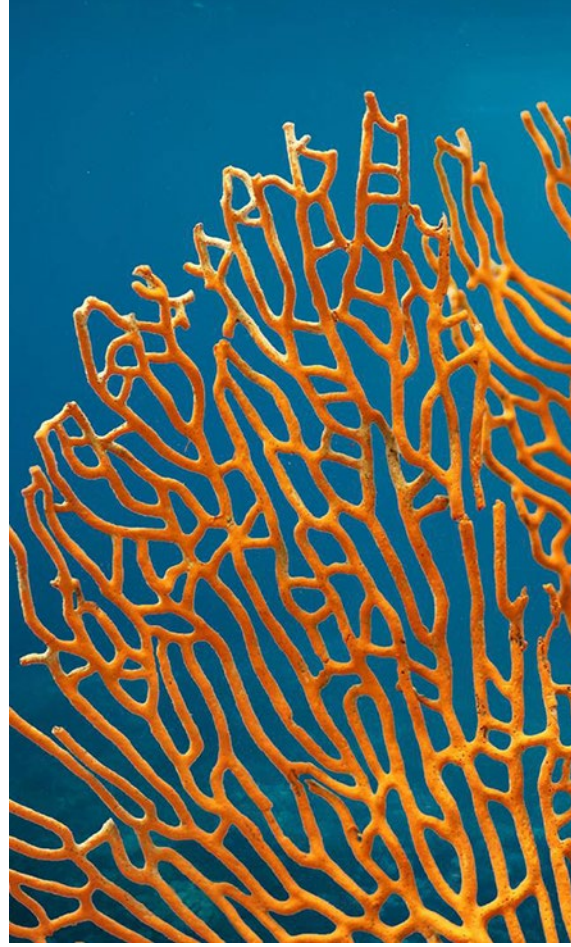


Ten Year's History of Regional 3R and Circular Economy Forum in Asia-Pacific and Introducing the Pre-zero Draft New 3R and Circular Economy Declaration (2024-2034)

