



WOOD2WOOD

A Wood-to-Wood Cascade Upcycling Valorisation Approach

» Deliverable 16.3

Standardisation activities (version 1)

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GLOSSARY OF ACRONYMS

Acronym	Extended Definition
W2W	Wood2Wood
AFNOR	Association Française de Normalisation (in English: French Standardization Association)
BSI	British Standards Institution
CEN	European Committee for Standardization
CENELEC (CLC)	European Committee for Standardization in the Electrical field
CWA	CEN or CENELEC Workshop Agreement
DIN	Deutsches Institut für Normung (in English: German Institute for Standardization)
EC	<i>European Commission</i>
EU	<i>European Union</i>
EN	European Standard
ETSI	European Telecommunications Standards Institute
FP	<i>Framework Programme</i>
HEN	Harmonised European Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization; International Standard

JTC	Joint Technical Committee
NSB	National Standardization Body
NWI	New Work Item
PAS	Publicly Available Specification
SC	Subcommittee
TC	Technical Committee
TR	Technical Report
TS	Technical Specification
UNE	Asociación Española de Normalización (in English: Spanish Association for Standardisation)
VA	Vienna Agreement

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EXECUTIVE SUMMARY

The main objective of the standardisation activities is to contribute to the generation of new standards that can facilitate the acceptance and utilisation by the market of the developed solutions and products.

An initial analysis of the standardisation landscape has to be performed, about existing standards that can be related as well as the related standardisation committees and organisations involved.

The availability of this information at the very early stage of the projects will allow using already existing material and the alignment with current and underdevelopment standardisation works facilitating the compatibility of the outcomes with the current market practises.

The Spanish Association for Standardization (UNE), as a European standardisation body, is a partner in the W2W project to provide support regarding the standardisation tasks included in the project. In order to fulfil this commitment, this deliverable D16.3 " Standardisation activities (version 1)" has been prepared to guide the partners about the published standards and standards under development that can be applicable to W2W.

This deliverable contains the fields of interest related to W2W project, given by its consortium, and, from this starting point, an identification and analysis of the standardisation technical committees (TCs) related with the project as well as of the published standards and standards under development that can be useful and relevant for the project activities. Furthermore, it can help in the future to identify standardisation gaps that can be covered by the results of the project.

1. INTRODUCTION

Various sectors heavily rely on wood products, leading to an increased demand for virgin materials. The valorisation of wood waste can play a crucial role in facilitating the transition towards a circular economy to alleviate this pressure. The EU-funded W2W project aims to establish a framework for the multi-dimensional cascade valorisation of wood sourced from construction and demolition sites, as well as furniture waste. This framework encompasses adaptive separation and sorting techniques, upcycling processes and technologies, a life cycle assessment tool, supply chain management strategies, a digital product passport, and an information exchange platform. Through its holistic approach, W2W seeks to diminish the need for virgin materials, reduce waste sent to landfills and incineration facilities, and foster the principles of a circular economy.

The W2W project will produce and validate a comprehensive framework for multi-dimensional cascade valorisation of wood from C&D and furniture waste, consisting of four core components:

- 1) Advanced separation & sorting technologies: Adaptive Separation and Sorting system based on cascade valorisation thresholds, making use of human-robot collaboration and mixed reality technologies
- 2) Upcycling Processes and Technologies: mechanical, chemical, and bioremediation processes to recover wood or resources from waste and use them in new products which have the same quality as the ones produced by primary resources.
- 3) Digital Tools for Improving Circular Flows of Secondary Materials: LCA-based tool to predict and assess the impact of different cascade paths, Supply Chain Management Tool for the optimisation of upcycling of secondary materials, Digital Product Passport, and Digital Platform for circularity/upcycling information exchange.
- 4) Supportive Framework in Policy, Market, and Skills: Framework for CDW Cascade Valorisation, Harmonised Waste Wood Classification Framework, skills development, contribution to standards and certification schemes, business models.

