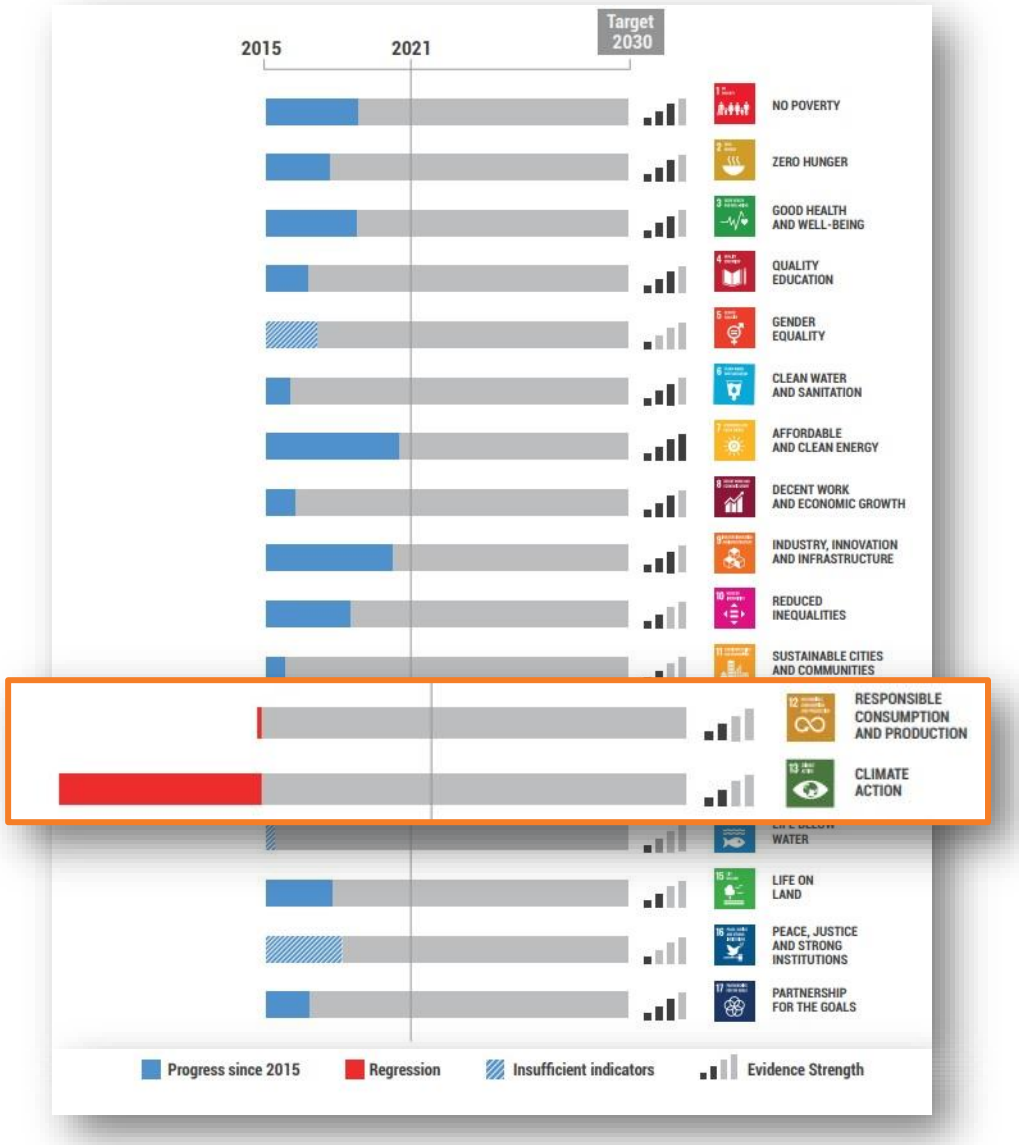
Circular Economy – Systems Thinking

Approaches to Achieve Successful Transitions to a Circular Economy

Circular Economy Systems Thinking provides a unifying framework which crosses Traditional Sustainability Boundaries

