BREEM METHOD CAN BE APPLIED TO CERTIFY NEW CONSTRUCTIONS AND RENOVATION PROJECTS.



WEBSITE



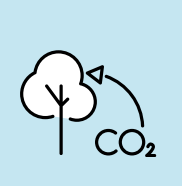
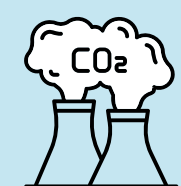
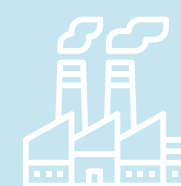
RESOURCES AND DOCUMENTS

VALIDATOR



BUILDING RESEARCH ESTABLISHMENT

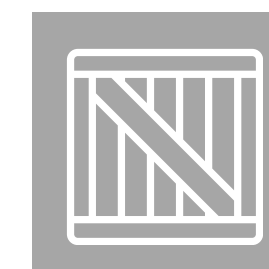
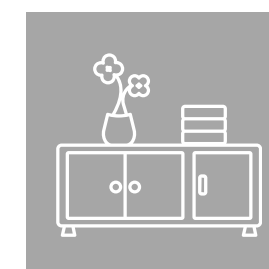
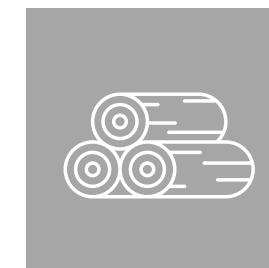
ENVIRONMENTAL BENEFITS ⁱ

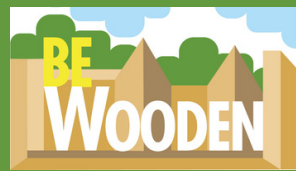


BUSINESS OBJECTIVES ⁱ



WOOD SUPPLY CHAIN PHASES ⁱ





PUBLIC CARBON CREDITS REGISTRY



PUBLIC CARBON CREDITS REGISTRY CREA

DESCRIPTION

THE **PUBLIC REGISTRY OF CARBON CREDITS** GENERATED VOLUNTARILY BY THE NATIONAL AGROFORESTRY SECTOR WAS ESTABLISHED UNDER LEGISLATIVE DECREE 13/2023 (CONVERTED INTO LAW NO. 41 OF 21.04.2023).

THE SCHEME AIMS TO PROMOTE **SUSTAINABLE AGRICULTURAL AND FORESTRY MANAGEMENT PRACTICES** THAT ENHANCE THE ABILITY TO ABSORB ATMOSPHERIC CARBON.

SPECIFIC **GUIDELINES** FOR ELIGIBILITY FOR REGISTRATION IN THE REGISTRY ARE SET TO BE ESTABLISHED SOON AND WILL DEFINE THE CRITERIA FOR THE ESTABLISHMENT OF THE REGISTRY AND THE CERTIFICATION METHODS FOR THE CREDITS.

VALIDATOR

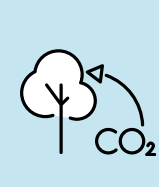
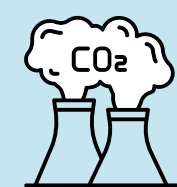
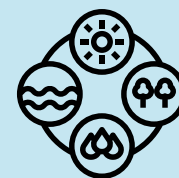


D.L 24.02.2023 N.13



CREA - COUNCIL FOR
AGRICULTURAL
RESEARCH AND
ECONOMICS

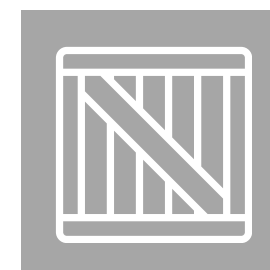
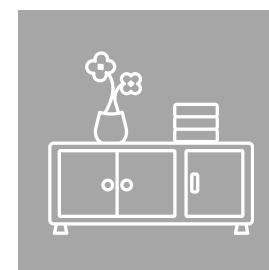
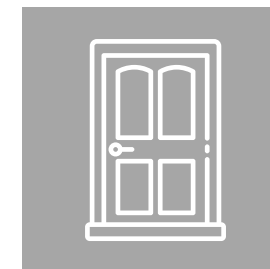
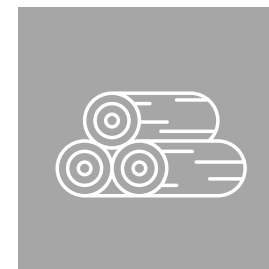
ENVIRONMENTAL BENEFITS ⁱ

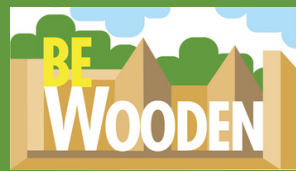


BUSINESS OBJECTIVES ⁱ



WOOD SUPPLY CHAIN PHASES ⁱ





VERRA - VCS



VERRA - VCS

VERIFIED CARBON STANDARD

DESCRIPTION

VERRA IS THE LEADING GLOBAL "CARBON STANDARD" AND AIMS TO SUPPORT SUSTAINABLE DEVELOPMENT GOALS.