W2W will demonstrate efficient and sustainable value chains in 3 Use Cases for the production of: wood without pollutants; biocomposite building materials; biopolymers; polyols; chemical detergents; and the recovery of nutrients, using technologies and tools that allow the selection of optimal cascade paths for further uses of wood products and their materials. The W2W holistic approach will reduce the demand for virgin materials, reduce the amount of waste that ends up in landfills or incineration facilities, allow for the creation of new value-added products from waste materials, and support the transition towards a circular economy by promoting closed-loop systems where materials are continually repurposed and reused, extending their useful life.¹

¹ [A Wood-to-Wood Cascade Upcycling Valorisation Approach | W2W | Projekt | Fact Sheet | HORIZON | CORDIS | European Commission](#)

1.1. DESCRIPTION OF THE DOCUMENT

The purpose of the D16.3 is to provide information on the standardization landscape and applicable standards relevant for W2W project. It aims to provide preliminary information for the work packages ensuring compatibility and interoperability with already existing solutions by identifying existing standards and standards under development at European and international levels and facilitate the acceptance and utilization by the market of the developed solutions.

1.2. WP AND TASKS RELATED WITH THE DERIVABLE

This Deliverable D16.3 "Standardisation activities (version 1)" is the first deliverable for Task 16.3. "Standardization activities" inside WP16 "Skills Development, and Standardisation, Policy & Certification Influencing for RP1".

1.3. SHORT INTRODUCTION ABOUT STANDARDIZATION

Standards are voluntary technical documents that set out requirements for a specific item, material, component, system or service, or they describe in detail a particular method, procedure or best practice. Standards are developed and defined through a process of sharing knowledge and building consensus among technical experts nominated by interested parties and other stakeholders - including businesses, consumers and environmental groups, among others. These experts are organised in Technical Committees (TCs), which are subdivided in subcommittees (SCs) or working groups (WGs). These TCs are included in the structure of the standardisation organizations (National, European and International, with the respective mirror committees) and work following their internal regulations.

The standardisation bodies operate at National (UNE, AFNOR, BSI, DIN, etc.), Regional (CEN, CENELEC, ETSI) or International (ISO, IEC, ITU) level. Sometimes there are different standardisation bodies at the same level but covering different fields. This is the case of ISO (general), IEC (electrical) and ITU (telecommunications) at international level, or CEN, CENELEC and ETSI at European level in the same way.

There are also different kinds of standardization documents. The most widespread is the standard, which has a different code depending on the organization under which it was developed, e.g. EN for European Standards, ISO or IEC for International standards. Other types of documents are technical specifications (TS), technical reports (TR) and CEN workshop agreements (CWA). Further amendments to the standards are identified by adding A1, A2, etc. at the end of the standard code.

At European level, all the members of CEN and CENELEC shall adopt EN standards as national standards and have to withdraw any existing national standards which could conflict with them. A summary of the characteristics of the different standardization documents can be found in the following table.

Table 1: Characteristics of different standardization documents

Type	International code	European code	National code	Main characteristics
Standard	ISO IEC	EN	UNE, NF, BS, DIN, etc. <i>When adopting:</i> UNE-EN NF-EN UNE ISO NF-ISO etc.	• Elaboration: 3 years • 2 steps of member approval • European: compulsory national adoption <i>Revision: every 5 years</i>
Technical Specification	ISO/TS IEC/TS	CEN/TS CLC/TS	<i>When adopting:</i> UNE-CEN/TS NF-CEN/TS UNE-ISO/TS NF-ISO/TS etc.	• Elaboration: 21 months • 1 step of member approval or internal approval in TC • European: optional national adoption <i>Revision: at 3 years (upgrading to EN or deletion)</i>
Technical Report	ISO/TR IEC/TR	CEN/TR CLC/TR	<i>When adopting:</i> UNE-CEN/TR NF-CEN/TR UNE-ISO/TR NF-ISO/TR etc.	• Internal approval in TC • European: optional national adoption <i>No revision required</i>
Workshop Agreement	IWA	CWA	Variable	• Elaboration: free timeframe (usually few months) • Internal approval in the Workshop • European: optional national adoption <i>Revision: at 3 years (upgrading to EN or deletion)</i>

European and International standardization organizations (e.g. CEN and ISO) have signed formal agreements to avoid duplication of efforts and promote global relevance of standards, which allow to adopt or develop in parallel each other's standards with the same content and code.

