Report of Circular Economy Mission to India

September 4-7, 2018
New Delhi, India

Circular Economy Mission to India, New Delhi

Report

September, 2018

Table of Contents

The European Union's Delegation to India under its Resource Efficiency Initiative hosted the Circular Economy Mission (CEM) to India from Sept 4-7, 2018. Mr Karmenu Vella, Commissioner for Environment, Maritime Affairs and Fisheries - European Union led a high-level delegation of over 80 delegates representing 16 Member States of the EU, who engaged with Indian government and over 300 businesses, entrepreneurs and NGOs over the four days for knowledge and policy exchange, and to explore business partnerships for the circular economy transition. Indian and EU stakeholders expressed interest in collaborating and partnering in various areas to accelerate transition towards a regenerative and restorative Circular Economy (CE) from the current model of linear economy. Over 140 business to business meetings were facilitated between EU and Indian stakeholders and many partnerships explored with some announcing their clear intent to cooperate. Collaboration, many experts reiterated, will remain key to developing innovative circular economy models.

September 4, 2018 – *Day 1*

The Inaugural session of the Circular Economy Mission was opened with welcome remarks by Mr Raimund Magis, Chargé d' affairs, European Union Delegation to India. Mr Magis said that at CEM, EU and its businesses were keen to understand the policy developments in India and network with the Indian businesses for some possible partnerships to be announced in the closing sessions of the Mission. He outlined the programme and sector represented in the CEM.

Thereafter, Ms Astrid Schomaker, Director for Global Sustainable Development, European Commission's Directorate General for Environment welcomed all the dignitaries and CEM participants on behalf of the European Union. She pointed to the EU India Strategic Partnership and the broadening and intensification of cooperation on environment involving policy, research, innovation and bringing together policy makers and stakeholders including business to share practical solutions. She added that the Circular Economy Mission proves the maturity of the cooperation and the shared interest in making it even stronger.

Ms Seema Arora, Deputy Director General, Confederation of Indian Industries (CII), said that circular economy calls for deep and widespread collaboration between industries – it calls for a completely revamped way of thinking, assisted by the very latest technology – artificial intelligence, perhaps, blockchain, internet of things, digitization, for example; new business models based upon sharing, using bio-based raw materials and renewable forms of energy. Ms Arora added that nearly 120 B2B meetings were already planned during the CEM. She stressed the challenges of RE and CE and the fact that global change cannot happen without India. India needs to better understand the environmental challenge to create the transition to a CE and it has to be assisted with the latest technologies and business models. Initiatives in this sense should be multiplied. This will enhance companies' competitiveness protect the environment and help address the externationalisation of cost for the society.

This was followed by thematic address by Dr Ajay Mathur, Director General, The Energy and Resources Institute (TERI), said that circularity is essentially about utilizing as few materials as possible in manufacturing products, and creating as little waste as possible at the end-of-life of product. CE rationale is very clear as it offers huge environmental and economic benefits. It is important to upgrade than downgrade the materials at the end of life of products. He pointed to the need to work on specific sectors, for example, paper recycling and electronic waste. Resource Efficiency (RE) and CE policies implementation should also be linked to the price of the waste products and the values that can drive the reuse and recycle. Finally, he pointed to the global trade of recycled materials in particular in relation to transaction costs.

In his inaugural address, Commissioner Vella stressed the global context of sustainable development and the Paris Agreement. To turn this vision into reality, environmental policy solutions need to be shared globally. The EU and India are strategic partners and are constructing a solid cooperation on environmental issues. Strengthening cooperation on environment is of mutual benefit to the EU and India. Promotion of resource efficiency and circular economy is an opportunity to learn and exchange views and best practices. Commissioner Vella recalled the launching of the EU Circular Economy Package and the EU Plastics Strategy. He explained that the Circular Economy Mission is about promoting circular economy policy globally and establishing adequate partnerships with our strategic partners. Mr Vella highlighted that circular economy is a positive agenda for bilateral cooperation between the EU and India. Inaugural speech of the Commissioner Vella is available here: https://ec.europa.eu/commission/commissioners/2014-2019/vella/announcements/speech-commissioner-vella-inauguration-circular-economy-mission-india-4-september-2018_en

This was followed by inaugural address by Mr Hardeep Singh Puri, Minister for Housing and Urban Affairs, stood in for the Environment Minister who was prevented at the last minute from attending the Inaugural Session. He highlighted the link between urbanisation, the development agenda, the SDGs and environment. He mentioned that this is a challenge for India as 600 million people will be living in urban areas in 2030. India's SDGs implementation needs a comprehensive framework in which urban policy may play a key role. India needs to build large amounts of urban areas every year in the next decades and will have to do it in the most sustainable way looking into and implementing the best resource efficiency policies. There is a tremendous business opportunity. Minister also made the point that climate change and urbanisation should be tackled together in an integrated manner. Thus, he reiterated that with India facing one of the highest resource extraction pressures in the world, and rapidly recovering economic growth in the last three quarters, India is the appropriate place and now is the right time to be having the discussions on Circular Economy. The fast urbanisation provides great opportunity to foster CE.

The session concluded with three presentations from EU and Indian businesses, explaining their views and experiences on resource efficiency projects in the EU and India. The inaugural session was followed by dinner hosted by Commissioner Vella.

September 5, 2018 – *Day 2*

On the second day of the Circular Economy Mission to India (CEM), two sessions were organized.

Session 1: Round table discussion on Resource Efficiency Strategy and Prioritized Sectors in India - organized by NITI Aayog, Government of India.

The session was chaired by Mr. B.N Satpathy, Senior Consultant, EAC-PM, NITI Aayog, and had expert contributions from a high-level panel including Ms. Ruchika Chaudhry Govil, Joint Secretary, Ministry of Steel, Dr Mukesh Kumar, Director, Ministry of Steel, Mr Prithul Kumar, Director, Ministry of Mines, Dr Sandip Chatterjee, Officer on Special Duty /Scientist F, Dr Rachna Arora, Deputy Team Leader, EU-REI (GIZ), Mr Sanjib Bezbaroa, Vice-President, Corporate EHS – ITC and Dr Prasad Modak, Founder, EMC.

Mr Satpathy welcome everyone and outlined the process of development and implementation of RE Strategy. He then invited Commissioner Vella to deliver his opening remarks. Commissioner's Vella recalled that the progress on resource efficiency (RE) and circular economy (CE) policy within the EU-India cooperation shows that the Indian government is determined to address resource efficiency challenges.

Following Commissioner Vella's address, Mr Satpathy informed the audience that currently the key sectors of focus are steel and aluminum as they constitute major infrastructure materials in the country and are relevant for waste recycling. The RE Strategy will produce policy analysis and inputs, regulation, ease of doing RE business, defining standards, R&D, technology development and capacity building programmes. He further emphasized the need for robust data and data collection mechanisms to enable estimation of the size of Circular Economy in India and the contribution of the different sectors in order to be able to measure the impact of the Resource Efficiency measures on the citizens of India.

Ms. Govil, Joint Secretary, Ministry of Steel highlighted key initiatives currently underway including the preparation of draft Scrap Steel policy. Further, insights on the recycling within the steel industry were shared and is of particular importance because unless steel can be recycled, large

amount of steel resources will need to be imported. Therefore, the policy would need to focus on how to reduce by-products that are coming out from the steel production and identify its alternative uses alongwith technological shifts and energy efficiency in the production processes.