THE **VERIFIED CARBON STANDARD (VCS)** PROGRAM ALLOWS ELIGIBLE AND CERTIFIED PROJECTS TO TRANSFORM CONTRIBUTIONS TO GREENHOUSE GAS (GHG) EMISSION REDUCTIONS INTO **TRADABLE CARBON CREDITS (VERIFIED CARBON UNITS - VCU)**.

VALIDATOR



VERIFIED CARBON
STANDARD OUTLINE

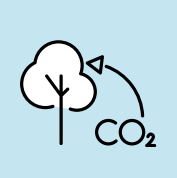
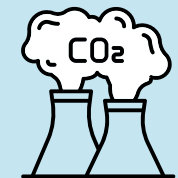
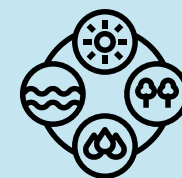


VERRA



Verified Carbon
Standard

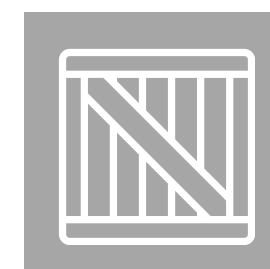
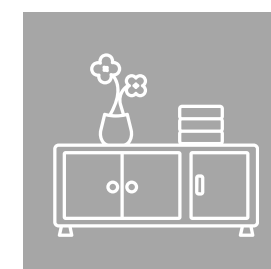
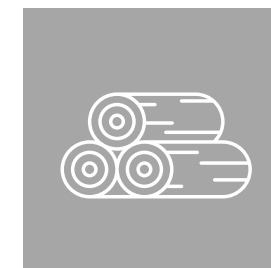
ENVIRONMENTAL BENEFITS ⓘ

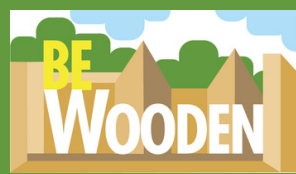


BUSINESS OBJECTIVES ⓘ



WOOD SUPPLY CHAIN PHASES ⓘ





GOLD STANDARD[®] [GS]



GOLD STANDARD[®] [GS]



DESCRIPTION

THE **GOLD STANDARD (GS)** IS A STANDARD THAT SETS THE REQUIREMENTS FOR IMPLEMENTING PROJECTS AIMED AT REDUCING CLIMATE-ALTERING EMISSIONS AND INCREASING CARBON SEQUESTRATION.

THE PROGRAM AIMS TO ENSURE THAT CARBON CREDITS ARE REAL AND VERIFIABLE, AND THAT PROJECTS PROVIDE MEASURABLE CONTRIBUTIONS TO SUSTAINABLE DEVELOPMENT.

VALIDATOR

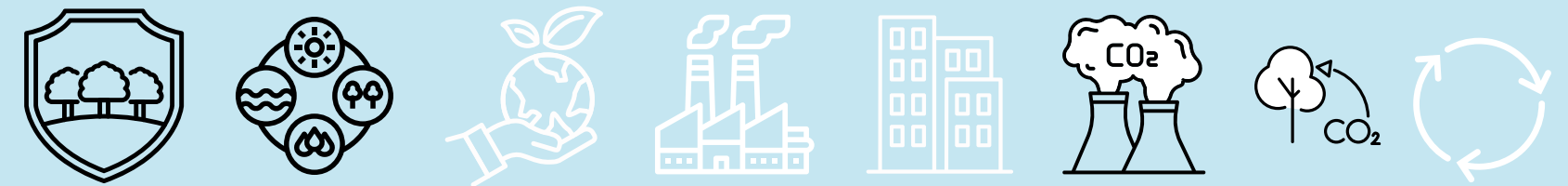


WEBSITE



GOLD STANDARD

ENVIRONMENTAL BENEFITSⁱ



BUSINESS OBJECTIVESⁱ



WOOD SUPPLY CHAIN PHASESⁱ





PLAN VIVO CERTIFICATE (PVC)



PLAN VIVO CERTIFICATE (PVC)

DESCRIPTION

THE **PLAN VIVO** SYSTEM IS A VOLUNTARY INITIATIVE BASED ON THE **SUSTAINABLE USE OF LAND BY COMMUNITIES IN DEVELOPING COUNTRIES**.

