Hybrid workshop on,

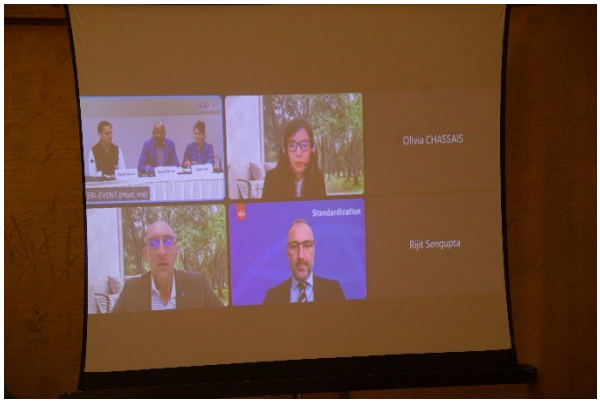
"Circular Economy: Environmental Design & Labelling – Role of Standards & Policy in India and the EU"

Key Takeaways & Workshop Summary

Short Summary & Key Takeaways: Workshop on
"Circular Economy: Environmental Design & Labelling- Role of Standards & Policy in India and the EU"
2nd December 2022, New Delhi, India

- *With Circular economy being the byword to a sustainable world, a host of nations have set for themselves action plans to achieve resource efficiency and circularity. While the mere focus until last decade was on the waste management and its final disposal of a product, today the focus has further extended to the sustainable management of materials along the entire value chain.*
- *To facilitate the smooth transition from linear to circular economy, various strategies have been designed and adopted to reduce material use, eco-design, increase the durability/lifetime of products, and ensuring re-use of materials via product redistribution, reuse, recycling.*
- *The eco-design and eco-labelling are effective tools for improving the energy efficiency of products. Eco-design helps in improving the environmental performance of a product by setting minimum mandatory requirements for energy efficiency of these products. Labelling complements the eco-design requirements with mandatory labelling requirements.*
- *Standardization helps in bringing innovation through eco-design which can in turn help in ensuring efficient resource utilization. International Standards Organization (ISO) is committed to specify standards. Measurement is considered as a key in standardizing procedure and there needs to be universal methodology to determine the variables for effective compliance.*
- *The event witnesses the need to shift towards the use of recycled plastics rather than virgin extraction. Also, proper legal mechanism, and apps like Digital product passport, an EU initiative to ensure transparency by incorporating detailed information on production processes, and digital public portals could help in delivering higher rate of plastics recycling, and allocating credits and allowing trade among the manufacturers.*
- *Stakeholders (industry, government, consumers, trade unions, academia, technical experts, and NGOs) role is seen to be an important catalyst and thus it is necessary to include them at every stage of standardization to ensure higher proliferation of environment friendly policies, for faster and smoother transition towards circular economy.*

Conference Glimpses



Inaugural Session

Session 1: High Level Panel on Need and Role of Environmental Design & Labelling for achieving Circular Economy and Resource Efficiency

14:30 – 15:30 (IST) / 10:00 - 11:00 (CET)

Session Highlights:

The inaugural session focussed on change in our lifestyle so that sustainable consumption and production techniques can be adopted. LiFE movement which is the centre of recent Indian policies to aware the citizens on environmental impacts of our consumption pattern and promote resource efficiency and circularity. This approach is quite an aspirational model for developed as well as developing economies, as it captures different dynamics of technology, society, climate, finance, environment, and economic; and work towards ensuring equality and equity. Since, to achieve the SDG 12 target in adherence to global temperature targets, it is essential to utilise resources in most efficient manner and minimise the waste generation, so that we could have better resource availability for future needs.

The standardizing and labelling policies which requires declaration of production practices and their environmental impacts by manufacturers are a systematic approach to direct all the market agents towards sustainability. Standards are consumption based and can go up to grass root to guide the behavioural change and promote best practices. Public-Private Partnership model is being used in European Union to decide the standards, and it assist in resilient transition towards circular economy. Standardization helps improve innovation through eco-design which can further help in achieving the overarching priority 'green transition'. Product design is the key element which dictates the terms of 80% of product life, thus eco-designing works as a most effective tool to ensure efficient resource utilization. In this regard ISO and IEC are deeply committed to international standardization. However, measurement is key in standardizing procedure and there is no universal methodology to determine the variables. For example, for waste reduction and efficient resource utilization, it is necessary that the products life should be prolonged, but the climatic conditions and development status defines the product life cycle. An electric equipment which can serve for more years in EU could have performance issue and lesser life due to Indian tropical weather conditions. Therefore, RRR (Reduce, Recycle and Recover) approach is essential for sustainable circular transition.