Snapshot: Sustainable Development in Asia and the Pacific

SDGs Progress in Asia and the Pacific, 2021

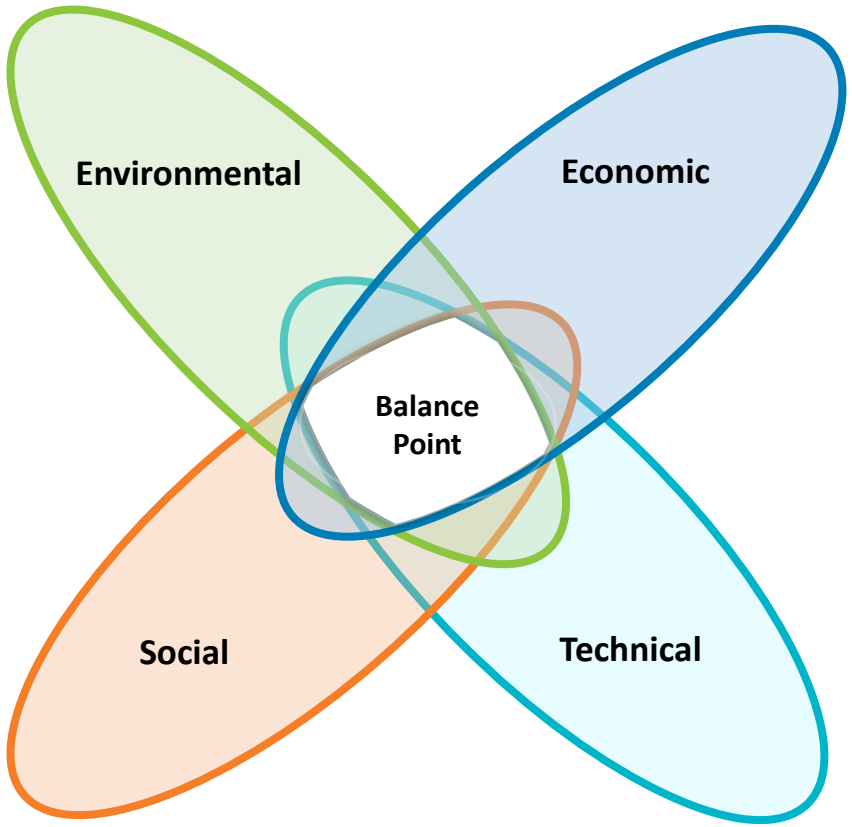


- Progress to meet the SDGs in Asia and the Pacific is slow
- Regression in meeting SDGs 12 (Responsible Consumption and Production) and 13 (Climate Action)
- With economic growth, increasing amounts of waste generation (including plastics) and declining natural ecosystems
- Low investments in green infrastructure -- Southeast Asia needs about $210 billion a year for green infrastructure investments
- Coordination, capacity, and data gaps
- COVID-19 further hampered progress

Source: United Nations Economic and Social Commission on Asia and the Pacific. 2022. *Asia and the Pacific SDG Progress Report 2022: Widening disparities amid COVID-19*. Bangkok.

Balance of Circularity

As we recover from COVID-19 and sustainable development once again rises to the top of our minds, how do we make the best decisions?



Transitioning from our mature, linear approaches to materials and industry towards a circular economy requires change.

- **But how to implement that change?**
- **Where to start?**
- **What to change and in what order?**

Our linear economies have been developed over years of trial and error to be very stable and heavily integrated into our communities, economies and national development.

As we recover from COVID 19 and transition to sustainable circular economies, we must understand the complex relationships of the 4 key domains of value and how those relationships will develop into the future.

