

# CEN and/or CLC Workshop Roadmap for the Evaluation of Product Quality Criteria for water related Circular Economy Products: Defining Product Types, Key Performance Indicators (KPIs), and Methods of Proof for Product Certification

## Workshop description form

- PART A – Workshop Summary
- PART B – Project Plan

## PART A – Workshop SUMMARY

<b>1</b>	<b>WS details</b>		
1.1.	<b>Organization</b>	<input checked="" type="checkbox"/> CEN <input type="checkbox"/> CENELEC <input type="checkbox"/> Joint with <input type="checkbox"/> CEN lead <input type="checkbox"/> CENELEC lead	
1.2.	<b>Title</b>	CEN WS “Roadmap for the Evaluation of Product Quality Criteria for water related Circular Economy Products: Defining Product Types, Key Performance Indicators (KPIs), and Methods of Proof for Product Certification”  (select CEN or CLC or leave CEN/CLC in case of joint WS)	
1.3.	<b>Scope</b>	This CEN Workshop Agreement (CWA) aims at developing guidance/roadmap on evaluating product quality criteria for water related Circular Economy products, defining product types, related Key Performance Indicators (KPIs) and relevant methods that can support product certification. This document is applicable to researchers, public authorities, circular economy product owners, NGOs, water utilities, manufacturers and users or companies developing market-ready solutions.	
1.4.	<b>Does this WS stem from an EU Research project?</b>	<input checked="" type="checkbox"/> YES Name of the project: BOOST-IN Grant number: 101135239 End date 31/12/2026  <input type="checkbox"/> NO	
1.5.	<b>Financial support</b>	<input checked="" type="checkbox"/> EU Research project <input type="checkbox"/> EC/EFTA Grant reference: Type here <input type="checkbox"/> Other Specify, if needed: Type here	
1.6.	<b>WS Proposer/Proposed Chair</b>  <b>WS proposer</b>	Name: Organization: Postal address: Email: Phone: Webpage: Contact person (name and email):	Thomas Track DECHEMA Theodor-Heuss-Allee 25, 60486 Frankfurt am Main, Germany thomas.track@dechema.de +49697564427 https://dechema.de/ Thomas Track (thomas.track@dechema.de)
1.7.	<b>WS Secretariat</b>	Organization: Postal address: Email: Phone: Webpage: WS Secretary name: Email: Phone:	UNE – Spanish association for standardization Calle Génova 6, Madrid (Spain), 28004 info@une.org +34 915 294 900 www.une.org Javier Idiago fidiago@une.org +34 628 501 276
1.8.	<b>CEN and CENELEC Management Centre (CCMC) contact</b>	Organization: Postal address: Webpage: CCMC Project Manager name: Email: Phone:	CEN and CENELEC Rue de la Science 23B - 1040 Brussels, Belgium <a href="https://www.cencenelec.eu/Pages/default.aspx">https://www.cencenelec.eu/Pages/default.aspx</a> Claire Van Thielen cvanthielen@cencenelec.eu +3225500831 +32478793545

1.9.	<b>Tentative date and place of the Kick-off Meeting</b>	Date: 13.10.2025; 9:00 – 11:30 CET	Place: Online (Teams)
1.10.	<b>Does the proposed Workshop fall within the scope of existing CEN and/or CENELEC Technical Bodies?<sup>1</sup></b>	<input type="checkbox"/> YES Specify: Type here <input checked="" type="checkbox"/> NO. The CWAs does not fall within the scope of an existing TC but it has strong relation with the activities of CEN/TC 473, CEN/TC 164 and CEN/TC 165.	
1.11.	<b>Are there other Technical Bodies or Joint Advisory and Coordination Groups potentially interested in the Workshop? <sup>2</sup></b>	<input checked="" type="checkbox"/> YES Specify: CEN/TC 473 “Circular economy”, CEN/TC 164 “Water supply” and CEN/TC 165 “Waste water engineering” <input type="checkbox"/> NO	
1.12.	<b>Are the following aspects affected?</b>	Safety matters YES <sup>3</sup> <input type="checkbox"/> NO <input checked="" type="checkbox"/> Management system aspects YES <sup>4</sup> <input type="checkbox"/> 7 <input checked="" type="checkbox"/> Conformity assessment aspects YES <sup>5</sup> <input type="checkbox"/> NO <input checked="" type="checkbox"/> Security matters YES <sup>6</sup> <input type="checkbox"/> NO <input checked="" type="checkbox"/> 8	
		Add information/explanations if Management System aspects and Conformity Assessment aspects are affected: Type here	
<b>2 WS Deliverables</b>			
2.1.	<b>CWA #1</b>		
2.1.1	<b>Title</b>	<input checked="" type="checkbox"/> Same as WS title (1.2) <input type="checkbox"/> Other: Type here	
2.1.2	<b>Scope</b>	This CEN Workshop Agreement (CWA) aims at developing guidance/roadmap on evaluating product quality criteria for water related Circular Economy products, defining product types, related Key Performance Indicators (KPIs) and relevant methods that can support product certification. This document is applicable to researchers, public authorities, circular economy product owners, NGOs, water utilities, manufacturers and users or companies developing market-ready solutions.	
2.1.3	<b>Does the proposed CWA conflict with a published EN</b>	<input type="checkbox"/> YES Specify: Type here <input checked="" type="checkbox"/> NO In case the answer is ‘yes’, the development of the CWA shall be stopped	