In Indian perspective, there is need to appropriately resonate the EU model of standardizing so the derived/designed solutions will be simple and easy to understand, and comply for all, rather than being proprietary to one segment and/ or sector.

Therefore, there is need of a global taxonomy, for instance - EU taxonomy, which enlists sustainable activities, that could help in scaling up investments towards circularity. Additionally, knowledge sharing of best practices could assist in taking steps necessary for climate adaptation and mitigation – since collaborative efforts are needed, as there is No Sustainability Island.

Indian government has initiated the mandate to use recycled content in the manufacturing of new products. In this regard, they have declared Extended Producer Responsibilities (EPR) guidelines to facilitate the transition towards circular economy. In the initial stage, four sectors have been identified, viz., Plastics, Electric Battery, Automobile -tyres, and Electronic Equipment.

Meanwhile, there are policies interventions are being designed for smoother transition, but market agents have raised concerns related to gap in standards – such as there is no reference for recycled materials quality. Thus, it is imperative to identify the policy gaps so that consumer can make a conscious choice.

Session Moderator – Dr. Michael Bucki, Counsellor and Head of Section, EU Delegation to India

Panellists:

- Welcome Remarks: Dr. Vibha Dhawan, DG TERI
- Opening Address: Mr. Justin Wilkes, Executive Director, ECOS
- Special Address-1: Mr. Olivier Peyrat, CEN Vice President Policy
- Special Address-2: Mr. William Neale, Adviser on Circular Economy and Green Growth European Commission's Environment Directorate General.
- Theme Address: Dr. Satyendra Kumar, Director, MoEFCC, GOI

Session 2: Environmental Design & Labelling: Vision, Policy Initiatives and Roadmap for the Future

15:30 – 16:30 (IST) / 11:00 - 12:00 (CET)

Session Objective: To understand the Indian and EU policy initiatives, identify synergies, and deliberate on the way forward through a shared vision.

Session Highlights:

The focus of this session was to identify the enablers and barriers in the transition from linear to circular economy through the assessment of India and EU environmental policies and the role of standards. EU has undertaken various sectoral policies to fuel this transition i.e., Eco-management and audit scheme, eco-label, eco-design for sustainable products regulation (ESPR). ESPR is a revised legislative framework on the existing eco-design directive which includes product specific measures based on detailed impact assessment. It has identified other product sectors rather than just focusing on energy products. Digital product passport (DPP) ensures transparency by incorporating detailed information on production processes. For instance: DPP includes data on varied product aspects like sustainability, environmental impact, circularity, substances of concern, value retention for reuse/remanufacturing/recycling.

Referring to the supply chain issue faced in economy, it was highlighted that the higher concentration of waste is with non-educative mass and thus, it becomes difficult to realize the potential of waste into wealth. The absence of policies in standardizing lead to the inclusion of toxic materials in the products value chain. Additionally, lack of comprehensive designing and labelling norms of a product lead to mishandling at the end-of-life and recycling phase.

Further for the sustainable transition towards circular economy, the material and product loop need to be clean. The biological aspects of product production are generally not considered and focus lies on technical and economical parameters. Therefore, there is a requirement of establishing a hierarchy for sustainable product in terms of their design system, functionality, repairability, replaceability, and discarding options. It has been observed that many corporates take advantage of environmental performance as a method to earn extra revenue, and employ labels of practices which are not actually followed.

Among the various sectors, plastic is the key element that require immediate space in circularity – hence policy initiatives are targeted towards it. It is being advised to shift towards application of recycled plastics than virgin mining and extraction. The legal mechanism and digital public portals could help in delivering higher rate of plastics recycling, and allocating credits and allowing trade among the manufacturers.