The technical collaboration between ISO and CEN was formalized through the Vienna Agreement (VA).

European standards developed through the Vienna Agreement have EN ISO codification while International Standards developed through the Vienna Agreement remain only with ISO code.

Concerning CENELEC, it has close cooperation with its international counterpart, the International Electrotechnical Commission (IEC) through the Frankfurt Agreement (FA).

As a result, new electrical standards projects are jointly planned between CENELEC and IEC, and where possible most are carried out at international level. This means that CENELEC will first offer a New Work Item (NWI) to its international counterpart. If accepted, CENELEC will cease working on the NWI. If IEC refuses, CENELEC will work on the standards content development, keeping IEC closely informed and giving IEC the opportunity to comment at the public enquiry stage. CENELEC and IEC vote in parallel (both organizations are voting at the same time) during the standardization process. If the outcome of the parallel voting is positive, CENELEC will ratify the European standard, and the IEC will publish the international standard. Close to 80% of CENELEC standards are identical to or based on IEC publications.

National standards could also be proposed as a base for new European or International standards.

The following figure shows the possible tracks of the standards.

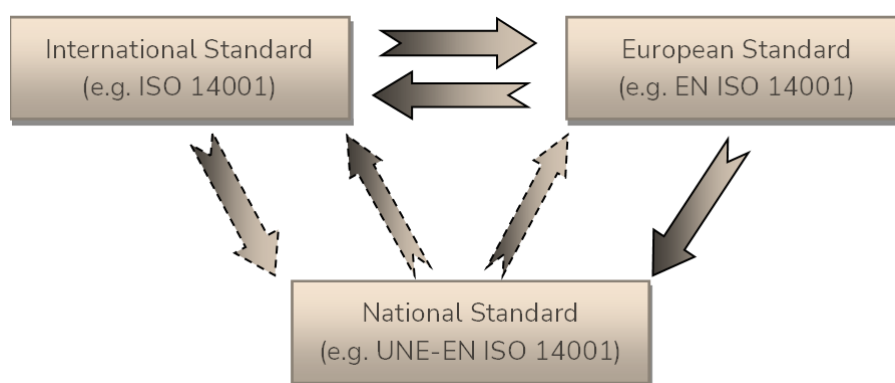


Figure 1. Possible tracks of standards adoption

Therefore, the code of any standard is the combination of the above-mentioned issues and could be explained as shown in the following figure.

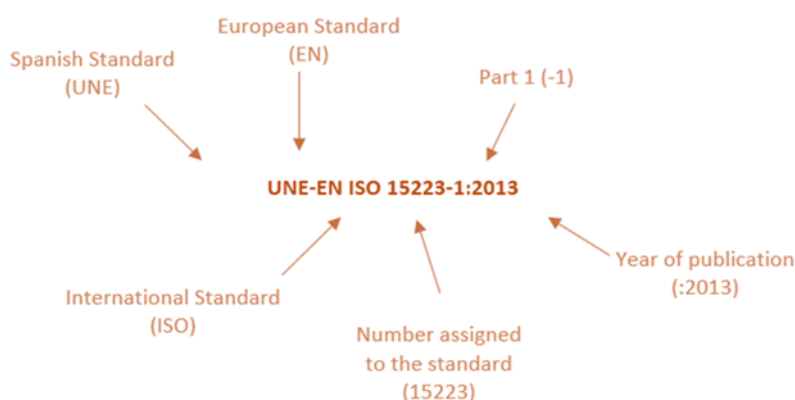


Figure 2. Example of identification of elements in the code of a standard

2. METHODOLOGY

For the identification of standards and standards under development relevant for W2W project, the following methodology has been followed:

1. A list of key concepts was prepared to act as a starting point for the identification of standardization areas.
2. For the selection of the key concepts, the aims and goals of the project and the levels in which the project should integrate were considered. In addition, the use cases' needs were considered. The list was agreed by UNE and W2W partners.

The final list of key concepts used for the search is shown in the following table.