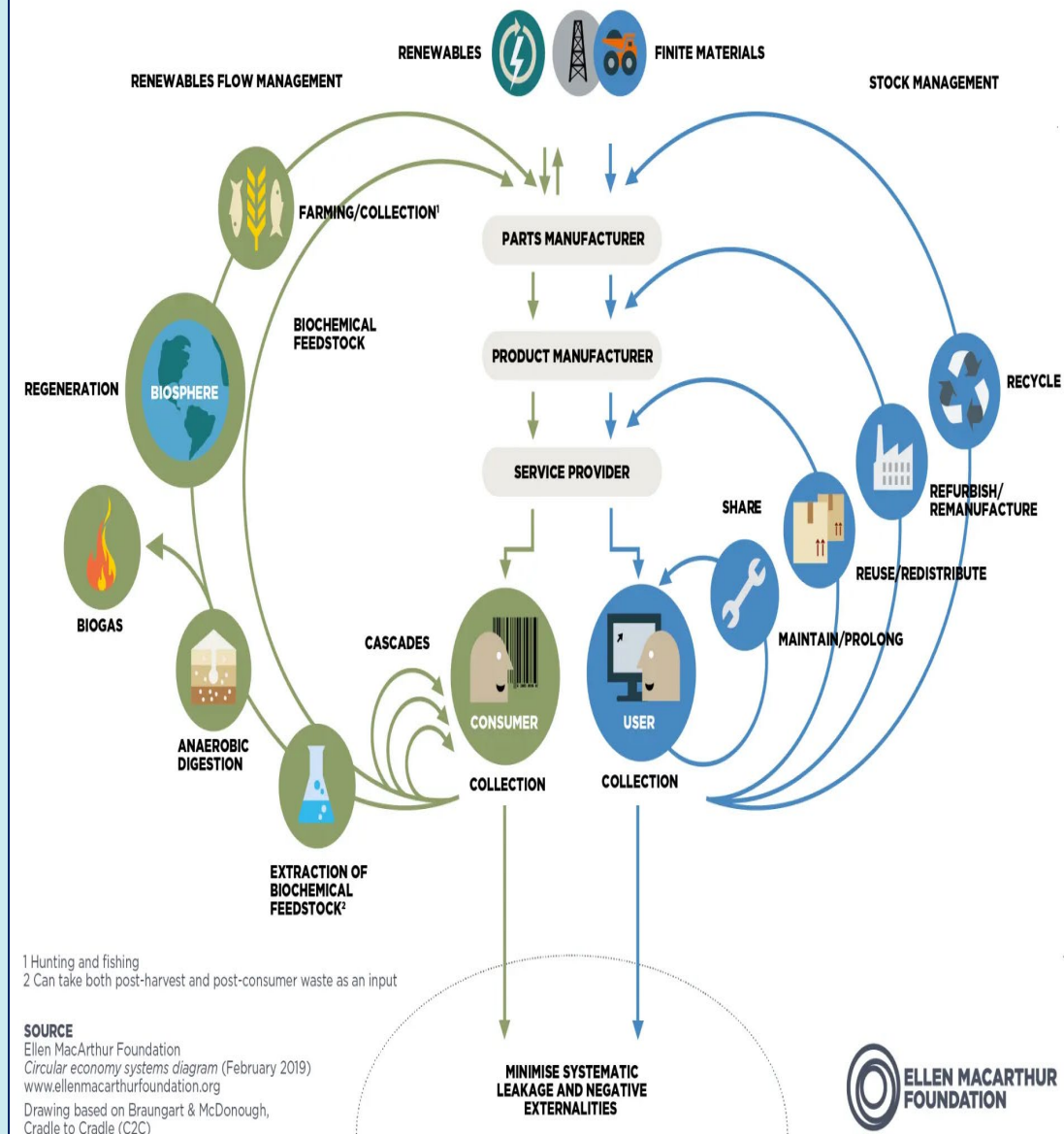


Choudhury Rudra Charan Mohanty

Environment Programme Coordinator, UNCRD- DSDG/UN DESA

Key facts:

- A significant transformation is required towards achieving net-zero emissions by 2050, aligning with the 1.5 °C climate goal outlined in the Paris Agreement. Even if this target is met, costs to the global economy relating to climate change are projected to reach **USD 54 trillion by 2100**.
- Applying circular economy strategies in just five key areas (cement, aluminum, steel, plastics, and food) can eliminate almost half of the emissions from the production of goods – **9.3 billion tonnes of CO2 in 2050**.
- Global material use may increase to between 170 and 184 billion tonnes by 2050 (IRP, 2017). In business-as-usual scenario, we could **see resource use up by 60% from 2020 levels by 2060** (Global Resources Outlook, 2024).
- As per UNEP, the Asia-Pacific accounts for approximately two-thirds to global growth, and **63 per cent of the global material use**.
- The policy and scientific community have realized that farming, overfishing, mining and deforestation have now reached such a scale that they are reducing the resilience of the biosphere where life thrives, and also the need to become **net zero, zero waste** and **nature positive** in order to enhance the resilience of countries and societies by halting and reversing nature and biodiversity loss.
- 3R and circular economy approaches contribute to **nature positive** approach which enriches biodiversity, stores carbon, purifies water and reduces pandemic risk, thereby enhances the resilience of our planet and our societies. **Kunming-Montreal Global Biodiversity Framework** calls for a full recovery of all ecosystems by 2050 <<**biodiversity is valued, conserved, restored and widely used**>>