Session Moderator – Mr. Souvik Bhattacharya, Associate Director, TERI

Speakers:

- Ms. Olivia Chassais, Policy Officer, DG Environment, Unit Sustainable Products
- Ms. Ioana Popescu, Head of Circular Economy, ECOS
- Dr. Mamta Mohapatra, Principal Scientist, CSIR IMMT
- Ms. Rachna Arora, Team Lead, EU-REI

Session 3: Environmental Design & Labelling: Standards Perspective & Partnerships

16:30 – 17:35 (IST) / 12:00 - 13:05 (CET)

Session Objective: To discuss the perspectives on standards, implementation status in EU and India, and identify key stakeholders and their role in forming partnerships for standardisation.

Session Highlights:

The focus of the session was to understand the frameworks used by different standards designing organization and how industries, stakeholders are building their activities around it.

Under Eco-design directive, standards are developed to provide manufacturers dedicated methods to enable them to measure the performance/energy efficiency of their products. The deliverables are targeted to extend the product lifetime, reusability, replaceability and improve materials efficiency. The scope of ESPR is being extended to cover other non-energy sector as well, like textiles, construction, etc. In this regard, ISO (International Standards Organization) works in line to reduce and remove the policy gaps.

From the producers' perspectives, EPR (Extended Producer Responsibility) have very little incentive for them to introduce better products. There is a need to set more granular EPR fee structure to minimise cross subsidy between product groups and also identify appropriate criteria for fee modulation to incentivize producer for higher compliance rate. With new recycling targets, marginal costs of recycling are likely to diverge significantly from production average costs and introduction of fee modulation could naturally assist in achieving them.

Futuristically, stakeholder's role is very important as they likely to be most affected in its due process, thus inclusion of their ideas is essential. There are different stakeholders identified in the process of standardization such as industry, government, consumers, trade unions, academia, technical experts, and NGOs. These kinds of standards have the potential to provide harmonised circular economy terminology and assessment methods and define key circularity principles for products and services characteristics. However, there are some challenges in bringing stakeholders together and design standards due to the lack of awareness, access, capacity, and resources.

Considering Indian space in international textile market, there lies very high potential of faster transition towards circular economy. Since, global trade supply chain has taken a web form, it is essential to make standardised procedure integrated so that regulation and implementation could be smoother in coming years. There is need for norms updation in each phase of production starting from resource extraction/ mining to end-of-life. It is obvious that digitization could play a key role in standard designing procedure, so that everyone will be aware of limitations and advantages of each process and verification will be easier. Its imperative for Indian standards development that approach should be inclusive (stakeholders), nature conscious (environment friendly), decisive, immediate, and ambitious so that our NDC (National Determined Commitments) could be achieved.

Session Moderator – Dinesh Chand Sharma, SESEI

Speakers:

- Mr. Martial Patra, Chair of Eco Design Coordination Group, CEN-CENELEC
- Mr. Jose Alcorta, Head of Standards, ISO CS
- Ms. Pamela Tarif, Global Engagement Director, ECOS
- Ms. Claudia Bierth, European Public Affairs & Sustainability Manager, Ball Beverage Packaging EMEA
- Mr. Rakesh Vazirani, Global Head of Sustainability Services, TUV Rheinland

Concluding Session

Fireside Chat: High Level Panel on Need and Role of Environmental Design & Labelling for achieving Circular Economy and Resource Efficiency

17:35 – 18:20 (IST) / 13:05 - 13:50 (CET)

Summarising key deliberation, identifying gaps and data requirements, and discussing the way forward, with emphasis on consumer uptake and mutual areas of interest to further Eco Design and Labelling in India and EU.

Session Highlights:

The experts have observed that in Indian context, standards formulation is not sufficient if they are not mandated. In case of their voluntarily adoption nature, compliance is low and the ultimate target of environment protection could not be achieved. The delay in implementation of standards further delays the achievement of global climate neutrality targets. At the same time, the lower proliferation of Eco-labelling has pushed back the adoption rate of sustainable products. It's quite possible that the standards related to production process are followed by an industry but absence of labelling norms does not provide the option to consumers to make an informed choice, and consequently de-incentivize the manufacturers. Another challenge in the associated with the circular economy is that the standards and norms are being designed considering only the end-of-life phase, but there is a need to include other product life phases as well in the realm of circularity.

