The European Union and Sustainability

(Key Policy Initiatives/Regulations, Standardization, Studies)

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EU Project SESEI

Project is a local presence in India

SESEI (**S**econded **E**uropean **S**tandardization **E**xpert in **I**ndia) ***is a local face for the European standardization community in India: Dinesh Chand Sharma***

Why SESEI: India is a major trade partners for EU/EFTA, Increasing role of standards to gain market access, evolving & complex nature of regulatory and standardization landscapes, sharing best practices, and work together as partners

Priority Sectors/topics: Aligned with EU-INDIA TTC, Connectivity Partnership

Digitization: Strategic technologies, digital governance, and digital connectivity

Smart Cities/Urban Development, ITS, Quantum Technologies, Smart Grid/Meter, **Artificial Intelligence**, 5G/6G, Open RAN, M2M/IoT (Cyber-Physical Systems), DECT, Data Privacy, Satellite Communication, Blockchain, Digital Signature, Smart Manufacturing, e-Accessibility, cybersecurity, digital skills, digital platforms including Research and Innovation etc.

Green & Clean technologies : Clean Energy, Energy Efficiency (Green ICT), Environment, Circular Economy including Resource Efficiency, Waste Management, Energy storage technologies, Electric mobility, Green Hydrogen, Advanced biofuels including R&I etc.

Other topics of mutual interests such as Rail, Ropeways, Machinery Safety etc.

www.sesei.eu , www.sesei.in

Objective of the Presentation

- **Standards** & Its Importance
- Process to frame a **new regulation in Europe**, How It Becomes an EU Act, and How ESOs (i.e CEN, CENELEC and ETSI) develop hENs in support of new regulation
- Overview of the **Sustainable Development Goals (SDGs)** and their importance for global sustainability.
- **Circular Economy** & its benefits
- Key **policy initiatives** that drive sustainability practices at European level.
- Role of **EU standards** in supporting sustainability, enabling effective **ESG** implementation across industries.
- European Commission’s **studies** to support evidence-based policymaking

Standard & Its importance

What is a Standard?

- Many people think that Standards Complicate or are impediment to innovation
- Standards are often confused with Rules or with Quality Regulations.
- Standards are simply a way of sharing good practice. It is a document that defines technical or quality requirements with which current or future products, production processes, services or methods may comply
- Standards present the consensus view on products/services, managing processes or even improving behaviours.
- They can be agreed specifications, recommendations, guidelines or principles.
- They demonstrate that products/services meet agreed criteria, processes and principles.
- Standards are written & maintained by business/industry, consumers, govt., innovators, etc.
- Organizations of all sizes and across all sectors choose standards to help them achieve their goals.

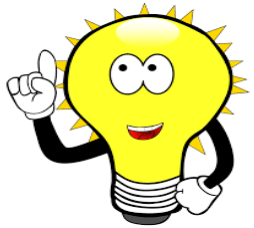
Why standards are important?

It is widely accepted that standards play a vital and often invisible role in supporting economic growth:

- ✓ by promoting productivity and efficiency in companies
- ✓ through their role in supporting international trade
- ✓ by acting as a catalyst for innovation within companies and sectors.
- ✓ Enhance **safety of products**
- ✓ Promote **common understanding**
- ✓ **Facilitate trade** by reducing TBs
- ✓ Promote **interoperability of products and services**
- ✓ Benefits of **economies of scale**
- ✓ Support **environmental sustainability**
- ✓ Facilitate the **uptake of innovation &** reflect the outcome of **research and Development**

How Standards are Made?

Anyone can suggest an idea for a new Standard



All ideas for new standards are assessed & stakeholders are consulted on the potential scope

The Proposal is assessed and if approved a stakeholder group is formed

The Stakeholder group forms a committee to draft the standards

The draft is then issued for public consultation

Once the document passes final approval it is published

Standards are reviewed every five years some as early as two years from publication. The committee or drafting panel considers any comments they have received about standard and decides whether it needs to be withdrawn , confirmed or reconfirmed amended or revised. A decision to amend or revise the standard will lead to a new proposal for work

World of Standardization

Objective - Avoid duplication of work at Indian, European and International levels with an aim for a identical worldwide standards

"Vienna Agreement" with

Chemistry, Material, Energy, Environment, Transport, Construction, Services, eMobility etc

"Frankfurt Agreement" with

Electricity, Electro-technical

MoU for telecommunications sector (ITU-T), Agreement on radio-communication sector (ITU-R)

Information & Communication Technologies (ICT)