<sup>1</sup> Part A and Part B of this form shall be sent by the WS secretary to the secretary of the Technical Bodies identified in this section to inform them about the creation of the WS and register any possible objection within 30 days (45 during the holiday period).

<sup>2</sup> Part A and Part B of this form should be sent by the WS secretary to the Bodies identified in this section to inform them about the creation of the WS.

<sup>3</sup> Work on the proposed CEN and/or CENELEC Workshop shall not be initiated.

<sup>4</sup> The CEN and/or CENELEC Workshop proposal shall be submitted to the CEN/CENELEC BT(s) for decision.

<sup>5</sup> CEN-CENELEC Internal Regulations - Part 3, Clause 33 applies.

<sup>6</sup> For projects dealing with security matters the security risk analysis provided in Annex I shall be carried out.

<sup>7</sup> See Note 2 in CEN-CENELEC Guide 29, Clause 3.

<sup>8</sup> See Note 2 in CEN-CENELEC Guide 29, Clause 3.

## **PART B – Project Plan**

### **1 Abstract**

This **CEN/CENELEC Workshop** “Roadmap for the Evaluation of Product Quality Criteria for water related Circular Economy Products: Defining Product Types, Key Performance Indicators (KPIs), and Methods of Proof for Product Certification” is developed within the scope of the Horizon Europe **BOOST-IN project** (<https://boostin.eu/>), which aims to promote technological innovation, governance reforms, organizational shifts, and mindset changes to enhance **water sector management**. By applying circular economy principles, the project seeks to enable water reuse and the recovery of valuable materials.

The resulting **CEN Workshop Agreement (CWA)** will provide guidance for the market uptake of circular economy products, particularly those derived from wastewater streams, such as recyclates and fit-for-purpose waters having specific qualities suitable for targeted reuse purposes not currently addressed by the EU Regulation on Minimum Requirements for Water Reuse and other recycle related regulation. While circular economy offers the potential to unlock the full value of water as a service, a process input, a source of energy, and a carrier of nutrients or other valuables, the transition remains complex due to various technical, economic, social, and regulatory barriers. This document aims to support stakeholders in overcoming these challenges through practical and strategic guidance.

### **2 Status of the project plan**

#### **Draft project plan for public commenting (Version 1.0)**

This draft project plan is intended to inform the public about the new CEN/CENELEC Workshop on a “Roadmap for the Evaluation of Product Quality Criteria for water related Circular Economy Products: Defining Product Types, Key Performance Indicators (KPIs), and Methods of Proof for Product Certification”. Any interested party can take part in this Workshop and/or comment on this draft project plan by sending an email to **fidiago@une.org**.

All those who have applied for participation or have commented on the project plan by the deadline will be invited to the kick-off meeting of the Workshop on **2025-10-13**. This draft plan will serve as the basis for discussion and refinement during the Workshop's initial stages.

## 3 Workshop proposer and potential Workshop participants

### 3.1 Workshop proposer

Person or organisation	Short description and interest in the subject
<p>Name: Thomas Track            Organisation: DECHEMA Gesellschaft für Chemische Technik und Biotechnologie e.V.            Postal address: Theodor-Heuss-Allee 25, 60486 Frankfurt am Main, Germany            Email: <a href="mailto:thomas.track@dechema.de">thomas.track@dechema.de</a>            Phone: +49 69 7564-427            Webpage: <a href="http://www.dechema.de">www.dechema.de</a></p>	<p>Freshwater and wastewater expert with a focus on zero pollution, circularity approaches and soil-sediment-water resources management. With more than 30 years of experience he is strongly working on the interface of transferring new developments into application.</p>
<p>Name: Angela Magno Malagón            Organisation: BIOAZUL SL            Postal address: Avenida Manuel Agustín Heredia nº18 1º4, 29001 Málaga, Spain            Email: <a href="mailto:amagno@bioazul.com">amagno@bioazul.com</a>            Phone: +34 951 047 290 Ext 104            Webpage: <a href="https://www.bioazul.com/en/">https://www.bioazul.com/en/</a></p>	<p>Senior project manager specialized in sustainable water management and circular economy. With over 10 years of experience in EU-funded R&amp;D and innovation projects, Angela has coordinated and contributed to initiatives focused on water reuse, resource recovery, and nature-based solutions. Angela currently leads international projects at BIOAZUL, fostering innovation and policy dialogue across multidisciplinary partnerships in the water sector.</p>