Dr Mukesh Kumar, Director – Steel Research & Technology Mission of India, highlighted that the draft strategy on steel recycling will focus on recycling of steel scrap and slag and explore the sectors and areas where the secondary raw materials can be further utilized. He highlighted currently there is a policy to treat primary and secondary steel at par subject to Bureau of Indian Standards quality check. There is also focus on use of BF slag in Cement sector, road construction and geo-polymers. Draft policy on Steel Scrap Recycling will also promote shredding of old vehicles and increasing the domestic availability of scrap.

Mr Prithul Kumar, Director, Ministry of Mines presented on the resource efficiency strategy for the aluminum sector. He highlighted that contribution to Al production in India is 70% from the primary aluminum and 30% by the secondary/recycled aluminum sector, and the strategy would focus on both. Further, Al can be used as material for achieving RE at a macro level as well. For RE in primary Al sector, measures to promote sustainable mining through star rating of bauxite mine, use of space technology for scientific mining as well as lowering the threshold value of minerals.

Dr Sandip Chatterjee, Officer on Special Duty, Ministry of Electronics Information Technology reported on the up-scaling of indigenously developed e-waste technologies. In India 90-95% of e-waste is being recycled in the informal sector in an extremely crude way that is hazardous to the health of those engaged. Unscientific methods of recovery, recycling and then dumping prevalent in the informal sector also leads to leaching of heavy metals and chemicals in the landfill. For the same, he presented a proposal for development of eco parks to deal with e-waste processing in a comprehensive manner to enhance RE in the electronics sector

Dr Rachna Arora, Deputy Team Leader, EU-REI project, presented on the e-waste strategy covering aspects on the development of business models for inclusion of informal sector and promotion of sustainable practices for e-waste management and waste recovery. She added that it was important to consider the adoption of efficient technology for electric and electronic waste (WEEE)recycling, ii) Lowering and optimising costs for technology transfer are relevant for proper implementation and enable large scale proliferation, iii) benchmarking of technologies, iv) involvement of stakeholders is necessary – along with government, recycler, producer and also informal sector – v) formalising the informal sector for collection of e-waste. The REI could act as an enabler for sharing policies, practices and business models. With regards to the Construction and Demolition Waste (CDW) Strategy, Dr Rachna Arora highlighted the major elements including sound management of CDW and promotion of products made out of CDW. It was also shared that the recent ban on construction in several Indian states by the Supreme Court, after they failed to comply with its order to come up with a policy on solid waste management, is clear sign that there is a need to develop comprehensive resource efficiency practices in the sector. Market creation will require an enabling ecosystem for demand and supply of recycled products, increased awareness of architects and builders and government's role as a facilitator and regulator to encourage the cities to set up facilities for its management.

Businesses participating in the roundtable provided their recommendations on strategies for recycling and waste packaging and provided feedback on incentivizing recycling.

Session 2: Circular Economy Business Transition for India

Two panel discussions were co-hosted by FICCI as part of the session. Panel Discussion 1 focused on the 'Idea Generation for a Circular Economy Grand Challenge' for India, with emphasis laid on the research and innovation component for the circular economy and how this can be financed.

Opening remarks were given by Mr Karmenu Vella, Commissioner for Environment, Maritime Affairs and Fisheries, EU. Commissioner Vella highlighted the opportunities for new business models that CE offers as the CE transition is set to stimulate innovation. Implementing new business models will require efforts from everyone and interaction between different sector. Businesses need to engage with government at all levels. Business-to-business collaboration, across industries and across value chains, and new collaborative networks are needed for the transition. He also reminded that authorities may have a role removing barriers.

Mr Yogesh Bedi, Chief, Steel Recycling Business – Tata Steel, & Member – FICCI Working Group on Circular Economy, chaired the discussion. Examples from the EU and globally were showcased, including the funding made available by the EU for CE research by EU Member states under the Horizon 2020 project and The Circulars awards. Ms Tania Friederichs, Research & Innovation Counsellor, EU Delegation to India, also highlighted avenues for potential partnerships between the EU and the Indian government to spur such research and innovation. Mr Sundeep Singh, Senior Principal, Accenture Strategy, presented the idea of the Circular Economy Grand Challenge in India and announced its launch during the panel. Mr Rahul Bansal, Deputy Director, Climate-KIC shared the work undertaken by Climate KIC in the space of Circular Economy including support to innovations. The panel emphasized that there is a need for setting collaboration partnerships, funding and investment, foster the disruptive technologies and creating and enforcing the policy landscape.

This was followed by panel discussion on '**Reducing Waste and Reinventing Plastics – Closing the Loop'** in India. The deliberations focused on the importance of EPR (Extended Producer Responsibility) and PROs (Producer Responsibility Organizations) to enable the management of plastics and plastic waste. Learnings from the EU were shared, which has close to 25 years of experience in implementing EPR. Interesting models for the inclusion of the informal sector for tackling the plastic waste and e-waste management issues in India were also showcased.

Over the first two days, delegates also participated in the High-level political and business meetings are also being held as a part of the Mission to facilitate partnerships for increased cooperation between EU and India in these areas. Several businesses have already highlighted interesting developments in the partnerships they are exploring.

September 6, 2018 - *Day 3*

The 3rd day of the Circular Economy Mission to India (CEM) coincided with the first day of the Sustainability Summit organized by the Confederation of Indian Industries.

Inaugural: 13th Sustainability Summit:

Commissioner Vella inaugurated the Summit alongside with Mr Harsh Vardhan Minister of Environment, Forests and Climate Change as well as Science & Technology and Mr Hardeep Singh Puri, Minister of Housing & Urban affairs. The summit was attended by more than 400 participants from the EU and India. All speakers emphasized the relevance of the EU–India partnership on resource efficiency and the opportunities that have been offered by exchanging efficient approaches and green business partnerships.

Highlighting the growing importance of CE and RE Mr Karmenu Vella, Commissioner for Environment, Maritime Affairs and Fisheries, European Commission expressed that 'these are not just ecological issues but have social and economic implications attached to them. To implement RE and CE, we need a change in the social behaviour—how we use; dispose and reuse materials. Transition is set to stimulate innovation and civil society is demanding decisive actions at this juncture'. Emphasising on eco-innovation which ensures economic development through effective use of resources that follows the environmental regulations, he mentioned that this needs to be embedded in the core decision-making process.

Emphasising on the need to adopt the concept of CE, Mr Suresh Prabhu, Minister of Commerce & Industry and Civil Aviation, expressed that 'CE must be driven by people and by businesses who offer the right ideas and who practice it. It cannot be done by the government alone'. With respect to resource utilisation, he mentioned 'enhance recycling efficiency; change thinking and change designing'. CII released the 'CEO's Guide to Circular Economy and Competitiveness' which discusses an alternative for the current business models by adopting the concept of CE. It shows

how CE has evolved as a new path to competitiveness, given the environmental resource-related and geo-political challenges faced by companies today.

Addressing the inaugural session, Dr Harsh Vardhan, Minister for Environment, Forest & Climate Change, Science & Technology, and Earth Sciences, quoted from international reports, that 'under the Swachh Bharat Abhiyan till date 8 crore toilets have been built across the country and it is a unique record that every school in India has a toilet. Also, 4 lakh villages are open defecation-free, in India'. He said 'we have the backing of labs and scientists who are tirelessly working on mitigation and adaptation strategies for climate change'. He mentioned that protection of environment is a moral responsibility in the context of the rights of an unborn child. In 4 years, 5000 new technologies will be deployed with the help of industry. It is a matter of pride that in a list of 1200 institutions in the world, CSIR from India ranked at the ninth position.