Indian standardization process differs from the EU model, on the basis of non-inclusion of PPP approach, but since the stakeholders are important in compliance it is essential to incorporate them in the process. Meanwhile, as standardizing is a long-term process, it was suggested that there is need of step wise compliance and certification, instead of keeping binary opinion. So, that if any industries/sectors have taken initiated actions according to defined standards, but didn't fully comply them, could get some credits. Additionally, when product relevant standards and benchmarks are being defined, its essential to determine which parameters would dictate the terms of environmental benefits, such as cost, energy, emission reduction potential, etc.

The public portals to share technical knowledge, good practices, policy interventions, could be designed under India and the EU partnership. This could also help in identifying specific sectors/ products/ processes which require immediate attention and actions. The workshop ends on the note that the India and EU partnership could help in achieving improved

standards, higher proliferation of environment friendly policies, and ensure faster and smoother transition towards circular economy.

"Engage, Collaborate and Deliver" was the signing off moto of the workshop.

Session Moderator – Pamela Tarif, Global Engagement Director, ECOS

Panellists:

- Mr. I. V. Rao, Ex-Head Engineering Maruti Suzuki India Limited
- Mr. Rijit Sengupta, CEO, CRB
- Mr. Justin Wilkes, Executive Director, ECOS
- Mr. Souvik Bhattacharya, Associate Director, TERI

Vote of Thanks followed by High Tea and Networking

18:20 Onwards (IST)/ 13:50 Onwards

Moderator and Speakers/ Panellists Bio Notes

Dr. Michael Bucki – Counsellor, Head of Section – Delegation of the European Union to India

Dr. Michael Bucki is based in New Delhi. He leads dialogue and cooperation between the EU and India on "Sustainable Modernisation": circular economy, biodiversity, transports, smart cities, clean air and water, energy & climate change.

From 2016-2020, prior to joining this Delegation, Dr. Bucki worked in Jakarta, holding similar responsibilities for EU, Indonesia and ASEAN. From 2006-2016, he had worked in the European Commission on topics like forest adaptation, forest fires, wood products, climate mitigation, deforestation and international negotiations. He inter alia took part in the UN climate negotiations, from 2010 up to the 2015 Paris Agreement. Dr. Bucki holds a PhD, and Engineering degree, from the French National School for Forest and Water Management. His core interest is to find and share pragmatic, collective solutions for global citizens, producers and consumers to adapt to rapidly deteriorating "planetary boundaries", and more specifically to adapt the EU "Green Deal" strategy of sustainable economic growth to the context and needs of emerging economies, fostering mutually profitable (industrial, agro-ecologic) transitions for affordable sustainability and resilience.

Dr Vibha Dhawan – Director General, The Energy and Resources Institute (TERI).

She served as the Vice-Chancellor of TERI School of Advanced Studies from 2005-2007 and is a Fellow of the National Academy of Sciences, India.

Dr Dhawan is actively involved in research as well as policy development, both at the national and international level. She is currently serving as Adjunct Professor, Consul General South Asia Partnership, Michigan State University. She has served on the boards of prestigious organizations in India and overseas including Jawahar Lal Nehru University, Ambedkar University, Ayurvet Foundation and Centre for Agriculture and Bioscience International (CABI). Dr Dhawan as a researcher was instrumental in the establishment of the successful Micropropagation Technology Park at TERI. Developed e-contents in biotechnology, research interests are in the area of biofuels. She is currently the coordinator of the DBT-TERI Centre on Integrated Production of Advanced Biofuels and Biocommodities. She is the winner of Indian Women Achievers Sammaan 2017 by NRI Achievers; Women Leadership Agriculture Award 2016 by the Indian Council of Food & Agriculture; First Biotech Product and Process Development and Commercialization Award of the Department of Biotechnology in 2000, the Kamal Kumari National Award for Science and Technology

and the first All India Biotech Association (AIBA) award in 1998. She has authored 6 books and over 50 publications.

Justin Wilkes is Executive Director of ECOS – Environmental Coalition on Standards.

As Executive Director Justin has focused on the leadership, strategic development, impact, and growth of the organisation. Prior to that Justin was Deputy Director of ECOS.