Both are involved on the research and innovation project **BOOST-IN “Boosting the uptake of innovative solutions in the context of water and circular economy”**, funded by the European Union under the Framework Programme for Research and Innovation Horizon Europe (with Grant nr 101135239), in which BIOAZUL SL is coordinator partner.

### 3.2 Potential participants

This CWA will be developed in a Workshop (temporary body) that is open to any interested party. The participation of other experts would be helpful and is desired.

Participation from the following BOOST-IN project partners is expected:

- BIOAZUL
- DECHEMA
- KWB

- ISLE
- ZSI
- Fresh thoughts GmbH
- ECOFILAE
- UNIBO
- NTUA
- AGENSO
- BWA
- WaterEurope

It is also recommended that:

- Researchers
- Public authorities
- Circular economy product owners
- NGOs
- Water utilities
- Manufacturers and users
- Companies developing market-ready solutions
- Standards application

take part in the development of this CWA.

## 4 Workshop objectives and scope

The **CEN Workshop in developing a “Roadmap for the Evaluation of Product Quality Criteria for water related Circular Economy Products: Defining Product Types, Key Performance Indicators (KPIs), and Methods of Proof for Product Certification”** aims at discussing and developing guidance/roadmap on evaluating product quality criteria for water related Circular Economy products, defining product types, related Key Performance Indicators (KPIs) and relevant methods that can support product certification.

### 4.1 Workshop background

Droughts and **water scarcity** are becoming critical issues in Europe, with around **20% of the European territory** and **30 % of the population** already experiencing **water stress**. This growing challenge is driven by a combination of factors, including climate change, agricultural intensification, tourism, and population density. As global temperatures rise, the frequency and intensity of water scarcity events are projected to increase, particularly in Southern and Western Central Europe (EEA, 2021). These changes disrupt the natural water cycle and pose severe risks to energy production, food security, human health, and economic development.

Currently, most European water systems follow a **linear model “take, make, consume and waste”**, which leads to the overexploitation and degradation of freshwater resources. This unsustainable model not only intensifies environmental hazards but also depletes ecosystems, undermining their ability to provide essential services. For example, over 60 % of European rivers, lakes, and wetlands are in poor ecological condition (EEA, 2018).

To address these challenges, Europe is advancing the **transition toward a circular economy (CE)** - a model that emphasizes resource efficiency, waste minimization, and recovery. In the water sector, this means reusing treated water, recovering energy and materials from wastewater, and rethinking infrastructure and governance to support closed-loop systems. A circular economy helps to reduce pressure on natural resources, decrease greenhouse gas emissions, and improve resilience to the impacts caused by climate change.

The importance of CE for Europe lies in its potential to create sustainable growth while reducing dependency on imports and fragile global supply chains. According to the European Commission, applying circular economy principles across the EU economy has the potential to increase EU GDP by an additional 0.5 % by 2030 and create around 700,000 new jobs (European Commission, 2020b). In the water sector specifically, CE solutions can contribute to achieving the objectives of the European Green Deal, which calls for a climate-neutral, resource-efficient, and pollution-free Europe by 2050 (European Commission, 2019).

However, to effectively implement and scale CE practices, especially in the water and wastewater sector, **Key Performance Indicators (KPIs)** and **certification schemes** can play a crucial role. KPIs are essential to monitor progress, ensure transparency, and measure the environmental, economic, and social impacts of CE products and processes (Ellen MacArthur Foundation, 2015). Without robust metrics, it is difficult to assess whether CE initiatives are truly sustainable or merely incremental improvements. Likewise, certification plays a crucial role in building trust among stakeholders, facilitating market access, and ensuring compliance with EU regulatory frameworks (ISO, 2020; European Commission, 2021). Certification systems also help to distinguish verified circular products from greenwashing and can support harmonization across EU member states.