Mr Hardeep Singh Puri, Minister for State (I/C) Housing and Urban Affairs emphasised that growth and development have to be firmly couched along with sustainability and that all developmental challenges must be viewed through the prism of sustainable development. He stressed on the fact that the framework of SDGs will succeed only if India is able to contain its population concerns. He also highlighted that building resilient cities require rebuilding existing structures. By 2030 around 600 million people will be living in urban spaces which needs efficient transport systems. In this context, he commended DMRC for being the most efficient and inexpensive mode of public transport in the world which is comparable to those in the developed nations.

Bringing to light the veracity of natural disasters across the globe, Mr Sanjiv Puri, Managing Director, ITC Limited pointed out that once in every 5 days at least 4 nations are struck with a natural calamity. To elaborate, he mentioned that the planet has lost one fourth of its forest cover and one-third of its biodiversity in the last century; and two-third of the world will face water scarcity in the next decade. He insisted on adopting different growth models and innovative strategies for economic prosperity and inclusive growth which meant not only to preserve but enrich environment.

Mr Chandrajit Banerjee, Director General, Confederation of Indian Industry announced the launch of a portfolio in CE by CESD (One of the COEs of CII) that will focus on policy advocacy, actioning the business agenda. He expressed that CII is happy to work on EU CEM and looks forward to gain knowledge as well as business partnerships between European and Indian businesses, government and other stakeholders in accelerating this transition.

The inaugural was followed by three thematic sessions organised by EU-REI project, and a closed-door lunch on the Ease of Doing Business in India. Alongside the sessions, the business-to-business meetings continued. Sessions for 13th Sustainability Summit were also held parallelly.

Session 1: Responsible Investments in Circular Economy Business Model.

The session was chaired and moderated by Mr. Donal Cannon, Head of Regional Representative, European Investment Bank with the Mr. Chandan Bhavnani - Executive Vice President, Yes Bank, Ms. Esha Sar, Manager – World Business Council for Sustainable Development, and Mr. Piotr Barczak- Policy Office for Waste, European Environment Bureau in the panel.

Mr Cannon said that CE is about more than resources. It is also about the new business models. He also highlighted that SMEs will drive the CE transition. Therefore, EIB partnering with domestic banks and non-banks to create low-cost financing facilities for SMEs support. EIB is also actively engaging with EU Commission – to provide blended finance platforms including grants and debt finance to enable integration of large informal sector.

Mr Bhavnani said that YES Bank has 3 key pillars towards CE i.e. improving own productivity wherein YES Bank is implementing environment management standards, 714 facilities are ISO 14001 certified (according to new standards in 2015); risk assessment wherein environment and social policy embedded into risk and credit policy; and focus on growth opportunity whereby CE can bring trillions of dollars of value, GDP from 1% to 4% etc – different numbers.

Ms Esha Sar, WBCSD, said that for directing responsible investments towards CE, measuring of circularity will be important for driving more investments into circular business models, hence WBCSD is engaged in developing a consensus-based framework for measuring circularity at company level. It has also launched a report on landscape analysis on circularity metrics conducted earlier this year. This report shows that that companies increasingly see CE as a value driver i.e they recognise the financial opportunity in revaluating the business model. She also insisted that development of a common framework can improve transparency, create a level playing, help de-risk investments.

Mr Piotr Barcak, EEB, said that circular economy business models especially in developing countries need to look at inclusive policy shifts so that informal sector is included in this transformative process. The value chain actors and holistic ecosystem covering diverging views are crucial so that the framework designed is robust and includes the views from the practitioners. He also emphasized that technology is an essential element in this design change but choice of right technologies and decentralized models is needed so that we don't have market failures as in the case of waste to energy plants.

Session 2: Start ups and Innovations on RE and CE Business Models

The session was chaired and moderated by Mr Rene Van Berkel, Officer in Charge – Regional Office, India, UNIDO and was joined by Ms Revathy Kamath, Architect, Kamath Design Studio; Ms Rashi Agarwal**,** Director, Banyan Nation; Mr Siddharth Hande, Founder and CEO, Kabadiwalla Connect; Mr Jayant Pai, Founder, Social Seva Initiatives; Ms Kristin Kagetsu, Co-founder, Saathi Eco Innovations; Mr Jose Maria Bermejo, Advisor on Circular Economy, Thinking Remarket joined as panellists.

Mr Berkel opened the session with his comments and said that UNIDO is looking for fostering resource efficiency in industries for a sustainable future with innovative business models and service-oriented markets than product led markets. Such innovations will be important for the economic transition.

Ms Revathy Kamath, Kamath Design Studio, presented five case studies that showcased the use of vernacular materials and indigenous techniques to construct houses and building that use local materials and are also energy efficient. She added that consumers awareness is key as they have to comprehend that building ecological is imperative, also possible at the large scale and of higher quality.

Ms Rashi Agarwal, Banyan Nation, highlighted that India has a high plastic waste generation of which 70% is recovered but most of it is downcycled (90%). The collection is highly efficient due to the most resource efficient force i.e kabadiwallas, however, recycling is highly inefficient due to unscientific recycling technologies. Thus, there is a need to harness potential of plastics recycling technologies. Banyan Nation is working with industry partners like Dow & Dupont and Tata for developing solutions for managing plastics with paint and other contaminates.

Mr Siddharth Hande, Kabadiwalla Connect, outlined the two intertwined solutions being offered by Kabadiwalla Connect: 1) integrating informal sector into reverse logistics; 2) processing facility as experimental space. He also highlighted key take aways based on their experience for different sectors and emphasised on the need for collection of data, mobilisation of funding for supporting innovations by informal sector towards strengthening of their work.

Mr Jayant Pai, Social Seva Initiatives, focused on building a business case which can create sustainable incomes for Bottom of Pyramid (BoP) and deliver environmental goods for the entire society. India, Protoprint is the first initiative of its kind that integrates the bottom-of-pyramid waste pickers collecting plastic waste with the extrusion-based technology to convert plastic waste into value-added 3D filament.

Kristin Kagetsu, Co-founder, Saathi Eco Innovations, presented the journey of Saathi which produces sanitary pads from banana fibres. She added that the material used for sanitary pads are very environmentally friendly because banana trees have to be cut down every harvest anyway. The initiative employs low income women in Ahmedabad. The product developed is chemical free, no issues of rashes or irritation and is also more comfortable than conventional products. Unlike the traditional sanitary napkins that do not decompose and need to be incinerated, the materials can be composted and/or converted to biomass. For its work Saathi Eco Innovations has also received Global Cleantech Innovation Award.

Mr Jose Maria Bermejo, Thinking Remarket, said that it is a consulting company that partners with manufacturers to create a wide range of different products made from recycled materials. It is currently involved in four of five pillars in CE business model (no projects in eco-design so far). He presented three examples wherein thinking remarket is involved in innovating for products based on secondary material through development of new treatment processes, circular materials with extended life, using recycled tyres for making products.