Circular Economy and Systems Thinking provides the framework, language and metrics to design, articulate, and deliver multi-sectoral solutions

ADB

Trade-Off's of Circularity

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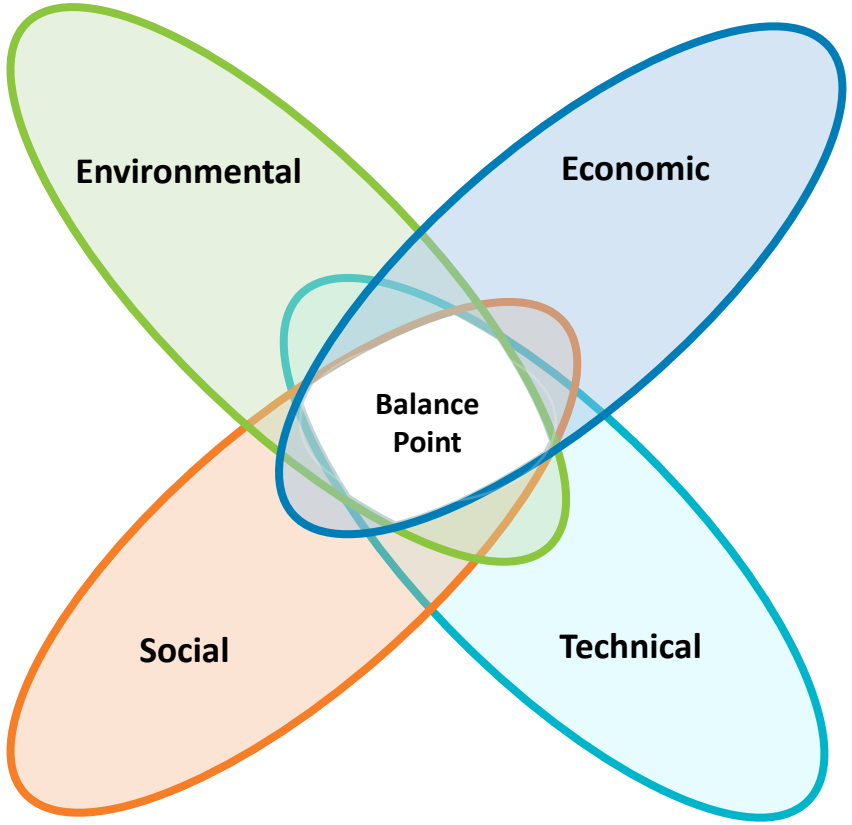


As we develop and issue circular economy policies, we must accept that there will rarely be perfect answers.

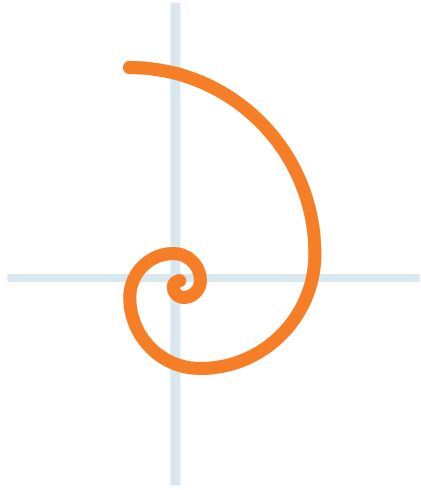
- Solutions which are best for the environment are not always best for society or the economy.
- Technology does not always keep up with our desire to implement circularity
- Solutions which are best for society are not always the best for the environment

Risk - Emergent Phenomena and The Butterfly Effect

Small Changes can have non-linear impacts on complex systems. Even small steps towards a circular economy can introduce significant instability in existing systems

Policy design and decisions are particularly challenging when related to circular economy. Not only are they disrupting established markets, systems, and supply chains, but the circular nature of the outcome means that there is far more time for both positive and negative emergent phenomena to manifest

- Promoting bio-degradable plastics can severely disrupt existing plastic recycling
- Transitioning to glass bottles reduces plastics but has a higher net environmental impact than the plastic bottles they replace
- Banning single use plastics can reduce jobs in the recycling industry
- Transition to organic fertilizers can cause significant food supply security issues
- Banning sachets reduces access to products for poor communities
- Imposing extended producer responsibility in small markets can cause suppliers to leave those markets



Can we predict, identify, avoid or mitigate these issues during the policy design process?