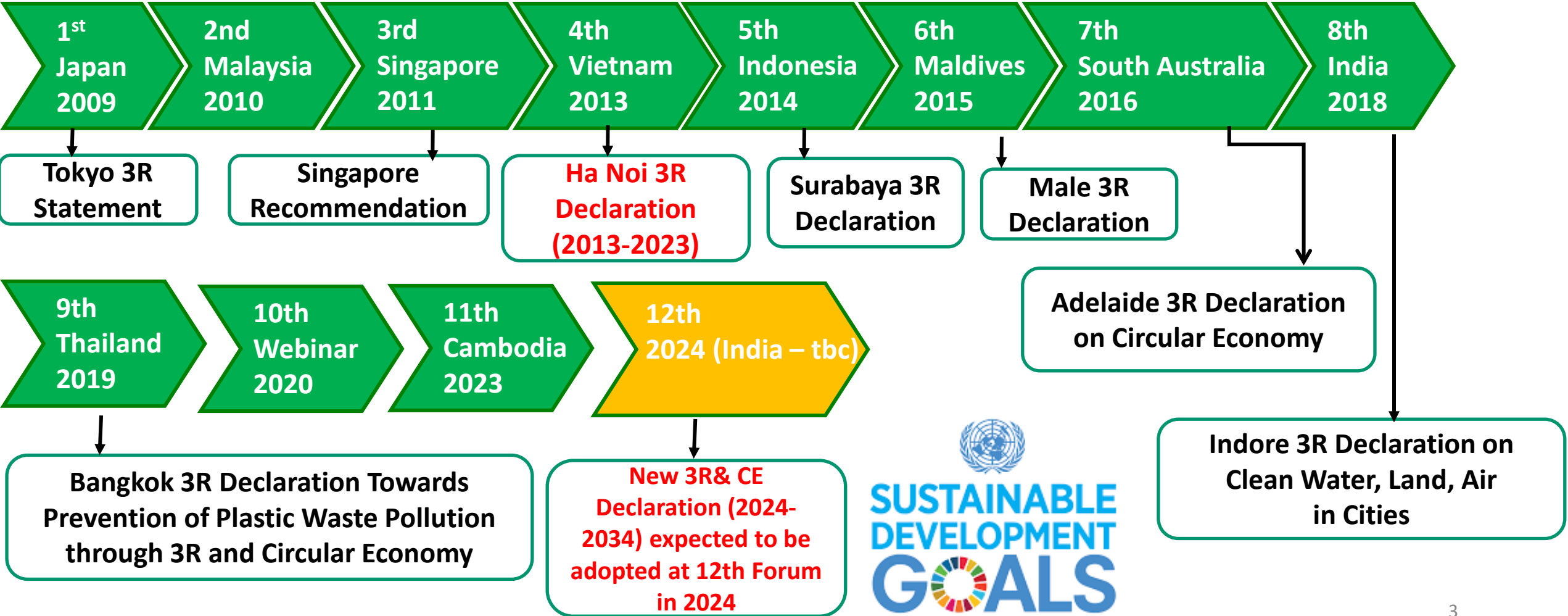


Source: Completing the Picture: How the circular economy tackles climate change (2021).

UNCRD/UN DESA High-Level Regional 3R and Circular Economy Forum in Asia and the Pacific



Aligned with SDGs, UNCRD 3R & CE initiative calls for lasting supply security of resources as the basis for sustainable development. It aims to provide a policy framework to implement 3R & resource efficiency measures to achieve circular economic development – an alternative economic growth model which is not at the expense of finite natural resources and ecological assets, rather regenerative. UNCRD’s 3R & circular economy initiative brings up both the policy, scientific & research community & private sector to convene on an annual basis the high-level Regional 3R & Circular Economy Forum in Asia-Pacific to strengthen the science-policy interface in addressing 3R & resource efficiency as the basic for economic growth, pollution prevention and strengthening resilience of cities & communities, and after all, to achieve the international agendas & agreements – SDGs, Paris Agreement, NUA, among others.



Ha Noi 3R Declaration

Sustainable 3R Goals for Asia and the Pacific for 2013-2023

(Adapted at 4th Regional 3R Forum, 18-20 March 2013, Ha Noi, Viet Nam)

- First regional declaration providing an important basis and framework for Asia-Pacific countries to voluntarily develop and implement 3R & CE policies and programs, including monitoring mechanisms, towards transitioning to a resource efficient, circular and zero waste society.