Mr Van Berkel said that from the discussions it was clear that any discussion on Circular Economy in India, almost automatically includes a social dimension due to the strong presence of the informal sector. He concluded the session by mentioning that there is a demand and potential for creating valuable and high-value added products is key in order to ensure profitable operation of CE business models

Closed – door round table lunch on the Ease of doing business in India,

Commissioner Vella's participation in the Summit concluded with the participation in a roundtable discussion on Ease of doing business in India with the participation of EU and Indian SMEs and also large companies. The session was moderated by Mr Paul V. Jensen, EBTC India.

Along with the CEM EU participants, invited participants from Indian industry participated. These were:

- Mr Atul Sud- Director, Legal & Regulatory Affairs, Perfetti Van Melle India Pvt. Ltd.
- Mr B Rajagopal, President, DSM India
- Ms Madhulika Sharma, Chief Corporate Sustainability, Tata Steel Limited
- Ms Shukla Wassan, Executive Director Legal & Corporate Affairs – South Asia, Hindustan Coca-Cola Beverages Private Limited
- Mr Vivek Abraham, Senior Assistant Vice President & Co-Head, Global Investor Outreach, Invest India
- Mr Tushar Alekar, Commercial Director, IFAT India

- Mr Raman Ramachandran, Chairman & Managing Director, BASF India Ltd
- Ms P. Bineesha, Executive Director, International Institute of Waste Management (IIWM)

Participants stated the need to plan circular economy policies at global level exploring the policies required and the need to support innovation and business exchange. EU participants highlighted several trade barriers can be counterproductive for business cooperation.

The session focused on increasing collaboration between India and the EU in ease of doing business in India, with respect to challenges faced by small, medium and large international enterprises. The EU delegation reiterated that they will now want to focus on bilateral cooperation with India in terms of policy and businesses that will be the key implementers of policy. Existing collaboration between the EU and India in the areas of air and water pollution, smart cities and resource efficiency is now being extended to circular economy as well.

During this meeting the delegates raised many issues with respect to India-EU cooperation on existing tariffs and position of MSMEs. For instance, disparity in duty rates on chemical imports, excessive generation of electronic waste, updates about the latest emission norms, obstacles for new entrants and skill training and efficiency in the informal sector.

The actual ease of doing business does not always correlate with ranking. Two factors in India determine business opportunities, first market share and second cost of doing business. In terms of cost, India is among the most competitive. The various possible solutions discussed by the panelists can be summarized as EU–INDIA partnership to tackle the problems associated with sustainable development, improvement in infrastructure, commercialization of technology, harmonization of norms and standards as in EU for market uptake and globalization from India's side.

Session 3: Institutionalisation of Resource Efficiency in India

The session was chaired and moderated by Mr A.K. Jain, Additional Secretary, Ministry of Environment, Forest and Climate Change. The panel consisted of Ms Astrid Schomaker, Director of Global Sustainable Development, Directorate General for Environment, European Commission; Dr Ajay Mathur, Director General, TERI; Mr Ravi Agarwal, Director, Toxics Link; Dr Ashok

Khosla, Founder & Chairman, Development Alternatives; and Dr Dieter Mutz, Team Leader, EU-REI (GIZ).

Mr A.K. Jain, MoEFCC, opened the session and highlighted that MoEFCC has been undertaking many initiatives on Resource Efficiency. He mentioned that Indian Resource Panel as a policy advisory group has created a framework towards mainstreaming RE and also recommended to create an institutional set up on RE. This calls for intense discussions, brainstorming and identification of key elements to be addressed in a phased manner for India to set up an institutional structure or a RE policy.

Mr Ravi Agarwal, Toxics Link, emphasised that for institutionalisation of RE in India, it was important to first understand what would be the right location within the Indian government for institutionalising and what role would the agency play. Also the governance mechanism and overarching legislative framework which can address the cross-sectoral issues needs to be carefully analysed.

Dr Ajay Mathur, TERI, said that it was important to analyse why RE is not happening at the scale it is needed. He stressed that waste needs to be monetised including the cost incurred by society and individuals to it. Like energy efficiency, RE needs to be incentivised for all stakeholders, and an institutional mechanism to mainstream with a comprehensive framework for its implementation is needed.

Dr Ashok Khosla, Development Alternatives, highlighted that for institutionalisation of RE a policy is needed. He added that regulation needs a robust data, monitoring frameworks, industries preparedness and social inclusion. The concept of sufficiency needs to be added to efficiency to see the large-scale benefits for the community especially the bottom of the pyramid.

Ms Astrid Schomaker, EU, stressed that to promote RE and CE, institutions are needed at every level and sphere including government and industry. There is also a need to promote innovations, showcase proof of concepts towards the achievement of objectives. Stakeholder consultations are needed so that rules achieve the aims for which they are formed and capacities are enhanced through knowledge exchange platforms.

Dr Dieter Mutz mentioned that India had taken a lead in 2015 to launch its own national resource panel. This was an innovative policy measure which the world is looking at also considering the discussions on the G 20 RE dialogue initiated last year. The efforts undertaken in this direction by MoEFCC and Niti Aayog are leading to prioritization of this topic in the policy discussions. We as a project (EU-REI) are contributing to work with the RE cell, newly formed at MoEFCC to facilitate the knowledge exchange and development of policy frameworks. It is also crucial to consider that for CE transition; the current governance and regulatory models will have to be relooked to identify options for institutionalizing this topic within the relevant government body.

September 7, 2018 – *Day 4*

The last day of the CEM took place also jointly with the CII Sustainability Summit.

Inaugural Session – Circular Economy for Competitiveness

The day started with a session on Circular Economy for Competitiveness. Seema Arora, Deputy Director General, CII, recapitulated the highlights of the previous day. Throwing light on the important discussions and potential solutions that came up during the intense deliberation on part of the delegates, panellists and dignitaries, Ms Arora spoke about the importance and practical need

for a circular economy (CE) for everyone's future. Speakers recounted their learnings and experiences of implementing CE and the accruing benefits for each country.

Ms Astrid Schomaker, DG-Environment presented EU's Circular Economy Package and the expected benefits from the same. She added that the difference between challenges arising from policy formulation and implementation on ground needs to be understood. She also reiterated that both India and EU have a lot to learn from each other's experiences and best practices.

This was followed by the release of four sectoral studies on resource efficiency developed by EU-REI project.

Ms Henriette Faergemann shared the journey of development of the four studies and the recommendations from the following studies.

- Enhancing Resource Efficiency through Extended Producer Responsibility – Sector Study on Plastic Packaging and E-waste Management in India
- Fostering Resource Efficiency in the Indian Buildings and Construction Sector
- Greening the Solar PV Value Chain
- Towards Resource Efficient Electric Vehicle Sector in India

The studies propose recommendations for enhancing RE and CE in the Indian economy as well as potential to further the EU India cooperation on RE and CE.

Session 1: Resource Efficiency Action and Initiatives at the State and City Level

The session was chaired by Mr B.N. Satpathy, NITI Aayog. He was joined on the panel by Dr Ashok Khosla, Founder & Chairman, Development Alternatives; Ms Marta Moren Abat, Policy Officer, EU-India Cooperation on Environment, Directorate General for Environment, European Commission; Dr Rachna Arora, Deputy Team Leader & Coordinator, EU-REI (GIZ); Mr Daulat A. Hawaldar, Secretary (Planning/ Finance), Government of Goa; Mr KCA Arun Prasad, Member Secretary, Rajasthan Pollution Control Board; Dr Ramesh Jalan, Senior Vice President Technology Centre, 3Wayste, France; and Mr Ralph Moreau, Technology Attaché, Flanders Region, Investment & Trade, Embassy of Flanders.

