



Mainstreaming Circular Economy (CE)

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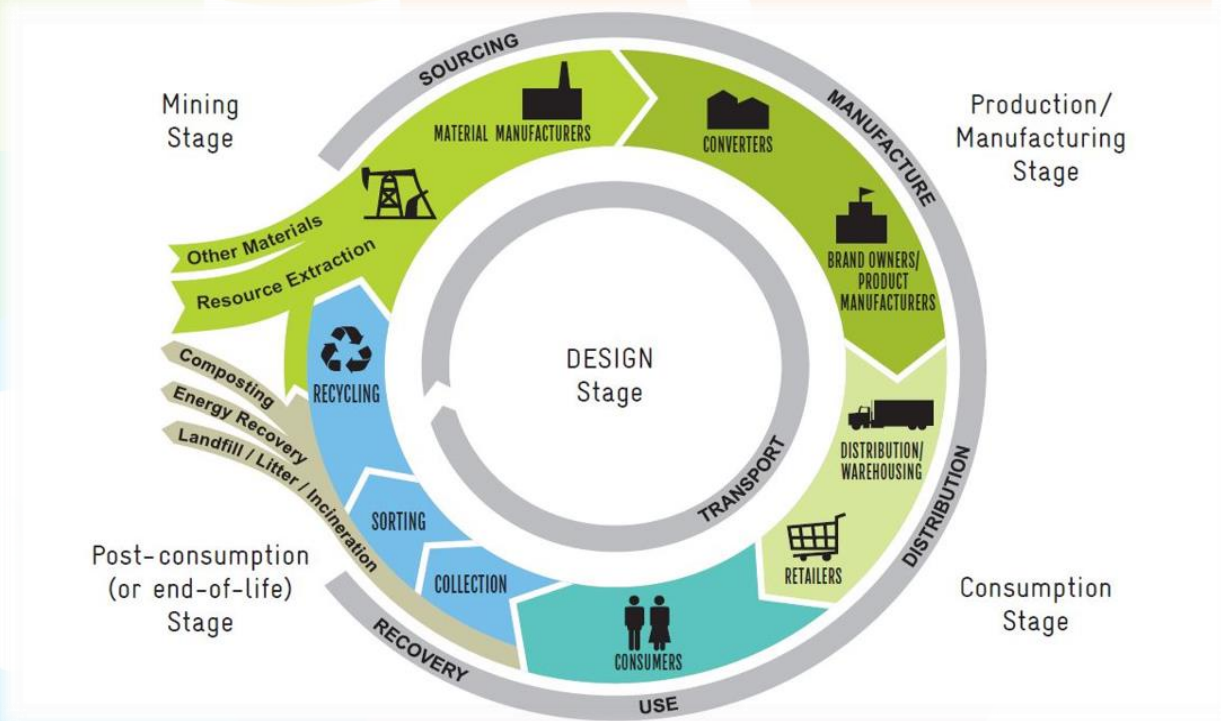


Background: India's Economy & Current Status on Resources



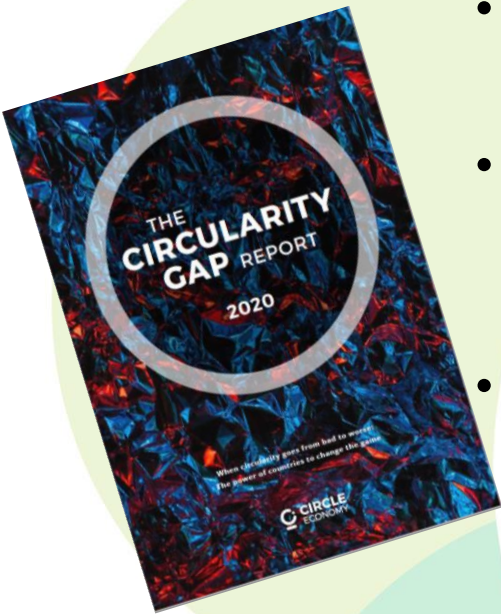
- To sustain these levels of economic development but also limit global warming below 2°C, **rapid reduction in energy and material consumption is required.**
- This may be achieved by decoupling economic growth from material consumption, environmental degradation, and exploitation of vulnerable, economically disadvantaged groups.