The **BOOST-IN project** addresses these needs by **implementing successful strategies** to support the development and market uptake of CE products derived out of technical solutions related to circularity in the water sector. BOOST-IN aims to promote the market uptake of **Water Circular Economy Solutions (WACES)** that recover water, materials and energy and hence, close the water cycle. These efforts are being implemented at both EU and regional levels, particularly in “Regions of Opportunity” (ROp) to promote knowledge exchange, build capacity, encourage entrepreneurship, and support policy development.

The resulting **CEN Workshop Agreement (CWA)** will serve as a practical output of the BOOST-IN project and will be illustrated with five specific CE products.

### **Legal environment (relevant European legislation and directives)**

Various layers of regulations, policies, and legal frameworks at the European Union, national, and regional levels. Here's a breakdown of the key European Union Regulations and Directives:

- **Water Framework Directive (2000/60/EC)**: This is a cornerstone of EU water policy, aiming to achieve good qualitative and quantitative status of all water bodies. ([Link](#))
- **Urban Waste Water Treatment Directive (91/271/EEC)**: This directive sets standards for the collection, treatment, and discharge of urban wastewater. ([Link](#))
- **REACH Regulation (EC No 1907/2006)**: If the project involves the recovery and reuse of materials from the water cycle (e.g., nutrients, by-products from wastewater), the regulations concerning the registration, evaluation, authorization, and restriction of chemical substances will be applicable to ensure environmental and human health safety. ([Link](#))

- **Circular Economy Action Plan:** The EU's commitment to a circular economy influences funding and policy directions. ([Link](#))

### **Literature**

European Commission (2019). The European Green Deal. COM (2019).

European Commission (2020a). Water and the EU – Factsheet on water and energy. europa.eu.

European Commission (2020b). Circular Economy Action Plan – For a cleaner and more competitive Europe. COM (2020).

European Commission (2021). Sustainable Products Initiative – Staff Working Document. SWD (2022).

European Environment Agency (EEA) (2018). European Waters – Assessment of status and pressures 2018. EEA Report No 7/2018.

European Environment Agency (EEA) (2021). Water stress and drought in the European Union. Briefing No 18/2021.

Ellen MacArthur Foundation (2015). Circular Economy Indicators: An Approach to Measuring Circularity. ellenmacarthurfoundation.org.

ISO (2020). ISO 14009:2020 – Environmental management systems — Guidelines for incorporating material circulation. International Organization for Standardization.

## **5 Workshop programme**

### **5.1 General**

The **kick-off meeting** is planned to take place on **13.10.2025** as virtual meeting. A draft for public commenting will be published.

After the kick-off meeting, the necessary number of Workshop meetings, preferably by web conferences, will be held, during which the content of the CWA will be discussed, agreed and approved.

The working language (language of meetings, minutes, etc.) of the WS will be English. The CWA will be written in English.

### **5.2 Workshop schedule**

A tentative timeline is described in the Figure below



**Table 1: Workshop schedule (preliminary)**

CEN/CENELEC Workshop	June 25	July 25	August 25	September 25	October 25	November 25	December 25	January 26	February 26	March 26	April 26	May 26	June 26	July 26
<b>Initiation</b>														
1. Workshop description form submission and TC														
2. Open commenting period on draft project plan														
<b>Operation</b>														
3. Kick-off meeting														
4. CWA(s) development														
5. Open commenting period on draft CWA(s) (optional)														
6. CWA(s) finalized and approved by Workshop														
<b>Publication</b>														
7. CWA(s) publication														
<b>Dissemination (see 8)</b>														
<b>Milestones</b>														

**Legend:** K (Kick-off); M (Workshop meeting); V (Virtual Workshop meeting); A (Adoption of CWA); P (Publication of CWA); D (Online distribution of CWA)

## 6 Resource planning

Both registration and participation at the Workshop here are free of charge. The management costs of the Workshop will be covered by resources from the BOOST-IN project.

The use of electronic meetings will be preferred. Nevertheless, in the case of physical meetings, they will be held in Europe and each participant must bear his/her own costs for travel, accommodation and subsistence.

The CWA will be published by CEN/CENELEC and made publicly available through CEN/CENELEC and the different standardization Institutes in the member states at normal costs in line with the guidelines in CEN/CENELEC Guide 10. It is foreseen that the CWA can be also freely downloaded from the CWA Download Area on the CEN/CENELEC webpage.

The copyright of the final CWA will be at CEN/CENELEC. The final document will include the following paragraph: "Results incorporated in this CEN Workshop Agreement received funding from the European Union's HORIZON EUROPE research and innovation program under grant agreement number 101135239".