Consisting of 33 goals under the following areas:

- I. 3R Goals in Municipal/Urban areas (4 Goals)
- II. 3R Goals in Industrial Areas (5 Goals)
- III. 3R Goals in Rural/Biomass Areas (2 Goals)
- IV. 3R Goals for New and Emerging Wastes (5 Goals)
- V. 3R Goals for Cross-cutting Issues (17 Goals)

Major Recommendations by the Forum in advancing 3R & Circular Economy in Asia-Pacific (2013-2023)

Broad Areas of Major Interventions	Recommendations
Policy and institutional transformation	<ul style="list-style-type: none"> • Decoupling economic growth, human well-being and environmental pressures/impacts • Enhance supply security of strategic resources and to operate within absorptive capacity of ecosystems • Harness co-benefits of resource efficiency and climate mitigation • Stronger recognition of the “whole-of-value-chain” approach • Synergetic policy approach that addresses resource efficiency, waste prevention/minimization, and low carbon development (ensure policies capture synergies and avoid trade-offs in the national and global resource circulation system)
Strengthening resilience of cities and communities	<ul style="list-style-type: none"> • critical nexus between circular economy and resilience of cities and communities needs to be understood at policy level; • need for policy and institutional shifts to integrate 3R & circular economy principles with climate mitigation and disaster reduction strategies and measures;
Technological interventions & Collaborative Research & Development	<ul style="list-style-type: none"> • drive a science, innovation and technology based culture in overall policy setting and development agendas; • promote networks of innovation & national innovation centers for resource efficiency; • promote eco-industrial parks & regional infrastructure to support resource optimization and efficiency in industries; • promote R&D oriented industrial structures; triangular cooperation; PPP • International collaborative research programmes; • Industry 4.0 • Nano-technologies & Green chemistry to create sustainable urban business opportunities by reducing waste and chemicals;
Greening the SMEs	<ul style="list-style-type: none"> • Governments should assist SMEs to integrate resource efficiency into their entire supply chain through appropriate policy, institutional and financial measures and partnership mechanisms; • Governments should facilitate various information-based instruments (e.g. product labels) in raising awareness of both consumers and SMEs on the needs and benefits of greening the supply chain;
Multilayer partnerships & inter-municipal cooperation	<ul style="list-style-type: none"> • Government-to-business, business-to-business, & industry-to-industry cooperation are crucial to increase the role of business & trade associations towards greening the entire operation & supply chain; industry-industry cooperation, for instance, can ensure that by-products circulate fully in the local production system; • Horizontal cooperation (among line Ministries & agencies) and vertical cooperation (national & local authority); and inter-municipal cooperation so that resources or by-products circulate among the industries and urban systems within the same region; can offer significant solutions to manage disaster waste;

Mapping of 3R and Circular Economy Policies of the Asia-Pacific countries in line with the Hanoi Declaration