Founding member of ISO and working with IEC since 1911

DoT/TEC are member of ITU-T and WPC for ITU-R

Founding Partner to 3GPP & oneM2M

Organisational Partner of 3GPP and Partner Type 1 of oneM2M

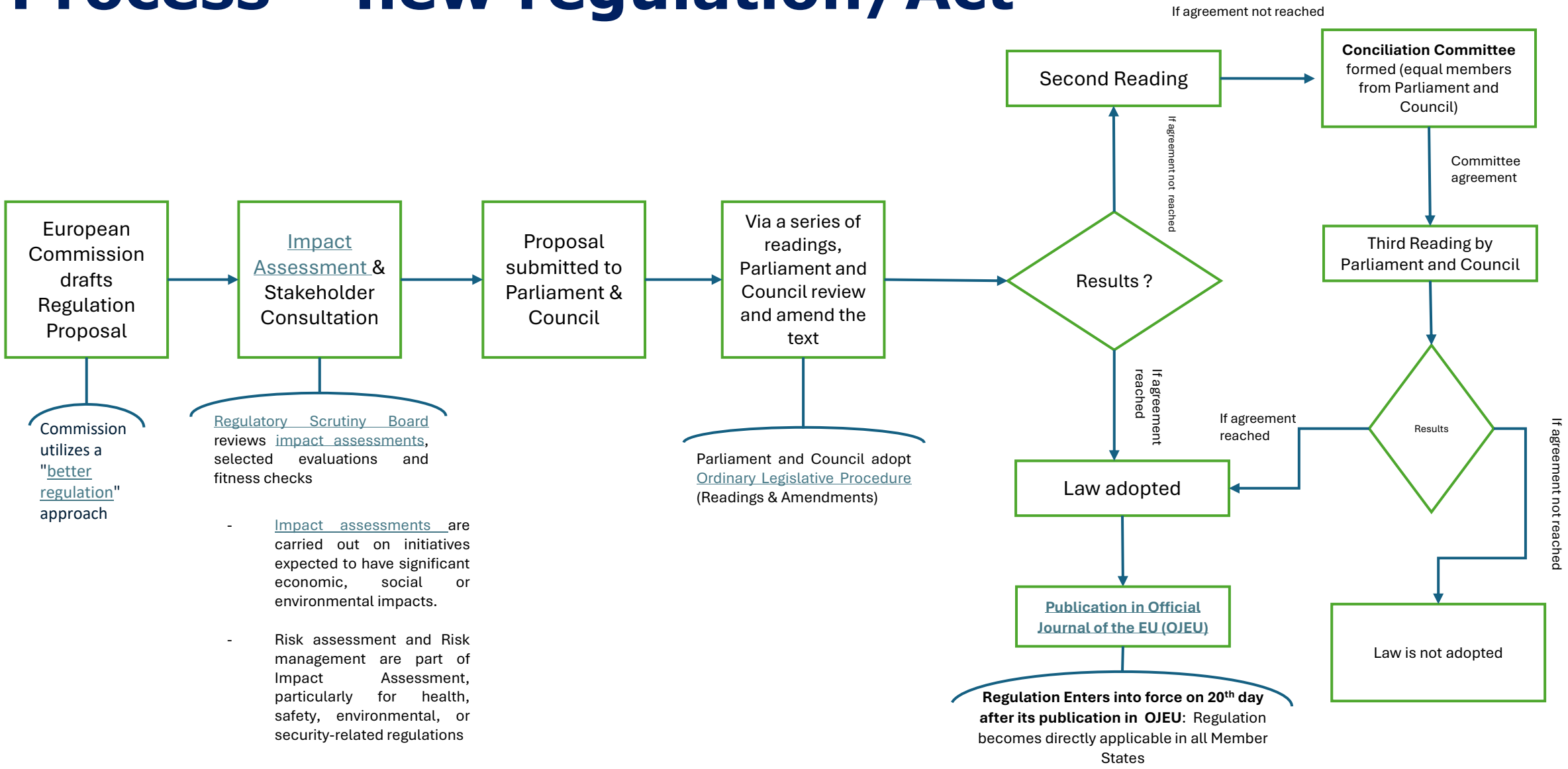
How a new regulation is framed in EU => Act & its implementation

Smart and Better Regulation 1(3)

Smart Regulation – Better Regulation

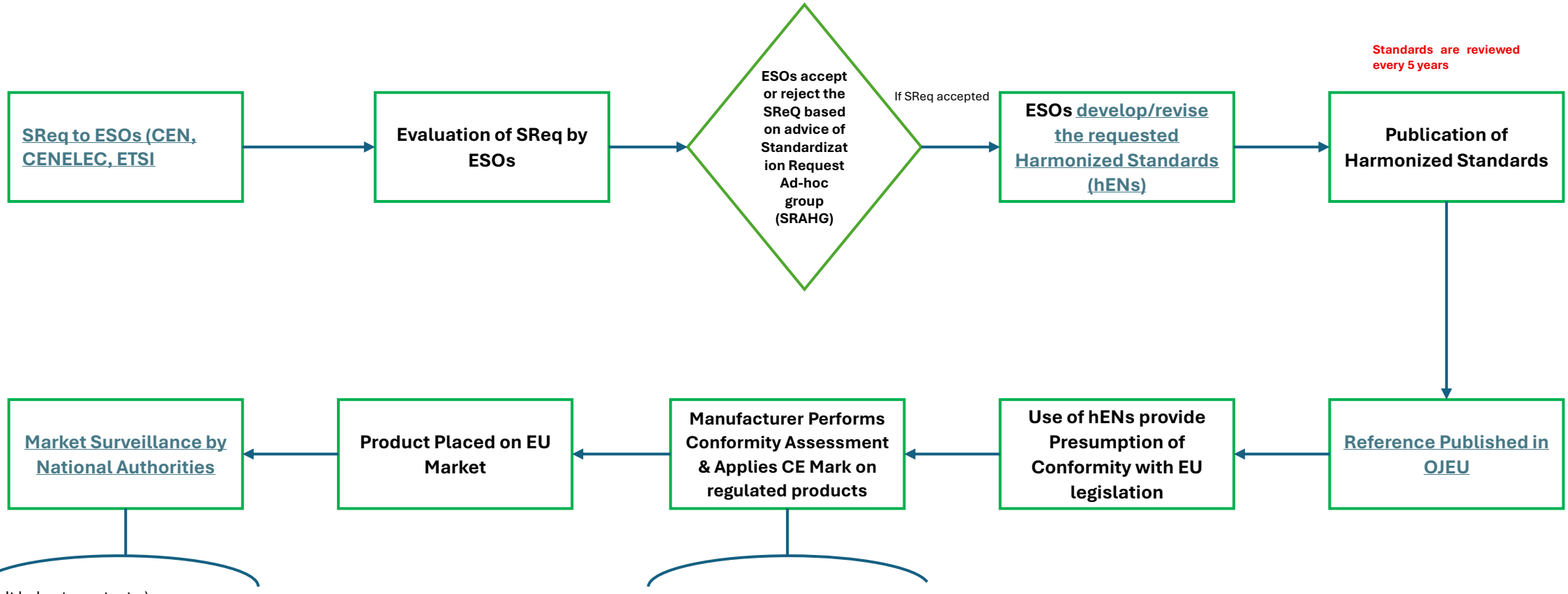
- EU follow-s the principal of Better/Smart regulation:
  - Design EU policies and laws to achieve their objectives at **minimum cost** and ensure that policy is prepared, implemented and reviewed in an **open, transparent manner, well informed** by the best available evidence and backed up by **involving stakeholders, supported by Impact Assesement**
- Before EU takes action the Commission publishes roadmaps and inception impact assessments which
  - Describe the planned new initiatives and evaluations of existing legislation.
  - examine the potential economic, social and environmental consequences of proposed action through Impact assessments
- Regulatory Scrutiny Board (RSB): review the impact assessments reports/results
- REFIT (Regulatory Fitness and Performance Programme) to
  - make EU law simpler and to reduce regulatory costs, thus contributing to a clear, stable and predictable regulatory framework supporting growth and jobs
- Ensure Sufficient transition period
  - for standards 3 years and for any new/amended legislation it is 2 years: Concurrent application of both old and new standards are allowed during this transition period of three years post legislation.