• **Life cycle Approach to transitioning towards Resource Efficiency (RE) and Circular Economy (CE) is key towards achieving sustainable economic development.**





Gaps and Challenges



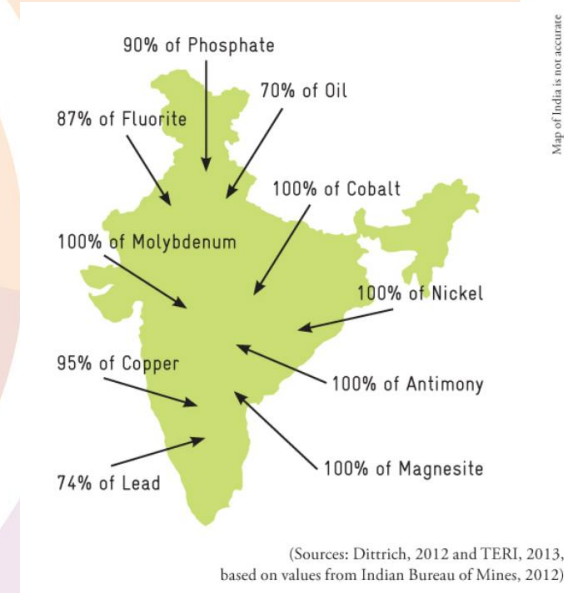
- Decline in global circularity from 9.1% circular in 2018 to 8.6% in 2020
- Three underlying trends - High Rates of Extraction; Ongoing Stock Build-up; Low levels of end-of-use processing and cycling
- Societal needs for housing and Infrastructure represents the largest footprint, with 38.8MT for construction, maintenance of houses, offices, roads and other infrastructure especially in the developing world
- Need for Circular design of stock build up for future maintenance, reparability and reusability of the urban assets



Gaps and Challenges



- There is heavy dependency on imports of the raw materials.
- In most cases, collection rates or ability to bring materials back in the system is quite low.
- For materials with higher collection rates, recycling and recovery percentages are inadequate.
- Gaps are to be addressed at each stage of the circularity spectrum – right from design to manufacturing, utilisation to recovery, and closing the loop on materials.





Resource Efficiency Action in India – 2012 – onwards



EU-REI
Creating a Resource Efficient India



The journey so far...





EU-India Partnership for Circular Economy & Resource Efficiency

Supporting Policy Development & Implementation of Resource Efficiency



EUROPEAN UNION

The EU-REI is a vehicle for implementation of "The Partnership" to mainstream RE&CE in India



CII-ITC Centre of Excellence for Sustainable Development





DRAFT National Resource Efficiency policy for India



- Policy instruments for implementing resource efficiency at different life cycle stages include the following:

Extraction

- Tax on virgin material
- Different pricing
- Mandating good mining practices

Design

- LCA based standards
- Environmental technology verification scheme
- Grants for R&D

Production

- Product tax
- Emission performance standard
- Advisory for SMEs
- Soft loans for green SMEs
- Product innovation (secondary material)

Disposal

- Landfill & incineration taxes
- Bans & restrictions on landfills
- Takeback scheme
- Soft loans for eco-friendly waste disposal

Recycling

- Tax benefits for recycled materials
- Recycling standards
- Platform for secondary raw materials (supply & demand)
- Grants for R&D

Consumption

- Deposit refund schemes
- Product restriction or ban
- Labeling & certification
- Green public procurement



Material Flow assessments



Resource flows in construction sector in Ahmedabad were determined to identify gaps and point to possible city-level interventions that may be taken up to reduce virgin resources consumed through utilization of secondary resources.

Achieving material efficiencies can contribute to decarbonising the construction sector while addressing municipal and industrial waste management issues.

C&D waste potential in Ahmedabad
based on redevelopment potential May 2020

Material	Quantity
Concrete	26 million m ³
Steel	1963 million kg
Brick	65.6 million m ³
Plaster	8.4 million m ³
Flooring tiles	42.2 million m ²
Glass	108 million kg

Study estimated availability of concrete waste from redevelopment potential in Ahmedabad, recycled aggregates can be used in production of 38 million m³ of M20 concrete which at a 50% replacement of natural aggregate with Recycled Aggregates.

This volume of concrete can be used in construction to the tune of 102 million m² of built-up space which is the equivalent of 7.5 Lakh housing units of 2 BHK @120m² built-up area.