Justin has 25 years of professional experience impacting national, European and global policies, having worked on key environment, climate, energy and trade policy developments during this time. Previously Justin has held numerous positions for a European industry association promoting renewable energy, WWF where he worked on the agreement and implementation of the REACH regulation, and for a member of the European Parliament.

He has a Master's degree in International Studies (Diplomacy), and is a joint Irish/UK national.

Olivier PEYRAT – Director General of AFNOR

Olivier PEYRAT is a former Ecole Polytechnique student, Head Engineer of the Body of Mining Engineers (Ecole des Mines). Currently, he is also administrator of CEN at the European level and ISO at the international level. Since January 2022, he is also Vice-President (Policy) of CEN. He has been appointed in January 2013 Vice-President (Finance) of ISO (2013/2014 and 2015/2016).

He belongs to the Board of Directors and Treasurer of Groupe des Industries Métallurgiques (GIM – France). He was also appointed in 2016, Member of China Standardization Expert Committee and since July 2021 he is Président of FNEP (Fondation Nationale Entreprise et Performance). Olivier PEYRAT has moreover chaired several standardisation commissions or groups at national, European and international level, ISO Conformity Assessment Committee (2007-2011). Olivier PEYRAT holds the title of Chevalier of the Legion of Honour.

William Neale - Adviser on Circular Economy and Green Growth for the European Commission's Environment Directorate General

He is currently mostly occupied with preparation of the Sustainable Products Initiative and Digital Product Passport, the Sustainable Finance Taxonomy, and the circular economy in relation to digital policy, employment policy, and European funding.

He served 11 years as a Member of Cabinet of 2 European Commissioners; firstly for Janez Potočnik as Commissioner for Science and Research, then as Commissioner for Environment; then for Karmenu Vella as Commissioner for Environment, Maritime Affairs and Fisheries. In cabinets he variously held responsibility for relations with the European Parliament and the Council of Ministers, planning, resources and budget, and advised Commissioners on circular economy, resource efficiency, sustainable production and consumption, environmental technologies, eco-innovation, waste policy, transport, aeronautics, research infrastructures and external relations.

Mr. Neale started his career in public service working for 7 years in the European Commission's Directorate General for Enterprise and Industry (now DG GROW). He previously spent 13 years in the private sector in the fields of international banking, retail, social enterprise and management consultancy. He holds a B.A.(Hons) degree in economics and history, and an M.A.(Econ) both from the University of Manchester (UK).

Dr. Satyendra Kumar - Director, Ministry of Environment, Forest and Climate Change

He has made significant contributions in the functional areas viz. Wastes and Chemical Management, Resource Efficiency & Circular Economy, Biodiversity Conservation, National Clean Air Programme (NCAP), Solid Waste Management and Plastic Waste Management.

He was part of the team that was involved in preparing new regulations on plastic rules for elimination of single use plastics (SUPs) as well as guidelines extended producer responsibility. He has been part of the actions related to bringing circularity in identified categories of wastes. Now, he is involved in implementation of circular economy action plans for bringing regulatory changes and preparation of guidelines to transition from linear to circular economy. He was also involved in formulation of notification incorporating EPR on ash for thermal power plants. He is engaged in framing battery waste management rules incorporating EPR and circular economy concepts. He is also engaged in framing relevant circular economy concepts in mandated areas as per Circular Economy plans in end of life vehicles, municipal solid and liquid wastes.

He is a graduate from NIT Kurukshetra in mechanical engineering, Post Graduate from IIT Delhi in Energy studies and Doctorate in Policy Making Sustainable Developmental Goals. He brings expertise in environment and energy along with an experience of about 20 years.

Ms. Olivia Chassais - Policy Officer, DG Environment, Unit Sustainable Products

Olivia is passionate about sustainable development. Since 2019, she works as a civil servant at the European Commission, DG Environment (DG ENV), on circular economy issues, in particular ecodesign, product policy including methodological issues and indicators. She is also the standardisation coordinator for DG ENV.

Her academic background includes, among other things, an MPhil in Engineering for Sustainable Development from the University of Cambridge, UK, and an MSc in Management specialising in Market Finance from the Rouen School of Management (Grande Ecole Programme), France.