Solutions to Balance, Trade-offs and Risk

ADB is embracing the challenges faced by our member country governments to understand and develop effective policies for circular economy transition and implementation

Current

- We are currently understanding the individual aspects of balance, trade-offs and risk management on a case-by-case basis at a micro level

- We can identify the more obvious challenges and mitigate those risks without truly understanding the nuances of our activities

- By accepting that perfect answers are rare and by articulating the trade-off challenges, we are already improving our policy dialogues

Future

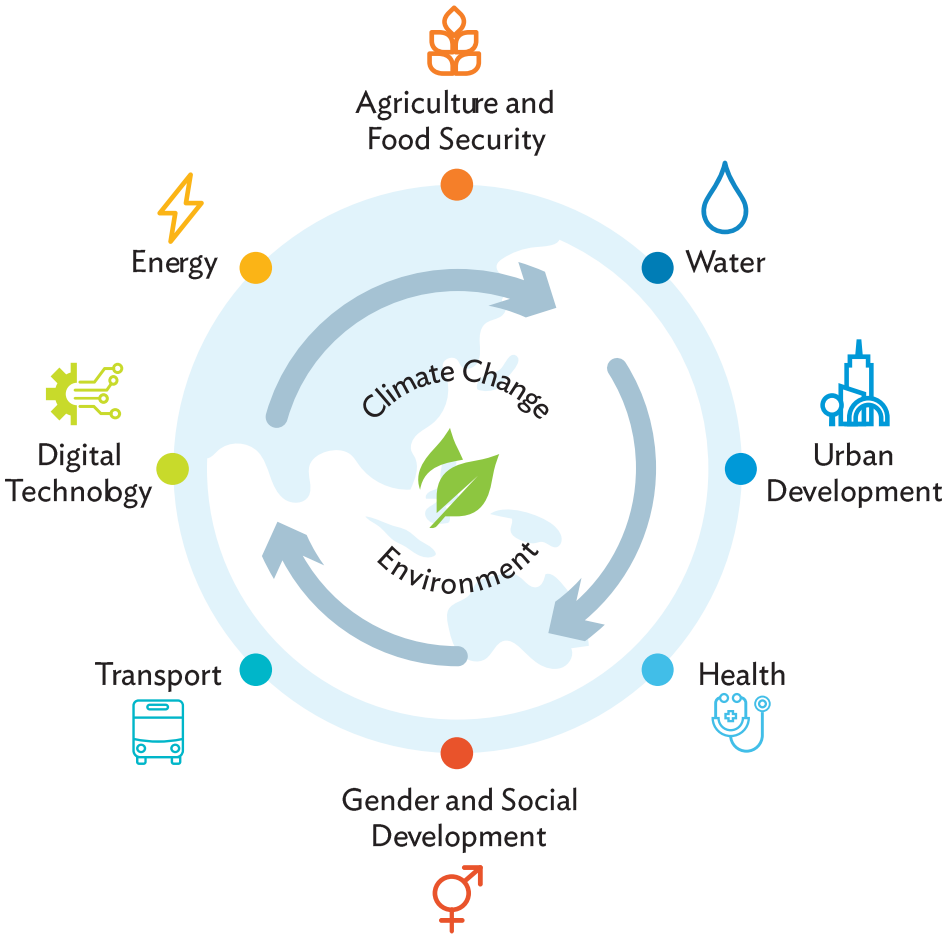
- Developing modelling techniques to capture the complexity of our systems is a challenge but the capabilities and opportunities offered by modern computer systems offers a major opportunity for understanding circular transitions

- As the library of circular economy transition projects grows, we can begin to identify common success factors and areas for improvement

Entry Points for Circular Economy: Programmatic Level

Circular Economy Entry Points Exist Across ADB's Sectors

Circular Economy is anchored in sustainability and most closely associated with waste management and plastics, but the value, efficiency and integrated systems approach can support programmatic additionality to enhance ADB's services and DMCs needs lead products portfolio across sectors



ADB Sectors exist as part of national, regional and global systems. Circular Economy supports the ONE ADB approach to provide integrated solutions and products for our clients through multi-sectoral approaches