Process – new regulation/Act



- Impact assessments are carried out on initiatives expected to have significant economic, social or environmental impacts.
- Risk assessment and Risk management are part of Impact Assessment, particularly for health, safety, environmental, or security-related regulations

Process – Standards & Implementation



It helps to protect a) consumers and workers against unsafe products and general non-compliance b) businesses from unfair competition by those who ignore the rules

- Conformity Assessment Procedure (CAP) is carried out before the product can be sold.
  - Product legislation defines applicable CAPs
  - Manufacturers may choose from available CAPs
  - Assessment is done by the manufacturer, with a notified body involved if required by law. see notified bodies
- CE-Marking is compulsory only for most of the products covered by the New Approach Directives.
- Comprehensive guidance on implementing EU product rules can be found in so-called Blue Guide

Standards vs Législation

Standards :

1. Voluntary
2. Consensual
3. Developed by independent organisations
4. Revised every 5 years
5. Provide specifications and test methods (interoperability, safety, quality, etc.)

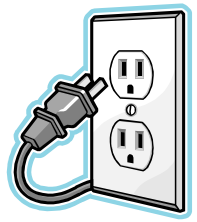
- **Legislation :**

1. Mandatory
2. Imposed by Law
3. Established by public authorities
4. Revised when legislators decide
5. Gives requirements to protect public interests

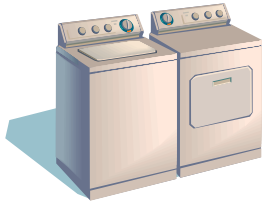
EU Council Directives

The EU Directives are intended to:

- Protect all EU Citizens from harm
- Improve Citizens' well-being
- Provide essential Safety in Workplace, Home Life, and Leisure Activities.
- Now also to address Environmental Protection



- Eg. and Senior of the Directives: The **Low Voltage Directive (2014/35/EU) to assure a degree of Electrical Safety.**
  - **Objective: To prevent Electric Shock, Burns, Injuries, Fires and Property Damage**
  - **There are several Product Specific Test and Evaluation Standards covering every type of electrically powered product.**

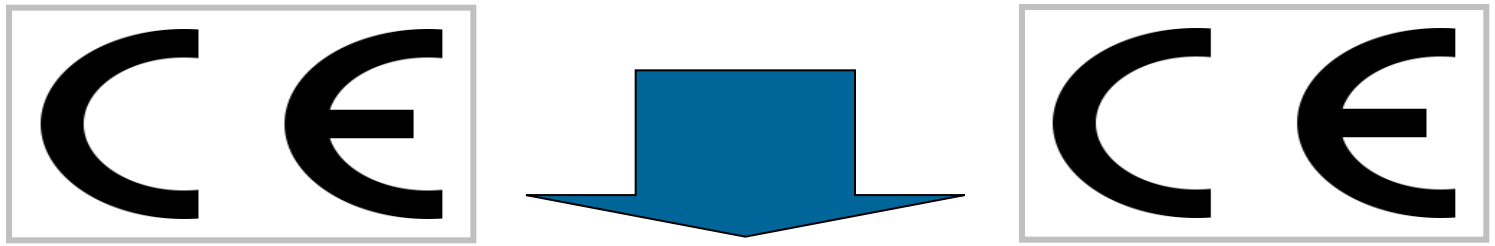


Example Directives to provide Environmental Protection:

- **RoHS-** Restrictions of Hazardous Substances used in manufacture
  Controls Levels of **Lead, Mercury**, **Cadmium, Hexavalent Chromium** etc, used in products in order to minimize seepage in land fills
- **WEEE** - Electronic Waste Disposal is being controlled.

CE MARKING

Facilitate **free movement of goods**
in the Internal Market whilst ensuring a
high level of protection for consumers



Elimination of barriers to trade through technical harmonisation

https://single-market-economy.ec.europa.eu/single-market/ce-marking_en

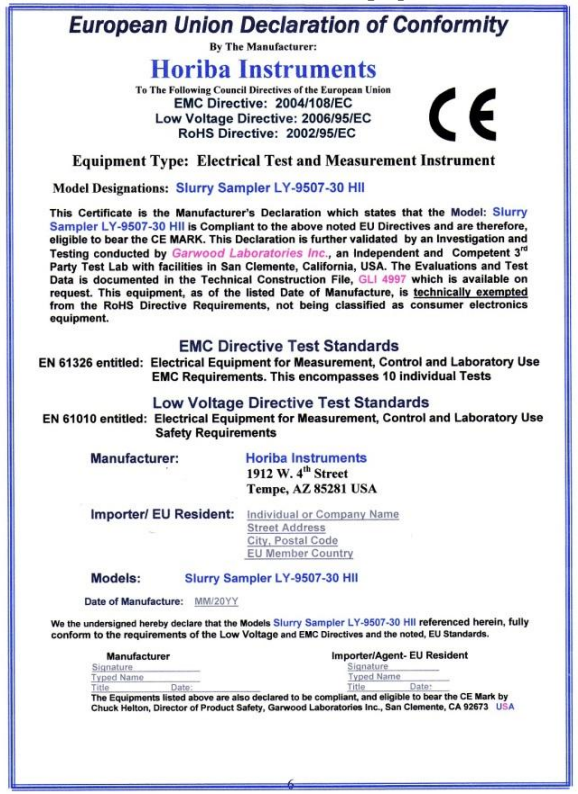
CE MARK Concept

- The **CE Mark** with a **Declaration of Conformity** is analogous to a passport for products exported to the EU. Its intent is to IDENTIFY Compliant Products so they are not delayed or held in Customs.
- The **CE MARK** protocol is essentially an honor system accepted by EU member countries. Manufacturers can ***Self-Declare Compliance*** by adding CE MARKS and signing a Declaration of Conformity. It is also required that a Technical File be created.
- The **Technical File** is the backup document for the CE MARK and Declaration of Conformity. The Technical File is NOT typically included with the product shipment. The Technical File is intended to:
  - Identify the Importer or Purchaser who is resident within the EU
  - Describe the Product
  - List Safety and Compliance Critical Parts
  - Cite the applicable EU Directives
  - List all Safety, EMC and Other Tests performed to Validate Compliance
  - List Tests related to I.D. Number of each Test Standard used

CE MARK Deliverables

Detailed Findings Report is the first document generated. It is generated after the 1st safety review of the product. It is specific to the Clients Product. It includes viable suggestions for Corrections

The Declaration of Conformity provided as a draft



European Union Declaration of Conformity

By The Manufacturer:

Horiba Instruments

To The Following Council Directives of the European Union

EMC Directive: 2004/108/EC
Low Voltage Directive: 2006/95/EC
RoHS Directive: 2002/95/EC

CE

Equipment Type: Electrical Test and Measurement Instrument

Model Designations: Slurry Sampler LY-9507-30 HII

This Certificate is the Manufacturer's Declaration which states that the Model: Slurry Sampler LY-9507-30 HII is Compliant to the above noted EU Directives and are therefore, eligible to bear the CE MARK. This Declaration is further validated by an Investigation and Testing conducted by Garwood Laboratories Inc., an Independent and Competent 3rd Party Test Lab with facilities in San Clemente, California, USA. The Evaluations and Test Data is documented in the Technical Construction File, GLI 4997 which is available on request. This equipment, as of the listed Date of Manufacture, is technically exempted from the RoHS Directive Requirements, not being classified as consumer electronics equipment.