Ioana Popescu - Head of Circular Economy ECOS – Environmental Coalition on Standards

Ioana is Head of Circular Economy at ECOS. ECOS represents a network of 56 environmental NGOs and works on technical policy and standardisation at European and international level. Ioana leads ECOS work on toxic-free, circular and sustainable products and systems. Prior to joining ECOS, Ioana worked in the bio-economy field. She holds a Master's degree in Environmental Science and Management.

Dr. (Ms.) Mamata Mohapatra - Sr. Principal Scientist, CSIR-IMMT

Dr. Mamata Mohapatra received her Ph.D. from Utkal University, Bhubaneswar. She got her post-doctoral experience from University of Waterloo, Canada by availing BOYSCAST fellowship.

She joined at Hydro& Electrometallurgy department, CSIR-IMMT in 2006 (October) as Jr.Scientist and has been undertaking research independently on interdisciplinary field of research in aqueous processing of ores and secondaries, synthesis and surface modification of transition metal oxide/ oxalate and carbonate materials for environment and energy application. She has scientifically involved in carrying out experiments from lab to large scale for industrial sector. She has executed a number of projects as principal, as Co-Investigator and member in some major projects, flagship projects and international collaborative project (taken the responsibility as Principal Research Scientist for the INDO-AUS Strategic Research Fund program supported by DST, India and Australia Strategic Research Fund, Australia). She has many contributory well-cited publications in international peer review journals (about 75) in collaboration with IIT, Kanpur, Utkal University (India), KIIT, Murdoch University (Australia), WATLab (Canada) and SDU, Denmark. Her work has received 2329 citations with h index of 24. She has successfully supervised 5 PhD students, 19 M.Sc students, 2 M.Tech students.

Mr Souvik Bhattacharjya - Associate Director, Integrated Policy Analysis Division, TERI

Souvik Bhattacharjya is a Senior Fellow and Associate Director at Integrated Policy Analysis Division of TERI. He has more than 16 years of rich experience in the field of energy and environmental research and management consulting. He has undertaken and led various consultancy and research assignments for ministries, bilateral and multilateral organizations and multinational corporations.

His areas of work include Resource Efficiency and Circular Economy and 6Rs, Life Cycle Assessment & Life Cycle Cost Analysis, ESG, Material Demand/Supply Assessments, Material Flow Analysis, Environmental Impact Assessments, Valuation of Environmental Goods and Services, Trade, Environment & Climate Change.

Dr. Rachna Arora - Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Dr. Rachna Arora is working as a Team Leader in the EU-Resource Efficiency project of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and as a Team Leader on the GIZ Circular Economy solutions preventing Marine litter project.
She has been working with GIZ since last 15 years under the bilateral projects, projects of the European Commission and the partnership projects with the private sector with relevant Ministries and government departments towards policy formulation and its implementation. She holds a doctorate degree in environmental chemistry from Indian Institute of Technology (IIT) Roorkee. She was a member of the Inter-departmental committee set up by Niti Aayog (Policy think tank, GoI) on Resource Efficiency strategy. She is also a working group member of the FICCI Circular Economy Committee to support industry research and dialogues on Circular Economy.

Dinesh Chand Sharma - Director Standards & Public Policy, EU Projects SESEI

Since 2012, Mr. Dinesh Sharma is associated with EUROPEAN STANDARDISATION PROJECT, SESEI as Director – Standards and Public Policy. In this role, Mr. Sharma acts as the focal point in India representing European Standards Organizations (ETSI, CEN, CENELEC), European Commission (EC) and European Free Trade Association (EFTA).
Prior to this, Mr. Sharma worked with Ericsson for 15 years, having last working profile as "Director – Regulatory Affairs & Industry Relation". Mr. Sharma began his career in Technical Customer Support back in 1992 and has over 28 plus years of industry experience both in India and abroad.
Mr. Sharma holds a bachelor's degree in Electronics, highest honors in Business Management from Stratford Institute, USA, and a SUN Solaris certification.