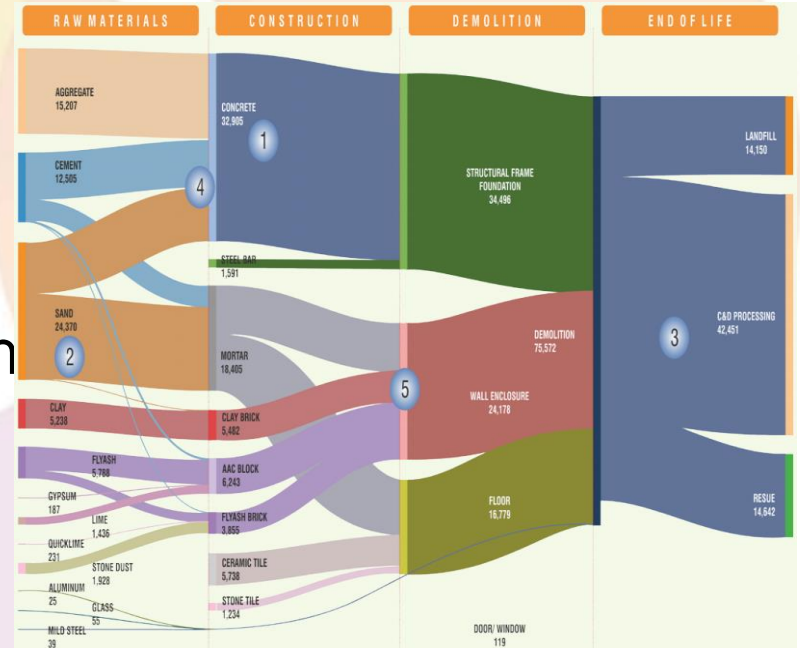




Material Flow assessments



- Data driven assessments - The SMART cities mission creates a favourable environment for introduction of IT enabled infrastructure
- Accelerate the identification & adoption of secondary resources in the construction sector
- Sustainable Public Procurement
- Financial Instruments & Incentives
- Strengthening the Supply Chain
- Dissemination of experiences including best practices