Table 2: List of key concepts acting as a starting point for the identification of standardization areas

Generic Term	Specific term
Materials	wood
	timber
	plywood
Environmental engineering	low carbon economy
	decarbonisation
	lifecycle
	energy efficiency
	footprint
	CO ₂ emissions
	valorisation
	carbon capture
	carbon reduction
	climate neutrality
	circular economy
	green transformation
Sensorisation	control systems
	sensor
	spectroscopic
	spectral
Simulation & decision-making process	digital twins
	data fusion
	IA (Artificial Intelligence)
	decision support system
	deep learning
Cybersecurity	industrial cybersecurity
	data protection in industry

	Industrial information security
	industrial network security
	SCADA system security
	industrial IoT security
	industrial automation security
	cloud security
	critical infrastructure security
	smart manufacturing security

- Both existing standards and standards under development were identified for each standardization area, together with the technical committee responsible for the respective standards.

To facilitate the activity, the key concepts have been grouped into five large areas, namely:

- Materials. It includes information relating to materials, additional products and end products.
- Environmental engineering. It includes concepts related to improvement and assessment of processes for environmental care and protection.
- Industrial processes. It includes information about industrial processes related to the needs of the W2W project.
- Sensorisation. It includes information on sensorisation techniques for process automation.
- Simulation & decision-making process. It includes information on standardisation related to digital design or decision support systems and machine learning.
- Cybersecurity. It includes information relating to security and industrial data protection.

The search covered the European standardization developed by the European Committee for Standardization (CEN), European Committee for Standardization in the Electrical field CENELEC (CLC), European Telecommunications Standards Institute (ETSI) and international standardization developed by the International Organization for Standardization (ISO) and IEC (electro technical). The databases and websites used for the search are referred in Chapter 5.

- As a final stage, W2W partners were asked to identify those references that should really be considered for the project, specifying in what WP they would be used, how the standard would influence/impact the project implementation and risks/opportunities from technical and business perspective.

They will be also asked to indicate if any contribution to the respective standard is expected and whether they considered relevant to contact the technical committee responsible for the standard development.

The interaction with the identified standardization technical committee could take place through:

- The participation of one or more W2W partners in the technical body (standardization is an open activity and all interested parties may participate in a CEN/CENELEC/ISO/IEC technical committee through the designation of National Standardization Bodies/National Mirror Committee or as organization liaison representative in a CEN/TC).
 - The participation through the formal liaison of the W2W project with main CEN/TC(s) to participate directly as liaison organization which intend to make technical contributions to their works.
 - The dissemination of the W2W project progress by delivering reports to the relevant TCs secretaries or by attending relevant technical committees' meetings.
5. As a result of all the process described above a list of technical committees and standards relevant for W2W has been identified (see Chapter 3).

They have been classified as:

- Relevant technical committees for the project.
- Relevant standards for the project: it should be decided whether the standards will represent a requirement for the WP developments at design/development phases or it would be interesting to keep them in mind as they could be helpful, but they will not represent a requirement.

3. RELEVANT STANDARDS FOR W2W

3.1. TECHNICAL COMMITTEES' IDENTIFICATION

The following table includes a list of the European and international committees, subcommittees and working groups that have been identified as technical bodies working on issues related to the W2W project.

Table 3: List of European and international committees related to W2W project

Key concept	Technical body	Committee Title
Materials & Material Products	CEN/TC 112	Wood-based panels
	ISO/TC 89	
	CEN/TC 124	Timber structures
	ISO/TC 165	
	CEN/TC 249	Plastics
	ISO/TC 218	Timber

Test	CEN/TC 38	Durability of wood and wood-based products
	CEN/TC 138	Non-destructive testing
	ISO/TC 135	
Manufacturing and industrial process	ISO/TC 287	Sustainable processes for wood and wood-based products automation systems and integration
Wood sector	ISO/TC 59	Buildings and civil engineering works

In the same analysis process, a few other committees have been identified as ‘possible references of interest’.

Table 4: European and International Committees of possible interest for the W2W project.