Martial Patra - Standardization Manager, Industrial Automation Business, Schneider-Electric

Mr. Patra Chairs the European CEN-CENELEC standardization Ecodesign Coordination Group (EcoCG), focusing on Energy-related products covered by the EU Ecodesign Directive.
He is also Secretary of the CENELEC TC 22X Committee for Power Electronics. At international level, after 9 years of office as the Chairman, he is currently Vice-Chair of IEC/SC 22G Committee for Adjustable speed electric power drive systems standards. He is also Liaison Officer with other Committees (TC 31, 65, 121A, CIS-B), and he chairs the French national mirror committee for Power electronics. He has worked for more than 35 years in the Industrial Control & Drives systems in the Industrial Automation Business of the Schneider Electric company where, as a group senior expert, he is responsible for standardization activities.

Mr José-Ignacio ALCORTA - Head of Standards Development at the International Organization for Standardization (ISO).

He has over 25 years' experience in standards development. He joined ISO in October 2011 where the leads experienced teams of Technical Programme Managers that provide oversight for the 300+ Technical Committees in various sectors, such as Healthcare, Services, Quality, Energy, Environment, ITC, etc.
He is also responsible for the coordination of technical work in the areas of Climate Change, Management Systems and other groups under the Technical Management Board. He convened the group responsible for the mapping of ISO standards to the UN SDGs, its dedicated website and the initiatives in support of the SDGs, such as development of ISO Guides on sustainability and climate change and London Declaration.
Prior to ISO, José worked at the British Standards Institution (BSI) in the United Kingdom from 2001 to 2011 where he held the role of Team Leader in the Governance and Resilience Department as well as holding the Secretariat of high-profile ISO committees

Ms. Pamela Tarif, Global Engagement Director, ECOS - Pamela took on this role in ECOS in late 2021. The focus is crosscutting activities that seek to deepen and expand ECOS engagement in the standardisation system at international, national and regional level, working with stakeholders such as standardisers, policymakers, industry, and environmental NGOs.

Prior to ECOS, she was Senior Manager International Engagement in Standards Australia, working with counterparts across the Asia Pacific region and beyond on building effective participation in standardisation. She was also Head of Membership both at the ISO

Central Secretariat and at the International Telecommunication Union in Geneva for some 10 years. Before standardisation, Pamela's career was in diplomacy serving in Africa, the Americas and Europe. She holds a Master's degree in International Relations. Originally from Scotland, now she resides in Switzerland.

Claudia Bierth - European Public Affairs & Sustainability Manager, Ball Beverage Packaging EMEA

Claudia is an advocate for the circular economy with over 20 years' experience in Public Affairs, Sustainability, stakeholder engagement and communications in Europe, North America, and India for large multinational corporations, non-profits, SMEs and the public sector. At Ball, she leads European Affairs in Brussels as well as Sustainability and Public Affairs in Central Europe.

Claudia believes that near 100% recycling rates for packaging are possible if policy, product design and recycling infrastructure are aligned. To achieve a true circular economy, recycling rates must be complemented by packaging materials and design made for circularity.

Rakesh Vazirani - Head of Sustainability Services, Consumer Products, TUV Rheinland

With 19 years of international experience establishing solutions for 'Product Environmental Compliance', 'Responsible Production', and Due-Diligence for "Impact/Green Finance across 15 countries while living in 3 continents Mr. Rakesh has worked as Program Leader for establishing Sustainability Initiative (Chemicals, Water, Energy Textile & Footwear supply chain with a multidisciplinary team spread across 12 countries, including PPP with government donors, NGOs, Academia, and Industry.

Organized various event and moderated forums with partner expert, regulatory policy makers to address Biodiversity, Renewable Energy, Energy Efficiency, Green Finance, Sustainable Chemistry, etc. Contributed during UNFCC Marrakech Partnership for Global Climate Action during workshops. Established services to address Sustainability assessment needs for Electronics industry. He is member of European Union, Technical Advisory Board (TAB) on Environmental Footprint' (Expert group E03710) and ANSI/ISO's Virtual Technical Advisory Group Member (VTAG) ESG Ecosystem Mr. Vazirani is Chair - Product Sustainability Working Group, International Testing Inspection Certification Council (TIC Council) Chair - ESG and Green Finance Working Group, Hong Kong Association for Testing, Inspection and Certification Limited (HK TIC)

I.V. Rao- Ex-Head Engineering Maruti Suzuki India Limited, Visiting Senior Fellow in Centre for sustainable Mobility at TERI.