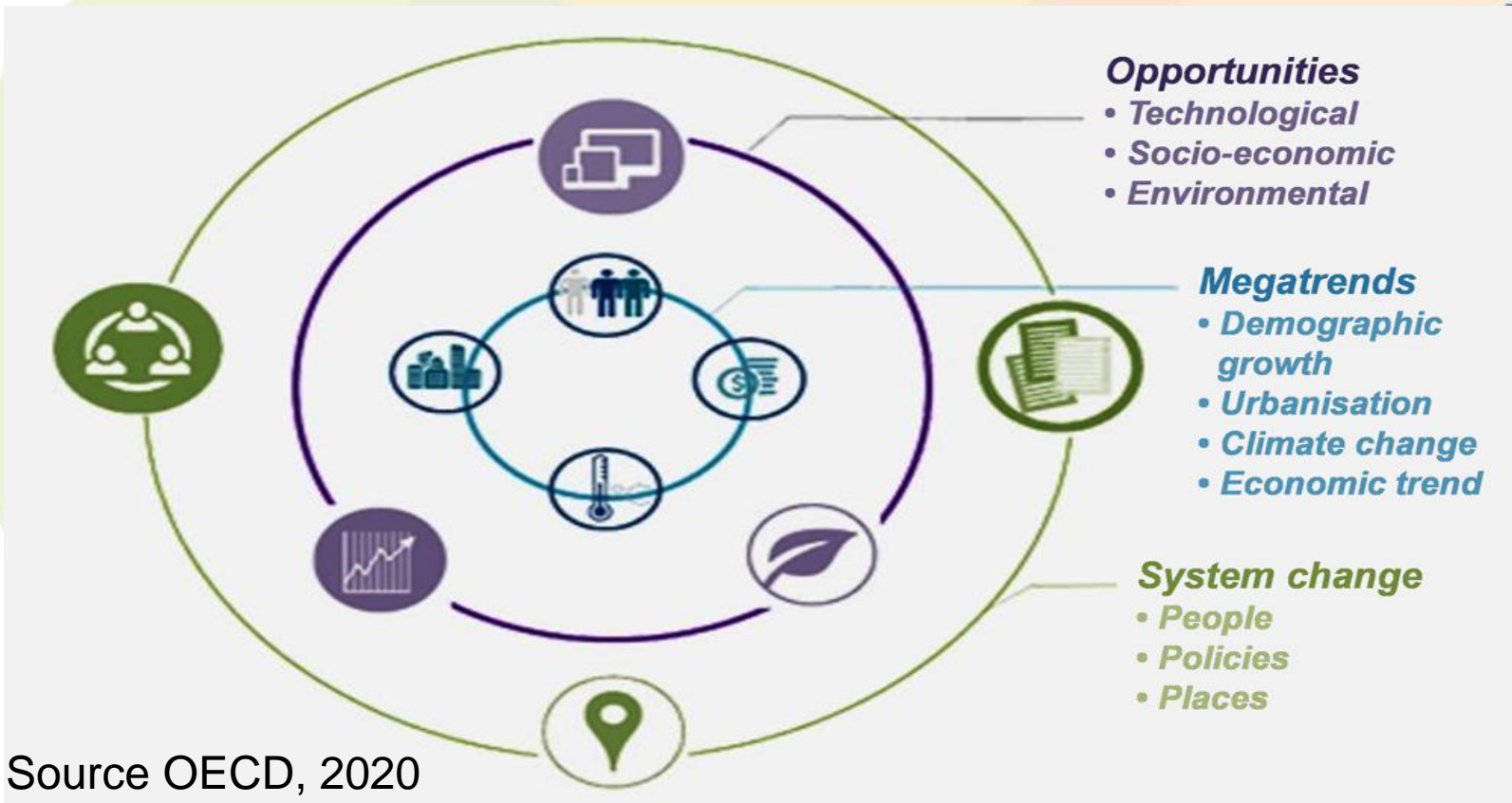




CE Framework for Cities



EU-REI
Creating a Resource
Efficient India



OECD Survey on the Circular Economy in Cities and Regions (2019) reveals , climate change (68%), evolving economic conditions (47%) and the search for new business opportunities (44%) are major drivers of the circular transition in regions and cities.





Policy Dialogues to Mainstream RE & CE



NITI Aayog

Govt Driving Transition from Linear to Circular Economy

The focus areas include 11 end-of-life products/recyclable materials/wastes that either continue to pose considerable challenges or are emerging as new challenge areas that must be addressed in a holistic manner.

While increased manufacturing and changing consumption patterns will generate more employment and increase per capita income, the effects of such higher production on the environment must also be efficiently managed and mitigated. With only 2% of the world's landmass and 4% of freshwater resources, a linear economy model of 'Take-Make-Dispose' would constrain India's manufacturing sector and, consequently, the overall economy. Therefore, it is essential to recognize and revolutionize the material flow in the manufacturing process and shift towards a circular economy, which provides multipronged economic and ecological benefits.

Annexure 1

S. No.	Focus Area	Concerned Line Ministry
1	Municipal Solid Waste and Liquid Waste	Ministry of Housing and Urban Affairs
2	Scrap Metal (Ferrous and Non-Ferrous)	Ministry of Steel
3	Electronic Waste	Ministry of Electronics and Information Technology
4	Lithium Ion (Li-ion) Batteries	NITI Aayog
5	Solar Panels	MNRE
6	Gypsum	Department for Promotion of Industry and Internal Trade
7	Toxic and Hazardous Industrial Waste	Department of Chemicals and Petrochemicals
8	Used Oil Waste	Ministry of Petroleum and Natural Gas
9	Agriculture Waste	Ministry of Agriculture and Farmers' Welfare
10	Tyre and Rubber Recycling	Department for Promotion of Industry and Internal Trade
11	End-of-life Vehicles (ELVs)	Ministry of Road Transport and Highways

- Support to NITI Aayog and Sectoral Ministries for three CE action plans
- Implementation support to Ministry of Electronics CE Action Plan's selected elements
- Support to Department of Telecommunication (DoT) for development of CE Action Plan





Pilot Measure: Supporting Development of Waste Recycling Park, Rajasthan



EU-REI is providing technical support to **Rajasthan State Pollution Control Board (RSPCB)** for Setting up **India's first Waste Recycling Park (WRP)** in Rajasthan, India.

The WRP will be for waste streams including plastic waste, e-waste, hazardous waste, waste from PV panels and storage batteries, metal scrap, and EOL vehicles

Support extended

- Prefeasibility Study for the Waste Recycling Park
- Study on Benchmarking of Best Practices for Eco-Industrial Park
- **Conceptual Master Planning And Zoning** for the Waste Recycling Park to be undertaken





Pilot Measure: Goa Circular Economy strategy



- **Support to Goa State government on planning and implementing Deposit Refund Schemes for plastic and packaging waste**
- **Scaling up for setting up of a collection mechanism for discarded fishing nets**
 - In consultation with **Goa State Pollution Control Board** and **Goa Fisheries Department**
 - **Target - 2 fish landing sites and 3 fishing villages.** To potentially benefit ~12000 fishermen and allied workers
 - Engagement with fishing community through workshops
 - Ecomission to counter littering - start-up for pilot collection through digital Deposit Refund Scheme