PLAN VIVO PROGRAMS AND PROJECTS ENABLE LONG-TERM CARBON STORAGE, ALONG WITH OTHER LOCAL BENEFITS SUCH AS BIODIVERSITY AND POVERTY REDUCTION.

THE SYSTEM INCLUDES THE "**PLAN VIVO STANDARD**", WHICH SETS THE CRITERIA THAT EACH PROJECT MUST MEET IN TERMS OF **CARBON, LIVELIHOODS, AND ECOSYSTEMS**.



WEBSITE



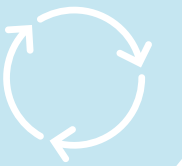
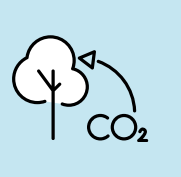
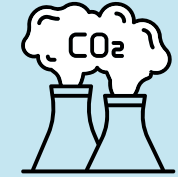
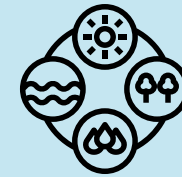
GOLD STANDARD

VALIDATOR

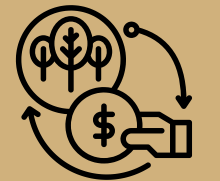


PLAN VIVO
For nature, climate and communities

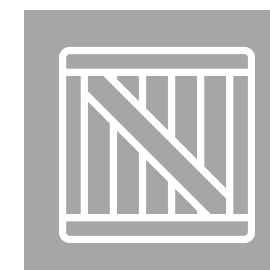
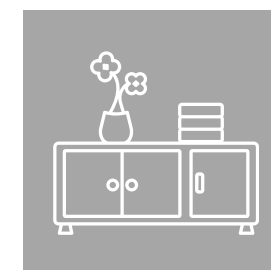
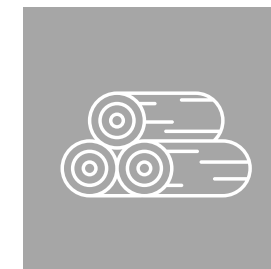
ENVIRONMENTAL BENEFITS ⓘ



BUSINESS OBJECTIVES ⓘ



WOOD SUPPLY CHAIN PHASES ⓘ





EU CRCF



EU-CRCF – CERTIFICATION

REG.(EU) 2024/3012

CARBON REMOVAL AND CARBON FARMING



DESCRIPTION

THE OBJECTIVE OF THE SCHEME IS TO FACILITATE AND ENCOURAGE THE IMPLEMENTATION OF **PERMANENT CARBON REMOVALS, CARBON FARMING, AND CARBON STORAGE IN PRODUCTS** BY MANAGERS OR GROUPS OF MANAGERS, AS A COMPLEMENT TO LASTING EMISSION REDUCTIONS ACROSS ALL SECTORS, IN ORDER TO ACHIEVE EUROPEAN GOALS AND TARGETS.

THE SCHEME INCLUDES THE OBLIGATION TO DISCLOSE PERMANENT CARBON REMOVALS, CARBON FARMING, AND CARBON STORAGE IN PRODUCTS THROUGH THE CREATION OF AN **EUROPEAN UNION REGISTRY**.

VALIDATOR



CARBON REMOVALS AND CARBON FARMING (EU WEBSITE)

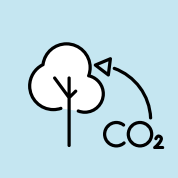
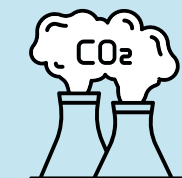
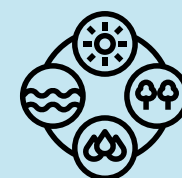


REG. (EU) 2024/3012

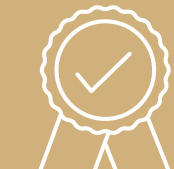


**EUROPEAN COMMISSION
DG ENERGY, CLIMATE
CHANGE, ENVIRONMENT**

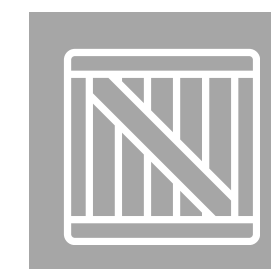
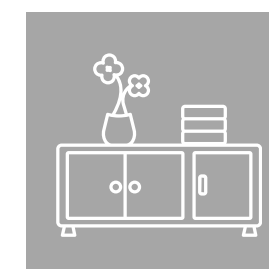
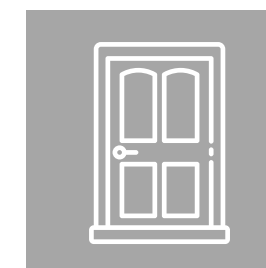
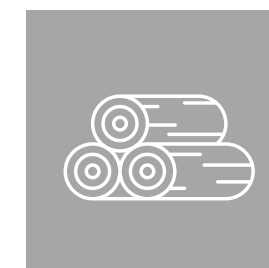
ENVIRONMENTAL BENEFITS ⓘ