Hanoi Declaration Major Goal	Some of the Policies in the signatories
3R Goals in Urban/Industrial Areas	<ul style="list-style-type: none"> • Japan: Waste management and public cleansing law (1971); 4th Fundamental Plan for Establishing a Sound Material-Cycle Society (2018); Circular and Ecological Economy (2018); Society 5.0; New basic policy of the Food Recycling Act (2019); Resource Circulation Strategy for Plastics (2019); Plastic Resource Circulation Act (2022) • Republic of Korea: Volume based waste disposal fees; Wastes Control Act; Act for Promotion of Transition to a Circular Economy Society (2022), • Singapore: Zero waste masterplan (2019); Mandatory Packaging Reporting (MPR) & Packaging Partnership Programme (2021) ; Packaging Partnership Programme (2021); Singapore Green Plan 2030 (2021); Resource Sustainability Act (2019) • Australia: National Waste Policy 2018 • New Zealand: Auckland Waste Management and Minimisation Plan • India: Swachh Bharat Mission (Clean India Mission) (2014-2019); Solid Waste Management Rules (2016) - including Construction & Demolition waste, Plastic Waste Management Rules, E-Waste (Management) Rules and Hazardous and Other Wastes (Management and Transboundary Movement) Rules ; National Circular Economy Roadmap for Reducing Plastic Waste in India (2023)
3R Goals in Rural Areas	<ul style="list-style-type: none"> • India: SAMPADA- Scheme for Argo-marine processing and Development of Argo-processing Clusters • Thailand Bio-Circular-Green Economic Model (BCG) • New Zealand: First emissions reduction plan 2022
3R Goals for New and Emerging Wastes	<ul style="list-style-type: none"> • People’s Republic of China: Plastic Import Ban • Maldives: Plastics Export-Import Act Japan: Act on the Promotion of Sorted Collection and Recycling of Containers and Packaging, Act on Promotion of Recycling of Small Waste Electrical and Electronic Equipment • Singapore: Resource Sustainability Act (RSA)

Malé 3R Declaration

(signed by 99 tourist resorts at 6th Regional 3R Forum, 16-19 August 2015, in Malé, Maldives)

Important initiatives and steps:

- ❖ **discourage** use of any form of plastics in the resorts as a priority; explore ways to utilize end-of-life plastics as a valuable resource and as an integral part of the waste reduction strategy contributing to circular economy;
- ❖ **consider investments** for installing state-of-the-art sewage collection and treatment facilities to protect the coastal and marine environment; and
- ❖ **take every preventive measure** to protect coral reefs and other ecological assets from physical damage and pollution from toxic chemicals and hazardous substances.



*Miles of litter: Thilafushi is an artificial island in the Maldives where about 400 tonnes of rubbish is dumped every day - “**rubbish island**”*

Indore 3R Declaration of Asian Mayors on Achieving Clean Water, Clean Land and Clean Air in Cities

- ❖ 40 cities - Mayors and local authorities signed the voluntary and good-will Indore 3R Declaration during 8th Regional 3R and Circular Economy Forum in Asia and the Pacific, Indore, India, 2018.
- ❖ 6 cities have signed during 9th Regional 3R and Circular Economy Forum in Asia and the Pacific, Thailand, 2019.
- ❖ 5 cities have signed during 11th Regional 3R and Circular Economy Forum in Asia and the Pacific, Cambodia, 2023.

- Sound management of 3R
- Circular economic development
- Sustainable waste management
- Resource efficiency



NEW DECLARATION on 3R and Circular Economy

- Preamble
- Declaration
- Common Vision
- Sustainable 3R and Circular Economy Goals for Achieving Resource Efficient, Clean, Resilient, Sound Material Cycle and Low-Carbon Society
- Cluster I-V – 3R and CE Goals
- Annex 1: Strategies to Support the Implementation of the Draft New Declaration (2024-2034)
- Annex 2: Indicators for Tracking the Progress on Implementation of New Declaration on 3R and Circular Economy (2024-2034)
- Annex 3: Country Reporting Guidelines (to be followed by countries for each Regional 3R & CE Forum in AP (2024-2034))



Sustainable 3R and Circular Economy Goals for Achieving Resource Efficient, Clean, Resilient, Sound Material Cycle and Low-Carbon Society

- **Cluster I:** Promote Sustainable Resource Management, Resource Efficiency and Low-Carbon Society (*Goals: 1, 2 & 3*).
- **Cluster II:** Achieving Clean Environment (Land, Water, Air, Ocean) through 3R and Circular Economy (*Goals: 4, 5, 6, 7 & 8*).
- **Cluster III:** Sound Material Cycle Society and Resource Recirculation towards Zero Waste and Circular Society (*Goals 9: 9a, 9b, 9c, 9d, 9e, 9f, 9g, 9h, 9i, 9j, 9k, 9l & 9m*).
- **Cluster IV:** Resilient Economies and Societies and Cross-cutting Socio-Economic Goals (*Goals: 10, 11 & 12*).
- **Cluster V:** Means of Implementation - Partnerships, Technology Transfer, Research and Development, National and International Financing and Investments, Institutional Capacity Building and Information Sharing (*Goals 13: 13a, 13b, 13c, 13d, 13e & 13f*).