Mr Rao is currently working on studies on National Transport Decarbonization Council, for future sustainable mobility.

In an accomplished career at Maruti Suzuki spanning 36 years, made significant contribution in different roles in the areas of Technology Transfer, New Product Planning & Development, Component Localization, Quality Assurance & Service and Manufacturing Engineering functions.

With the vast experience of technology development and understanding of Indian context, played active role in formulation of automotive regulations in India. He held key positions in different industry/ government bodies.

He also played a key role in establishing SAE (Society of Automotive Engineers) in India and expanding its activities for industry professionals and engineering students.

Rijit Sengupta is CEO of the Centre for Responsible Business (CRB).

He has over twenty-two years of experience in various areas of sustainable development policy and practice across Asia and Sub-Saharan Africa.

His interest lies in the interface of business and society – particularly environmental protection/management, consumer welfare, livelihoods/SMEs, business regulation, responsible business and SDGs. He has designed and implemented various projects/programmes in these areas across Sub-Saharan Africa, South and South East Asian countries. Currently, while much of his work on sustainable business/SDGs is focused on India, he has been also advocating for greater North-South dialogue and collaboration on sustainable business/supply chain sustainability/SDGs at various international platforms.

He has a Master degree in Agriculture and in Environment Management. He is an Alumnus of the University of Calcutta and the United Nations University (Tokyo). He is a Member of the Board of the Alliance for Water Stewardship, Edinburgh; Member of Advisory Board of the Trade for Sustainable Development programme, International Trade Centre, Geneva; and Member of Advisory Committee of the Consumer Information Programme of the One Planet Network, UNEP, Paris.

About Organizers:

European Union's Resource Efficiency Initiative (EU-REI)
EU's Resource Efficiency Initiative India (EU-REI) (2017-2023) aims to work together with India on the implementation of the United Nations global Sustainable Consumption and Production (SCP) agenda by way of adapting international standards and best practices in business on resource efficiency and fostering the efficient and sustainable use of natural resources. It is implemented by an international consortium led by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, The Energy and Resources Institute (TERI), Confederation of Indian Industries (CII) and adelphi.

SESEI
Project SESEI (www.sesei.eu) is a standard focused project established by the three European standardization bodies namely CEN, CENELEC and ETSI along with EFTA (European Free Trade Association) and European Commission – DG GROW.

The Energy and Resources Institute (TERI)
The Energy and Resources Institute (TERI) is an independent, multi-dimensional research organization with capabilities in policy research, technology development, and implementation. Headquartered in New Delhi, TERI has regional centres and campuses in Gurugram, Bengaluru, Guwahati, Mumbai, Panaji, and Nainital, supported by a multi-
disciplinary team of scientists, sociologists, economists, engineers, administrative professionals, and state-of-the-art infrastructure.

Environmental Coalition on Standards (ECOS)
ECOS is an international NGO with a network of members and experts advocating for environmentally friendly technical standards, policies and laws. We ensure the environmental voice is heard when they are developed and drive change by providing expertise to policymakers and industry players, leading to the implementation of strong environmental principles.

CEN-CENELEC
CEN (European Committee for Standardization) and CENELEC (European Committee for Electrotechnical Standardization) are recognized by the European Union (EU) and the European Free Trade Association (EFTA) as European Standardization Organisations responsible for developing standards at European level, as per European Regulation 1025/2021. The members are the National Standards Bodies (CEN) and National Electrotechnical Committees (CENELEC) from 34 European Countries. European Standards (ENs) and other standardization deliverables are adopted by CEN and CENELEC, are accepted and recognised in all these countries. These standards contribute to enhancing safety, improving quality, facilitating cross border trade, and strengthening of the European Single Market. They are developed through a process of collaboration among experts nominated by business and Industry, research institutions, consumer and environmental organisations, trade unions, and other societal stakeholders. CEN and CENELEC work to promote the international alignment of standards in the framework of technical cooperation agreement with ISO (International Organisation for Standardisation) and IEC (International Electrotechnical Commission).

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