Political will, governance, economics and finance, water and electricity, wastes, environment and resource footprint, urban planning, management, jobs and migration were some of the issues discussed in this session. Dr. Ashok Khosla covered aspects related to city level decoupling and the transition from a linear to circular economy. The emphasis was on 'how to achieve more from less by three examples covering industrial ecology, termite's technology for energy-efficient building called 'biomimicry' and resource-use. Furthermore, Ms. Martha suggested that there was a need for development of RE/CE indicators through baseline data collection and tracking performance. Dr. Rachna Arora presented the approach for state level RE strategies and initiatives through the integration of SDGs into the sectoral priorities of the State government which will be needed. Similarly, action at city level was needed for them to transform from linear to circular. Experience of Belgium in moving towards CE was also shared especially of the Flanders region by Mr. Moreau wherein many measures have been adopted including segregation of waste wherein 70% of household waste is sorted and recycled.

The session offered insights and examples on how RE and CE approaches can be implemented at regional and local level. Both, the state of Goa and Rajasthan presented their initiatives on plastics and policy on reduce, recycle and recovery waste.

This was followed by four sessions exploring further the implementation of the recommendations of the four studies.

Session 2: Extended Producer Responsibility: Plastics & E-Waste

The session was chaired by Dr Dieter Mutz, Team Leader, EU-Resource Efficiency Initiative. He was joined on the panel by Mr Morton Hemkhaus, Project Manager, adelphi who presented the sectoral study findings on EPR for plastic and electronic waste, Mr Chandra Mohan Gupta, Director – Corporate Affairs, Coca Cola, Mr Anwar Shirpurwala, Executive Director, Manufacturers' Association for Information Technology (MAIT), Dr Ashish Chaturvedi, Director - Climate Change, GIZ, Mr Jan Vlak, President, WEEE Forum, Mr Joris Lauwers, Supply Manager, Umicore.

As per the available data, total consumption of plastic in India amounts to about 14.5 million tonnes per year and CPCB estimates that 5.6 million tonnes of plastic waste every year. The production of EEE valued to around 34 billion EUR in 2016 vis-à-vis demand to the tune of 86 billion EUR.

Mr Morton Hemkhaus presented the findings of the sectoral study. Even though the government has updated the E-waste Management Rules and Plastic Waste Management Rules in 2016, many implementation challenges remain. Hence, he emphasised that there is a need for strengthening the capacity of implementing agencies, exploring the strength and weakness of different implementing mechanisms in order to create administrative synergies and launching sector-wide platforms for collaboration which foster information exchange along the plastic and e-waste value chain. In addition, he highlighted that the legal framework largely neglects the informal sector; currently, there is no structured approach for mapping the formal activities and capacity building programmes under the Skill India.

Mr Chandra Mohan Gupta said that every package has value and life beyond its initial use, so it should be collected and recycled into a new package or another beneficial use. He also explained about PET reverse supply chain, a true circular economy model, which can be implemented in all other plastics and involves actors along the whole value chain of packaging products. In addition, he highlighted that collection and recycling of PET is an important first step in the transition towards a circular economy and is directly linked to the Extended Producer Responsibility (EPR) under the Plastic Waste Management Rules, 2016 in India.

Mr Anwar Shirpurwala started his presentation by highlighting the importance of cooperating with the informal sector by pursuing engagement activities. Down the road, this will help to successfully implement regulations and policies, such as the E-waste Management Rules, 2016 and the corresponding E-waste Amendment Rules, 2018. Further, he emphasised the relevance of awareness creation on the hazardous effects of improper e-waste management among workers of the informal sector and the general public. To address this issue, MAIT is currently working on the Clean to Green initiative and the GreenE initiative. Overall, these are clear examples thatthe Indian electronics industry is spearheading efforts to raise awareness on e-Waste issues and to ensure legal

compliance to the E-waste Rules, 2016. As the industry is growing rapidly, so do the challenges of electronic waste. Promoting awareness creation through workshops can support the transition towards a circular economy which safeguards both human health and the environment.

Mr Jan Vlak gave an overview regarding the activities of WEEE Forum, the European not-for-profit association of 36 WEEE producer responsibility organisations (or 'producer compliance schemes') in Europe and globally. Based on more than 15 years of experience by the WEEE Forum and EPR in European countries, he highlighted that the roles and responsibilities of different actors in the system need to be clearly defined in order to achieve the desired results (i.e. efficient collection and recycling of e-waste). In addition, he highlighted the importance of monitoring and enforcement of existing legislations. This could be supported by a system of standards, such as the WEEE Label of Excellence (WEEELABEX) which is currently being transposed into European CENELEC standards. Furthermore, he highlighted the challenges of increasing digitisation for compliance management of EPR, namely the increasing tendency for free-riding due to online sales.

Dr Ashish Chaturvedi provided a synthesis of the previous presentations on e-waste and plastic waste management by highlighting three key challenges for implementation of the EPR principle. First and foremost, he described informality as a key challenge due to its adverse effects on the rate of resource utilisation, resulting environmental pollution and its tendency to cause market distortions. A second challenge is found in scaling up proven approaches, which to date remain at a proof-of-concept-stage. The third and last challenge referred to by Dr Chaturvedi is to find suitable business models and technologies which allow for efficient and profitable recycling of plastic and electronic waste. At the end of his presentation, he recommended that the government should take the role of a facilitator for the creation of Producer Responsibility Organisations (PROs). In addition, he demanded stronger efforts for formalising the informal sector in e-waste management and limiting the use of single-use plastics.

Lastly, Mr Joris Lauwers spoke about options to optimize resource efficiency in the e-waste recycling chain, emphasising a full chain perspective from Umicore'send-refiners viewpoint. While he strongly emphasised the introduction of the polluter pays principle in India, he also mentioned that resource efficiency in e-waste recycling is essentially determined by every step in the value chain. While collection efficiency is typically high in India (due to the presence of the informal sector), extraction of precious metals works best in large-scale smelters as operated by Umicore in Hoboken, Belgium. As of recently, Umicore faces administrative difficulties to obtain export licenses which, from his perspective, encourages inefficient informal recycling practices and therefore pose a major hindrance to the implementation of the Indian E-waste Rules. To overcome these obstacles, he suggested the stimulation of global synergies to optimize resource efficiency and increased monitoring and transparency measures along the entire recycling chain.

Session 3: Circularity in Mobility – Managing End-of-Life and the Case of Electric Vehicle

This session was chaired by Dr Suneel Pandey, Director, TERI. Mr Souvik Bhattacharya, Fellow from TERI, who was also the presenter of sectoral study findings, was part of the panel along with Ms Estela Goncalves Pereira, Consultant, and Mr Sumit Dhanuka, Founder & Managing Partner, Precog Innovation Partners.

The session started with the welcome address by the chair where he highlighted the importance of the electric mobility in a world of growing scarcity of fossil fuel resources. However, electric mobility has its own unique set of challenges particularly when it comes to requirement of resources. Under the EU supported project, TERI had undertaken a comprehensive assessment of resource use and efficiency potential of electric vehicles in India.