Key concept	Technical body	Committee Title
Environmental engineering	CEN/CLC/WS LEVEL-UP	Circularity Protocols for extending the useful Life of Large Industrial Equipment
	CEN/TC 473	Circular Economy
	CEN/TC 474	Carbon dioxide Capture, transportation, Utilisation, and Storage (CCUS)
	ISO/TC 300	Solid recovered materials, including solid recovered fuels
	ISO/TC 323	Circular economy
	ISO/TC 207/SC 5	Life cycle assessment
Industrial processes	CEN/TC 186	Industrial thermoprocessing - Safety
	CEN/WS EMSM Projects	A Methodology for the implementation of an Energy Management and Sustainable Manufacturing (EMSM) Project in factories
	SyC SM	Smart Manufacturing
	CEN/TC 138	Non-destructive testing
	CEN/TC 151	Construction equipment and building material machines - Safety
	CEN/TC 477	Sustainable production of mineral and metal raw materials from mining and recycling
	ISO/TC 135	Non-destructive testing

Sensorisation	CLC/TC 65X	Industrial-process measurement, control and automation
Simulation & decision-making process	CEN/CLC/WS BIOMAT	Data-driven management of production processes
	CEN/CLC/JTC 21	Artificial Intelligence
	CEN/CLC/WS Monsoon	Predictive management of data intensive industrial processes
	ISO/IEC JTC 1/SC 38	Cloud Computing and Distributed Platforms
	ISO/IEC JTC 1/SC 41	Internet of Things and Digital Twin
	ISO/IEC JTC 1/SC 42	Artificial Intelligence
Cybersecurity	CEN/CLC/JTC 13	Cybersecurity and Data Protection
	ISO/IEC JTC 1/SC 27	Information security, cybersecurity and privacy protection
Environmental engineering	CEN/CLC/JTC 14	Energy management and energy efficiency in the framework of energy transition
	CEN/TC 467	Climate Change
	ISO/TC 301	Energy management and energy savings
Industrial technologies	CEN/TC 114	Safety of machinery
	CEN/TC 123	Lasers and photonics
Chemical engineering	CEN/TC 268	Cryogenic vessels and specific hydrogen technologies applications
	CEN/CLC/WS ZDMTerm	Zero Defects in Digital Manufacturing Terminology
	CLC/TC 65X	Industrial-process measurement, control and automation
Sensorisation	CLC/TC 66X	Safety of measuring, control, and laboratory equipment
	CLC/TC 216	Gas detectors
	IEC/TC 65	Industrial-process measurement, control and automation
	IEC/TC 65/SC 65A	System aspects

	IEC/TC 65/SC 65B	Measurement and control devices
	IEC/TC 65/SC 65C	Industrial networks
	IEC/TC 65/SC 65E	Devices and integration in enterprise systems
	IEC/TC 66	Safety of measuring, control and laboratory equipment
	ISO/TC 184	Automation systems and integration
	ISO/TC 184/SC 1	Industrial cyber and physical device control
	ISO/TC 184/SC 4	Industrial data
	ISO/TC 184/SC 5	Interoperability, integration, and architectures for enterprise systems and automation applications
Simulation & decision-making process	ISO/IEC JTC 1/SC 38	Cloud Computing and Distributed Platforms
	ISO/IEC JTC 1/SC 41	Internet of Things and Digital Twin
	ISO/IEC JTC 1/SC 42	Artificial Intelligence

3.2. RELEVANT STANDARDS

In order to present the list in a coherent and understandable way, the list of relevant standards has been grouped by the responsible Technical Committee.

CEN/TC 112 - Wood-based panels

Scope: Preparation of standards for wood-based panels and panels of other lignocellulosic materials covering:

- terminology;
- classification;
- requirements;
- product specifications;
- methods of tests.

Table 5. CEN/TC 112 relevant standards for W2W.