EMC Directive Test Standards

EN 61326 entitled: Electrical Equipment for Measurement, Control and Laboratory Use EMC Requirements. This encompasses 10 individual Tests

Low Voltage Directive Test Standards

EN 61010 entitled: Electrical Equipment for Measurement, Control and Laboratory Use Safety Requirements

Manufacturer: Horiba Instruments
1912 W. 4th Street
Tempe, AZ 85281 USA

Importer/ EU Resident: Individual or Company Name
Street Address
City, Postal Code
EU Member Country

Models: Slurry Sampler LY-9507-30 HII

Date of Manufacture: MM/20YY

We the undersigned hereby declare that the Models Slurry Sampler LY-9507-30 HII referenced herein, fully conform to the requirements of the Low Voltage and EMC Directives and the noted, EU Standards.

Manufacturer
Signature
Typed Name
Title Date:

Importer/Agent- EU Resident
Signature
Typed Name
Title Date:

The Equipments listed above are also declared to be compliant, and eligible to bear the CE Mark by Chuck Helton, Director of Product Safety, Garwood Laboratories Inc., San Clemente, CA 92673 USA

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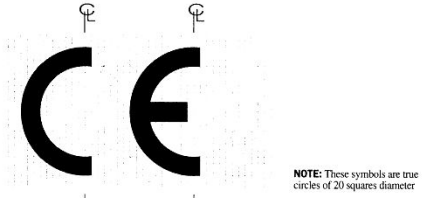
CE Marking

As defined by the Official Journal of The European Communities. Number L 169/43, Annex XII.
The CE Conformity Marking shall consist of the initials "CE" taking the following form:



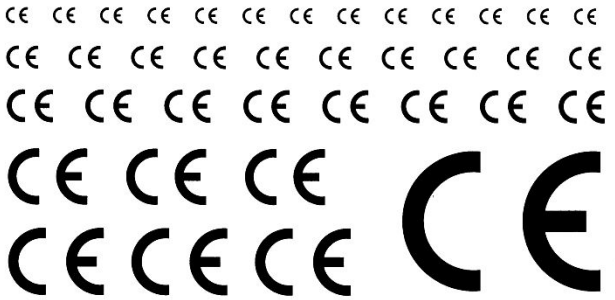
NOTE: These symbols are true circles of 20 squares diameter

If the marking is reduced or enlarged the proportions given in the above graduated drawing must be respected. The symbol may not be less than 5mm.

The minimum dimension may be waived for small-scale devices.

The following is provided to assist our clients with ready made artwork for use with labels, manuals, shipping containers and other copy needs.

REMEMBER… the smallest permissible vertical size is 5mm (.2 inches).



The Findings Report notes any discrepancy in the product's construction and offers suggestions for making corrections. When appropriate we even suggest sources for key components and alternatives.

CE Compliant Products Technical Report

EMC Test Report : EMC = Electro-Magnetic Compatibility

The “Technical File” or CE Mark Test Report

1. Includes a Declaration of Conformity (D.o.C). A separate D.o.C is also provided as a Certificate to accompany the shipping documents to an EU Port-of-Entry. Only one D.o.C. is required per shipment. This is regardless of the number of units in a single shipment.

2. The CE Mark Report is provided in pdf format and is known as a Technical File (TF). It is a detailed Report describing the product in detail and all of its testing. It bears the written opinion of a Competent and Independent 3rd Test Lab that the CE Marked Product has been evaluated and tested. It cites all of the Directives and Test Standards used in making the decision. The TF is used to set aside any challenges that a manufacturer may get as to the validity of the CE Mark.

4. If a customs official or a customer questions the validity of the CE Mark, a review of the TF should quickly set aside any concerns. Typically, one hard copy is kept at the main office and one sent to each Importer/Agent.

All About CE Marking, NANDO, MRA & Market Surveillance

- All About CE Marking

- NANDO
  - Nando (New Approach Notified and Designated Organisations)
- MRA
  - Mutual recognition agreements
- MS
  - Market surveillance

6 Steps Summary for Manufacturer

1. Identify Applicable Directive
2. Verify Requirements
3. Need for notified body?
4. Check Conformity
5. Technical Document [report]
6. Affix CE Marking

EU Policies/Regulations/Directives in support of sustainability

What is Sustainable Development?

Sustainable development = development that **meets the needs of the present without compromising the** ability of **future** generations to meet their own **needs**

To achieve this, it is crucial to harmonize **three core elements**:

- ✓economic development,
- ✓social inclusion and
- ✓environmental protection.