BUSINESS OBJECTIVES ⓘ



WOOD SUPPLY CHAIN PHASES ⓘ





GUIDELINES FOR MANAGEMENT OF WOOD CONSUMPTION FOR ENERGY USE

DESCRIPTION

THE PROTOCOL AIMS TO ENHANCE THE VALUE OF **LOCAL WOOD** AND, WHEN POSSIBLE, PROMOTE ITS TRANSFORMATION INTO DURABLE, REUSABLE, AND/OR RECYCLABLE PRODUCTS AT THE END OF LIFE, ALLOWING FOR THE LONG-TERM STORAGE OF CO₂.

THE PROTOCOL ALSO INTENDS TO REAFFIRM THE **PRINCIPLE OF CASCADING USE OF WOOD**: THAT IS, THE USE OF WOOD ACCORDING TO THE PRINCIPLES OF THE **CIRCULAR ECONOMY**, RESERVING COMBUSTION ONLY FOR WOOD RESIDUES THAT CANNOT BE OTHERWISE UTILIZED.



THE PROTOCOL IS
CURRENTLY APPLICABLE
ONLY IN THE EMILIA-
ROMAGNA REGION

VALIDATOR

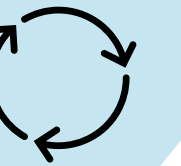
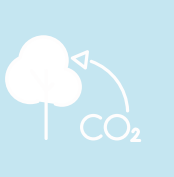
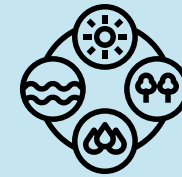


D.G.R. 1629/2022
REGIONE EMILIA-
ROMAGNA



EMILIA-ROMAGNA
REGION -
PROTECTED AREAS,
NATURA 2000 AND
FORESTS

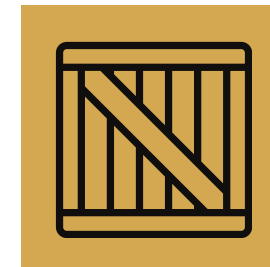
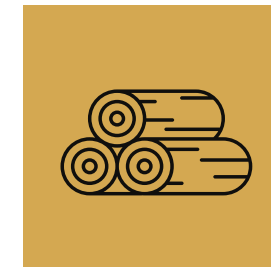
ENVIRONMENTAL BENEFITS ⁱ



BUSINESS OBJECTIVES ⁱ



WOOD SUPPLY CHAIN PHASES ⁱ





TOOLS

SUSTAINABLE FOREST MANAGEMENT CERTIFICATION OF CHAIN OF CUSTODY

PEFC CERTIFICATION
FSC CERTIFICATION

ECO LABELS

ECOLABEL EU
EPD (ENVIRONMENTAL PRODUCT DECLARATION)
CARBON FOOTPRINT
MADE GREEN IN ITALY
EU-CRCF PRODUCTS
PEFC CERTIFICATION
FSC CERTIFICATION

GUIDELINES FOR CASCADING USE OF WOOD

BUILDINGS ENVIRONMENTAL CERTIFICATION

LEED RATING SYSTEMS
ITACA PROTOCOL
BREEAM

CARBON CREDITS

CARBON CREDIT REGISTRY – CREA
EU-CRCF REGULATION
VERRA-VCS
PLANT VIVO
GOLD STANDARD

ENVIRONMENTAL MANAGEMENT SYSTEMS

EMAS (ECO-MANAGEMENT AND AUDIT
SCHEME)
ISO 14001 – ENVIRONMENTAL
MANAGEMENT SYSTEMS

*This document is a result of the LIFE BE-WoodEN project, within the activities outlined in **Work Package 4 - Innovation Lab (Task 4.1 - Innovation lab on valorization of environmental performances in the wood supply chain).***
(March 2025 update)

LIFE BE-WoodEN

Buildings and Education in Wood Ecosystem for the New European Bauhaus

Project Acronym: LIFE23-PRE-IT-LIFE BE-WoodEN

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<https://lifebewooden.unige.it>

Project Leader



**Università
di Genova**

**DAD DIPARTIMENTO
ARCHITETTURA E DESIGN**

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E FORESTALI



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