## 7 Workshop structure and rules of cooperation

### 7.1 Participation in the Workshop

The Workshop will be constituted during the kick-off meeting. By approving this project plan, the interested parties declare their willingness to participate in the Workshop and will be formally named as Workshop participants, with the associated rights and duties. Participants at the kick-off meeting who do not approve the project plan are not given the status of a Workshop participant and are thus excluded from further decisions made during the kick-off meeting and from any other decisions regarding the Workshop.

As a rule, the request to participate in the Workshop is closed once it is constituted. The current Workshop participants shall decide whether any additional members will be accepted or not.

Any new participant in the Workshop at a later date is decided on by the participants making up the Workshop at that time. It is particularly important to consider these aspects:

- a. expansion would be conducive to shortening the duration of the Workshop or to avoiding or averting an impending delay in the planned duration of the Workshop;
- b. the expansion would not result in the Workshop taking longer to complete;
- c. the new Workshop participant would not address any new or complementary issues beyond the scope defined and approved in the project plan;
- d. the new Workshop participant would bring complementary expertise into the Workshop in order to incorporate the latest scientific findings and state-of-the-art knowledge;
- e. the new Workshop participant would actively participate in the drafting of the manuscript by submitting concrete, not abstract, proposals and contributions;
- f. the new Workshop participant would ensure wider application of the CWA.

All Workshop participants who approved the publication of the CWA or its draft will be named as authors in the European Foreword, including the organizations which they represent. All Workshop participants who did not approve the publication of the CWA will not be named in the European Foreword.

## 7.2 Workshop responsibilities

The Workshop Chair is responsible for content management and consensus building. The Workshop Chair is supported by the Workshop Vice-Chair (if any) and the responsible Workshop secretariat, whereby the Workshop secretariat will always remain neutral regarding the content of the CWA(s). Furthermore, the Workshop secretariat shall ensure that CEN-CENELEC's rules of procedure, rules of presentation, and the principles governing the publication of CWA(s) have been observed. Should a Workshop Chair no longer be able to carry out her/his duties, the Workshop secretariat shall initiate the election of a new Workshop Chair. The list below covers the main tasks of the Workshop Chair. It is not intended to be exhaustive.

- Content related contact point for the Workshop
- Presides at Workshop meetings
- Ensures that the development of the CWA respects the principles and content of the adopted project plan
- Manages the consensus building process, assesses when the Workshop participants have reached agreement on the final CWA, on the basis of the comments received
- Ensures due information exchange with the Workshop secretariat
- Represents the Workshop and its results to exterior

The Workshop secretariat, provided by a CEN and/or CENELEC Member, is responsible for organizing and leading the kick-off meeting, in consultation with the Workshop proposer. Further Workshop meetings and/or web conferences shall be organized by the Workshop secretariat in consultation with the Workshop Chair. The list below covers the main tasks of the Workshop secretariat. It is not intended to be exhaustive.

- Administrative and organizational contact point for the Workshop
- Ensures that the development of the CWA respects the principles and content of the adopted project plan and of the requirements of the CEN-CENELEC Guide 29
- Formally registers Workshop participants and maintains record of participating organizations and individuals
- Offers infrastructure and manages documents and their distribution through an electronic platform
- Prepares agenda and distributes information on meetings and meeting minutes as well as follow-up actions of the Workshop
- Initiates and manages CWA approval process upon decision by the Workshop Chair
- Interfaces with CEN-CENELEC Management Centre (CCMC) and Workshop Chair regarding strategic directions, problems arising, and external relationships
- Advises on CEN-CENELEC rules and brings any major problems encountered (if any) in the development of the CWA to the attention of CEN-CENELEC Management Centre (CCMC)
- Administrates the connection with relevant CEN or CENELEC/TCs

## 7.3 Decision making process

The CEN and/or CENELEC Workshop Chair is responsible for ensuring that the development of the CWA follows the principles and content of the project plan described in this document and the requirements of CEN-CENELEC Guide 29. The CEN and/or CENELEC Workshop Chair may take decisions on the conduct of the CEN and/or CENELEC Workshop on the basis of the comments expressed by the participants and of CEN-CENELEC Guide 29.

Decisions shall be taken based on consensus of the WS participants.

## 8 Dissemination and participation strategy

Potential participants identified in section 2.2 and potential interested stakeholders identified in Part A should be informed of the open commenting phase, if any, and of the publication of the CWA. In addition to the CCMC website, the final CWA will be advertised on:

- BOOST-IN project specific newsletter
- Social media, such as: LinkedIn, X
- EC Newsroom.