Standard code	Standard Title	Status
EN 317:1993	Particleboards and fibreboards - Determination of swelling in thickness after immersion in water	Published

EN 319:1993	Particleboards and fibreboards - Determination of tensile strength perpendicular to the plane of the board	Published
EN 322:1993	Wood-based panels - Determination of moisture content	Published
EN 323:1993	Wood-based panels - Determination of density	Published
EN 324-1:1993	Wood-based panels - Determination of dimensions of boards - Part 1: Determination of thickness, width and length	Published
CEN/TS 1099:2007	Plywood - Biological durability - Guidance for the assessment of plywood for use in different use classes	Published
CEN/TS 14966:2005	Wood-based panels - Small scale indicative test methods for certain mechanical properties	Published
EN 12775:2001	Solid wood panels - Classification and terminology	Published
EN 312:2010	Particleboards - Specifications	Published

CEN/TC 89 - Thermal performance of buildings and building components

Scope: Standardization in the field of energy performance of buildings, including particularly energy transfer through building components and thermal insulation of installed equipment in buildings, covering:

- rules for expressing relevant thermal properties and requirements;
- calculation and test methods;
- input data, including climatic data;
- effects of moisture.

Table 6. CEN/TC 89 relevant standards for W2W.

Standard code	Standard Title	Status
EN 12667:2001	Thermal performance of building materials and products - Determination of thermal resistance by means	Published

	of guarded hot plate and heat flow meter methods - Products of high and medium thermal resistance	
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ISO/TC 89 - Wood-based panels

Scope: Standardization in the field of panels such as fibreboards, particle boards and plywood based on lignocellulosic materials (derived from wood or other materials) including terminology, classification, dimensions, test methods and quality requirements.

Table 7. ISO/TC 89 relevant standards for W2W.

Standard code	Standard Title	Status
ISO 12460-serie	Wood-based panels — Determination of formaldehyde release — Part	Published
ISO 12460-5	Wood-based panels — Determination of formaldehyde release — Part 5: Extraction method (called the perforator method)	Published
ISO 12465:2007	Plywood — Specifications	Published
ISO 18775:2020	Veneers — Terms and definitions, determination of physical characteristics and tolerances	Published

ISO/TC 24 - Particle characterization including sieving

Scope: Standardization pertaining to equipment and methods used in characterization or size classification of particulate material, where particles may be considered to include grains, flakes, fibres, droplets, bubbles or pores from the nanometre to the millimetre scale.

Covering the following:

- Particle and particle ensemble characterization, mainly by determination of physical properties of the particles including, for example, size distribution, particle shape and morphology, weight, density, surface area or porosity, and mobility
- Particle systems characterization comprises particle-fluid and particle-particle interactions in suspensions, emulsions, aerosols or powders by determining their properties including concentration, electric charge, zeta potential, state of agglomeration, stability and rheology.
- Test sieves, sieving methods and industrial screens.

Each of the above areas will comprise standardization in the field of laboratory or process environment including terminology, reference materials, guidance for sampling, sample preparation, interpretation of results and uncertainty determination.

Table 8. ISO/TC 24 relevant standards for W2W.

Standard code	Standard Title	Status
ISO 13322-2:2021	Particle size analysis — Image analysis methods — Part 2: Dynamic image analysis methods	Published

CEN/CLC/WS LEVEL-UP - Circularity Protocols for extending the useful Life of Large Industrial Equipment

Table 9: CEN/CLC/WS LEVEL-UP relevant standards for W2W.

Standard code	Standard Title	Status
CWA 18106:2024	Circularity Protocols for extending the useful Life of Large Industrial Equipment	Published

CEN/TC 473 - Circular Economy

Scope: Standardization in the field of Circular Economy to develop horizontal standards that address European specific prerequisites, legislation, and policy.

The standards aim to provide guidance, recommendations, requirements, methodologies and tools to implement, support and measure transition towards a Circular Economy at an organizational level.

The deliverables aim to complement international and European standardization in the advancement in the transition towards a Circular Economy, while contributing to sustainable development.

The work aligns with, but does not duplicate, activities falling into the scope of other Technical Committees*. The Technical Committee will promote and maintain open communication and active collaboration with all relevant committees.

* see list of related TC/SC in TC 473 Business plan

Table 10. CEN/TC 473 relevant standards for W2W.