ANNEX 1: STRATEGIES TO SUPPORT THE IMPLEMENTATION OF THE NEW DECLARATION (2024-2034)

Sustainable 3R and Circular Economy Goals	Strategies and Actions to Achieve the Goals	Contribution to SDG and other international agendas and agreements
<p>Cluster I: Promote Sustainable Resource Management, Resource Efficiency and Low-Carbon Society (Goals: 1, 2 & 3).</p> <p>Sustainable resource management, supply security of natural resources, and resilient ecological assets are at the heart of a circular economy and sustainable development. Majority of the natural resources are finite therefore it is critical that the world finds environmentally and economically viable way of using these scarce resources to achieve lasting supply security of resources and minerals – a critical underpinning factor to achieve the SDGs. Given the decline in Asia's natural capital – shrinking forests, declining biodiversity, depleting freshwater resources, and growing pollution and resource extraction, it is imperative for the policy makers of Asia to promote and implements various policy instruments and institutional arrangements in support of greater resource efficiency such as - regulatory instruments (e.g., EPR, standards for recycling), economic and financial instruments, information based instruments (raise public and industry awareness and education), voluntary initiatives (public-private partnerships), and formalization of the informal sector.</p>		
<p>Goal 1: Achieve significant improvement in materials, energy, and water efficiency</p>	<p>SDG 7.3, SDG 12, SDG 13</p>	<ul style="list-style-type: none"> - establishing sustainability principles and appropriate policies to regulate the improvement of improvement of product durability, reusability, upgradability and reparability, addressing the presence of hazardous chemicals in products, and increasing their energy and resource efficiency; <p>Cont.....(Please see Annex 1)</p>
<p>Goal 2: Achieve full-scale utilization of biomass as a resource, not waste (bio-economy) through 3R and circular economy</p>	<p>SDG 1, SDG 2, SDG 8, SDG 12, SDG 13</p>	<ul style="list-style-type: none"> - promote full scale utilization of bio-mass and crop residues for bioenergy and biomaterials (bio-economy); <p>Cont.....(Please see Annex 1)</p>
<p>Goal 3: Achieve resource efficiency in small and medium enterprises (SMEs) through 3R and circular economy</p>	<p>SDG 9, SDG 12, SDG 13</p>	<ul style="list-style-type: none"> - promote policies and programmes to integrate industrial farms, network or chains of farms, eco-industrial parks and regional infrastructure to support resource optimization so that industrial byproducts circulate fully in the local production system; <p>Cont.....(Please see Annex 1)</p>

Cluster II: Achieving Clean Environment (Land, Water, Air, Ocean) through 3R and Circular Economy