Indo-German Technical Cooperation Project “Circular Economy Solutions Preventing Marine Litter in Ecosystems”

Commissioned by	German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)
Nodal Ministry	Ministry of Environment, Forest and Climate Change (MoEFCC)
Lead Implementing Agency	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Duration	August 2020 – December 2023



One of the Pilots- The Refill Project

Aligned to :

- ✓ International Legally Binding Instrument on Plastic Pollution promoting **Reuse-Refill Economy**
- ✓ EPR notification by MoEFCC, Govt. of India- **Reuse of rigid packaging (Brand owners) (from 2025 onwards)**
- ✓ Concept of **Lifestyle for Environment (LiFE)**



Linkages to COP CE



IMPACT REPORT

Youth Empowerment Towards Circular Economy (CE) And Resource Efficiency (RE) in India



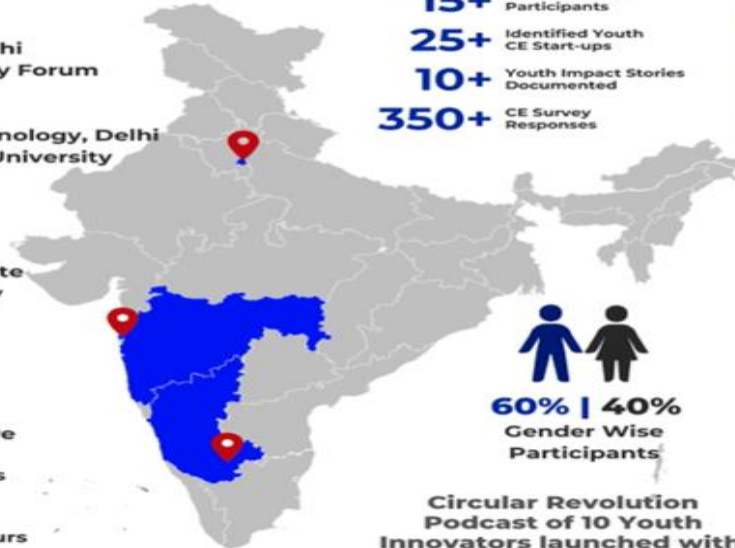
Training & Awareness Sessions

Delhi
New Delhi
 Agents of Change | Delhi
 World Circular Economy Forum
 (WCEF) 2023 | Delhi
 Awareness Session |
 Indian Institute of Technology, Delhi
 Hansraj College, Delhi University

Maharashtra
Mumbai
 Agents of Change
 with Y20| Indian Institute
 of Technology, Bombay

Karnataka
Bengaluru
 Agents of Change |
 Indian Institute of
 Management, Bangalore

Age **19-32** Participants **350**
 Experts **60** Session Hours **54+**



Circular Revolution
 Podcast of 10 Youth
 Innovators launched with
 HT Smartcast Media &
 Radio One 94.3 FM

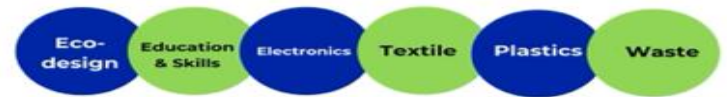
KEY THEMES EXPLORED

Foundations of CE & RE	Policies on CE & RE
Sectoral Challenges	Life Cycle Assessments
Business Models & Green Jobs	Innovation & Youth Action

YOUTH DEMANDS

- Right to Repair
- Subsidies for Green Products
- Investment in Secondary Markets
- Circular Economy Reporting & Ranking
- Circular Economy Entrepreneurship Skill Development
- Awareness Creation on Circular Economy Financing
- Circular Economy Mainstreaming in Climate Reporting
- Supply Chain Innovation and Resilience and many more

YOUTH INNOVATION AREAS



EU- REI and IYCN key working areas

AGENTS OF CHANGE -
 WORKSHOPS &
 TRAINING SESSIONS

INITIATIVES ON
 LIFESTYLE FOR
 ENVIRONMENT (LIFE)

DEVELOPING
 CIRCULAR INNOVATIVE
 IDEAS

EU- REI & IYCN Launched 3 Initiatives to Unite Stakeholders for Strengthening CE Collaborations with Youth

INDIA YOUTH
 CIRCULAR
 ECONOMY FORUM

CIRCULAR CAMPUS
 INITIATIVE

YOUTH CIRCULAR
 ECONOMY PLEDGE





EUROPEAN UNION



THANK YOU

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