The session started with the welcome address by the chair where he highlighted the importance of the electric mobility in a world of growing scarcity of fossil fuel resources. However, electric mobility has its own unique set of challenges particularly when it comes to requirement of resources. Under the EU supported project, TERI had undertaken a comprehensive assessment of resource use and efficiency potential of electric vehicles in India.

A detailed presentation on 'Enhancing Circularity of Electric Vehicles' was made by Souvik Bhattacharjya from TERI. It is extremely important to recognize the fact that despite many economic and environmental benefits of EVs and hybrid vehicles, there are challenges with regard to material availability and affordability used in manufacturing EVs. There are challenges with regard to introducing break-through technologies in developing products that use recycled materials, achieving security when it comes to import dependency of raw materials, formalizing management of end of life vehicles including reverse logistics, reducing down cycling, closed loop management of wastes/scrap at intermediate levels, tracing mechanism of critical components like batteries, labelling of resource efficient products, certification of used products etc. However, the EV sector has the potential to create unprecedented opportunities for resource savings along the value chain the opportunities and benefits were presented along with ways how that can be facilitated in India.

Ms. Estela Gonçalves Pereira shared electric mobility experience in Europe. She highlighted the shortage of resources in producing electric vehicles in EU circularity is the only way forward to achieve the same. In Indian context circular economy models will be essential achieving resource security. However, it is important to understand the implications of rebound effect and it is critical for policies of such sort to address them.

Mr. Sumit Dhanuka, from Precog, offered ideas with regard to promoting resource efficiency in the EV sector. He highlighted the importance of collaboration within country between big players (OEMs) and with new start-ups in the segment which can lead to exchange of innovative solutions and scaled up accordingly. Charging infrastructure and source of power is very critical. EVs running with electricity from conventional power sources are not sustainable. Hence developing different models of charging infrastructure using renewable energy will make the EV transformation more meaningful. As the Indian government prioritises

Session 4: Resource Efficiency in the Construction Sector

This session was chaired by Mr Piotr Barczak, Policy Officer, European Environmental Bureau. Mr Mikael Henzler, Managing Director, adelphi presented the EU–REI sectoral study findings for this sector and was the keynote speaker. He was joined by Mr Sandeep Shrivastava, Senior Vice President - Corporate Environment & Sustainability, Ambuja Cements Limited representing Indian corporates, Mr N Muthusezhiyan, Principal Counsellor, Confederation of Indian Industry (CII) and Mr Petr Marek, Director – Business Development, ERC Tech from EU along with academician Dr Mohamed Osmani, Programme Director-Architectural Engineering and Design Management, Loughborough University.

This session witnessed discussions on India's growing construction industry which is fuelled by rising population, middle income group and urbanisation. Construction demand is predicted to increase more than fourfold by 2030 from its 2005 level. To meet this growth, a huge volume of material will be required. Sand (concrete and mortar), soil (bricks), stone (aggregates), limestone (cement) and iron and steel (bars and rods) are the most intensively used materials for building and construction purposes. Some of these materials are already facing scarcity issues. The extraction and use of these materials also have associated environmental and social impacts. Building and construction sector in India is extremely linear and this provides an opportunity to undertake the task of construction by following the principles of circularity. Therefore, it is important to understand the flow of these materials in the market to identify points where interventions on

resource efficiency can be made. Resource efficiency in the construction sector will also address the ten out of the seventeen SDGs.

This growth in construction sector is challenged by raw material scarcity, environmental issues such as greenhouse gas emissions, pollution of air and water in the process of production of cement, policies and regulations for construction sector, and other design related wastes as this is resource intensive industry.

Mr Henzler presented the findings of the study and provided recommendations for policy innovations, the increased use of locally sourced resources and vernacular architecture and the increased use of demolition waste as building material. Further, he highlighted the role of indicator frameworks and green building schemes (e.g. the German DGNB) in connection with Green Public Procurement (GPP) policies to create a momentum for a wide uptake of the idea. Mr Henzler recommended a soft launch approach for concrete policy implementations and stressed the opportunities of cooperation between India and European firms in terms of these developments.

Mr Sandeep Shrivastava then followed by referring to actions related to sustainability and the Agenda 2030 at Ambuja Cements Limited. At its core, Ambuja seeks to pursue goals beyond financial gain and seeks to be the most sustainable company of the industry. Under the aegis of the brand Geocycle, Ambuja is offering sustainable long-term waste management solutions through co-processing of wastes in cement kilns, thus reducing the volume of waste that is landfilled in India. Taking further steps in the realm of Circular Economy, Ambuja increasingly encourages renewable energy usage and sustainable product solutions. Through this, a total of 332,000 tonnes of refuse derived fuel were consumed for thermal substitution of conventional fuels.

Mr N. Muthusezhiyan highlighted that the Indian building and construction sector is inherently linear and provides much scope for improvement towards circular economy. Since India is already one of the world's most populous nations, it is estimated that roughly 70% of India's infrastructure that will exist by 2030 is yet to be constructed. Hence, he emphasised that there is an urgent to study the importance of raw materials that are being used in the construction sector and find ways to use construction and demolition waste as an alternative resource. The Indian Green Building Council (IGBC), part of Confederation of Indian Industry was formed in the year 2001 to achieve this goal and is taking steps towards integration of circularity principles into its green building rating system.

Mr Marek presented a summary on how technological innovations and know- how contribute to a reduced resource consumption by reusing construction and demolition waste and thereby contributing to a reduction in CO_2 emissions. The range of possible applications of this technology (offered by ERC Tech) includes, amongst others, prefabrication, the transport of concrete and manual processing activities. Mr Matrek concluded by naming the numerous benefits of converting construction and demolition waste to raw material in terms of fulfilling the Sustainable Development Goals as part of the Agenda 2030.

Dr Mohamed Osmani focused on the lifecycle of buildings, especially during the design phase and construction stage to identify waste main waste generators. He named standards as enablers to optimise building design and drive resource efficiency. By showcasing two standards from the U.K. aiming towards material efficient design, he concluded that such systems enable the effective application of circular economy principles.

The panellists also discussed various steps to overcome few of these challenges such as introduction of vernacular architecture concepts, use demolition and construction waste and recycled products, green building concepts, labels, comprehensive set of norms and standards for locally sourced and recycled materials, increased R&D, Cradle-to-Cradle certification in circular economy.

Session 5: Circular Economy and Solar Supply Chains

The session was chaired and moderated by Mr Amit Kumar, Senior Director of TERI. The key note speaker was Dr Suneel Pandey, Director of TERI. The other panellist who joined him were Mr Sujoy Ghosh, Country Head India, First Solar; MR Ashish Khanna CEO & ED, TATA Power Solar Systems Ltd; Ms Anandi Iyer, Director, Fraunhofer Office India; and Mr Luca Meini, Head of Circular Economy & Environmental Strategies, ENEL.

The chair, started the session with the welcome remarks. In 2010, India launched the renewable energy program- 'Jawaharlal Nehru National Solar Mission (JNNSM)', with an objective to install 100,000 MW of solar power by 2022. India will be able to demonstrate a sustainable model of JNSSM if materials for manufacturing PVs are available at competitive prices and as well as managing the wastes from PVs once they reach their end of lives. The later provides lot of scope in terms bringing materials back into the value chain thereby reducing dependence on primary materials.