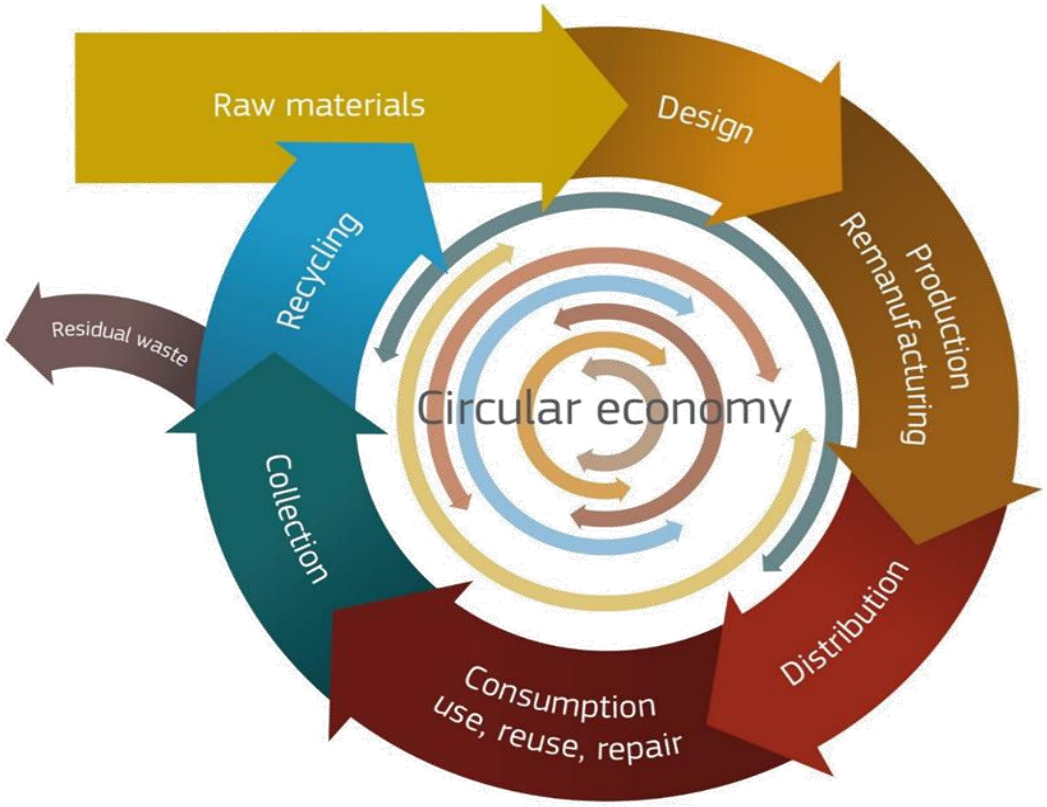
What are the SDGs?

- **Sustainable Development Goals (SDGs)** were adopted by all United Nations Members in 2015
  - ✓ A universal **call to action** to end poverty, protect the planet and ensure that all people enjoy peace and prosperity **by 2030**
  - ➢ **Includes 17 Goals => 169 targets**
    - ✓ It's a blueprint to achieve a better and more sustainable future for all,
    - ✓ It also address the global challenges we all as a humanity face: poverty, inequality, climate change, environmental degradation, peace and justice
- Implementation and success will rely on all stakeholders including the **standardization communities**.

Circular Economy & its benefits?

Circular Economy is a model of production and consumption:

- ✓involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible.
- ✓In this way, the life cycle of products is also extended.

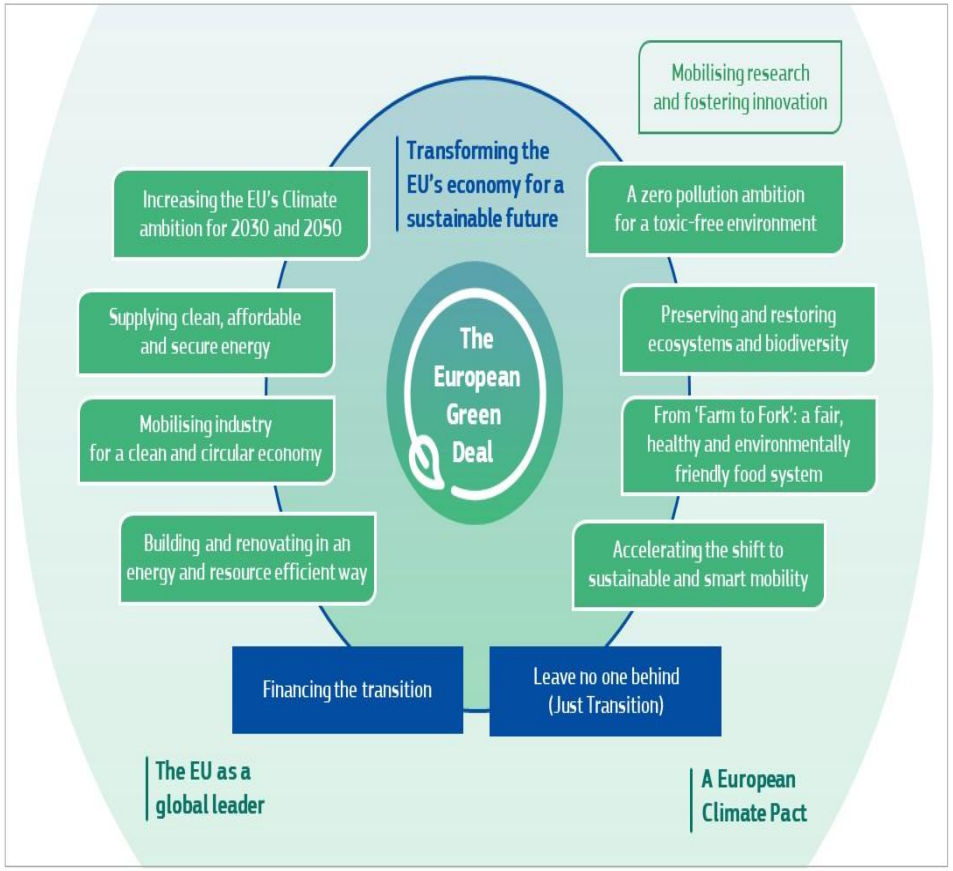


Why do we need to switch to a circular economy: benefits?

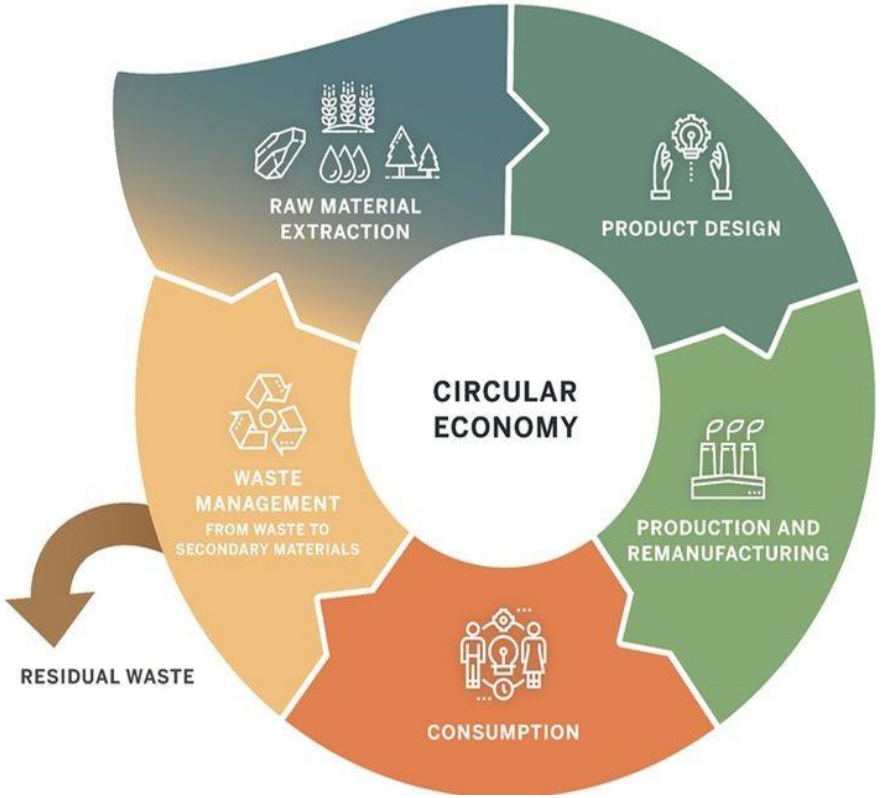
- ✓ To protect the environment
- ✓ To reduce raw material dependence
- ✓ To create jobs and save cost - consumers money