<p>Goal 4: Achieve significant improvement in water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse</p>	<p>SDG 3.3, SDG 3.9, SDG 6, SDG 12, SDG 14, SDG 15</p>	<ul style="list-style-type: none"> - reduce pollution discharges to water bodies through appropriate policy, regulations and technology solutions; - promote new business models and public-private- to attract the private and business sector and explore new funding sources to help close the existing funding gap for sustainable urban water supply and sanitation services; <p>Cont.....(Please see Annex 1)</p>
<p>Goal 5. Reduce adverse environmental impacts of cities by paying special attention to land and air quality and municipal and other waste management</p>	<p>SDG 3.9, SDG 11</p>	<ul style="list-style-type: none"> - complete ban of illegal dumping and open burning of waste; - promote city-level solid waste management strategies; - promote household hazardous wastes (segregation, collection); <p>Cont.....(Please see Annex 1)</p>
<p>Goal 6. Reduce adverse environmental impacts of mining operations by greening the entire supply chain focusing on resource efficiency and ecosystem restoration</p>	<p>SDG 8, SDG 12, SDG 13, SDG 15</p>	<ul style="list-style-type: none"> - reduce adverse environmental impacts of mining operations by greening the entire supply chain (exploration, mining, processing, raw materials, design, production, use/reuse, collection, recycling) while focusing on elements such resource efficiency as impact on employment, poverty alleviation, health, and GDP growth; <p>Cont.....(Please see Annex 1)</p>
<p>Goal 7. Reduce harmful chemicals and persistent organic pollutants (POPs) in materials, products and wastes</p>	<p>SDG 3, SDG 9, SDG 11, SDG 12, SDG 14, SDG 15</p>	<ul style="list-style-type: none"> - as the first and foremost priority avoid use of hazardous chemicals and POPs (Clean); if there is no suitable substitute, and the utility of the use is indispensable, consider cyclical use as a fundamental principle (Cycle); and further minimize hazardous chemicals and POPs waste to the environment, and decompose and stabilize waste stock used in the past as much as possible (Control); <p>Cont.....(Please see Annex 1)</p>
<p>Goal 8. Prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution</p>	<p>SDG 3, SDG 14.1, SDG 14.2, SDG 14.3</p>	<ul style="list-style-type: none"> - explore state-of-the-art technologies and techniques being used to measure and monitor plastic waste in municipal and marine environments; <p>Cont.....(Please see Annex 1)</p>

Cluster III: Sound Material Cycle Society and Resource Recirculation towards Zero Waste and Circular Society

Goal 9. Minimize demand and pressure on virgin raw materials and avert resource constraints by implementing 3R and circular economy for all waste streams

- Sub Goal 9 (a). Mainstream circular economy in all forms of municipal waste (solid and dry waste, wet waste, wastewater and sewage sludge)
- Sub Goal 9 (b). Enhance 3R and circular economy policies and programmes, including technological interventions, for construction & demolition (C&D) waste
- Sub Goal 9 (c). Advance circular economy approaches in rural sector with an objective to reduce ecological impacts, create new employment opportunities and alleviate poverty
- Sub Goal 9 (d). Achieve resource efficiency and circularity in metal sector
- Sub Goal 9 (e). Achieve resource efficiency and circularity for waste electrical and electronic equipment (WEEE)
- Sub Goal 9 (f). Promote safe and sustainable medical and healthcare waste management with a focus to waste-prevention and reduction actions for healthcare organizations
- Sub Goal 9 (g). Promote safe and sustainable hazardous waste management with a focus to waste-prevention and reduction actions for industries, including SMEs
- Sub Goal 9 (h). Achieve resource efficiency and circularity for solar wastes
- Sub Goal 9 (i). Achieve circularity for end-of-life batteries
- Sub Goal 9 (j). Promote safe and sustainable used oil waste management with a focus to waste-prevention and reduction actions for both domestic and industrial sector
- Sub Goal 9 (k). Achieve resource efficiency and circularity for waste tyre and rubber
- Sub Goal 9 (l). Significantly improve disaster (resource) recovery and response through circular economy
- Sub Goal 9 (m). Achieve resource efficiency and circularity for textile waste (fashion industry)

**SDG 1, SDG 2,
SDG 3, SDG 8,
SDG 11, SDG 12,
SDG 13, SDG 15**

- Managing materials sustainably is at the heart of the triple environmental crisis - climate change, biodiversity loss and waste and pollution. The basic foundation of 3R and circular economy lies with the practices that involve uses or consumption of smaller amount of physical resources and virgin raw materials and generating lesser waste that could be fully reused or recycled. The route to sustainable development is through minimizing natural capital inputs through out the entire life cycle of products and services that drive local, national, regional and global economies. Renewal, regeneration, and conservation of natural capital (land resources – forests, farms, aquifers, grasslands, urban space; aquifer systems – rivers, lakes, wetlands, coastal and marine ecosystems; the atmosphere; and the dynamic cycles of nature) form the foundation for achieving not only sustainable resource efficiency and zero waste society, but also the SDGs, the Paris Agreement on climate change, and the UN Decade on Ecosystem Restoration, among other international agendas and agreements.