Dr Suneel Pandey, presented how the PV sector has the potential to create unprecedented opportunities for resource savings along the value chain. Process innovation will reduce primary demand of resources. Further efficient recycling can help in recovering these materials, thereby making India achieve material security. Before India becomes a leading manufacturing hub of solar PVs, it is extremely important that an ecosystem is developed that can promote efficiency across the life cycle stages. Apart from improved product design and process re-engineering and a business model that can promote reverse logistics of end of life solar PVs for efficient material recovery, a conducive policy framework is the need of the hour that will further enhance establishing such an ecosystem in place thus making India's solar PV sector most competitive.

Mr Luca Meini, from ENEL and echoed the concerns, like other panellists, about the issue of material security at a time when the world which is aggressively moving towards solar. Developers are increasingly showing interest in ensuring that PV wastes are appropriately recycled particularly in developing countries.

Ms Anandi Iyer, Fraunhofer Office, in her remarks, among other things shared the German experience. Suppliers are now encouraged to adopt CE model during the installation phase. Looking

at the scenario in Europe, it is looked at in a multidisciplinary manner and the concept has gained traction in the last couple of years. The concept of CE has its deep roots in the value chain. Besides the provision of an annual financial guarantee, the law requires financing of current waste either collected by the municipal network, a dedicated industry scheme or the Producer directly.

Mr Sujoy Ghosh, highlighted the aspect of material sustainability which is already built in their company's product which is made from cadmium and telluride. However, he felt that the solar PV technologies are maturing. It is important to start investing in third generation of technology now—develop state-of-the-art innovations modules in R&D which will eventually reduce the primary dependence of many materials.

Finally, Mr Ashish Khanna, TATA Power Solar Systems Ltd highlighted that there is a lot that the current policy need to address when it comes to effective deployment of solar PV in India. RE thinking might help to revisit some of these policies although full RE pricing (including dismantling may be challenging).

Concluding Session:

The CEM finished with a concluding session in which **Director Astrid Schomaker** presented what the results of the CEM and what was agreed as follow up. Furthermore, the partnerships that the CEM has initiated were also presented.

Ms Schomaker said that the EU India cooperation on RE will continue focussing on; i) facilitating concrete initiatives, especially on the four sectors covered by the above studies ii) promoting BREFs (Best Available Techniques Reference Documents) and standards which can promote ease of dismantling, improved recycling and shared economy models, and support Implementation of Extended Producer Responsibility. Given the progress of the work, interest and engagement from India and the EU, it was also proposed to highlight the engagement on CE and RE at the next EU India summit and formally launched a Partnership on these subjects. More than 140 B2B meetings took place during the CEM which have also delivered prospects for business cooperation. In the concluding session of CEM and the 13th Sustainability Summit, following businesses, NGOs and entrepreneurs also announced partnerships that they are already exploring and that show tremendous potential to develop further:

- ERC Tech, a Czech Company has technological innovations and know-how in recycling Construction & Demolition Waste (C&D) had a fruitful discussion with several Indian Companies looking to exchange know-how towards managing C&D waste as well as develop solutions

- Karo Sambhav, an Indian Producer Responsibility Organisation (PRO) for E-waste, had profitable meeting with PRO's from the EU to exchange ideas and develop partnerships with PROs from the EU

- ESC Sustainability, a Consultancy firm on Circular Economy & Sustainable Energy from Germany, Ms Estela Goncalves Pereira (independent consultant) from Portugal and Sansodhan – eWaste exchange, an Indian digital PRO discussed ways to undertake capacity building and develop a platform for disseminating information relating to Circular Economy funding and investment opportunities for Indian SMEs

- Vescobel SPRL from Belgium, with an expertise in various sectors of Re-use, recycling, recovery and disposal reaching from baseline assessments to the

development of regional concepts and job creation, and Stenum Asia, a consultancy firm offering services to Indian businesses on RE and CE

- Protoprint, an Indian Social Enterprise that works in collaboration with Swach – a waste-pickers collective in Pune, has developed a 3D printer filament from the HDPE (high-density polyethylene) waste, had a discussion with several companies in the EU that could use the products made our of recycled plastics.

- PRO India, an Indian PRO for plastics had positive discussions with several PROs from Europe for information exchange as well as for selling the products made out of waste plastics.

- Mr Jan Vlak, President of WEEE Forum also announced the Forum's support – "The societal challenge of our times is to collect more e-waste and recycle better. The WEEE Forum offers to share its know-how with actors on the Indian market and the rest of the world to support capacity building."

- Mr Dieter Mutz from GIZ also announced a partnership between the European Union Resource Efficiency Initiative and the Board of Control for Cricket in India that will make cricket stadiums in India waste free and resource-efficient.

- The Fraunhofer Institute also expressed interest in supporting any research acceleration mechanisms that are developed as coordinated action EU and India.

EU-India cooperation has already led to the development of India's first ever Resource Efficiency (RE) Strategy by the EU Delegation and NITI Aayog. As a part of RE Strategy implementation with NITI Aayog, the EU-REI (Resource Efficiency Initiative) project is also supporting development of Strategies on RE in three Indian states – ¬Telangana, Goa and Odisha – for state level mainstreaming of RE and CE approaches. A new partnership is also being formalized with the Rajasthan Pollution Control Board. Four sectoral studies on Resource Efficiency conducted under the EU-REI project were also released at CEM, covering Solar Supply Chains Mobility, Construction sector and Extended Producer Responsibility for plastic waste and electronic waste.

The EU will continue to support the implementation of the RE strategy and the work of the RE cell initiated by the Government of India. The EU and India will work towards formalizing the partnership in the next EU-India Summit, as well as strengthening input to the Resource efficiency dialogue in the G-20 context.

Mr Ratan P. Watal, Principal Adviser, NITI Aayog and Member Secretary to EAC-PM, highlighted that in the last one-year Resource Efficiency has gained increasing traction in policy circles in India, and is now discussed in the same way as Energy Efficiency. Ms Astrid Schomaker, Director of Global Sustainable Development, Directorate General for Environment, European Commission expressed that from the perspective of the European Commission, this Mission has been extremely successful and we look very much forward to cooperation between the EU and India, both at the government and private sector level.

The European Union's Circular Economy Mission (Sept 4-7,2018) to India successfully concluded on Sept 7, 2018 after four days of intensive engagement by the stakeholders of EU and India.


CII
CII-ITC Centre of Excellence
for Sustainable Development
SEEMA ARORA

Media Coverage of Circular Economy Mission

Pre-event:

- EU Commissioner Karmenu Vella to visit India from 4-7 September 2018 https://eeas.europa.eu/delegations/india/49918/eu-commissioner-karmenu-vella-visit-india-4-7-september-2018_en

- High-level EU delegation to arrive in India for collaboration on circular economy https://energy.economictimes.indiatimes.com/news/renewable/high-level-eu-delegation-to-arrive-in-india-for-collaboration-on-circular-economy/65641986

- High-level EU delegation will arrive in India for collaboration in green businesses and promoting circular economy http://www.incoreinsightlytics.com/high-level-eu-delegation-will-arrive-in-india-for-collaboration-in-green-businesses-and-promoting-circular-economy/

- High-level EU delegation to arrive in India for collaboration on circular economy http://www.eqmagpro.com/tag/high-level-eu-delegation-to-arrive-in-india-for-collaboration-on-circular-economy/

- High-Level EU Delegation Arrives In India Next Week http://www.businessworld.in/article/High-level-EU-delegation-arrives-in-India-next-week-/31-08-2018-159019/