A European Green Deal (EGD)

- In December 2019, European Commission unveiled its European Green Deal (EGD), an ambitious plan to transform the EU's economy into a fair, **sustainable**, and prosperous one.
  - no net emissions of greenhouse gases by 2050
  - economic growth decoupled from resource use
  - no person and no place left behind
- EGD provides an action plan, to boost efficient use of resources by moving to a clean, circular economy and to restore biodiversity and cut pollution.
  - It outlines investments needed and financing tools available and explains how to ensure a just and inclusive transition.
  - It covers all sectors of economy, notably transport, energy, agriculture, buildings, and industries such as steel, cement, ICT, textiles and chemicals.
- It sets important policy goals to further advance the **sustainable transition** of packaging value chain, which include:
  - Ensuring that all packaging in EU market is reusable or recyclable in an economically viable manner by 2030.
  - Defining measures to reduce packaging waste.
  - Promoting a robust Single Market for secondary raw material to increase recycling.
- Commission has estimated that achieving 2030 climate and energy targets will require EUR 260 billion of additional annual investment, about 1.5% of 2018 GDP.



Circular economy action plan (CEAP)



- European Commission released its new Circular Economy Action Plan (CEAP) in support of **European Green Deal** on 11 March 2020.
  - One of main building blocks of European Green Deal, Europe's new agenda for **sustainable** growth.
- 35 actions along the entire life cycle of products, to:
  - make **sustainable products** the norm in the EU
  - **empower** consumers and public buyers
  - **focus also on key product value chains**: electronics and ICT, batteries and vehicles, **packaging, plastics**, textiles, construction and buildings, food, water and nutrients
  - ensure **less waste**
  - make circularity work for **people, regions** and **cities**
  - **lead global efforts** on circular economy
- In 2023, Commission revised circular economy monitoring framework
  - It supports EU's circular economy and climate neutrality ambitions under European Green Deal.

Ecodesign for Sustainable Products Regulation [ESPR]

- New Ecodesign for Sustainable Products Regulation (ESPR), came into force on 18 July 2024, is cornerstone of Commission's approach to more **environmentally sustainable and circular products**.
    - It replaces Ecodesign Directive 2009/125/EC and establishes a framework for setting eco-design requirements on specific product groups.
- ESPR is part of a package of measures that are central to achieving the objectives of 2020 Circular Economy Action Plan.
    - They will contribute to helping the EU reach its environmental and climate goals, doubling its circularity rate of material use and to achieving its energy efficiency targets by 2030.
- **Key features:**
    - Scope extension beyond energy-related products (with some exceptions, such as food and feed, as defined in Regulation 178/2002),
    - New requirements (track substances of concern)
    - Allows for 'horizontal' ecodesign requirements (e.g. electronic boards in appliances)
    - Increased focus on product information (**digital product passport** developed via standards)
    - Incentivising best performing products (ESPR labels – by delegated act for products not having energy label)
    - Development of standards by international and European standardisation organisations, including on the material efficiency of energy-related products.

More information>>

Corporate Sustainability Reporting Directive (CSRD)

- Entered into force on 5 January 2023, **CSRD** makes it mandatory for large companies and all companies listed on regulated markets to disclose sustainability information.
  - Beginning on or after January 1, 2024, large firms already subject to Non-Financial Reporting Directive (NFRD) will have to report along environmental, social, and governance dimensions.
  - Listed SMEs will be subject to the CSRD for fiscal years starting on or after January 1, 2026.
  - Non-listed SMEs can voluntarily comply with the standards.
- Companies subject to CSRD will have to report according to **European Sustainability Reporting Standards (ESRS)**
  - Standards are developed in a draft form by the EFRAG, an independent body bringing together various different stakeholders.
- CSRD also requires assurance on the sustainability information that companies report and will provide for the digital taxonomy of sustainability information.
- On 26 February 2025, Commission adopted a package of proposals to simplify EU rules and boost competitiveness.
  - largest companies >1000 employees
- In July'25, EC introduced Voluntary Sustainability Reporting Standard(VSRS) for SMEs to support them in meeting CSRD requirements

Sustainability aspects (European rule from the corresponding report)	Examples of topics covered by technical standards
Climate (ESRS E1)	• Net zero emissions • Carbon footprint of products and organizations • Adaptation to climate change
Pollution (ESRS E2)	• European reference methods for determining pollutants in the air
Water (ESRS E3)	• Water footprint • Water use efficiency
Biodiversity (ESRS E4)	• Strategic consideration of biodiversity for organizations (in development)
Circular economy and resources (ESRS E5)	• Circular Economy Implementation and Circularity Measurement (in development) • Methods to assess the ease of reusing, repairing or recycling products • Energy management
Own workforce (ESRS S1)	• Occupational health and safety management • Diversity and Inclusion in Human Resource Management • Implementation of gender equality (in development)
Workers in the value chain (ESRS S2)	• Corporate Social Responsibility
Affected communities (ESRS S3)	• Sustainable procurement and contracting
Consumers and end users (ESRS S4)	• Accessible design • Inclusive service
Governance (ESRS G1)	• Governance • Compliance management. General and specific topics criminal, tax, socio-labour... • Antifraud and Whistleblowing

Corporate Sustainability Due Diligence Directive (CSDDD)

- On 24 May 2024 the Council of the European Union formally adopted "**corporate sustainability due diligence directive**"
- Directive aims to foster sustainable and responsible corporate behaviour in companies' operations and across their global value chains.
  - New rules ensure that companies in scope identify and address adverse human rights and environmental impacts of their actions inside and outside Europe.
- **Benefits of new rules:**
  - **For citizens**
    - Better protection of human rights, including labour rights.
    - Healthier environment for present and future generations, including climate change migration.
    - Increased trust in businesses.
    - More transparency enabling informed choices.
    - Better access to justice for victims.
  - **For companies**
    - Harmonised legal framework in the EU, creating legal certainty and level playing field.
    - Greater customer trust and employees' commitment.
    - Better awareness of companies' negative human rights and environmental impacts, less liability risks.
    - Better risk management, more resilience and increased competitiveness.
    - Increased attractiveness for talent, **sustainability-oriented** investors and public procurers.
    - Increased incentives for innovation.
    - Better access to finance.