- Energy projects with integrated climate change, digital, water, urban development and nature-based solutions
- Urban development with integrated nature-based climate change mitigation solutions, urban farms, digital technology, energy efficiency and water conservation
- Gender accessible, quality jobs linked to sustainability and resource efficiency
- Healthy and Age Friendly Urban Development
- Bio-based Circular Economy to link increase circularity in the construction industry by linking urban, sub-urban and rural systems

Circular Economy and Systems Thinking provides the framework, language and metrics to design, articulate, and deliver multi-sectoral solutions

Plastics – Marine Plastics Pollution

Circular Economy is most often associated with plastics from their avoidance and substitution through to waste management and recycling. ADB's Promoting Action on Plastic Pollution is working across ADB to address marine plastic pollution and support our DMCs as the Global Plastics Treaty is designed and implemented

Circular Economy Entry Point	Multiple Financing Solutions	Multisectoral Programmatic Pipeline
Marine Plastic Pollution	Private Sector	Nature-based Solution Substitution
		Private Sector Integration
		Eco-system Services
	GEF Grant	Climate Change Adaptation
		Transport Infrastructure
		Urban Infrastructure
	Sovereign PBL	Circular Plastics Economy
		Eco-compensation Innovation
		Digital Solutions
		Sustainable Manufacturing
		Gender Accessible Quality Jobs

Prosperous

Inclusive

Resilient

Sustainable

Yangtze River Economic Belt

The Yangtze River Basin is a growing example of circular economy facilitated, multi-sectoral solutions for sustainable rural development and climate adapted food supply security

Circular Economy Entry Point	Multiple Financing Solutions	Nature Positive Programmatic Pipeline
Agricultural Plastics	Private Sector Partnership GEF Grant Comprehensive Agricultural Development loan	Nature-based Solution Substitution Private Sector Integration Sustainable Production Practices Eco-system Services Climate Change Adaptation Debt for Nature Swaps Circular Plastics Economy Transport Infrastructure Digital Solutions Agricultural Infrastructure Gender Accessible Quality Jobs Eco-compensation Innovation

Prosperous

Inclusive

Resilient

Sustainable

ADB

Guangxi Wuzhou Healthy and Age Friendly Cities

Circular Economy is anchored in sustainability and regularly associated with waste management, but integrated systems approaches can be applied across ABD's sectors. The tools and language of Circular Economy can support the integration, implementation and optimization of multi-sectoral solutions for Liveable Cities

Circular Economy Entry Point	Multiple Financing Solutions	Community Positive Programmatic Pipeline
Sustainable Development	Sovereign Lending	Infrastructure Investment
	Private Sector	Health
	Grant	Urban Sector Development
	Blended Financing	Integrated Waste Management
		Gender
		Climate Change Mitigation
		Digital Solutions
		Energy
		Social
		Water
		Nature-based Solution Substitution
		Transport

Prosperous

Inclusive

Resilient

Sustainable

One ADB Circular Economy Toolkit

Circular Economy Framework – A simplified conceptual model of how individual project investment can contribute to the development of programmatic pipelines in sectors, countries and regions. This will include project structuring, component design and interfaces.

Circular Economy Modelling Tool – Building on the existing ADB waste management calculator incorporating both Lifecycle Analysis and Complex Value Optimisation. This modelling tool will support both policy and investment design by mapping and quantifying positive Circular Economy impacts across a sector, country or region.

Specific Knowledge Products – Continuing and expanding the articles and blogs already produced to address core finance, policy and functional subjects.

Partnerships – Identifying potential partnership opportunities for Circular Economy funding and knowledge transfer (WEF, UNEA/UNEP)

Knowledge Development and Dissemination – Providing a central repository for up to date and reviewed reference materials to support operational departments with deeper

Deep Dives (as required by Operational Teams) – Technical Deep Dives on specific subjects or challenges raised through the working group. (*Supported by available TA or Project Budgets depending on scope and depth of study*)

Circular Economy and Systems Approaches will be fundamental in Implementing Strategy 2030

Thank you for your Attention

We are very happy to answer any questions you may have

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