Standard code	Standard Title	Status
(WI=00473001)	Circular economy - Guidance on the implementation of ISO 59010 with consideration of European policies and regulations	Under development
(WI=00473004)	Extended Producer Responsibility application on products and materials	Under development

(WI=00473003)	Circular Economy – Product-related data and information sharing along value networks	Under development
(WI=00473002)	Circular Economy – Practical information and guidance for the implementation of ISO 59004 in Europe	Under development

CEN/TC 474 - Carbon dioxide Capture, transportation, Utilisation, and Storage (CCUS)

Scope: Standardization within CEN/TC 474 includes but is not limited to:

- the full lifecycle of CCUS projects;
- design, construction, commissioning, operation, inspection and maintenance, abandonment / end of life / post-closure handover, storage and retrieval;
- specific health, safety, and environmental aspects;
- risk and integrity management and lifecycle assessment of the project or technology;
- CO₂ stream composition and quality;
- measurement, monitoring, verification (MMV) and quantification, including accounting of the CO₂ across the CCUS value chain

The work aligns with, but does not duplicate, activities falling into the scope of other Technical Committees. The Technical Committee will promote and maintain open communication and active collaboration with all relevant committees.

Table 11. CEN/TC 474 relevant standards for W2W.

Standard code	Standard Title	Status
prEN ISO 27913 (WI=00474005)	Carbon dioxide capture, transportation and geological storage - Pipeline transportation systems (ISO 27913:2024)	Under development
(WI=00474006)	Negative emission technologies (NET), e.g. BECCS and DACCS, and their potential for carbon dioxide removal (CDR)	Under development
(WI=00474002)	Properties of CO ₂ streams	Under development
(WI=00474003)	Carbon dioxide quantification and verification across the CCS Value Chain	Under development

ISO/TC 323 - Circular Economy

Scope: Standardization in the field of Circular Economy to develop frameworks, guidance, supporting tools and requirements for the implementation of activities of all involved organizations, to maximize the contribution to Sustainable Development.

Excluded: Aspects of Circular Economy already covered by existing committees.

Note: In parallel, the ISO TC 323 works in cooperation with existing committees on subjects that may support Circular Economy.

Table 12. ISO/TC 323 relevant standards for W2W.

Standard code	Standard Title	Status
ISO 59004:2024	Circular economy — Vocabulary, principles and guidance for implementation	Published
ISO 59010:2024	Circular economy — Guidance on the transition of business models and value networks	Published
ISO/TR 59032:2024	Circular economy — Review of existing value networks	Published
ISO 59040:2025	Circular economy — Product circularity data sheet	Published
ISO/CD TR 59031	Circular economy – Performance-based approach – Analysis of cases studies	Under development

ISO/TC 207/SC 5 - Life cycle assessment

Scope: Standardization in the field of environmental management to address environmental and climate impacts, including related social and economic aspects, in support of sustainable development.

Excluded: test methods of pollutants, setting limit values and levels of environmental performance, and standardization of products.

Note 1: TC 207 is focused on environmental management systems, auditing, verification/validation and related investigations, environmental labelling, environmental performance evaluation, life cycle assessment, climate change and its mitigation and adaptation, ecodesign, material efficiency, environmental economics and environmental and climate finance.

Note 2: Where appropriate, the ISO/TC 207 works in cooperation with existing committees on subjects that may support environmental management."

Table 13. ISO/TC 207/SC 5 relevant standards for W2W.

Sample text (Normal,copy)	Sample Text (Normal,copy)	Sample text (Normal,copy)
ISO 14040:2006	Environmental management — Life cycle assessment — Principles and framework	Published