Continue...

- **For developing countries**
  - Better protection of human rights and environment
  - **Sustainable investment**, capacity building and support for value chain companies
  - Improved **sustainability-related practices**
  - **Increased take-up of international standards**
  - Improved living conditions for people

- Directive will apply depending on size of companies following this timeline:
  - 3 years from the entry into force of directive for companies with more than 5 000 employees and €1 500 million turnover
  - 4 years from the entry into force for companies with more than 3 000 employees and €900 million turnover
  - 5 years from the entry into force of the directive for companies with more than 1 000 employees and €450 million turnover

Carbon Border Adjustment Mechanism (CBAM)

- As part of **European Green Deal**, CBAM is a carbon tariff on carbon intensive products namely specified goods within cement, electricity, fertilisers, aluminium, iron, steel and hydrogen sectors, as well as some upstream and downstream products (mainly iron, steel and aluminium), imported to European Union.
  - It encourages industries worldwide to embrace greener production methods and discourages firms from relocating outside the EU to countries with less stringent environmental standards.
  - It is a WTO-compliant tool
  - It will ensure that EU's climate objectives are not undermined

- Reporting system under regulation is enforced from October 1, 2023 for certain goods to facilitate a smooth roll out and dialogue with third countries.
  - Importers would start paying the financial levy from 2026.

EU Deforestation Regulation (EUDR)

- Regulation on deforestation-free products entered into force on 29 June 2023.
  - From 30 December 2025 (30 June 2026 for small businesses), companies doing business in EU will need to comply with the requirements of EUDR.
  - new rules apply if you place on the EU market or export from the EU: palm oil, cattle, soy, coffee, cocoa, timber and rubber as well as derived products (such as beef, furniture, or chocolate).
- New rules aim to
  - avoid that the listed products Europeans buy, use and consume contribute to deforestation and forest degradation in the EU and globally
  - reduce carbon emissions caused by EU consumption and production of the relevant commodities by at least 32 million metric tonnes a year
  - address all deforestation driven by agricultural expansion to produce the commodities in the scope of the regulation, as well as forest degradation
- In line with its **communication of 22 June 2022** on the power of trade partnerships: together for green and just economic growth, Commission is stepping up engagement with trade partners to foster compliance with international labour and environmental standards.
- EU is continuing to work with partner countries and companies to ensure a successful transition to deforestation-free supply chains

EU Standards in support of sustainability

ETSI/CEN/CLC TCs

ETSI TC-EE : Environmental Engineering (EE)	**CEN/TC 473:** Circular Economy	CLC/TC 111X: Environment	**CEN/CLC/JTC 10:** Material efficiency aspects for products in scope of Eco-design legislation
CEN/CLC/JTC 14: Energy management and energy efficiency in the framework of energy transition	**CEN/CLC/JTC 24:** Digital Product Passport - Framework and System	CEN/TC 350: Sustainability of construction works'	CEN/TC 465: Sustainable Cities and Communities
CEN/TC 383: Sustainably produced biomass for energy applications	CEN/TC 249: Plastic	CEN/SS S26: Environmental management	CEN/TC 478 'Water resilience and sustainable use'

Many more.....

ESG standards

Environmental

- Emissions, adaptation to climate change, circular economy and biodiversity are some of the key elements in this area. The environmental aspect is the area of sustainability that has traditionally had the longest history and the most regulation associated with it through national and European policies. Below are standards that support organizations in defining and achieving their goals in these areas while helping them to comply with the applicable regulatory frameworks.

ESRS	EU standard
ESRS 1 General Requirements	**EN ISO 14008:2021** Monetary valuation of environmental impacts and related environmental aspects **EN ISO 14007** : Determining environmental costs and benefits **EN ISO 22301** Security and resilience – Business continuity management systems – Requirements **EN ISO 14063** Environmental management - Environmental communication - Guidelines and examples **EN ISO 14015** Environmental management - Guidelines for environmental due diligence assessment
ESRS-E Environment	**EN ISO 14001:2015** Environmental management systems — Requirements with guidance for use
ESRS E1 Climate	**EN ISO 50001:2018** Energy management systems — Requirements with guidance for use **EN 16247-1:2022** Energy audits - Part 1: General requirements **EN 19694-1:2016** Stationary source emissions - Determination of greenhouse gas (GHG) emissions in energy-intensive industries - Part 1: General aspects **EN ISO 14064-1** Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals **EN ISO 14067** Greenhouse gases - Carbon footprint of products - Requirements and guidelines for quantification **EN ISO 14064-3** Greenhouse gases — Part 3: Specification with guidance for the verification and validation of greenhouse gas statements **EN ISO 14031** Environmental management - Environmental performance evaluation - Guidelines **EN ISO 22301:2019** Security and resilience – Business continuity management systems – Requirements **EN ISO 14090:2019** Adaptation to climate change – Principles, requirements and guidelines **EN ISO 14091:2021** Adaptation to climate change - Guidelines on vulnerability, impacts and risk assessment
ESRS E2: Pollution	**EN ISO 15175:2018** Soil quality — Characterization of contaminated soil related to groundwater protection Parts of **EN ISO 16198:201**5 Soil quality — Plant-based test to assess the environmental bioavailability of trace elements to plants (ISO 16198:2015) **EN ISO 19204:201**7 Soil quality — Procedure for site-specific ecological risk assessment of soil contamination **EN ISO 15799:2022** Soil quality - Guidance on the ecotoxicological characterization of soils and soil materials **EN ISO 14067:2018** Greenhouse gases - Carbon footprint of products - Requirements and guidelines for quantification
ESRS E3 Water and marine resources	**EN ISO 15175** Soil quality — Characterization of contaminated soil related to groundwater protection **EN ISO 14046:2016** Environmental management - Water footprint - Principles, requirements and guidelines **EN ISO 14044** Environmental management –Life cycle assessment –Requirements and guidelines **EN 16941 series**: Use of rainwater and greywater
ESRS E4 Biodiversity and ecosystems	Strategic and operational consideration of biodiversity. **ISO 17298** (standard under development) Design and implementation of projects with biodiversity net gain. **ISO 17620** (standard under development) Natural capital accounting. **ISO 1405**4 (standard under development)
ESRS E5 : Resource use and circular economy	**EN ISO 14040** Environmental management – Life cycle assessment – Principles and framework **EN ISO 14009** Environmental management systems - Guidelines for incorporating material circulation in design and development **EN ISO 14006** Environmental management systems – Guidelines for incorporating ecodesign **EN 17267:2020** Energy measurement and monitoring plan - Design and implementation - Principles for energy data collection **EN 45552:2020** General method for the assessment of the durability of energy-related products **EN 45553:2020** General method for the assessment of the ability to remanufacture energy-related products **EN 45554:2020** General methods for the assessment of the ability to repair, reuse and upgrade energy-related products **EN 45556:2019** General method for assessing the proportion of reused components in energy-related products **EN 45557:2020** General method for assessing the proportion of recycled material content in energy-related products **EN 45558:2019** General method to declare the use of critical raw materials in energy-related products **EN 45559:2019** Methods for providing information relating to material efficiency aspects of energy-related products