- High-level EU delegation to visit India for collaboration on green businesses and circular economy www.climatesamurai.com/climate/eu-delegation-to-visit-india-for-collaboration-on-green-businesses-and-circular-economy/

Post-event:

- EU and India #CloseTheLoop on Circular Economy for a Better Tomorrow https://eeas.europa.eu/delegations/india/50296/eu-and-india-closetheloop-circular-economy-better-tomorrow_en

Coverage of the 13th CII Sustainability Summit:

- 13th Sustainability Summit kicks off today in New Delhi
- https://www.devdiscourse.com/Article/160354-13th-sustainability-summit-kicks-off-today-in-new-delhi

Social Media Coverage and outreach

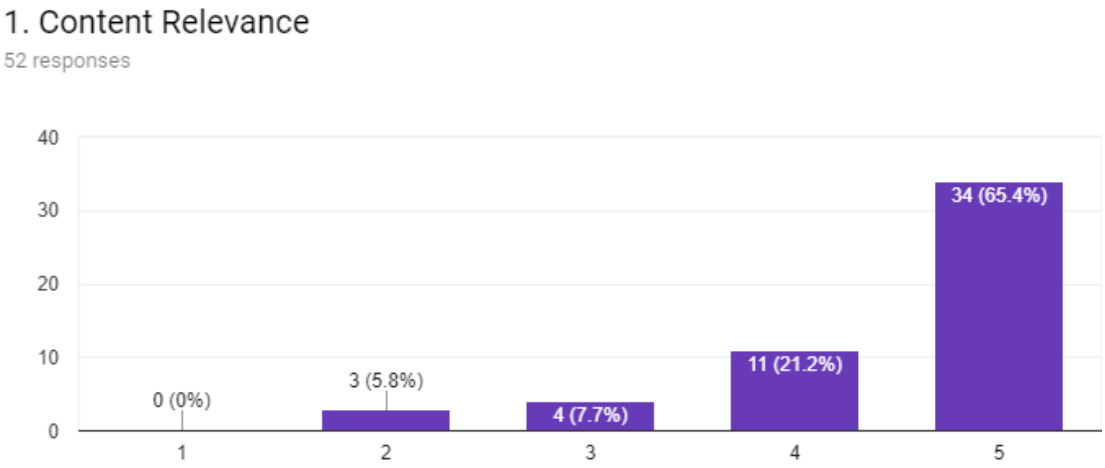
The Circular Economy Mission to India was covered on the EUDEL India Facebook and Twitter channels and had a total **1,412,977** of impressions and **1037** engagement**,** we used the hashtag **#CEM2018** and **#CloseTheLoop** to promote the event. The outreach included an awareness video about circular economy, infographics explaining resource efficiency, live coverage of all the updates. More than, **447,355 digital accounts** were reached with our hashtags during CEM 2018.

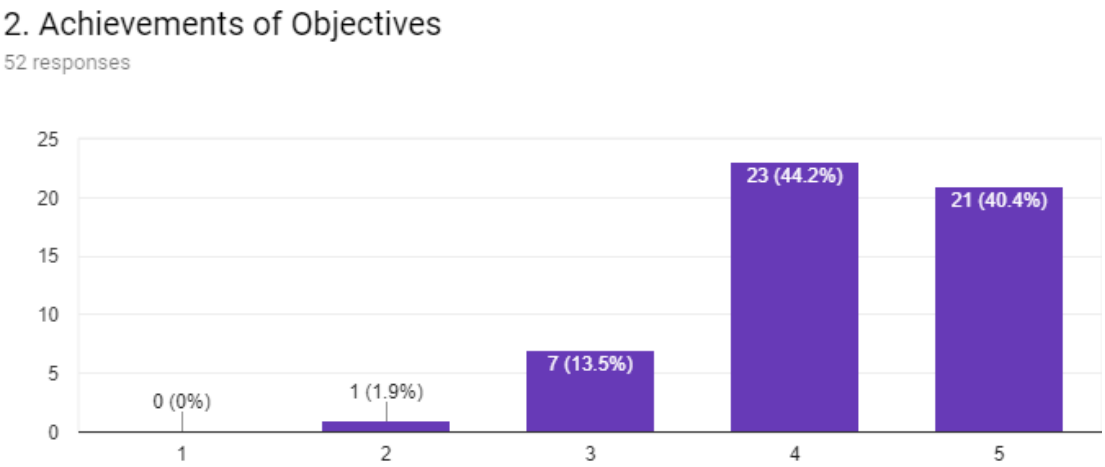
Feedback on B2B Meetings and on the sessions:

Following are the results on the feedback collected:

Percentage of participants who were satisfied and benefitted from the summit:

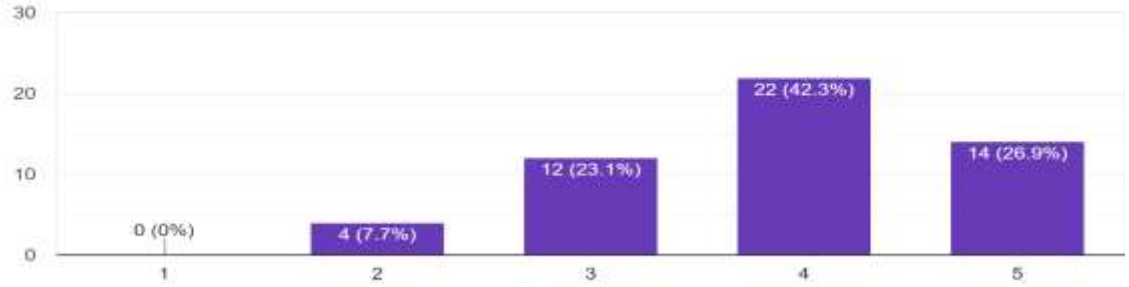
Overall satisfaction level of participants =
54% very happy;
35% happy;
4% not happy,
7% not very happy
(Likert Scale: Totally Agree = 5, Totally Disagree = 1)





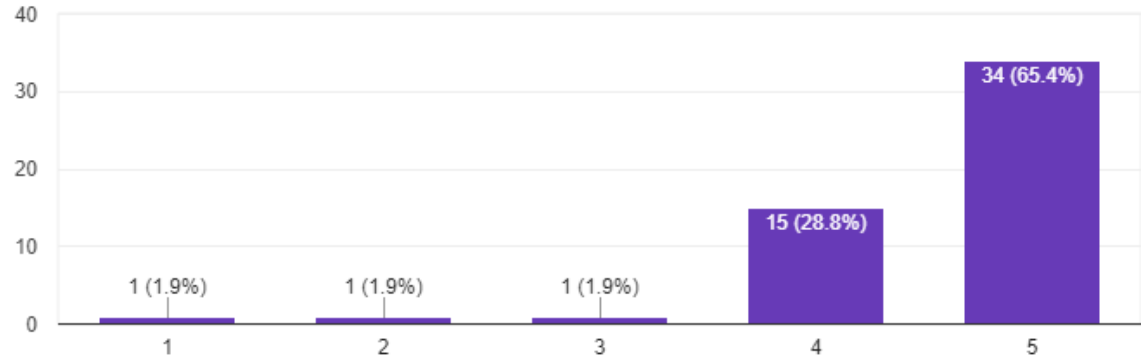
3. Feasibility and Acceptability

52 responses



4. Partnership

52 responses



5. Overall Assessment of Session

52 responses