ISO 14040:2006/Amd 1:2020	Environmental management — Life cycle assessment — Principles and framework — Amendment 1	Published
ISO 14044:2006	Environmental management — Life cycle assessment — Requirements and guidelines	Published
ISO 14044:2006/Amd 1:2017	Environmental management — Life cycle assessment — Requirements and guidelines — Amendment 1	Published
ISO 14044:2006/Amd 2:2020	Environmental management — Life cycle assessment — Requirements and guidelines — Amendment 2	Published
ISO 14045:2012	Environmental management — Eco-efficiency assessment of product systems — Principles, requirements and guidelines	Published
ISO 14046:2014	Environmental management — Water footprint — Principles, requirements and guidelines	Published
ISO/TR 14047:2012	Environmental management — Life cycle assessment — Illustrative examples on how to apply ISO 14044 to impact assessment situations	Published
ISO/TS 14048:2002	Environmental management — Life cycle assessment — Data documentation format	Published
ISO/TR 14049:2012	Environmental management — Life cycle assessment — Illustrative examples on how to apply ISO 14044 to goal and scope definition and inventory analysis	Published
ISO 14055-1:2017	Environmental management — Guidelines for establishing good practices for combatting land degradation and desertification — Part 1: Good practices framework	Published

ISO/TR 14055-2:2022	Environmental management — Guidelines for establishing good practices for combatting land degradation and desertification — Part 2: Regional case studies	Published
ISO 14071:2024	Environmental management — Life cycle assessment — Critical review processes and reviewer competencies	Published
ISO 14072:2024	Environmental management — Life cycle assessment — Requirements and guidance for organizational life cycle assessment	Published
ISO/TR 14073:2017	Environmental management — Water footprint — Illustrative examples on how to apply ISO 14046	Published
ISO/TS 14074:2022	Environmental management — Life cycle assessment — Principles, requirements and guidelines for normalization, weighting and interpretation	Published
ISO 14075:2024	Environmental management — Principles and framework for social life cycle assessment	Published
ISO 59014:2024	Environmental management and circular economy — Sustainability and traceability of the recovery of secondary materials — Principles, requirements and guidance	Published
ISO/DTS 14076	Environmental management — Environmental techno-economic assessments — Principles, requirements and guidance	Published
ISO/AWI 14077	Environmental management — Life cycle assessment — Requirements and guidelines for application of Chain of Custody (CoC) approaches in Life Cycle Assessment (LCA)	Under development

4. CONCLUSIONS

As a result of the study of the standardisation landscape through the methodology explained above, several standards relevant for the W2W project have been found.

This initial analysis of the standardization landscape is useful at the very early stage of the project because it reveals already existing material and promotes the alignment with current and under development standardization work, facilitating the compatibility of the outcomes with the current market practises. Project partners collaboration and their feedback have been very important and useful for this analysis.

Despite not having found only a specific standardization technical committee whose activity impacts directly on the W2W project, specific tasks to be addressed in the project are related to standardization works, and several technical committees have been identified as possibly most relevant

On the other hand, the identified standards might be considered as a compliance requirement for the outputs of the project, or they could be used as guidelines since they could be useful for the WPs.

After this analysis of the current standardization situation of the technical committees and standards related to W2W, one main conclusion may be drawn:

There are many European and international technical committees, as well as of existing standards and standards under development related to W2W project that may be useful for its development and for its future dissemination. Depending on the assessment by W2W partners on the impact of the identified standardization committees on their tasks and the level of contribution that their results can represent for these committees, several actions can be performed, like:

- the follow up of the standardization activity through updates reported by UNE;
- the follow up through one or more W2W representatives joining this standardization committees. Standardization is an open activity, and all interested parties may participate in a CEN/CENELEC/ISO/IEC technical committee through its National Mirror Committee and National Standardization Body;
- the dissemination of the W2W project progress by delivering reports to the relevant TCs secretaries or by attending relevant technical committees' meetings.

To use the standardisation system as a tool for dissemination of the project results, an interaction with the market stakeholders will be necessary to decide the type of W2W's engagement with relevant standardization technical committees. UNE will provide the necessary technical support required for that interaction.

It is also important to mention that as the project progresses, new standards or technical committees may be detected as relevant. In these cases, the same methodology will be followed.

5. REFERENCES

For the elaboration of this report, the following sources have been consulted:

- CEN Website (www.cen.eu)
- CENELEC Website (www.cenelec.eu)
- CEN/CENELEC Projex Online database (projex.cen.eu) (restricted to authorized users)
- ETSI Website (www.etsi.org)
- ISO Website (www.iso.org)
- ISO Project Portal (isotc.iso.org) (restricted to authorized users)
- IEC Website (www.iec.ch)



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