ESG standards: Social

- These standards help organizations to balance business objectives with social interests, increasing the social commitment of their policies and programs.

- They provide guidelines to improve the opportunities and management of disadvantaged groups and communities, both in their value chain and in their own work environment, while helping them to take these needs into account when designing their activities, products and service

ESRS S1: Own workforce	EN ISO 45001 Occupational health and safety management systems — Requirements with guidance for use EN ISO 26000:2020 Guidance on social responsibility
ESRS S2: Workers in the value chain	EN ISO 45001 Occupational health and safety management systems — Requirements with guidance for use
ESRS S3 : Affected communities	- -
ESRS S4: Consumers and end users	EN ISO 9001:2015 - Quality management systems – Requirements EN ISO 9004:2018 Quality management - Quality of an organization - Guidance to achieve sustained success EN 17161:2019 Design for All. Accessibility following a Design for All approach in products, goods and services. Extending the range of users

ESG standards: Governance

- These good governance standards help organizations to establish practices, policies and structures that enable them to direct and control their operations in an ethical and transparent way.

- They facilitate the identification of and compliance with the legal frameworks that apply to them while helping them to prevent irresponsible or fraudulent business practices.

- They also offer support to increase their resilience through risk management and business continuity in the face of adverse contexts.

ESRS G1 : Governance Business conduct

- EN ISO 26000:2020 Guidance on social responsibility

- **EN 31010** Risk assessment techniques

- **EN ISO 22301** Business continuity management.

Summary

- **Implement Carbon Reduction Strategies**: Indian businesses should assess their carbon footprint and develop strategies to reduce greenhouse gas emissions, in line with Carbon Border Adjustment Mechanism (CBAM) etc.

- **Collaboration in R&D and Innovation**: Explore/strengthen EU-India partnerships in research on green technologies, renewable energy, and sustainable practices through partnerships/initiatives like TTC, Horizon Europe.

- **Adopt Global Sustainability Standards**: India and EU must work together to adopt and implement global Sustainability Standards

- As part of ongoing **FTA talks**, India and EU are discussing **sustainability measures** such as **CBAM** and **EUDR** etc. among the others.

- European Commission's **studies** play a crucial role in supporting evidence-based policymaking

European Commission's Studies

1. **Study on the impact of climate and energy policies on EU competitiveness from an industry perspective:** Study analyses the potential impact of climate and energy policies on the competitiveness of EU industries by 2030 through 4 main policy scenarios.

2. **Study on regulatory barriers to circular economy:** Study analyses **a set of circular economy business practices** to identify and suggest policy and regulatory actions to unlock their full growth potential.

3. **Study on the Competitiveness of EU Companies and Resource Efficiency:** Study analyses businesses performance in resource efficiency, the drivers and barriers they encounter and opportunities for greater resource efficiency and competitiveness.

4. **Study on increasing the re-use of products:** Study titled 'Treating Waste as a Resource for EU Industry: Analysis of various waste streams and the competitiveness of their client industries' (2013) investigated ways to promote a greater use of waste as a resource for European Industry, while strengthening its competitiveness.
    - explores the market typologies of various waste streams with high potential to contribute to growth
    - examines the main driving forces and barriers, including market failures, as regards to treating waste as a resource for industry
    - provides a framework to measure a possible decoupling of secondary raw materials from various waste streams

Long question

Question:

- *What is meant by a Standard?*
- *How Standard can help as an enabler in translating policy frameworks into measurable actions?*
- *What is a Circular Economy?*
- *List down series of EU policies and regulations related to Circular Economy?*
- *Which are the sectors possible for achieving Circular Economy?*
- *Do we have any barriers for achieving Circular Economy?*
- *Suggest Solutions to remove these identified barriers*

Reference: Study on regulatory barriers to circular economy: Study analyses a set of circular economy business practices to identify and suggest policy and regulatory actions to unlock their full growth potential.

Multiple-choice questions (MCQs)

Q1. Which of the following best describes the role of standards in supporting the UN Sustainable Development Goals (SDGs)?
a) They replace government policies.
b) They provide a common framework for measurable and scalable actions.
c) They act as technical documents for industries.
d) They are not linked to sustainability.

Q2. Which EU initiative is primarily aimed at aligning sustainability with digital and green transitions?
a) European Green Deal
b) Horizon 2020
c) Common Agricultural Policy
d) Erasmus+ Programme

Q3. In the context of ESG, EU standards play a crucial role in:
a) Promoting uniform data collection and reporting
b) Eliminating the need for environmental policies
c) Restricting innovation in green technologies
d) Replacing the SDGs

Q4. One of the major benefits of adopting sustainability-related standards is:
a) Reduced accountability
b) Increased consumer trust and market access
c) Limiting trade opportunities
d) Avoiding policy compliance

Q5. Which of the following shows the correct link between EU policy, standards, and sustainability?
a) Standards replace policy, making SDGs redundant.
b) SDGs define technical standards without policy input.
c) Policy sets targets, standards operationalize them, supporting SDGs and ESG goals.
d) Policy and standards work independently without contributing to sustainability.

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