Cont.....(Please see Annex 1)

Cluster IV: Resilient Economies and Societies and Cross-cutting Socio-Economic Goals (Goals: 10,11 & 12)

Goal 10. Strengthen resilience to climate change, natural disasters, and health emergencies and pandemics through 3R and circular economy, including nature-based solutions

SDG 9, SDG 13

- establish the explicit connections between resilience and circular economy strategies across all line Ministries and agencies;
 - promote continuous learning and adaptation, including distinguishing different types of resilience (resilience to recover from a shock, resilience to adapt or resilience to transform);
- Cont.....(Please see Annex 1)

Goal 11 (a). Ensure decent and safe working environment for all informal waste workers and achieve sustainable transition for them to become key

SDG 3, SDG 8

- improve working conditions and work-related toxic exposure at waste collection, dismantling, recovery and disposal facilities;
- Cont.....(Please see Annex 1)

Goal 11 (b). Complete elimination of illegal engagement of children in the informal waste sector

SDG 3, SDG

- establish children’s environmental health surveillance and monitoring systems that include indicators related to hazardous wastes such as e-waste;
- Cont.....(Please see Annex 1)

Goal 12. Create green jobs towards new employment generation, including women empowerment and sustainable economic growth

SDG 1, SDG 2, SDG 5

- government and private sector should work towards achieving a paradigm shift to link the environmental and social consciousness of women with the wide range of jobs, including manual labour and technical positions in waste management sector;
- Cont.....(Please see Annex 1)

Cluster V: Means of Implementation - Partnerships, Technology Transfer, Research and Development, National and International Financing and Investments, Institutional Capacity Building and Information Sharing

Goal 13. Strengthen means of implementation

- **Goal 13 (a).** Promote multi-layer partnerships, including public-private-partnerships (PPPs) as the basis for advancing circular economy in all development sectors
- **Goal 13 (b).** Foster technology transfer and collaborative research and development (R&D) programmes on circular economy
- **Goal 13 (c).** Mobilize national and international financing and investments towards circular economy
- **Goal 13 (d).** Information sharing and capacity building programmes targeting key government institutions and agencies and industrial authorities, including SMEs
- **Goal 13 (e).** Strengthen policy and regulations for integrating circular economy principles in all development sectors
- **Goal 13 (f).** Strengthen public awareness and education, including empowering consumers, on 3R and circular economy

SDG 17.16, SDG 17.17

SDG 17.6, SDG 17.7, SDG 17.8

SDG 17.3, SDG 17.5

SDG 17.9

SDG 4, SDG 12.6, SDG 12.7, SDG 12.

- national, regional and local authorities should encourage and support the development and use of standards, metrics and methods for quantifying, reporting and managing natural capital risks and opportunities;
- governments should work with companies that depend on or affect natural capital to ensure greening the entire supply chain;
- financial institutions should ensure that they do not support companies that deplete natural capital;
- governments should work with scientific and academic institutions to mobilize, harness and disseminate existing knowledgebase on circular economy to accelerate the implementation of the SDGs;
- governments should catalyse triangular cooperation (government-scientific and research organizations-business and industry sector) in advancing a science-based policy making towards effective implementation of circular economy in all development sectors;
- public-private and donors communities should nurture experimental spaces for collaboration on circular economy; and taking science-policy-business interfaces to the next level, those experimental spaces can reap new partnerships and foster co-creation of transformational ideas on circular economy;

Cont.....(Please see Annex 1)

Welcome to all
12th Regional 3R and Circular Economy
Forum in Asia and the Pacific 2024
2024
(INDIA – TBC)